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Introduction

Thank you for purchasing your MPC. At Akai Professional, we know how serious music is to you. That’s why we design our equipment with only one thing in mind—to make your performance the best it can be.

This user guide explains how to create music within the MPC and MPC Beats software applications. There is similar documentation available for MPC products that use a touchscreen and for those that use an LCD. To view these user guides, click the Help menu, select MPC Help, and select an option.

Welcome to the MPC family.

Akai Professional

MPC vs. MPC Beats

In addition to the v2.8 MPC software, MPC Beats is the new software from Akai Professional that brings many of the most essential beat-making tools of the MPC software to anyone, without the need for dedicated MPC hardware. MPC Beats supports the following:

- Up to 8 MIDI tracks
- Up to 2 stereo audio tracks
- 4 Send channels and 8 Submix channels
- AIR FX Bundle insert effects
- AIR Bassline, Electric and TubeSynth plugins

For the complete MPC experience with up to 128 MIDI and audio tracks, additional plugins and more, you can upgrade MPC Beats to the full MPC software by clicking the menu icon (≡) in the software, selecting Help and clicking Upgrade To MPC. You can also visit akaipro.com to learn more.

System Requirements & Product Support

For the latest information about this product (system requirements, compatibility information, etc.) and product registration, visit akaipro.com.

For additional support, visit akaipro.com/support.
About This User Guide

This manual describes features in the MPC and MPC Beats software applications. For consistency, the terminology throughout is based on the MPC parameter names. We also used specific formatting to indicate particular topics of significance:

**Important/Note/Tip:** Important or helpful information on a given topic.

Names of buttons, controls, parameters, settings, and other options are written in **bold** characters throughout the manual. **Examples:** 
- Click the **Play Start** button.
- Turn **Q-Link Knob 4**.
- Click the **Mute** button.
- The **Velocity** ranges from 0 to 127.
- Set the **Sample Play** selector to **One Shot**.
- Click **BPM**, and then use the numeric keypad to enter **120** as the tempo.

Some parts of this manual refer to other relevant chapters or sections, which are cited in **bold, italic blue** characters. **Examples:**
- Read the **Important Notes** section before proceeding.
- For more information about installing the drivers and software, please see the **Setup > 2. Installation**.
- To learn more about using effects, see **Operation > General Features > Effects**.

**Important Notes**

Before installing the MPC or MPC Beats software, make sure your computer meets the system requirements described at [akaipro.com](http://akaipro.com). This applies whether you'll use MPC software as your host software or as a plugin in another digital audio workstation (DAW).

Before connecting your MPC hardware to your computer, make sure you have installed the latest drivers and software. Visit [akaipro.com](http://akaipro.com) to download the latest versions. Refer to **Setup > 2. Installation** for more information.
Setup

1. Connection

Here is just an example of how to use MPC hardware in your setup (MPC Live, in this case). Items not listed in your included Quickstart Guide are sold separately.

2. Installation

1. Go to akaipro.com and register your product. If you don’t have an Akai Professional account yet, you will be prompted to create one.
2. In your Akai Professional account, download the MPC or MPC Beats software package.
3. Open the file and double-click the installer application.
4. Follow the on-screen instructions to complete the installation.

Note: By default, the MPC software will be installed in [your hard drive]\Program Files\Akai Pro\MPC (Windows®) or Applications (macOS®). You can also create a shortcut on your Desktop.
3. Getting Started

MPC Software

1. Power on your MPC hardware.
2. On your computer, open the MPC software.
3. Follow the on-screen instructions to authorize your version of MPC.
4. You will need an iLok account to complete this. You can create an account at ilok.com.
   Make a note of the PACE code in your account, and enter it when asked for it during the authorization/unlock process.
5. **MPC X, MPC Live, MPC Live MKII & MPC One users**: Check the upper-right corner of the window:
   - If you see a monitor/cable icon, then your MPC hardware is already in Controller Mode. Continue to Step 6.
   - If you see a chip icon, then your MPC hardware is in Standalone Mode. Follow these steps:
     i. Press Menu to enter the Menu.
     ii. Tap the MPC chip icon in the upper-right corner.
     iii. In the Enter Controller Mode window that appears, tap Controller Mode. Looking for computer may appear briefly in the window before your MPC hardware recognizes the USB connection as a controller.
6. In the MPC software, open the Preferences:
   - **Windows**: Click the menu icon (≡), select Edit, and click Preferences.
   - **macOS**: Click the MPC menu, and click Preferences.
7. In the Preferences window, click the Audio tab and select the sound card you want to use. Click OK when you are done.

Important: We highly recommend using your MPC hardware’s sound card (Akai Pro [your MPC model] ASIO).

Windows users only: If you need to use your computer’s internal sound card, we recommend downloading the latest ASIO4ALL driver at asio4all.com.
MPC Beats Software

1. On your computer, open the **MPC Beats** software.

2. When the software is opened for the first time, the Startup Wizard will launch to guide you through the setup with three simple steps:
   i. First, connect your MIDI device to your computer using a USB cable.
   ii. Next, select the MIDI map for your controller. Maps for many of the most popular MIDI controllers are available to make integration quick and easy.
   iii. Finally, choose whether you want a **Simple** or **Advanced** workspace. These will display different parts of the MPC software more prominently to maximize workflow. This setting can be changed at any time by clicking the **menu icon** (≡), selecting **View > Workspace**, and clicking **Simple** or **Advanced**.

When you are finished, click **Start Making Beats** to exit the Setup Wizard. The Startup Wizard can be accessed at any time by clicking the **menu icon** (≡), selecting **Edit**, and clicking **Open Startup Wizard**.

3. In the MPC Beats software, open the **Preferences**:
   - **Windows**: Click the **menu icon** (≡), select **Edit**, and click **Preferences**.
   - **macOS**: Click the **MPC** menu, and click **Preferences**.

4. In the **Preferences** window, click the **Audio** tab and select the sound card you want to use. Click **OK** when you are done.

**Important**: We recommend using an external audio interface when possible.

**Windows users only**: If you need to use your computer’s internal sound card, we recommend downloading the latest ASIO4ALL driver at [asio4all.com](http://asio4all.com).

For more on getting started with MPC Beats, open the MPC Beats Quickstart Guide from the **Help > MPC** menu.
Basic Concepts

This chapter should help explain some fundamental aspects of the MPC and MPC Beats software.

The MPC workflow is quite different from traditional digital audio workstations (DAWs). In most typical DAWs, each track uses an instance of each instrument, and all tracks are always playing even if they don’t contain any audio or MIDI information. Furthermore, your entire project needs to be arranged just as the resulting song would be.

This isn’t the case with the MPC software, which offers much more flexibility within your project. It’s important to understand some basic terms, though:

A **sequence** is a “building block” of a song. It contains multiple tracks that play at the same time like a normal DAW. In a project, you might create one sequence for your verse and another sequence for your chorus, alternating and/or repeating each one in a specific order to create the song. (A project can contain 128 sequences.)

A **track** is a layer in a sequence. There are two types of tracks:

- **MIDI tracks** consist of MIDI data only, no audio data. These tracks produce sound by using programs, described below. Unlike a normal DAW, each MIDI track exists only in its sequence. The advantage of this is not having to manage empty or unwanted tracks across all of your sequences—each sequence contains only the tracks you want to use in it. If you want to use the same track across multiple sequences, you can copy the track from one sequence into another. (A sequence can contain 128 MIDI tracks [up to 8 for MPC Beats]).

- **Audio tracks** consist of a recorded audio signal, like a traditional DAW. These tracks do not use programs because the audio is already contained in the track. Also, unlike MIDI tracks, audio tracks are present in every sequence in the project, even if the tracks themselves are empty. (A sequence can contain 128 audio tracks. [up to 2 for MPC Beats]).

A **program** is a preset through which MIDI tracks are routed. Programs may contain audio samples that are triggered when tracks play through them, producing the sound you want on that track. Programs are independent of tracks and sequences, so you can set multiple tracks to use the same program (unlike normal DAWs where each track requires its own set of samples or plugin). Furthermore, you can use the same program/programs across multiple sequences. (A project can contain 128 programs.).

Each program can be played using the 16 pads (across eight pad banks, which gives you access to 128 pads in each program). Each pad plays a MIDI note when you press it, but that MIDI note will trigger something different for each program. For instance, in drum programs, the pads are assigned to samples—one pad could trigger a kick drum sound and another could trigger a snare drum sound—whereas in plugin programs, each pad triggers a MIDI note that plays the corresponding pitch of its assigned instrument plugin.

Here’s a diagram to illustrate an example of how these pieces could work together:

![Diagram](image)

Please take a look at the following **Tutorial** chapter, as well. It will walk you through the creation of a short song to show you some of the MPC software’s most important features.
This chapter is a walkthrough of the creation of a song in the MPC software. To get the most out of this chapter, we recommend reproducing each of the described steps. The previous Basic Concepts chapter may also help you understand what we’re asking you to do in this tutorial.

On the following pages we will create a short song to show you some of the MPC software’s most important features. Make sure you have completed all of the steps described in Introduction > Setup. This includes:

- Installing the most current drivers and software.
- Connecting your MPC hardware to a power outlet using the included power adapter and powering it on.
- Opening and authorizing your MPC software.

Creating a Drum Kit

Let’s start by making a simple drum kit.

By default, the Browser is shown on the right side of the window.

To show or hide the Browser, do one of the following:

- In the lower-right corner of the window, click the six-rectangles icon, list icon, or hard-drive icon.
- In the upper-left corner of the window, click the menu icon (≡), and go to View > Browser and click: Hidden (to hide the Browser), File Browser (to show files in the Browser), Expansion Browser (to show your Expansions in the Browser), or Media Browser (to show your media in the Browser).

Use the Browser controls to navigate to where your drum sounds are located:

- To browse your files by location, select the File Browser.
- To move up one folder level, click the up arrow (↑) next to the file path.
- To select a file or folder, click it once.
- To enter a folder, double-click it.
- To load a sample directly to a pad, click and drag the sample onto a pad in the lower half of the window.
- To load a selected file to the project’s sample pool, double-click it. If the file is a sample, it will be loaded to the project’s sample pool. If the file is a project, it will be loaded in its entirety (you will be asked if you want to close your current project).
- To load all files in a selected folder, click and drag the folder onto anywhere in the window outside of the Browser.
- To preview a selected sound, click and hold Play (►) in the lower-left corner of the Browser.
- To enable or disable the audition function and set its volume level, click the volume icon in the lower-left corner of the Browser. Click and drag the level slider left or right to set the volume level.

If you loaded samples into the sample pool rather than directly to the pads, then let’s start assigning them now:

To load a sample directly to a pad, click and drag it from Project panel (in the Samples column) in the lower half of the window onto a pad.

To create a simple drum kit, repeat the above steps for other pads. We recommend loading a kick/bass drum, snare drum, a closed hi-hat, and an open hi-hat.
Creating a Drum Sequence

Now that your drum kit is set up, let’s record a drum sequence using your MPC hardware.

1. In the MPC software, click the house icon in the upper-left corner to make sure you’re in Main Mode.
2. On your MPC hardware, press Tap Tempo repeatedly at the speed you want to record your sequence. The software will detect the rate and adjust itself automatically.
3. Press the **Rec** button to activate Record Mode.
4. Press the **Play** button to start the actual recording. The pre-count will count one measure before the sequence starts to record. We recommend recording only one sound (pad) at a time, especially if you are not familiar with playing drums on the pads.
5. Play a simple kick/bass drum pattern. The note events you just recorded will automatically be placed in the grid (in this case, on 16th notes). The initial measure length is two bars. After the two bars, the recording will enter Overdub Mode automatically; the sequence plays again from the beginning and keeps looping, allowing you to record further notes. Don’t stop the recording!
6. Play the snare drum part, then a hi-hat part.
7. When you’re done recording, press **Stop**. The Grid Editor in the software will show what you recorded.

If you start recording again on this sequence, keep in mind that the pads you play in your new recording will automatically replace existing notes. To prevent this, you can start again from Step 1 but press **Overdub** instead of **Rec**. Overdub lets you record additional note events over the existing sequence.

The **Undo** button functions differently while in Record Mode. Normally, pressing **Undo** will undo just the last event. When there is an event to undo, the **Undo** button will be lit solid. While recording, the **Undo** button will flash. In this case, pressing **Undo** will erase all events from that recording (i.e., since **Play** or **Play Start** was clicked).
Renaming & Saving

We recommend renaming your programs and samples before going further.

The collection of drum samples you loaded earlier (and their respective pad assignments) are arranged into a program. When you load this program in the future, you will be able to use all of the samples that belong to it.

Let’s rename the existing program as we’ll want to create more programs later on.

To rename a program or track, do one of the following:

- In the “Inspector” on the left edge of the window, double-click the program name or the track name (in the Program or Track field), type a name, and press Enter.

- In the Project panel, under the Programs list, right-click the program, and click Rename. Type a name. Click OK or press Enter to confirm the name, or click Cancel or press Esc to keep the original name.

To rename your samples:

1. In the Project panel, do one of the following:
   
   - Click All Samples.
   
   - Click a program in the Programs list.
   
   - Click a sequence in the Sequence list or a program under one of those sequences.

2. In the Samples list on the right side of the Project panel, right-click the sample, and click Rename.

3. Type a name (e.g., Kick, Snare, etc.). Click OK or press Enter to confirm the name, or click Cancel or press Esc to keep the original name and press Enter.

Repeat the above steps to rename other samples.
Now would also be a good time to save your project.

To save your project, click the menu icon (≡), click File, and click Save Project.

In the Save Project window, do any of the following:

To select the storage device you want to view, click the down arrow (▼) next to the file path. If you have storage devices connected to your MPC hardware, they will appear in this column, as well.

To enter a folder, double-click it or press Enter.

To create a new folder, click New Folder, type a name for the new folder, and then click OK or press Enter to confirm the name, or click Cancel or press Esc to keep the original name. You will immediately enter the new folder.

To move up one folder level, click the up arrow (▲).

To name the file, click the File field at the bottom of the window, and type a name.

To save the file, click Save or press Enter.

   To save the file as a project template file, click the Save as Template checkbox to select it before clicking Save. This project will then load when you create a new project from a template. (To do this, click the menu icon (≡) in the upper-left corner of the window, select File, and then click New From Template.)

To cancel, click Cancel or press Esc.
Edit the Grid Editor: click **Grid** under the mode icons in the upper-left corner of the window.

**In the Grid Editor**, you can do any of the following:

- **To zoom in or out**, use the sliders in the lower-right corner of the Grid Editor (along each axis), or click the blue timeline and drag down or up.

- **To undo your last action**, do one of the following:
  - Click the **undo/back-arrow icon** in the upper-right corner of the Grid Editor.
  - Click the **menu icon (≡)**, click **Edit**, and click **Undo**.

- **To redo the last action you undid** do any of the following:
  - Click the **redo/forward-arrow icon** in the upper-right corner of the Grid Editor.
  - Click the **menu icon (≡)**, click **Edit**, and click **Redo**.

- **To enter a note**, click the **pencil icon** above the grid. Then, in the grid, click an empty square. Alternatively, double-click an empty grid square when using the marquee tool.

- **To delete a note**, click the **eraser icon** above the grid. Then, in the grid, click a note. Alternatively, double-click a note when using the marquee tool.

- **To select a single note**, click the **pencil icon** or marquee icon above the grid. Then, in the grid, click a note.

- **To select all notes for a pad**, click the desired pad in the **Pads** area below the grid, or on the left edge of the Grid Editor.

- **To move the selected notes**, click the **pencil icon** or marquee icon above the Grid Editor. Then, in the grid, click and drag the note to the desired location. By default, you can position notes only by quantization values defined by the **Time Correct** value (learn about this feature in **Operation > General Features > Time Correct**).

  **To move the selected notes without restricting (“snapping”) them to the quantization grid**, click and drag the note while holding **Shift**.
• To adjust the start point or end point of the selected notes (without changing their position), click the pencil icon or marquee icon above the Grid Editor. Then, in the grid, hover the cursor over the left or right edge of the note. When the cursor changes into a bracket with arrows ([ or ]), click and drag the edge of the note to the desired length.

• To transpose the selected notes up or down, click and drag the notes up or down.

• To switch to another track, do one of the following:
  o In the Inspector, click the Track field, and click the desired track in the menu that appears.
  o Click the menu icon (≡), go to Edit > Track, and click Next Track or Previous Track.
  o Click and drag the Current Track Q-Link knob (in the Q-Links panel below the Grid Editor) up or down.

• To mute or solo the track, click the three-bars icon in the lower-left corner of the window to show the track channel strip (on the left), and then click M or S (respectively) on the track channel strip.

• To open the Time Correct window, click the menu icon (≡), go to Edit > Time Correct, and click Settings.
  This feature is described in Operation > General Features > Time Correct.

  Tips:
  To adjust the time division only, click the TC field at the top of the window, and click one.
  To adjust the amount swing only, click and drag the Swing field at the top of the window up or down (or click it, type a value, and press Enter).

• To adjust the metronome settings, go to Tools > Metronome. This feature is described in Operation > General Features > Metronome.

  Tips:
  To activate or deactivate the metronome, click the metronome icon at the top of the window.
  To adjust the metronome volume only, click and drag the Metro meter at the top of the window up or down.

• To adjust the velocity of the selected notes (manually), click Velocity in the automation lane below the grid to select it, and then click and drag the handle/handles below the note/notes. Each note’s velocity is represented by a vertical bar. The higher and more red the bar is, the higher the velocity is. The current velocity value will appear next to the cursor.

• To show or hide the velocity lane, click the up or down arrow (▼ or ▲) button next to the horizontal scroll bar under the grid.
Making Basic Sound Edits

Let’s make sure the samples are properly tuned and have good levels.

Click the **four-pads icon** in the toolbar to enter Program Edit Mode.

Click a **pad** to show its parameters in the window.

**To adjust its volume**, click and drag the **Level** knob in the **Pad** section up or down.

**To adjust its stereo panning**, click and drag the **Pan** knob in the **Pad** section up or down.

Adjust the level of each pad to suit your taste. We recommend spreading the panning of the bright sounds (e.g., cymbals, snare drum) a little. Additionally, you can tune the bass drum sound—in the **Sample Layers** section, adjust the **Semi** and **Fine** knobs next to the sample name.

The snare drum may need some reverb to give it a more spatial sound.

Click the **pad icon** in the lower-left corner of the window to show the pad channel strip in the Inspector above it. Press the **pad** with your snare drum sound to select it.

**To add an effect:**

1. In the **Inspector**, click the arrow (▼) in the desired effect slot. A list of effects will appear.
2. Click the + or – icon to expand or collapse each category of effect.
3. **To load an effect**, double-click it. Alternatively, click it to select it and then click **Select**. Let’s try **Reverb Medium**.

**To adjust the effect’s parameters**, double-click the effect name in the slot.

**To empty the effect slot**, load an effect but select <none> instead. Switch the effect on or off by clicking the **On/Off** button for the slot.
Creating a Bass Track

Let’s try recording a bass line. Unlike a drum kit, it’s important to be able to play and record a bass sound chromatically, so this will be slightly different than setting up the drum kit.

Adding a bass line over the drum part means we need to work on a new track. A track is simply a layer of a sequence. Each track uses a program within your project. You can work with multiple tracks in a single sequence (e.g., a drum track, a bass track, a piano track, etc.). When you play the sequence, all of them will play simultaneously.

Let’s select an empty track, create a program to go with that track, and load a bass sample into that program.

To select a new track, click the Track field in the Inspector, and click Track 2 (unused) in the list of tracks that appears.

Rename the track so we know what it is (e.g., Bass Line).

To create a new program:

1. In the Inspector, click the piano-keys icon under the Track field. This icon indicates a keygroup program, which is necessary to play the bass sound chromatically with the pads. A name for the new keygroup program will appear in the Program field below.

2. Double-click the new program name, type a name, and press Enter.

To load and edit a bass sound:

1. Use the File Browser on the right edge of the window to navigate to where your bass sounds are located, and load one to the project’s sample pool.

2. After loading a bass sample to the sample pool, don’t click and drag the sample onto a pad like you did when creating a drum program; keygroup programs are different.

   Instead, make sure you are in Program Edit Mode: click the four-pads icon in the toolbar.

3. In Program Edit Mode, click the first menu (Layer 1) in the Sample Layers section, and then click your bass sample in the list that appears. Because you’re working with a keygroup program instead of a drum program, this sample is now playable across all pads.

   Tip: If you click Pad Bank D in the Pads panel and click Pad 13, you should hear the bass sample played back with its original pitch. You can use the other pads to play your sample chromatically.
Let’s add a second layer and set the layers’ velocity ranges so the bass will sound different when played at a higher velocity (as a real bass would):

1. Use the File Browser to select a different bass sample that sounds similar but a little bit brighter, and load it to the project’s sample pool.

2. Return to Program Edit Mode, click the Layer 2 menu in the Sample Layers section, and then select the new bass sample. Click a pad to hear both samples will sound at once. Maybe this new sound is interesting as it is, but let’s make some quick edits to get as close as we can to a real-life bass sound.

3. Click and drag the right edge of the Velocity slider for Layer 1 to 80.

4. Click and drag the left edge of the Velocity slider for Layer 2 to 81.

Now when you press a pad, the lower velocities (0–80) will trigger the Layer 1 sample only, while higher velocities (81–127) will trigger the Layer 2 sample only.

Let’s record that bass line now. Prepare your recording as described earlier, and record some bass notes. You can edit your recording just like we’ve done earlier.
Once you’ve recorded it, let’s tweak the sound a bit in the Filter section:

1. In Program Edit Mode, click the Type menu in the Filter section, and select a filter. Let’s try working with Lowpass 4 Pole.

2. Click and drag the Cutoff or Res (resonance) knobs to adjust their settings until your bass sample sounds good to you.

3. Under the Amp Envelope section, click and drag the Attack or Release knobs up or down to adjust their settings. These control the overall level characteristics of the sound.

Let’s add an effect or two to this keygroup program—do this in the same way as you did for a drum program.

So far, we’ve created a simple drum sequence and a bass line to go with it.
Recording an Audio Track

We’ve already created some MIDI tracks, so let’s record some actual audio for our next track:

1. Click the **house icon** in the toolbar to enter Main Mode.
2. Click the **Audio** tab at the top of the Inspector. **Audio 001** will appear in the **Track** field.
3. Connect a synthesizer or other line-level audio source to the 1/4” (6.35 mm) **input/inputs** on your MPC hardware, and set its **Line/Phono** selector to **Line**.
   Alternatively, connect it to your external audio interface.
4. In the audio track channel strip:
   i. Click the input menu (Input _) above, and select **Mono > Input 1** or **Stereo > Input 1,2** (depending on your audio source) as the input source.
   ii. If the output menu (Out _) is not set to **Out 1,2**, click it and select **Output > Out 1,2** as the output.
   iii. Click the **Monitor (speaker)** button to cycle through its three states until it reads **Auto** (you will hear incoming audio while the track is record-enabled only).
5. On your MPC hardware or external audio interface, turn the **Rec Vol** knob to set the input level while playing your audio source. You should now see the level in the meter. Make sure it does not exceed the maximum level (the meter should not be “peaking” constantly).
6. In the audio track channel strip, click the **Record Arm ()** button next to the **pan knob** to record-enable the track.
7. In the toolbar at the top of the window, click **Rec ()** or **Overdub (⊕)** to record-arm it. Alternatively, click **Rec** or **Overdub** on your MPC hardware.
8. **To start recording**, click the **Play ()** or **Play Start (|)** button in the toolbar (or press **Play** or **Play Start** on your MPC hardware)—then play your audio source! You should hear your existing sequence playing in the background.
   **To stop recording**, click the **Stop (■)** button in the toolbar (or press **Stop** on your MPC hardware).

Before creating a song, it would be good to have at least two different sequences, so record another audio track:

1. In the **Inspector**, click the **Sequence** field, and click **Sequence 2 (unused)** in the list of sequences that appears.
2. Click the + **icon** next to the **Track** field to add another audio track (**Audio 002**) to go with that sequence.
Creating a Song

This section explains how to make a song out of your sequences. Before starting, make sure that you have recorded some sequences.

To enter Song Mode, make sure playback is stopped, click the down arrow (▼) next to the other mode icons in the toolbar, and click Song.

In Song Mode, each of the sequences you’ve created in this project assigned to a pad in the Pads panel. The Sequence List panel is to the left of the pads, showing the song’s structure. The upper half of the window will show “blocks” representing each sequence of the song’s structure.

As a song plays, it moves through each step shown in the Sequence List panel. Each step contains a sequence you assign in its Sequence menu. Each step can be repeated, determined by the value in the Rpts column (a value of 1 means the sequence will play through only once). The Bars column on the right indicates the length of that sequence.

Each step can be set to play its sequence at an independent tempo, determined by the value in the BPM column.

Important: Each sequence has its own tempo, while the project itself may use a different master tempo. The BPM value for each sequence may be different from the master tempo. As long as playback is set to follow the master tempo, each sequence’s individual tempo will be ignored. By default, each project is set to use the sequence tempo, which you set back in the Creating a Drum Sequence chapter. We recommend clicking the Seq/Mst button at the top of the window (so the button displays Mst) and entering a master tempo to ensure all sequences use the same tempo.

To insert a step at the current position, click Insert Step in the Song Parameters panel. Alternatively, click and drag the pad that corresponds to that sequence into the editor above it.

To delete the currently selected step, click Delete Step in the Song Parameters panel.

To set which sequence plays for a step, click the step’s Sequence menu in the Sequence List panel, and then click the sequence in the menu that appears.

To set how many times a sequence repeats, click and drag the step’s Rpts field (next to the sequence name) up or down.
Exporting the Song

Want to share your new song? Just export it first.

To export a song:

1. Click the menu icon (≡), and go to File > Export and click As Audio Mixdown.
2. In the Audio Mixdown screen that appears, do the following:
   - Make sure the Start bar field is set to 1, and set the End bar field to the last bar of your song.
   - Click and drag the Audio tail field to set it to 2 seconds.
   - As you’ll likely share the song online, click the mp3 file format option under File format.
3. Click Export and choose where you want to save the song.
   To name the song, click the File field, type a name, and then click Save or press Enter to start exporting.
Other Features Explained

This chapter describes various advanced features. For fuller explanations of these features, please refer to their corresponding sections in the Operation chapter.

Step Sequencer

You’ve already learned how to record note events on a track, but you can quickly enter note events in the Step Sequencer by using the pads as “step buttons,” simulating the experience of a traditional step-sequencer-style drum machine.

To enter the Step Sequencer, do one of the following:

- Click the step-bars icon in the toolbar. If it is not shown, click the down arrow (▼), and click Step Sequencer.
- Click the menu icon (≡), select View > Mode, and click Step Sequencer.

Let’s create a sequence on a new track:

1. In the Inspector on the left edge of the window, click the Track field, and then select an (unused) track.
2. If the left-most four-pads icon in the Track section is not selected, click it. This indicates that the track is using a drum program.
3. Click the list icon in the Track section in the Inspector, and click Length so it is selected.
4. Click and drag the Length field in the Track section up or down to set a length for the track. If you select the minimum value, Sequence, the track will be however long your sequence is.
   **Tip**: This lets you maintain tracks of different lengths. For instance, you could play a 1-bar drum sequence repeatedly under a 4-bar bass line.
5. Click the Bar ← / ▶ buttons at the top of the Pads panel to select the bar whose steps you want to create or edit. The bar number will appear in the field.
6. Click the pad or sample name in the grid to select the pad whose steps want to create or edit. Alternatively, click and drag the Pad field in the Pads panel up or down; or click Pad Select, click a pad, and then click Pad Select again.
7. Click Play (►) to start your sequence.
8. Each pad represents a step in the bar. If the pad already has note events on the selected track, the corresponding pads (steps) will be lit with colors corresponding to their velocities.
   **To enter a note at a step**, click an unlit pad. The pad will light up with a color corresponding to its velocity.
   **To delete the note from a step**, click a lit pad. The pad will become unlit.

See Operation > Modes > Step Sequencer to learn more about this feature.
Drum Loops & Chop Mode

Modern music producers often use drum loops to add grit and nuance to programmed beats. This section explains how to use Sample Edit Mode to work with drum loops.

To enter Sample Edit Mode, do one of the following:

- Click the waveform-and-flags icon in the toolbar. If it is not shown, click the down arrow (▼), and click Sample Edit.
- Click the menu icon (≡), select View > Mode, and click Sample Edit.

1. Use the Browser to locate a drum loop, and then double-click it to add it to the project’s sample pool. The loop does not have to match the tempo of anything in the project.

2. In the Project panel, click the drum loop you just loaded in the Samples column. If you do not see it, click All Samples in the Project column.

3. In the Q-Links panel, click Chop to enter Chop Mode, which will let us cut the drum loop into slices.

4. Click the Chop To menu, and then click Threshold.

5. Below that, click the Threshold field and drag it up or down to set a value. The lower the threshold, the more slices will be created. Be sure to select a value so that every transient peak of the drum loop has a corresponding slice marker.

   Tip: Each slice will be automatically assigned to a pad: Pad A01 plays Slice 1, Pad A02 plays Slice 2, etc. Press each pad to play the slice with the same number.
Let’s use this chopped sample to create a new program in which each of these slices is an individual sample. We can also automatically create corresponding note events to play back these slices sequentially.

1. In the Extract New Samples section, click New Program.
2. Make sure the Convert To menu is set to New Program with New Samples is selected. If it is not, click it, and select that option.
3. Make sure Crop Samples is selected. If it is not, click it.
4. Make sure Create New Program is selected. If it is not, click it.
5. Make sure Create Events is selected. If it is not, click it.
6. Click and drag the Bars field up or down to select how many bars the entire sample should use in your program.
7. Click Do It to proceed. Each slice will be assigned to a pad, and each pad will have a recorded note event in the track. When you play that track, it will play each pad (each slice) in the original order. Enter Main Mode to see how the sample appears in your sequence.
8. Click Play and listen to how the drum loop matches your sequence’s tempo.
You can also edit the note events of the drum loop slices—stay in Main Mode to do this. A new track with the note events playing their corresponding slices has been automatically created.

Use the **Time Correct** window to quantize the note events so they fall on exact, even time intervals.

To show the **Time Correct** window, click the menu icon (≡), and go to **Edit > Time Correct** and click **Settings**.

You can also rearrange the note events, thus creating a new playback order for the slices. You can also edit each slice or sample in Program Edit Mode. You can add effects for slices or use the filter function to change the frequency range of a selected slice. There are limitless possibilities!

See **Operation > Modes > Sample Edit Mode > Chop Mode** to learn more about this feature.
Pad Muting & Track Muting

Pad Mute Mode and Track Mute Mode let you silence different pads and tracks to see what the sequence sounds like without those samples or parts.

To enter Pad Mute Mode, do one of the following:
• Click the X-in-square icon in the toolbar. If it is not shown, click the down arrow (▼), and click Pad Mute.
• Click the menu icon (≡), select View > Mode, and click Pad Mute.

1. Press Play to play the sequence.
2. In the Inspector on the left edge of the window, click the Track field, and select a track that uses a drum program.
3. Mute a pad by clicking it. The muted pad will be lit red. You can mute multiple pads at the same time.

See Operation > Modes > Pad Mute Mode to learn more about pad mutes.

You can also mute entire tracks by using the similar Track Mute Mode.

To enter Track Mute Mode, do one of the following:
• Click the bars-and-X icon in the toolbar. If it is not shown, click the ▼ icon, and click Track Mute.
• Click the menu icon (≡), select View > Mode, and click Track Mute.

1. Press Play to play the sequence.
2. In the Inspector on the left edge of the window, click the Sequence field, and select the desired sequence.
3. Each pad is assigned to a track. Mute a track by clicking it. The pad will be lit red. You can mute multiple tracks at the same time.

Tip: To mute a track only at precise note intervals (“quantizing” your mutes, essentially), click the Time Correct menu, and click the desired musical value (e.g., 1 bar). Now, when you click a pad in Track Mute Mode, the mute will occur precisely at the beginning of the following time division (in this example, one bar). This lets you test musical combinations of patterns—the preliminary stage to building a song structure.

See Operation > Modes > Track Mute Mode to learn more about track mutes.
Sampling (Recording)

This section describes recording new samples of your own, which you can use in your projects.

**Important:** To record any audio, you need to connect an audio source to your MPC hardware or to your computer’s audio interface.

To enter the Sampler, do one of the following:

- Click the vinyl-and-tonearm icon in the toolbar. If it is not shown, click the down arrow (▼), and click Sampler.
- Click the menu icon (≡), select View > Mode, and click Sampler.

1. Connect an audio source to the input/inputs of your MPC hardware or computer’s audio interface.
2. In the channel strip in the Sampler panel, click the input menu (Input __), and select the input channels for your audio source.
3. On your MPC hardware or computer’s audio interface, set the input level while playing your audio source. You should now see the level in the meter. Make sure it does not exceed the maximum level (the meter should not be “peaking” constantly).
4. Click and drag threshold slider to set the threshold. Set it to a fairly low level (e.g., -50 dB).
5. Click Arm to record-arm the Sampler.
6. Play your audio source. The Sampler will start recording immediately when the input level reaches the threshold value. Alternatively, click the round Record button or press Enter to manually start recording.
7. To stop recording, click the round Stop button or press Enter. The Keep or Discard Sample window will appear.

In the Keep or Discard Sample window:

**To name the new sample,** click the New Name field, type a name, and press Enter.

**To assign the new sample to a program,** click the Program menu and select the desired program.

**To assign the sample to a pad in the program,** click and drag the Assign to Pad field up or down, or press the desired pad on your MPC hardware.

**To save the recording,** click Save.

**To play the recording,** click Play.

**To discard the recording and close the window,** click Discard.

**To confirm your selections,** click Keep.

**To edit the recording in Sample Edit Mode,** click Edit.

See **Operation > Modes > Sampler** to learn more about this feature.
Sample Editing

You may need to edit your newly recorded samples using Sample Edit Mode.

To enter Sample Edit Mode, do one of the following:

- Click the waveform-and-flags icon in the toolbar. If it is not shown, click the down arrow (▼), and click Sample Edit.
- Click the menu icon (≡), select View > Mode, and click Sample Edit.

In Sample Edit Mode:

To switch between Trim Mode and Chop Mode, click the Trim, Chop, or Program tab in the Q-Links panel. In this example, use Trim Mode.

To set the sample’s start point, click and drag the green start point marker left or right. You can also use the Q-Link knobs to adjust the start point with varying degrees of resolution. Alternatively, click the value in the Start field in the Parameters panel (in the lower half of the window), type a new value, and press Enter.

To set the sample’s end point, click and drag the red end point marker left or right. You can also use the Q-Link knobs to adjust the start point with varying degrees of resolution. Alternatively, click the value in the End field in the Parameters panel (in the lower half of the window), type a new value, and press Enter.

To hear your edits, click Pad 10 while in Trim Mode to play the sample from the start point to the end point.
Let’s apply some processing to the sample.

To show or hide the Parameters panel, click Parameters below the sample waveform.

1. In the Parameters panel, click Pitch Shift to change the overall pitch of your sample. This will transpose the sample without affecting its length.

2. To set the pitch shift amount, click and drag the Pitch field up or down. Alternatively, click the Pitch field, type a value, and press Enter. To close the window, click Cancel or press Esc.

3. To confirm your selections, click Do It.
   To cancel the process, click Cancel or press Esc.

See Operation > Modes > Sample Edit Mode to learn more.
Recording Automation with Q-Link Knobs

Automating various parameters is a good way to add some motion and dynamism to your sequences.

1. In Main Mode, click a pad that has a sample assigned to it—ideally one that is played multiple times throughout the sequence, so you can hear the automated changes across several notes.

2. In the Q-Links panel, click the Q-Link Mode menu and select Pad Scene. This enables the Q-Link knobs to control various automatable parameters for that pad.

3. On the program channel strip, click the automation button under the Mute (M) button until it shows the red Write (W) option. This ensures your track will record the automation.

4. Record the automation using your MPC hardware:
   i. Press Play to start it.
   ii. Turn any of these Q-Link knobs (for example) to record their movement: Q1 (Level), Q2 (Pan), Q12 (Tuning).
   iii. Press Stop to finish the automation recording.

5. On the program channel strip, click the automation button under the Mute (M) button until it shows the green Read (R) option. This ensures your track uses the automation you just recorded when you play it back.

Want to see what you’ve recorded? In the software, to the left of the velocity lane under the grid, click the name of the parameter you automated (Level, Pan, or Tuning). The automation curve will appear in the lane. If part of the curve is still not quite what you want, select the pencil tool above the grid and draw in your own automation curve.

See Operation > General Features > Automation to learn more about this.

Using MPC as a Plugin

If you’re working with other audio software, you can use the MPC software as an instrument plugin (VST, AU, or AAX format) within your host software.

Important: Some of the MPC software’s keyboard shortcuts may not work if you are using the MPC software as a plugin (due to those shortcuts being used by your host DAW instead). Go to Help > Software Information and select Keyboard Shortcuts to view a complete list of shortcuts within the MPC software.

Additionally, when using MPC as a plugin on Windows, some fields may not be able to be typed into. The delete shortcut to erase selected notes can still be used by pressing Alt + Del.

Note: To learn how to load and use an instrument plugin in a host application, please refer to the corresponding chapter of your host application’s manual.
Operation

This chapter explains the complete features and functions of the MPC software.

General Features

Programs

About Programs

Each track you create within a sequence uses a program. There are six types of programs, each of which determines how the track sounds or what it is used for. A single project can hold up to 128 programs. This chapter covers how to create each program type.

To learn about editing your programs to your preference, see the Modes > Program Edit Mode chapter.

A **drum program** uses one or more samples as its sound source. It contains (1) a list of samples and (2) the settings for each sample (i.e., pad assignments, loop points, pitch tuning, effects, etc.). Drum programs are used mostly for creating drum parts and quickly and easily assigning samples to pads. See Drum Programs for more information.

A **keygroup program** uses one or more samples as its sound source. It contains (1) a list of samples and (2) the settings for each sample (i.e., pitch tuning, effects, etc.). Keygroup programs are used to play samples chromatically with a MIDI keyboard or the MPC pads. See Keygroup Programs for more information.

A **plugin program** contains an instance of a plugin through which you can send your track’s MIDI data. See Plugin Programs for more information.

A **MIDI program** lets you send your track’s MIDI data to an external MIDI device like a synth or drum machine. See MIDI Programs for more information.

A **clip program** uses several samples that can be looped (clips). Each clip can be assigned to a pad, which you can press to trigger the clip according to a quantization setting. This lets you create intriguing, layered performances by launching different combinations of clips together. See Clip Programs for more information.

A **CV program** lets you send your track’s MIDI data to an external MIDI device that uses control voltage (CV), like a synth. Although this option is selectable, it is usable only with MPC hardware that has CV outputs (e.g., MPC X). See CV Programs for more information.
Drum Programs

A drum program uses one or more samples as its sound source. It contains (1) a list of samples and (2) the settings for each sample (i.e., pad assignments, loop points, pitch tuning, effects, etc.). Drum programs are used mostly for creating drum parts and quickly and easily assigning samples to pads.

To create a drum program:

1. In the **Inspector**, click the four-squares icon below the **Track** field, which indicates a drum program. (Click the i icon to show or hide the Inspector. See **Inspector** to learn more.)

2. If the project does not contain a drum program yet, a new drum program (named **Program**, appended with a number) will be added automatically to the project and appear in the **Program** field below.

   If the project already contains a drum program, the first one will be selected automatically and appear in the **Program** field below.

   **To create another drum program**, click the + icon above the **Program** field. A new drum program will be created and appended with a number (e.g., **Program 002**).

   **To rename the program**, double-click the **Program** field, type a name, and press Enter.

To load a sample into a drum program:

1. In the **File Browser**, find a sample you want to use. (Click the hard-drive icon in the lower-right corner to show or hide the File Browser. See **Browser** to learn more.)

2. Click and drag the sample from the Browser onto the desired pad. Alternatively, double-click the sample to load it to the sample pool without loading it to a specific pad.

   **To assign samples to additional pads**, repeat Steps 1–2.

   **Tip**: Remember that a drum program has 128 pads total—16 pads across eight banks.

Alternatively, assign samples in a drum program this way:

1. Click the four-pads icon in the toolbar to enter Program Edit Mode.

2. In the bottom half of the window, scroll to the right to find the **Sample Layers** section. This lets you view the samples assigned to all four layers of the drum program as well as tuning and level parameters for each layer.

3. Click a pad to select it (and play its assigned samples, if any). The pad will be lit green.

4. Click the menu for a layer, and select a sample.

   **Tip**: Remember that a drum program has 128 pads total—16 pads across eight banks.
Keygroup Programs

A keygroup program uses one or more samples as its sound source. It contains (1) a list of samples and (2) the settings for each sample (i.e., pitch tuning, effects, etc.). Keygroup programs are used to play samples chromatically with a MIDI keyboard or the MPC pads.

To create a keygroup program:

1. In the Inspector on the left edge of the window, click the piano-keys icon below the Track field, which indicates a keygroup program. (Click the i icon to show or hide the Inspector. See Inspector to learn more.)

2. If the project does not contain a keygroup program yet, a new keygroup program (named Program, appended with a number) will be added automatically to the project and appear in the Program field below.

   If the project already contains a keygroup program, the first one will be selected automatically and appear in the Program field below.

   To create another keygroup program, click the + icon above the Program field. A new keygroup program will be created and appended with a number (e.g., Program 002).

   To rename the program, double-click the Program field, type a name, and press Enter.

To load a sample for your keygroup program into the project:

1. In the File Browser, find a sample you want to use. (Click the hard-drive icon in the lower-right corner to show or hide the File Browser. See Browser to learn more.)

2. Click and drag the sample from the Browser onto any space outside of the Browser. Alternatively, double-click the sample to load it to the sample pool.

   To load additional samples, repeat Steps 1–2.
To assign samples in a keygroup program:

1. Click the **four-pads icon** in the toolbar to enter Program Edit Mode.
2. In the bottom half of the window, scroll to the right to find the **Sample Layers** section. This lets you view the samples assigned to all four layers of the current keygroup as well as tuning and level parameters for each layer.
3. Click a pad to select it (and play its assigned samples, if any). The pad will be lit green.

   **Tip:** In the **Pads** panel, click the **Pad Bank D** button to and click **Pad 13**. You should hear the sample played back with its original pitch. You can use the other pads to play your sample chromatically.

4. Click the menu for a layer, and select a sample.

To create complex keygroup programs, you can add more keygroups (up to 128). This is useful when working with multi-samples (e.g., when programming a real piano).

**Tip:** Remember that a keygroup program offers up to 128 keygroups, and each keygroup can hold up to four samples (Layers 1–4). This is a total of 512 samples.
Plugin Programs

A plugin program contains an instance of a plugin through which you can send your track’s MIDI data. This lets you use the same instance of a plugin with multiple tracks (rather than load an instance of a plugin on every track, which can be cumbersome and CPU-intensive). See the Plugins chapter to learn about scanning and selecting plugins.

To create a plugin program:

1. In the Inspector on the left edge of the window, click the plug icon below the Track field, which indicates a plugin program. (Click the i icon to show or hide the Inspector. See Inspector to learn more.)

2. If the project does not contain a plugin program yet, a new plugin program (named Plugin, appended with a number) will be added automatically to the project and appear in the Program field below.
   - If the project already contains a plugin program, the first one will be selected automatically and appear in the Program field below.
   - To create another plugin program, click the + icon above the Program field. A new plugin program will be created and appended with a number (e.g., Plugin 002).

3. Click the Plugin menu. In the list that appears, click the desired plugin.
4. Click Select to select the plugin, or click Close to cancel.
   - Note: You have to specify the disk directory where your plugins are located. This can be done in the software’s Preferences. See Preferences to learn more.

5. Next to the Program field, click the menu icon (≡) and click All so it is selected. This will show all settings.
   - To select the MIDI channel the program will use, click the Input Ch menu, and click the desired channel. Use this setting when you are working with a virtual instrument plugin that supports multi-mode.
   - To select a preset in your plugin (if any), click the Preset menu, and click the desired preset.
   - To rename the program, double-click the Program field, type a name, and press Enter.

To adjust the volume and panning of a track using the plugin program:

1. Click the three-sliders icon in the toolbar to enter the Channel Mixer.
2. In the bottom half of the window, click the channel strip that represents the track with the plugin program to select it. (If you do not see it, make sure the MIDI Tracks button between the grid and channel strips is on.)
3. Click and drag the volume slider or pan knob up or down to adjust it.

Important:
If you copy a sequence, the volume and pan values will be copied with that sequence. This is also true if you move to a new sequence and put the same plugin program on a new track.

By default, some plugins do not support MIDI volume and pan. In this case, adjust volume levels and panning on the plugin program channel strip instead of the track channel strip.
MIDI Programs

A MIDI program lets you send your track’s MIDI data to an external MIDI device like a synth or drum machine.

To create a MIDI program:

1. In the Inspector on the left edge of the window, click the MIDI-jack icon below the Track field, which indicates a MIDI program. (Click the i icon to show or hide the Inspector. See Inspector to learn more.)

2. If the project does not contain a MIDI program yet, a new MIDI program (named Midi, appended with a number) will be added automatically to the project and appear in the Program field below.

   If the project already contains a MIDI program, the first one will be selected automatically and appear in the Program field below.

   To create another MIDI program, click the + icon above the Program field. A new MIDI program will be created and appended with a number (e.g., Midi 002).

3. There are five additional settings to configure for a MIDI program: the MIDI Port, program change message (Prog Ch), MIDI channel (Midi Ch), Most Significant Byte (Bank), and Least Significant Byte (Bank LSB). See Modes > Main Mode to learn more.

   Next to the Program field, click the menu icon (≡) and click All so it is selected. This will show all settings.

   To configure each setting, click its menu, and click the desired option.

   Note: You also have to configure the MIDI ports in the software’s Preferences. See Preferences to learn more.

   To rename the program, double-click the Program field, type a name, and press Enter.

To adjust the volume and panning of a track using the MIDI program:

1. Click the three-sliders icon in the toolbar to enter the Channel Mixer.

2. In the bottom half of the window, click the channel strip that represents the track with the MIDI program to select it. (If you do not see it, make sure the MIDI Tracks button between the grid and channel strips is on.)

3. Click and drag the volume slider or pan knob up or down to adjust it.

   Important: If you copy a sequence, the volume and pan values will be copied with that sequence. This is also true if you move to a new sequence and put the same MIDI program on a new track.
Clip Programs

A clip program uses several samples that can be looped (clips). Each clip can be assigned to a pad, which you can click or press to trigger the clip according to a quantization setting. This lets you create intriguing, layered performances by launching different combinations of clips together.

By default, the 16 pads are divided into four columns of four pads. Each column represents a mute group; when a pad is playing a clip, all other pads in that same mute group are turned off. This enables you to launch a clip without having to manually stop other clips that are similar. For instance, pressing Pad 2 may launch a bass clip. You could then press Pad 6, which launches another bass clip and stops the clip on Pad 2. This way, you'll never be playing two bass clips simultaneously.

The four-columns pad configuration described above is just a default to make things easy (e.g., you could use the first column for drum clips, the second for bass clips, the third for keyboard clips, and the fourth for vocal clips.). You can use Program Edit Mode to assign pads to any combination of mute groups you want.

To create a clip program:

1. In the Inspector on the left edge of the window, click the play-button icon below the Track field, which indicates a clip program. (Click the i icon to show or hide the Inspector. See Inspector to learn more.)

2. If the project does not contain a clip program yet, a new clip program (named Clip, appended with a number) will be added automatically to the project and appear in the Program field below.

   If the project already contains a clip program, it will be selected automatically and appear in the Program field below.

   To create another clip program, click the + icon above the Program field. A new clip program will be created and appended with a number (e.g., Clip 002).

   To rename the program, double-click the Program field, type a name, and press Enter.

To load a clip into a clip program:

1. Click the house icon in the toolbar to enter Main Mode.

2. In the File Browser, find a loop you want to use. (Click the hard-drive icon in the lower-right corner to show or hide the File Browser. See Browser to learn more.)

3. Click and drag the loop from the File Browser onto the desired pad. Alternatively, double-click the loop to load it to the sample pool without loading it to a specific pad.

   To assign clips to additional pads, repeat Steps 2–3.
Alternatively, assign clips in a clip program this way:

1. Click the **four-pads icon** in the toolbar to enter Program Edit Mode.
2. In the bottom half of the window, find the **Program** section. This lets you configure the settings for each pad in the clip program.
3. Click a **pad** to select it (and play its assigned samples, if any).
4. Click the **Pad** menu above the **Start** and **End** times, and select a clip.

   **To assign clips to additional pads,** repeat Steps 3–4.

   **To clear the assigned clip from a selected pad,** repeat Step 5 but select **None**.

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**CV Programs**

A CV program lets you send your control voltage (CV) signals to an external MIDI device like a synth or drum machine that uses CV.

**Important:** CV programs are available only while using an MPC model with CV outputs (e.g., MPC X).

To create a CV program:

1. In the **Inspector** on the left edge of the window, click the **CV icon** below the **Track** field, which indicates a CV program. (Click the **i** icon to show or hide the Inspector. See **Inspector** to learn more.)
2. If the project does not contain a CV program yet, a new CV program (named **CV**, appended with a number) will be added automatically to the project and appear in the **Program** field below.

   If the project already contains a CV program, it will be selected automatically and appear in the **Program** field below.

   **To create another CV program,** tap the **+** icon above the **Program** field. A new CV program will be created and appended with a number (e.g., **CV 002**).
3. There are five additional settings to configure for a CV program: the **CV Port**, **Gate Port**, modulation wheel port (**Md.Wheel**), velocity port (**Vel Port**), and note tracking (**Note**). See **Modes > Main Mode** to learn more.

   Next to the **Program** field, click the **menu icon** (≡) and click **All** so it is selected. This will show all settings.

   **To configure each setting,** click its menu, and click the desired option.

   **To rename the program,** double-click the **Program** field, type a name, and press Enter.
This chapter describes the available options in the toolbar at the top of the software window.

Not all elements of toolbar are shown by default. For instance, some mode icons and transport controls are hidden. Furthermore, you can choose to hide parts of the toolbar that are shown.

To select or deselect the items you want to see in the toolbar, click the menu icon (≡) in the upper-left corner and select View. See View > Toolbar for more information.

Menu

To access the software's menu, click the menu icon (≡) in the upper-left corner of the window.

 macOS Users: Five items in this section appear differently on macOS than listed below: Exit/Quit MPC, Preferences, Check for Updates, Expansion Store, and About MPC are located in the MPC menu next to the apple icon (rather than the menus listed below).

Tip: Several selections in the menu can be made by using computer keyboard shortcuts. You can see these keyboard shortcuts next to these selections in the menu. Go to Help > Software Information and select Keyboard Shortcuts to view a complete list of shortcuts within the MPC software. Some of these shortcuts may not work if you are using the MPC software as a plugin (due to those shortcuts being used by your host DAW instead). Additionally, when using MPC as a plugin on Windows, some fields may not be able to be typed into.

File

- **New Project** creates an empty project. Use this command when you want to start a project from scratch.
- **New From Template** loads a user-defined project template. We recommend creating a project with the basic settings that suit your needs and saving it as a project template for easy access. See Preferences > Project Load/Save to learn how to set this template.
- **Load Recent** provides shortcuts to the last 10 files you have been recently working with. The list is chronological with the most recent file at the top.
- **Save Project** saves the current project. In the window that appears, name your project and select a save location. The samples in the Project panel will be automatically saved with the project. The project file (.xpj), and its information (samples, MIDI files, program files, etc.) will be saved in a folder with the same name on the same folder level.
- **Save Project As** is identical to the Save Project function but lets you save the current project with a new name.
- **Save All Programs** saves all programs of your project.
- **Save Current Program** saves only the current program (.xpm).
- **Save Current Sequence** saves only the current sequence (.sxq).
- **Save MIDI Control Scene** saves your control map as set in MIDI Control Mode (.mcn). See Modes > MIDI Control Mode chapter for more information about creating a control map.
- **Export** lets you export your project or sequence data in various formats: a single project archive file, MPC formats, a standard MIDI file, or as an audio mixdown file. Select the desired option from the sub-menu.
  - **As Project Archive** exports the entire project as a project archive file (.xpa). In the window that appears, type a file name and set the save location. This option is useful when you want to transfer a project between different computers without dealing with its component files.
  - **As Pattern** exports the track (for the current sequence only) as a pattern (.mpcpattern).
  - **As MPC1000/MPC2500 Sequence** exports the current sequence so it can be read by an MPC1000 or MPC2500 (.seq).
  - **As MPC1000/MPC2500 Program** exports the current program so it can be read by an MPC1000 or MPC2500 (.pgm).

  **Important:** Program samples must be 16 bit in order to work with MPC100/MPC2500. Make sure to convert 24 bit samples to 16 bit prior to exporting the program. The export program process will not convert samples.
- As MPC5000 Sequence exports the current sequence so it can be read by an MPC5000 (.mid).
- As MPC5000 Program exports the current program so it can be read by an MPC5000 (.50s).
- As MIDI Sequence File exports the sequence as a standard MIDI file (.mid). In the window that appears, type a file name and set the save location. This option is useful when you want to import your sequences into separate sequencer software or exchange them with another artist.
- As MIDI Track File exports the track as a standard MIDI file (.mid). In the window that appears, type a file name and set the save location. This option is useful when you want to import your tracks into separate software or exchange them with another artist.
- As Audio Mixdown exports the sequence or song as an audio file. See the Audio Mixdown chapter for more information about this process. If you are in Song Mode, it will affect the entire song. If you are in any other mode, it will affect the current sequence only.
- As Ableton Live Set exports the current sequence as an Ableton Live Set (.ALS) file. See Addenda > Updates in v2.6 > New Features > Ableton Live Set Export for more information.
- Expansion exports MPC Expansion Packs (installed on your computer) to your MPC X, MPC Live, MPC Live MKII or MPC One for use in its Standalone Mode. See the Expansions chapter for more information about this process.

**Exit** closes the software. (On macOS, this is named Quit MPC and is located in the MPC menu next to the apple icon.) If you have not saved any changes made to a currently open project, it will prompt you to do so before quitting.

**Edit**

- **Undo** undoes the last action you performed. When there are no actions left to undo, this command will be unavailable and appear grayed out.
- **Redo** undoes the Undo command. You can continue redoing actions until there are no items left to redo, in which case, the Redo command will be unavailable and appear grayed out.
  - **Important:** If you perform a new action when the Redo command is available, you will no longer be able to redo. In other words, as soon as you perform an editing action other than Undo, Redo is no longer available.
- **Undo History** lets you view a list of previously executed commands in the Undo History panel. As you undo and redo commands, you can see your current “position” in the list of commands in the window.
  - **Tip:** To revert to a previous “state” in your project, click and drag the point just after the last step. Any “undone” steps will be grayed out. You can do the same to redo grayed-out steps, as well.
- **Cut** removes selected events from the grid and copies it to the clipboard. After cutting events, you can paste or insert them at another location in the same or another sequence.
- **Copy** copies selected events from the grid to the clipboard without removing them. After copying events, you can paste or insert them at another location in the same or another sequence.
- **Paste** lets you to paste the contents of the clipboard at the position marker’s current location.
- **Select All** selects all events or audio track regions in the current sequence and track.
- **Deselect** deselects all events or audio track regions in the current sequence and track.
- **Nudge Event Left/Right by TC** shifts the selected event/events left or right (respectively) by one tick.
- **Nudge Event Left/Right by Tick** shifts the selected event/events left or right (respectively) by one tick.
- **Time Correct** displays options for using time correct (quantization):
  - **Apply** quantizes the currently selected note events. If no note events are selected, nothing will be quantized.
  - **Settings** opens the Time Correct window where you can configure its settings. See the Time Correct chapter for more information about this.
- **Humanize** applies randomization to the timing, length, and/or velocity of MIDI events. See Addenda > Updates in MPC 2.2 > New Features > Humanize for more information about this.
- **Pitch Quantize** forces the pitches of note events on a MIDI track into a specific scale. See Addenda > Updates in MPC 2.1 > New Features > Pitch Quantization for more information about this.
- **Audio Region** provides options related to editing the current audio track region:
  - **Duplicate** copies and pastes the track region immediately after the original one.
  - **Mute** silences the track region.
  - **Reverse** reverses the track region.
  - **Warp** lengthens or shortens the track region without changing its pitch.
  - **Note:** The Warp algorithms are very CPU-intensive and can result in audio drop-outs during playback if used too freely. Be mindful of how (and how often) you use the warp function.
• Sequence provides options related to editing the current sequence:
  o Clear erases all tracks and their note events from the current sequence. After selecting this, click Clear to confirm your choice or Cancel to cancel it. This operation cannot be undone.
  o Half Length will immediately halve the length of the sequence (without deleting any note events).
  o Double Length will immediately double the sequence and copy all events from the first half to the second half.
  o Insert Blank Bars adds empty bars to a sequence at a specified point. See Editing Processes > Sequence for more information.
  o Delete Bars removes a range of bars from a sequence. See Editing Processes > Sequence for more information.
  o Copy Bars copies a range of bars from a sequence and adds them to another at a specified point. See Editing Processes > Sequence for more information.
  o Copy Events copies a range of events from a sequence and add them to another at a specified point. See Editing Processes > Sequence for more information.
  o Copy Sequence copies the contents of one sequence to another. See Editing Processes > Sequence for more information.
  o Copy Track copies the contents of one track to another. See Editing Processes > Sequence for more information.
  o Transpose transposes a range of events on a track in a sequence. See Editing Processes > Sequence for more information.
  o Erase erases all or part of a track in a specific sequence. See Editing Processes > Sequence for more information.
  o Events Double Speed immediately halves the lengths of all note events on all tracks in the sequence as well as the distance between them. In other words, all tracks’ notes are pressed closer together so the sequence sounds like it is playing at twice the previous speed. This does not actually affect the pitches of notes or the tempo.
  o Events Half Speed immediately doubles the lengths of all note events on all tracks in the sequence as well as the distance between them. In other words, all tracks’ notes are spread further apart so the sequence sounds like it is playing at half of the previous speed. This does not actually affect the pitches of notes or the tempo.
  o Next Sequence selects the next sequence. If you select this during playback, the next sequence will be selected when the current one is done playing.
  o Previous Sequence selects the previous sequence. If you select this during playback, the previous sequence will be selected when the current one is done playing.
  o Next Sequence Now selects the next sequence immediately.
  o Previous Sequence Now selects the previous sequence immediately.
  o Export as MIDI lets you export the current sequence as a standard MIDI (.mid) file. See Editing Processes > Sequence for more information.
  o Bounce to Sample immediately renders the sequence (all of its tracks) as an audio sample (.wav) and places it in the project’s sample pool. By default, it will be named Bounce - and appended with the sequence name. If you have already used this function on this sequence, then it will create another audio sample appended with the next-highest number.
  o Bounce to New Audio Track immediately renders the sequence (all of its tracks) as an audio track (.wav) in the project. The Audio tab will be automatically selected. By default, the sample will be named Bounce - and appended with a number. This function does not work for tracks that use MIDI programs or CV programs.

• Track provides options related to editing the current track:
  o Select All selects all events or audio track regions in the entire track.
  o Deselect deselects all events or audio track regions in the entire track.
  o Delete erases the entire audio track. This cannot be used on MIDI tracks.
  o Clear erases all note events from the current track.
  o Explode immediately splits the current track into multiple tracks—one for each distinct pad or note (pitch, not event). The current track also remains present and intact, while each track created from it is labeled with the track name and pad name or number.
- **Events Double Speed** immediately halves the lengths of all note events on the track as well as the distance between them. In other words, the track’s notes are pressed closer together so the track sounds like it is playing at twice the previous speed. This does not actually affect the pitches of notes or the tempo.

- **Events Half Speed** immediately doubles the lengths of all note events on the track as well as the distance between them. In other words, the track’s notes are spread further apart so the track sounds like it is playing at half of the previous speed. This does not actually affect the pitches of notes or the tempo.

- **Split Events** lets you split note events to create new rhythms and patterns. See *Addenda > Updates in MPC 2.3 > New Features > Split Events* for more information about this.

- **Next Track** selects the next track.

- **Previous Track** selects the previous track.

- **Export as MIDI** lets you export the current track as a standard MIDI (.mid) file. See *Editing Processes > Sequence* for more information. This cannot be used on audio tracks.

- **Bounce to Sample** immediately renders the track as an audio sample and places it in the project’s sample pool. By default, it will be named *Bounce* - and appended with the sequence name. If you have already used this function on this sequence, then it will create another audio sample appended with the next-highest number.

- **Bounce to New Audio Track** immediately renders the track (for the current sequence only) as an audio track in the project. The Main Mode will automatically switch to the Audio tab, and the original track will be muted. By default, it will be named *Audio* and appended with a number (e.g., *Audio 002*). This function does not work for tracks that use MIDI programs or CV programs. This cannot be used on audio tracks.

- **Program** provides options related to editing the current program:
  - **Pad Color** opens the Pad Color window where you can assign specific colors to your pads in each program. See *Pad Color* for more information.
  - **Note Mapping** opens the Note Mapping window where you can assign a MIDI note to each pad in a program.
  - **Flatten Pad** renders all samples on a pad as an audio sample and places it on the first layer of that pad. See *Editing Processes > Program* for more information.
  - **Tidy Keygroup Sample Names** automatically renames all samples belonging to a keygroup based on their keygroup, layer, and other information. This option is available only for keygroup programs.
  - **Duplicate** immediately creates an identical program. The duplicate program will use the same name but appended with a number (e.g., *Program 002*).
  - **Duplicate to New Track** immediately creates a identical program on a new track. The duplicate program will use the same name but appended with a number (e.g., *Program 002*). The new track will be named *Track* and appended with a number (e.g., *Track 06*).
  - **Merge** lets you copy the pads (and their parameters) from one program into another, essentially consolidating two programs into one. See *Editing Processes > Sequence* for more information.
  - **Delete** erases the program from the project. The samples used in that program will remain in the project’s sample pool and any other programs that use them.
  - **Rename** lets you enter a new name for the program. Type a name and click *OK* to continue or *Cancel* to return to the previous screen.
  - **Bounce to Sample** immediately renders all tracks that use that program (for the current sequence only) as an audio sample and places it in the project’s sample pool. By default, it will be named *Bounce* - and appended with the program name. This function does not work for MIDI programs or CV programs.
  - **Bounce to New Audio Track** immediately renders that program (for the current sequence only) as an audio track in the project. The Main Mode will automatically switch to the Audio tab. By default, it will be named *Audio* and appended with a number (e.g., *Audio 002*). This function does not work for MIDI programs or CV programs.
  - **Previous Preset** and **Next Preset** select presets when using a plugin program.
  - **Save Plugin Preset**... saves the current preset when using a plugin program.
  - **Load Plugin Preset**... lets you select a saved preset when using a plugin program.

- **Preferences** opens the Preferences window, which contains many customizable elements of the software. (On macOS, Preferences is located in the MPC menu next to the apple icon.) Click the corresponding tab on the left to select it (e.g., MIDI, Sequencer, etc.). Click the OK button to close the Preferences window. Preferences are automatically saved. See the Preferences chapter for more information about this.
Tools

- **Metronome**
  - **Count-In** enables or disables the metronome pre-count before recording.
    - **Off** disables the metronome pre-count.
    - **Record** enables the pre-count during recording only.
    - **Record + Play** enables pre-count in both Record and Playback Modes.
  - **Enable** offers the settings for the metronome.
    - **Off** disables the metronome.
    - **Play** enables the metronome sound during playback only.
    - **Record** enables the metronome sound during recording only.
    - **Record + Play** enables the metronome to happen in both Record and Playback Modes.
  - **Rate** lets you to select the metronome click’s time division: \(1/4, 1/4T, 1/8, 1/8T, 1/16, 1/16T, 1/32\) or \(1/32T\) (T indicates a triplet-based time division).
  - **Sound** lets you to select the sound that you want to hear for the metronome: **Sidestick 1**, **Sidestick 2**, **Clap**, **Metroclick**, **Shake**, **Tambourine**, or **MPC Click**.
  - **Output** lets you set where the metronome signal will be heard: a pair of master outputs (Out 1,2–31,32) or a single master output (Out 1–32).

- **16 Level** opens the 16 Levels window. See **16 Level** for more information.

- **Arpeggiator** opens the Arpeggiator window, a fully featured arpeggiator and phrase player for melodic program types. See **Addenda > Updates in MPC 2.3 > New Features > Arpeggiator** for more information about this.

- **MIDI Keys** enables or disables the use of your computer keyboard to enter or play a range of 17 MIDI notes, starting from a C. This is the same as using the **Keyboard** button in the toolbar.
  On standard US/American computer keyboard, use the **A**, **S**, **D**, **F**, **G**, **H**, **J**, **K**, **L**, and ; keys to play the white keyboard keys, and use the **W**, **E**, **R**, **T**, **Y**, **U**, **I**, **O**, and **P** keys to play the black keyboard keys. Press [ or ] to shift the range of playable notes up or down (respectively) by one octave.
  If the MIDI keyboard is shown, the corresponding computer keyboard character will be shown above each key (though you can still use MIDI keys even if it is hidden).

Enabling MIDI Keys disables Pad Keys.

**Tip:** Show the MIDI keyboard to visualize the keys in a traditional piano keyboard. See **Panels > MIDI Keyboard** to learn about this.

- **Pad Keys** enables or disables use of your computer keyboard to play the 16 pads of the current pad bank. This is the same as using the **Keyboard** button in the toolbar.
  On a standard US/American computer keyboard, use the keys as follows:
  - the **Z**, **X**, **C**, and **V** keys play **Pads 01, 02, 03**, and **04**
  - the **A**, **S**, **D**, and **F** keys play **Pads 05, 06, 07**, and **08**
  - the **Q**, **W**, **E**, and **R** keys play **Pads 09, 10, 11**, and **12**
  - the **1, 2, 3**, and **4** keys play **Pads 13, 14, 15**, and **16**

Enabling Pad Keys disables MIDI Keys.

- **Delete Unused Samples** deletes any samples not assigned to a pad from the project.
  **Important:** The samples will be deleted immediately from the project. The software will not ask for confirmation or allow you to cancel, but you can undo this action (i.e., with the Undo command or hardware button), if needed.

**Tip:** You can delete unused samples by clicking the trash can icon in the upper-right corner of the Project panel, as well.

- **Auto-Sampler** opens the Auto-Sampler window which lets you capture and convert any plugin preset or external instrument preset into a keygroup sampler patch. See **Addenda > Updates in MPC 2.3 > New Features > Auto-Sampler** for more information about this.

- **Generate Random Events** lets you create random melodic or drum patterns on the current MIDI track. See **Addenda > Updates in MPC 2.2 > New Features > Generate Random Events** for more information about this.
• **Convert To Progression** opens the **Convert Track to Progression** window that automatically detects the chords that are played on the currently selected track, which you can save as a chord progression. Use the **Name** field to enter a name for the progression.

The **Saved To** field indicates where the file is saved. The file will be saved as a `.progression` file in the **Progressions** folder in `[your hard drive]\Program Files\Akai Pro\MPC` (Windows) or `[your hard drive]/Users/[your user name]/Library/Akai/MPC/Progressions` (macOS).

Use the **Root Note** field to set the root note of the progression. This defines the starting note of the scale of the progression.

The **Chords Detected** field indicates how many chords were automatically detected in the track.

Use the **Scale Type** menu to select the scale or mode of the progression based on the **Root Note**.

The panel below lists the chords in the order they are played.

  - Click the red root note of a chord to play it. Click the text next to it to rename the chord.

  - Click and drag the **Type** field up or down to select whether the chord is played at its root note (**Root**), in the octave range as it appears in the track (**Normal**), above its root note (**AboveRoot**), or below its root note (**BelowRoot**).

  - The **Notes** column indicates how many notes were detected in the chord.

Click **Do It** to convert the track or **Cancel** to close the window without converting.

• **Rebuild Media Browser Database** resets and rescans your Media Browser. See **Browsers > Media Browser** to learn more about the Media Browser.

• **Retrospective Record** immediately captures recently played MIDI events and adds them to the current track.

• **Stop All Sounds** immediately stops all sounds within the software.

• **Plugin Manager** opens the **Plugins** window which contains a list of all available plugins, based on your selected plugin folders. This the same as clicking the gear icon in the lower-left corner of the effect selection menu. See the **Plugins** chapter to learn about this.

• **Expansion Manager** opens the **Expansions** window which contains a list of your MPC expansions. See the **Expansions** chapter to learn about this.

• **LCD Window** opens the **LCD** window, an emulation of the monochromatic display used on the MPC Renaissance or MPC Studio. Click the down arrow (▼) in the upper-right corner so it becomes an up arrow (▲) to keep the window on top at all times. Click it again to allow the window to be hidden under others. Click the X in the upper-right corner to close the window.

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**View**

• **Mode** lets you select from any of the available software modes. See **Modes** to learn about these.

• **Q-Link Mode** lets you select from any of the five edit modes for the Q-Link knobs. See **Panels > Q-Links** to learn about these.

• **Toggle Audio/MIDI Mode** lets you switch between viewing MIDI tracks and audio tracks. This is the same as clicking the **MIDI** or **Audio** tab at the top of the Inspector.

• **Workspace** lets you adjust what is shown in the MPC interface, allowing you to prioritize **Simple** or **Advanced** feature sets.

• **Toolbar** lets you select or deselect the items you want to see in the toolbar at the top of the window. This includes the **Mode Icons**, the **Timing Controls**, the **Transport Controls**, and overall **Status** indicators.

  - The **Toolbar Modes** submenu lets you select or deselect each mode icon. Selected ones will be shown in the toolbar. You can also select **All** to show all of them or **Default** to show the default ones (which we find are the most often used).

• **Inspector** lets you select or deselect the items you want to see in the Inspector on the left edge of the window. This includes the Inspector itself (**Show Inspector**), send effect knobs on the channel strips (**Sends**), and insert effect slots on the channel strips (**Inserts**). You can also select which channel strip you want to display: the pad channel strip (**Pad Channel**), the program channel strip (**Program Channel**), or the MIDI track channel strip (**MIDI Channel**). See **Inspector** to learn more about this.
• **Browser** lets you select or deselect options that determine how the Browser is shown on the right edge of the window. You can hide or unhide the Browser (Hidden); show the **File Browser**, **Expansion Browser**, **Media Browser**, **Project Information** Browser, **Project Notes** Browser, or **Undo History** Browser; show the **Quick Help** panel; or allow the Media Browser to show all tags. See **Browser** to learn more about this.

• **Editor** lets you select or deselect options that determine how the editor is shown in the top half of the window. You can show or hide the bottom panel (this is the same as clicking the two-panels icon in the lower-left corner of the main software window); show pad colors in the Grid Editor; show or hide the automation lane under the Grid Editor; or switch between the Grid Editor, Wave Editor, or List Editor (when each option is available, depending on the mode).

• **Show Mixer Window** lets you show the mixer window. This is the same as clicking the **two-sliders icon** in the lower-left corner of the main software window. See **Mixer Window** to learn more about this feature.

• **Show MIDI Keyboard** shows or hides a piano keyboard at the bottom of the window. You can use these keys to play or enter notes. See **Panels > MIDI Keyboard** to learn about this.

• **Zoom In At Playhead** and **Zoom Out At Playhead** zoom into or out of the Grid Editor or Wave Editor (respectively) while keeping the audio playhead or last-moved marker at the center.

• **Zoom In Vertically** and **Zoom Out Vertically** zoom into or out of the Grid Editor or Wave Editor (respectively).

• **Minimize** minimizes the MPC software window.

• **Full Screen** expands the MPC software window into a full-screen mode.

**Help**

• **Search** (macOS only) allows you to find results for specific search terms, which you can enter in this field.

• **Quick Help** shows or hides the **Quick Help** panel in the lower-right corner of the window under the Browser. This is the same as going to **View > Browser > Quick Help** or clicking the ? icon in the lower-right corner of the window. This panel is visible only when one of the Browsers is shown.

• **Keyboard Shortcuts** opens a window with a list of all available keyboard shortcuts to execute various actions in the MPC software.

> **Important:** Some of the MPC software’s keyboard shortcuts may not work if you are using the MPC software as a plugin (due to those shortcuts being used by your host DAW instead). Additionally, when using MPC as a plugin on Windows, some fields may not be able to be typed into. The delete shortcut to erase selected notes can still be used by pressing Alt + Del.

• **MPC Help** lets you open the user manual PDFs for the MPC software as well as the different types of MPC hardware that can control the MPC software.

• **Software Information** lets you open various items specific to this MPC software: the release notes PDF for this version of the MPC software (**MPC Release Notes**); the user manual PDF for Hybrid 3 (**Hybrid Instrument**).

• **Set Up Guides** lets you open a PDF with instructions on how to set up MMC control in this software (**MMC Control**).

• **Check for Updates** checks online for any available updates to the MPC software. (On macOS, **Check for Updates** is located in the **MPC** menu next to the apple icon.) You must have an internet connection to use this feature.

• **Expansion Store** opens an online store of available MPC Expansions on the Akai Professional website. (On macOS, **Expansion Store** is located in the **MPC** menu next to the apple icon.) You must have an internet connection to use this feature.

• **About MPC** opens a window with information about this MPC software. (On macOS, **About MPC** is located in the **MPC** menu next to the apple icon.)
Mode Icons

The mode icons let you select the current software mode.

Click a **mode icon** to enter its corresponding mode.

Click the **down arrow** (▼) to show a menu of all modes, and click a mode to enter it.

Timing Controls

Click the **metronome icon** at the top of the window to enable or disable the metronome.

Click and drag the **Metro** meter at the top of the window to set the volume of your metronome click.

The **Metronome** menu contains all settings regarding the metronome (click track).

To view the metronome settings, click the **menu icon** (≡), select Tools, and click Metronome. See Metronome for more information about this.

Click the **Sync** field to determine whether the MPC software receives MIDI Clock information (MIDI Clock), MIDI Time Code information (MTC), communication from Ableton Link, or none of these (Off). This is the same setting as the Receive menu in Sync tab of your Preferences. See Preferences for more information.

**Note:** Ableton Link is a new technology that synchronizes beat, phase and tempo of Ableton Live and Ableton Link-enabled applications over a wireless or wired network.

Click the **TC** icon to enable or disable Timing Correct.

Click the **TC** field to set the quantization value. Note events will “snap” to these time divisions on the grid. The T indicates a triplet-based value.

Click the **Swing** field to set the amount of swing from 50% to 75%. Swing lets you “shuffle” your beats—from subtle to extreme.

The **Timing Correct** window contains all settings to help quantize events in your sequence.

To open the Timing Correct settings, click the **menu icon** (≡), select Edit, select Time Correct, and click Settings…. See Time Correct for more information about this.

The time counter indicates the current playback position.

**To adjust the position**, click and drag each field up or down

**To switch the time increments**, click the **note icon** or stopwatch icon.

When set to **Beats** (note icon), the time is shown in Bars, Beats, and Ticks.

When set to **Time** (stopwatch icon), the time is shown in hours (HH), minutes (MM), seconds (SS), and frames (FF).

The MIDI monitor indicates incoming MIDI events.
Use the BPM field to adjust the tempo of the sequence. Click and drag it up or down, or double-click it, type a value, and press Enter. Alternatively, click Tap at the desired rate; the software will automatically detect the tempo.

Click the Seq/Mst button to set whether each sequence follows its own tempo (Seq) or a master tempo (Mst).

**Transport Controls**

Click Record (●) to record-arm the sequence. Click Play (▶) or Play Start (▶) to start recording. Recording in this way (as opposed to using Overdub) erases the events of the current sequence. After the sequence plays through once while recording, Overdub (⊕) will be enabled.

Click Overdub (⊕) to enable Overdub. When enabled, you can record events in a sequence without overwriting any previously recorded events. You can enable Overdub before or during recording.

Click Retrospective Record to immediately capture recently played MIDI events and add them to the current sequence at the playhead. This is useful for capturing performances when Record was not enabled.

After you record-arm the track and start playback, click Record from Sequence Start to start recording once the sequence loops back to its start. This is essentially a punch-in feature for the entire track, enabling you to start playing a record-armed track while allowing more time than the usual count-in to prepare for the actual recording to start.

Click Punch In to enable or disable the Punch In feature, which enables you to record over a specified length of time in the track. While recording, the entire sequence will play, but you will record over only the area between the Punch In and Punch Out markers, indicated by a red line below the blue timeline. Any part of the sequence before the Punch In marker or after the Punch Out marker will remain untouched, even if you perform over it during recording.

Click Stop (■) to stop playback. Alternatively, press the space bar. You can double-click this button to silence audio that is still sounding once a note stops playing. Quickly clicking this button three times will act as a “MIDI panic” and shut off all voices and stop all audio processing.

Click Play (▶) to play the sequence from the playhead’s current position.

Click Play Start (▶) to play the sequence from its start point.
Status

The In and Out boxes indicate the MPC software is receiving or sending (respectively) MIDI messages from or to your MPC hardware.

The CPU meter shows the software’s current usage of your computer’s CPU.

The automation button indicates the global automation state. See Automation to learn about this.

Use the Auto-Scroll selector to set how the editor behaves relative to the audio playhead.

- **Follow:** Depending on the zoom setting, the editor will scroll along in the background while keeping the audio playhead centered.
- **Page:** The editor will move to the “next page” to follow the audio playhead.
- **Off:** The editor will not move at all.

Click the Keyboard button to cycle through three options:

- **Off:** Pad Keys and MIDI Keys are off. Your computer keyboard will work normally.
- **Pad Keys:** Pad Keys is on, enabling your computer keyboard to play the 16 pads of the current pad bank. See Menu > Tools > Pad Keys to learn about this.
- **MIDI Keys:** MIDI Keys is on, enabling your computer keyboard to enter or play a range of 17 MIDI notes, starting from a C. See Menu > Tools > MIDI Keys to learn about this.

The volume meter shows the software’s master output level. Click and drag the volume slider to adjust it.
The **Inspector** is a panel on the left edge of the window that shows information about the current sequence, track, and program as well as two “dynamic” channel strips for convenient monitoring and mixing.

**To show or hide the Inspector**, do one of the following:
- Click the 𝘶 icon in the lower-left corner of the window.
- Click the menu icon (≡), go to View > Inspector, and select Show Inspector.

The **MIDI** and **Audio** tabs at the top of the Inspector determine whether it will show information about the project’s MIDI tracks or audio tracks. Click one to select it.

### Sequence

Click the > or ∨ next to the **Sequence** field to collapse or expand this section.

Click the **Sequence** field or down arrow (▼) to select a sequence.

Double-click the **Sequence** field to rename the sequence.

Click the small menu icon (≡) to select or deselect which items are shown in this section:
- **Bars**: the number of bars in the sequence
- **BPM**: the sequence tempo (as opposed to the master tempo)
- **Trans/Transpose**: the transposition of the sequence in semitones
- **Loop**: determines whether or not sequence playback will loop
- **Start**: the first bar of the sequence loop
- **End**: the last bar of the sequence loop
- **Time Sig/Time Signature**: the time signature of the sequence

Right-click the **Sequence** field to show a menu of some editing processes. See **Editing Processes > Sequence** for more information.

### Track

If the **MIDI** tab is selected, click the > or ∨ next to the **Track** field to collapse or expand this section. If the **Audio** tab is selected, this section cannot be expanded.

Click the **Track** field or down arrow (▼) to select a track.

Double-click the **Track** field to rename the track.

Click the small menu icon (≡) to select or deselect which items are shown in this section:
- **Type**: the type of program the track is using.
- **MIDI Input Port**: the input port where MIDI data is received.
- **MIDI Input Channel**: the MIDI channel that receives MIDI input data.
- **MIDI Out Port**: the output port where MIDI data is sent.
- **MIDI Out Channel**: the MIDI channel that sends MIDI output data.
- **MIDI Send**: an additional track where MIDI output data can be sent.
- **Monitor**: the monitoring behavior of the track.
- **Length**: the length of the track in beats. When set to **Seq**, the track will use the length of the sequence.
- **Velo/Velocity**: the velocity of the track
- **Trans/Transpose**: the transposition of the track in semitones
- **Mute/Solo**: Mute or Solo buttons for the track

Right-click the **Track** field to show a menu of some editing processes. See **Editing Processes > Track** for more information.
Program

The **Program** section is shown only when the **MIDI** tab at the top of the Inspector is selected.

Click the > or < next to the **Program** field to collapse or expand this section (when a plugin program, MIDI program, or CV program is selected).

Click the **Program** field or down arrow (▼) to select a program.

Double-click the **Program** field to rename the program.

Click the + next to the **Program** field to create a new program of the same type.

Click the small menu icon (≡) to select or deselect which items are shown in this section (when a plugin program, MIDI program, or CV program is selected):

**Plugin Program:**

- **Plugin:** the plugin that the program is using. See the **Plugins** chapter to learn about scanning and selecting plugins. Click the window icon next to the menu to show the plugin’s graphical user interface in a separate window.
- **Preset:** the preset/patch (if any) within the plugin.

**MIDI Ch/MIDI Channel:** the MIDI channel the program is using.

**MIDI Program:**

- **Prog Ch/Program Change:** the program change message the program sends out.
- **Bank:** the Bank message (Most Significant Byte or MSB) that the program sends out.
- **LSB:** the Least Significant Byte (LSB) message that the program sends out.

**CV Program:**

- **CV Port:** the CV port the program is using.
- **Gate Port:** the Gate port the program is using.
- **Md.Wheel/Mod Wheel:** the CV port the modulation wheel is using.
- **Vel Port/Velocity Port:** the CV velocity port.
- **Note/Note Tracking:** the CV program’s note track: lowest, highest or last.

Right-click the **Program** field to show a menu of some editing processes. See **Editing Processes > Track** for more information.
Channel Strips

The Inspector can display two “dynamic” channel strips, which vary slightly in appearance.

When the MIDI tab at the top of the Inspector is selected, you can select the pad channel strip, program channel strip, or MIDI/track channel strip.

When the Audio tab at the top of the Inspector is selected, you can show or hide the audio track channel strip only.

Pad & Keygroup Channel Strips

While using a drum program, keygroup program, or clip program, click the pad icon at the bottom of the Inspector. The pad or keygroup channel strip will be shown on the left side, and the corresponding program channel strip for that pad or keygroup will be shown on the right side.

The number of the pad or keygroup is at the bottom of the channel strip.

The Inserts slots show any enabled or disabled effects for that pad or keygroup. See Effects > Insert Effects to learn more about pad or keygroup insert effects.

Click and drag the Send knobs, which control the send levels for the pad or keygroup. A return channel strip will automatically be shown on the right side. Click anywhere in the lower half of the pad/keygroup channel strip to show the program channel strip again. See Effects > Send/Return Effects to learn more about pad or keygroup send/return effects.

The menu below the Send knobs shows the current pad or keygroup number. Press a pad or click the field to select a different pad or keygroup.

Tip: This is useful for mixing your pads or keygroups without having to enter the Pad Mixer.

The next menu below shows where the pad or keygroup is routed, which you can set to the current program (Program), a submix (Submix > Sub 1–8), a pair of master outputs (Stereo Output > Out 1,2–31,32), or a single master output (Mono Output > Out 1–32). Usually, this is set to Program.

Click M or S to mute or solo the pad or keygroup (respectively).

Adjust the pan knob or level slider to change the panning or level (respectively) of the pad or keygroup. The green level meter next to the slider shows the pad’s current volume level in dB.

See below for descriptions of the adjacent program channel strip.
Program Channel Strip

While using a drum program, keygroup program, clip program, or plugin program, click the **four-pads icon** at the bottom of the Inspector. The **program channel strip** will be shown on the left side, and its corresponding master or submix channel strip will be shown on the right side.

The name of the program is at the bottom of the channel strip.

The **Inserts** slots show any enabled or disabled effects for that program. See **Effects > Insert Effects** to learn more about program insert effects.

Click and drag the **Send** knobs, which control the send levels for the program. A **return channel strip** will automatically be shown on the right side. Click anywhere in the lower half of the **program channel strip** to show the master or submix channel strip again. See **Effects > Send/Return Effects** to learn more about program send/return effects.

The menu below the **Send** knobs the current program (which you can change).

The next menu below shows where the program is routed, which you can set to a submix (**Submix > Sub 1–8**), a pair of master outputs (**Stereo Output > Out 1,2–31,32**), or a single master output (**Mono Output > Out 1–32**).

Click **M** or **S** to mute or solo the program (respectively).

Click the **program automation button** to toggle between two possible states of program automation:

When set to **Read (R)**, the program will read automation data but will not record any additional automation over it. You can still manually edit and enter automation. (Think of this as a protective feature to prevent accidental changes to your automation while recording.)

When set to **Write (W)**, the program can record automation. (If you have any Q-Link knobs assigned to automatable parameters, make sure not to touch any accidentally while you are recording.)

**To disable or enable program automation**, hold **Shift** and click the **program automation button**. When off, the program will ignore automation data. If you have already recorded or entered automation, clicking this will switch between Read (R) and Write (W) only, but you can override this and turn it off by pressing and holding **Shift** while clicking the button.

**Important**: If you have already recorded automation and turn it off, the track will still use the effect and its parameter values at the point where you turned it off.

See **Automation** to learn about recording and editing automation.

**Tip**: You can quickly set all programs and audio tracks to the same automation by clicking the global automation button in the upper-right corner of the window.

Adjust the **pan knob** or **level slider** to change the panning or level (respectively) of the program. The **green** level meter next to the slider shows the program's current volume level in dB.

See **below** for descriptions of the adjacent master channel strip.
MIDI Track Channel Strip

While using a drum program, keygroup program, plugin program, or clip program, click the three-bars icon at the bottom of the Inspector. The MIDI track channel strip will be shown on the left side, and its corresponding program channel strip will be shown on the right side.

The first menu shows the track where the MIDI data is sent.

The second menus show the MIDI input port and channel.

Click M or S to mute or solo the track (respectively).

Click the monitor button to change the monitor behavior of the track.

- **Off**: The track's MIDI input is not monitored, and playback of recorded events will be heard. This setting is useful when using keyboards with Local Control active.

- **In**: The track's MIDI input is always monitored regardless of the track's Record Arm state, and playback from recorded events will not be heard.

- **Auto**: The track's MIDI input is monitored when the track is record armed, and playback of recorded events will be heard.

- **Merge**: The track's MIDI input is always monitored, and playback of recorded events will be heard.

Adjust the pan knob or level slider to change the panning or level (respectively) of the track. The green level meter next to the slider shows the track's current velocity level (0–127).

**Note**: If the track is using a plugin program, then the slider will send CC #7 (Volume) and the knob will send CC #10 (Pan) to your instrument plugin. The plugin will then handle these messages as it normally would.

See above for descriptions of the adjacent program channel strip.
Audio Track Channel Strip

While using an audio track, the audio track channel strip will be shown on the left side, and its corresponding master or submix channel strip will be shown on the right side.

The name of the track is at the bottom of the channel strip.

The first menu defines the input source of the external audio signal, which you can set to a pair of inputs (Stereo > Input 1,2–31,32) or a single input (Mono > Input 1–32).

The Inserts slots show any enabled or disabled effects for that track. See Effects > Insert Effects to learn more about audio track insert effects.

Click and drag the Send knobs, which control the send levels for the track. A return channel strip will automatically be shown on the right side. Click anywhere in the lower half of the audio track channel strip to show the master or submix channel strip again. See Effects > Send/Return Effects to learn more about audio track send/return effects.

The menu below the Send knobs shows where the track is routed, which you can set to a submix (Submix > Sub 1–8), a pair of master outputs (Stereo Output > Out 1,2–31,32), or a single master output (Mono Output > Out 1–32).

Click M or S to mute or solo the track (respectively).

Click the audio track automation button to toggle between two possible states of audio track automation:

- When set to Read (R), the audio track will read automation data but will not record any additional automation over it. You can still manually edit and enter automation. (Think of this as a protective feature to prevent accidental changes to your automation while recording.)
- When set to Write (W), the audio track can record automation. (If you have any Q-Link knobs assigned to automatable parameters, make sure not to touch any accidentally while you are recording.)

To disable or enable program automation, hold Shift and click the audio track automation button. When off, the audio track will ignore automation data. If you have already recorded or entered automation, clicking this will switch between Read (R) and Write (W) only, but you can override this and turn it off by pressing and holding Shift while clicking the button.

Important: If you have already recorded automation and turn it off, the track will still use the effect and its parameter values at the point where you turned it off.

See Automation to learn about recording and editing automation.

Tip: You can quickly set all programs and audio tracks to the same automation by clicking the global automation button in the upper-right corner of the window.

Click the Monitor button to set how your audio track will be monitored. Clicking it will cycle through its three states:

- When set to Auto, you will hear incoming audio while the track is record-enabled only.
- When on, you will hear incoming audio whether or not the track is record-enabled.
- When off, you will never hear any incoming audio.

Adjust the pan knob or level slider to change the panning or level (respectively) of the track. The green level meter next to the slider shows the track’s current volume level in dB.

Click the Record Arm () button to record-enable the track. When you begin audio recording, the audio signal will be recorded to this track.

Tip: You can record-enable multiple tracks in Track View Mode or in the Channel Mixer by pressing and holding Ctrl (Windows) or  (macOS) while clicking the Arm button to each track. You can also adjust the Record Arm behavior by changing the Rec Arm setting under Preferences > Sequencer.

See below for descriptions of the adjacent master channel strip.
Master & Submix Channel Strips

When viewing the master or submix channel strip:

The number of the pair of master outputs or submix are the bottom of the channel strip.

The Inserts slots show any enabled or disabled effects for those outputs or that submix. See Effects > Insert Effects to learn more about submix insert effects.

For submix channel strips, click and drag the Send knobs, which control the send levels for the track. See Effects > Send/Return Effects to learn more about submix send/return effects.

For submix channel strips, the menu below the Send knobs shows where the submix is routed, which you can set to a pair of master outputs (Stereo Output > Out 1,2–31,32) or a single master output (Mono Output > Out 1–32).

Click M to mute the master output or submix.

Adjust the pan knob or level slider to change the panning or level (respectively) of the outputs or submix. The green level meter next to the slider shows the outputs’ or submix’s current volume level in dB.
Browser

You can use the File Browser, Expansion Browser, and Media Browser to navigate your hard disks and other storage devices to load samples, sequences, projects, MPC Expansions/instruments, and other media. Using filter buttons and user-definable folders, you can easily adapt it to your preferred workflow. You can also audition (preview) samples before loading them.

You can also use the Project Info Browser, Project Notes Browser, and Undo History Browser to access and edit additional information about your project overall.

The MIDI Learn Browser lets you assign areas of the MPC software to external MIDI controllers. Global MIDI mappings are helpful if you use certain MIDI controllers across multiple projects. Project MIDI mappings are saved within a project, which can be helpful if your MIDI controller usage is particular to each one. See Addenda > Updates in MPC 2.2 > New Features > MIDI Learn for more information about this.

The Browser also includes the Quick Help panel. This panel is visible only when one of the Browsers is shown. Click the menu icon (≡), select Help, and then click Quick Help to show or hide this panel. Alternatively, click the ? icon in the lower-right corner.

You can also click the feedback button () to suggest a feature or report a bug. We always try to take your feedback into account as we continually improve the MPC experience!

To show or hide the Browsers, do one of the following:

- Click the menu icon (≡), select View > Browser, and then click the desired option: File Browser, Expansion Browser, Media Browser, Project Notes, or Undo History.
- In the lower-right corner, click the corresponding icon (as shown from right to left):
  - File Browser: hard-drive icon
  - Expansion Browser: list icon
  - Media Browser: six-rectangles icon
  - Undo History Browser: clock-and-arrow icon
  - Project Notes Browser: notebook icon
  - Project Info Browser: P/page icon
  - MIDI Assignment Browser: MIDI-controller icon
File Browser

When the File Browser is selected, you can do any of the following:

To move up one folder level, click the up arrow (↑) next to the file path.

To select a file or folder, click it once.

To enter a folder, double-click it.

To load a sample directly to a pad, click and drag the sample onto a pad in the lower half of the window.

To load a sample directly to an audio track, click and drag the sample onto the Grid Editor when the Audio tab is selected or onto an audio track when one is shown in the upper half of the window.

To load a selected file to the project’s sample pool, double-click it or click and drag it anywhere in the window outside of the File Browser. If the file is a sample, it will be loaded to the project’s sample pool. If the file is a project, it will be loaded in its entirety (you will be asked if you want to close your current project).

To load all files in a selected folder, click and drag the folder onto anywhere in the window outside of the File Browser.

To preview a selected sound, click and hold Play (▶) in the lower-left corner of the Browser.

To enable or disable the audition function and set its volume level, click the volume icon in the lower-left corner of the Browser. Click and drag the level slider left or right to set the volume level.

To sync and warp samples when auditioning, tap the sync icon and warp icon in the lower-left corner of the Browser. See Addenda > Updates in MPC 2.5 for more information.

To browse your files by search term, click the Search field and type a search term.

To get the most efficient use of the File Browser, set the file paths to your favorite drive locations first. There are five folder buttons labeled 1–5 at the top. You can set these to be shortcuts to five locations on your computer’s hard drive or any connected storage devices, giving you quick access to your files.

To assign the current location to a folder button, press and hold Shift, and then click one of the folder buttons (1–5). Now, when you click that folder button again, the File Browser will show that folder’s content immediately.

Use the five filter buttons to show only specific types of files in the list below. Folders will still be shown in the list.

To show project files only, tap the Proj/page button.

To show sequence files only, tap the Seq/bars button.

To show program files only, tap the Prog/four-squares button.

To show sample files only, tap the Sample/waveform button.

To show all file types, tap the All button.

To show or hide MPC project folders, tap the MPC folder icon in the lower-right corner.
Expansion Browser

When the **Expansion Browser** is selected:

Your available MPC Expansions will appear in the Browser, which you can expand or collapse.

MPC Expansions may have lists of patches that you can expand or collapse, as well.

**To preview a selected sound**, click and hold **Play (▶)** in the lower-left corner of the Browser.

**To enable or disable the audition function and set its volume level**, click the **volume icon** in the lower-left corner of the Browser. Click and drag the **level slider** left or right to set the volume level.

See *Expansions* to learn more about MPC Expansions.
Media Browser

When the Media Browser is selected:

Your MPC Expansions will appear under the Expansions panel, which you can expand or collapse.
You can filter through your media library in the Filter panel, which you can expand or collapse.
Use the Search field to browse your media by search term.

To preview a selected sound, click and hold Play (▶) in the lower-left corner of the Browser.

To enable or disable the audition function and set its volume level, click the volume icon in the lower-left corner of the Browser. Click and drag the level slider left or right to set the volume level.

Use the four filter buttons to show only specific types of files in the list below. Folders will still be shown in the list.

To show program files only, tap the Program/four-squares button.
To show project files only, tap the Project/page button.
To show sequence files only, tap the Sequence/bars button.
To show sample files only, tap the Sample/waveform button.

To enable or disable tags in the Media Browser, click the menu icon (≡), go to View > Browser, and select Media Browser Shows All Tags.

![Program filter + no tags selected.](image)

![Program filter + Kit and RbB tags.](image)

![Sample filter + Chill Trap and Kick tags.](image)
Project Info Browser

When the **Project Info Browser** is selected:

All available programs and sequences in the project will appear in the upper half of the Browser under **Projects**. A list of samples will appear in the lower half under **Samples** (the samples that are listed are part of the selected program or sequence under the **Project** list).

**To duplicate a program in the project**, right-click it and click **Duplicate**. An identical program will be created immediately. The duplicate program will use the same name but appended with a number (e.g., **Program 002**).

**To duplicate a program in the project and use it on a new track**, right-click it and click **Duplicate to New Track**. An identical program and new track that uses it will be created immediately. The duplicate program will use the same name but appended with a number (e.g., **Program 002**). The new track will be named **Track** and appended with a number (e.g., **Track 06**).

**To copy pads (and their parameters) from one program into another**, right-click the program and click **Merge**. This essentially consolidates two programs into one. See **Editing Processes > Sequence** for more information.

**To delete samples from the project**, click the trash can icon. In the screen that appears, select **Purge Unused Samples** to delete all unused samples from the project (from all programs, sequences, and audio or MIDI tracks), or select **Delete All Samples** to delete all samples from the project.

**To delete a program or sample**, right-click it and click **Delete**. Click **Delete** or **Delete Sample** to confirm your choice or **Cancel** to cancel the deletion.

**To save a program or sample**, right-click it and click **Save**. Use the window that appears to enter a name for the program file (.xpm) or sample file (.wav) and select a location. Click **Save** to confirm your choice or **Cancel** to cancel saving.

**To rename a program or sample**, right-click it and click **Rename**. Enter a name in the window that appears, and then click **OK** to confirm your choice or **Cancel** to cancel saving.

**To view a sample in Sample Edit Mode**, right-click it and click **Edit**. Alternatively, double-click the sample. You will immediately enter Sample Edit Mode and show the sample's waveform in the Wave Editor.

**To add the sample as an audio track**, right-click it and click **Add to Audio Track**. This will immediately create a new audio track named **Audio** and appended with a number (e.g., **Audio 002**), and the sample will be loaded on it.

This Browser is identical to the **Project** panel (see **Panels > Project**) but in a vertical layout rather than horizontal.
Project Notes Browser

When the **Project Notes Browser** is selected:

Information about the project will be shown in several fields: **Title, Artist, Original Artist, Album, Year, Genre, and Copyright.** Note that these are not ID3 tags.

You can also write notes in the lower panel.

**To enter text into a field**, click it and type.

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### Project Notes

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<tr>
<td>512</td>
<td>Set Program Parameter</td>
<td>Outbouts 1/2</td>
</tr>
</tbody>
</table>

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Undo History Browser

When the **Undo History Browser** is selected:

All undoable (and redoable) actions you have performed within the software will appear in this list in sequence. Each step is numbered in the **#** column. Each action is named in the **Action** column with additional information in the **Detail** column.

The magenta **action marker** indicates the current “undo state” location—the last-performed action.

**To undo or redo multiple actions at once**, click and drag the **action marker** to the desired location in the list. The project will immediately revert to that state. Actions that can be redone (below the action marker) are grayed out.
The **MIDI Learn Browser** lets you assign areas of the MPC software to external MIDI controllers. Global MIDI mappings are helpful if you use certain MIDI controllers across multiple projects. Project MIDI mappings are saved within a project, which can be helpful if your MIDI controller usage is particular to each one. See **Addenda > Updates in MPC 2.2 > New Features > MIDI Learn** for more information about this.
Editors

You can switch the editor between the **Grid Editor**, **Wave Editor**, and **List Editor**, depending on what mode you are in.

To enter each editor, click Grid, Wave, or List below the mode icons. You can do this only when editing MIDI tracks; audio tracks have only the Grid Editor that display the audio track waveform.

In all three editors, these buttons are available in the upper-right corner:

- Click the magnet icon to switch between the two different modes of “snapping” note events to the grid: **Absolute** or **Relative**.
  - **Absolute**: Events will “snap” to the nearest time division on the grid (as determined by the TC field or Time Correct window). This is the typical and traditional method of using the snap/quantization feature.
  - **Relative**: Events will “snap” to the nearest time division on the grid (as determined by the TC field or Time Correct window) plus the original time position of the event (e.g., an event that is originally three ticks past a time division on the grid will snap only to positions that are three ticks past every time division).

Click the **Hitting Pad Selects All Events** icon to turn the feature on (**red**) or off (**gray**). When on, pressing a pad will automatically select all note events for that pad in the sequence on that track. When off, pressing a pad will simply play its sound without selecting any note events.

Click the **left-arrow icon** to undo your last action. Click the **right-arrow icon** to redo the last action you undid.

Click the **Export Audio** icon (**star-and-waveform**) to export the track as an audio file (**.wav**). Once this is done, the icon will be **red**. You can then click and drag the icon onto your computer desktop or external storage device to copy it to that location. Press and hold **Shift** and click the icon to reset it to **gray**.

Click the **Export MIDI** icon (**star-and-bars**) to export the track as a MIDI sequence. Once this is done, the icon will be **red**. You can then click and drag the icon onto your computer desktop or external storage device to copy it to that location. Press and hold **Shift** and click the icon to reset it to **gray**.

You can use the Record/Export tab in the **Preferences** to determine precisely what is exported with each of these features. See **Preferences** to learn about this.

**Note**: Audio tracks can be exported as 16-bit or 24-bit, 44.1 kHz **.wav** files, and MIDI tracks are exported as **.mid** files. These files placed in the [Exports] folder in [(your hard drive)\Documents\MPC].
Grid Editor

The Grid Editor has three different appearances: one for drum and clip programs; one for keygroup, plugin, MIDI, and CV programs; and one for audio tracks.

MIDI

When the **MIDI** tab in the **Inspector** is selected, the Grid Editor lets you view and edit the note events of each MIDI track of a sequence and their velocities.

For drum programs, the left column shows you all available pads in a vertical view with their corresponding data.

For keygroup, plugin, MIDI, and CV programs, the left column shows a vertical “piano roll” keyboard.
In the Grid Editor for MIDI tracks, these three icons enable you to use different functions in the grid. Click one to select its mode:

**Pencil: Draw Mode:**
- **To enter a note in an empty grid square**, click the square.
- **To select a note**, click it.
- **To move a note**, click and drag it to another grid square. Press and hold Shift while doing this to move it without restricting (“snapping”) it to the quantization grid.
- **To erase a note**, double-click it.
- **To adjust the start or end point of a note**, click and drag its left or right edge. Press and hold Shift while doing this to adjust the start or end point without restricting (“snapping”) it to the quantization grid.

**Marquee: Marquee Mode:**
- **To select a note**, click it.
- **To select multiple notes**, click and drag across the grid to create a box around them.
- **To move a note**, click and drag it to another grid square. Press and hold Shift while doing this to adjust the start or end point without restricting (“snapping”) it to the quantization grid.
- **To move multiple notes**, select them as described above, and then click and drag them. Press and hold Shift while doing this to move them without restricting (“snapping”) them to the quantization grid.
- **To adjust the start or end point of a note**, click and drag its left or right edge. Press and hold Shift while doing this to adjust the start or end point without restricting (“snapping”) it to the quantization grid.

**Eraser: Erase Mode:**
- **To erase a note**, click it.

**To zoom in or out**, use the sliders in the lower-right corner of the Grid Editor (along each axis) or click the blue timeline and drag down or up.

**To show or hide the automation lane**, click the up or down arrow (\(\wedge\) or \(\vee\)) button next to the horizontal scroll bar under the grid.

**To adjust the velocity of the selected notes** (manually), click Velocity in the automation lane below the grid to select it, and then click and drag the handle/handles below the note/notes. Each note’s velocity is represented by a vertical bar. The higher and more red the bar is, the higher the velocity is. The current velocity value will appear next to the cursor.

Alternatively, select the pencil tool and click the desired height for each handle. You can also draw an automation curve across the entire automation lane.
The automation curve can contain points at the current Time Correct intervals. Press and hold **Shift** while creating and editing the automation curve to adjust it without restricting (“snapping”) it to the quantization grid.

**To show the automation of an automatable parameter**, click the **down arrow (▼)** in the lower-left corner of the Grid Editor. You can select a track, program, or pad parameter—the parameter name will appear below **Modifier**. You can then use any of the **tools** to create and edit automation for this parameter in the automation lane.

**To create a point in the automation curve**, click the desired location with the **pencil tool**, or double-click the desired location with **any other tool**. Press and hold **Shift** while clicking to create it without restricting (“snapping”) it to the quantization grid.

**To draw part or all of an automation curve**, click and drag the desired curve with the **pencil tool**. Press and hold **Shift** while clicking to draw it without restricting (“snapping”) it to the quantization grid.

**To erase a point in the automation curve**, click and drag over it with the **eraser tool**, or double-click it with **any other tool**.

**To erase part or all of an automation curve**, click and drag over the desired section of the curve with the **eraser tool**.

**To select a point in the automation curve**, click it.

**To move a point in the automation curve**, click and drag it to another location in the automation lane. Press and hold **Shift** while clicking to move it without restricting (“snapping”) it to the quantization grid.

Each parameter in the automation lane has an icon next to it that indicates the type of parameter it is:

- **Note**
- **Track Mixer Automation** *(Volume, Pan, Mute, Solo)*
- **Track MIDI CC Automation** *(0–127)*
- **Track Parameter Automation** *(Aftertouch, Pitchbend, Channel Pressure, or Program Change)*
- **Program Mixer Automation** *(Volume, Pan, Mute, Solo, or Send 1–4)*
- **Program Parameter Automation** *(options vary based on the type of program)*
- **Program Insert Effect Automation** *(options vary based on the effect)*
- **Pad/Keygroup Mixer Automation** *(Level, Pan, Pad Mute, Pad Solo, or Send 1–4)*
- **Pad/Keygroup Parameter Automation** *(options vary based on the type of program)*
- **Pad/Keygroup Insert Effect Automation** *(options vary based on the effect)*
When the Audio tab in the Inspector is selected, the Grid Editor lets you view and edit the audio waveform of each audio track of a sequence.

In the Grid Editor for audio tracks, these six icons enable you to use different functions in the grid. Click one to select its mode:

**Marquee:** Marquee Mode:

- **To select a region of the audio track,** click the light-blue strip at the top of it.
- **To select or deselect multiple track regions,** press and hold Shift and click the light-blue strip at the top of each one.
- **To move a track region** (or multiple selected track regions), click the light-blue strip at the top of a track region and drag it to the desired location. Press and hold Shift after clicking it to move it without restricting (“snapping”) it to the quantization grid. You can move multiple regions as well.
- **To duplicate a track region** (or multiple selected track regions), press and hold Alt (Windows) or Option (macOS), click the light-blue strip at the top of a track region, and drag it to the desired location. Press and hold Shift after clicking it to move it without restricting (“snapping”) it to the quantization grid. You can duplicate multiple regions as well.
- **To split a track region at two specific points** (creating track regions on either side and between them), click and drag across anywhere in the upper two thirds of it to create a translucent white box, and then click the light-blue strip at the top of it. You can do this to multiple track regions as well.
- **To shorten or lengthen a track region** (or multiple selected track regions), click and drag the lower third of its left or right edge. Press and hold Shift while dragging it to adjust the length without restricting (“snapping”) it to the quantization grid.
Arrow: Selection Mode:

To select a region of the audio track, click anywhere in the upper two thirds of it.

To select or deselect multiple track regions, press and hold Shift and click anywhere in the upper two thirds of it of each one.

To move a track region, click and drag anywhere in the upper two thirds of it. Press and hold Shift after clicking it to move it without restricting (“snapping”) it to the quantization grid.

To duplicate a track region (or multiple selected track regions), press and hold Alt (Windows) or Option (macOS), click the light-blue strip at the top of a track region, and drag it to the desired location. Press and hold Shift after clicking it to move it without restricting (“snapping”) it to the quantization grid. You can duplicate multiple regions as well.

To adjust the start or end point of a track region, click and drag anywhere in the lower third of its left or right edge. Press and hold Shift while doing this to adjust the start or end point without restricting (“snapping”) it to the quantization grid.

Pencil: Draw Mode:

To create a point in the automation curve, click the desired location in the automation lane. Press and hold Shift while clicking to create it without restricting (“snapping”) it to the quantization grid.

To draw part or all of an automation curve, click and drag the desired curve in the automation lane. Press and hold Shift while clicking to draw it without restricting (“snapping”) it to the quantization grid.

To select a point in the automation curve, click it.

To move a point in the automation curve, click and drag it to another location in the automation lane. Press and hold Shift while clicking to move it without restricting (“snapping”) it to the quantization grid.

To erase a point in the automation curve, double-click it.

Eraser: Erase Mode:

To select multiple track regions, click and drag from an empty location on a track to create a translucent white box. Click an empty location on the grid to deselect them.

To erase a track region (or multiple selected track regions), click it. You may need to click it twice if the track itself is not already selected.

To copy a track region, press and hold Alt (Windows) or Option (macOS) and then click and drag it.

To copy part or all of an automation curve, click and drag over the desired section of the curve in the automation lane.

Scissors: Split Mode:

To select a track region, click its left edge.

To select multiple track regions, click and drag from an empty location on a track to create a translucent white box. Click an empty location on the grid to deselect them.

To split the track at a specific point (creating a track region on either side), click that point in the track.

To copy a track region, press and hold Alt (Windows) or Option (macOS) and then click and drag it.

Mute: Mute Mode:

To select multiple track regions, click and drag from an empty location on a track to create a translucent white box. Click an empty location on the grid to deselect them.

To mute or unmute a track region (or multiple selected track regions), click it.

To copy a track region, press and hold Alt (Windows) or Option (macOS) and then click and drag it.
To zoom in or out, use the slider in the lower-right corner of the Grid Editor or click the blue timeline and drag down or up.

The Region field shows the name of the currently selected region of the audio track. Double-click it to rename the region.

Click the two-pages-and-+ icon to duplicate the currently selected region of the audio track. The duplicate region will appear immediately after the original one.

Use the Fade In or Fade Out fields to create a fade-in or fade out for the currently selected region of the audio track. The fades will be shown as a sloped line at the start or end of the region.

Use the Level slider to set the level of the currently selected region of the audio track. The waveform amplitude will change accordingly. Alternatively, click the dB value next to the slider and enter the desired level.

Click M to mute or unmute currently selected region of the audio track.

Click Rev to reverse the currently selected region of the audio track.

To lengthen or shorten the currently selected region of the audio track without changing its pitch, click Warp, which will enable the Semi, Fine, and BPM fields next to it. Use the BPM field to change the tempo, which will change the length of the region accordingly. You can also click X2 to double the value or /2 to halve it. Use the Semi and Fine fields if you want to change the pitch (this is useful for matching the durations of two samples with different pitches).

**Tip:** You can configure audio track recording to ensure the resulting track region is warped automatically. You can then adjust the sequence tempo while track region remains in time. See Preferences > General to learn about this.

**Note:** When you record an audio file, the current sequence tempo will be embedded with it. This information is stored within the sample file when you save the project. When you warp an audio track region, the warping algorithm uses this sequence tempo and the current value in the BPM field to generate the "stretch factor."

**Note:** The Warp algorithms are very CPU-intensive and can result in audio drop-outs during playback if used too freely. Be mindful of how (and how often) you use the warp function. You can reduce the CPU resources required by doing any/all of the following:

- Minimize the amount of pitch adjustment (e.g., the Semi and Fine parameters) of warped audio.
- Avoid warping very small track regions.
- Warp as few tracks or track regions as possible (i.e., reduce the number of total number of voices of the polyphonic limit that use the Warp algorithm at a given time), especially instances where the warped regions start at the same time.
- Avoid rapidly triggering samples that are warped.
- If you have warped samples used in a drum program, consider using the Flatten Pad function to consolidate the affected pad’s layers into one audio sample (see here to learn about this). After you flatten the pad, its sample/samples no longer need to be warped.
- Use a Warp algorithm other than Elastique Pro, which is very CPU-intensive. See Preferences > General to learn how to change this.
- Using a higher buffer size (usually above 256) can reduce the possibility of CPU issues. See Preferences > Audio to learn how to do this.
To show or hide the automation lane, click the up or down arrow (↑ or ↓) button next to the horizontal scroll bar under the grid.

The automation curve can contain points at the current Time Correct intervals. Press and hold Shift while creating and editing the automation curve to adjust it without restricting (“snapping”) it to the quantization grid.

To show the automation of an automatable parameter, click the down arrow (▼) in the lower-left corner of the Grid Editor. You can select a track parameters only (for the mixer or insert effects)—the parameter name will appear below Modifier. You can then use any of the tools to create and edit automation for this parameter in the automation lane.

To create a point in the automation curve, click the desired location with the pencil tool, or double-click the desired location with any other tool. Press and hold Shift while clicking to create it without restricting (“snapping”) it to the quantization grid.

To draw part or all of an automation curve, click and drag the desired curve with the pencil tool. Press and hold Shift while clicking to draw it without restricting (“snapping”) it to the quantization grid.

To erase a point in the automation curve, click and drag over it with the eraser tool, or double-click it with any other tool.

To erase part or all of an automation curve, click and drag over the desired section of the curve with the eraser tool.

To select a point in the automation curve, click it.

To move a point in the automation curve, click and drag it to another location in the automation lane. Press and hold Shift while clicking to move it without restricting (“snapping”) it to the quantization grid.

Each parameter in the automation lane has an icon next to it that indicates the type of parameter it is:

Audio Track Mixer Automation (Volume, Pan, Mute, Solo) or Insert Effect Automation (options vary based on the effect)
Wave Editor

The Wave Editor lets you view and edit the samples in a project.

The selected pad (e.g., A01, B16, etc.) is shown just below the Grid Editor tab. Click a pad in the Pads panel or press a pad to select it.

Use the Layer menu to select the layer (of the current pad) with the sample you want to view.

Use the Sample menu to change the sample assigned to the current pad.

**Important:** The following parameters work in conjunction with Chop Mode (in Sample Edit Mode). Here’s how it works:

When working in Sample Edit Mode and using Chop Mode to divide a sample into slices for your pads, you can convert a slice using **Non-Destructive Slice** or **Pad Parameters**.

A **Non-Destructive Slice** will let its pad to refer to that slice when you press it; the original sample remains intact and each slice marker is like a “bookmark” for a pad. In Program Edit Mode, you’ll see that the pad/layer to which it’s assigned has its Slice drop-down menu set to the corresponding slice number in the original sample. Playing that pad will cause it to refer to that slice marker like a “bookmark” instead of creating an entirely new sample of that slice. This means that you no longer have to clutter your Project with a new sample for every slice (though you can still use this earlier method, if you prefer).

A slice converted using **Pad Parameters** is very similar to a non-destructive slice described above. The difference is that in Program Edit Mode, the pads/layers they’re assigned to have their Slice drop-down menus set to Pad (instead of the slice number), and the **Pad Start** and **Pad End** points will correspond to the slice markers in the original sample.

See **Modes > Sample Edit Mode > Chop Mode** to learn more about this.

Use the **Start** field to determine the position (in samples) where the pad’s playback will start. The minimum value is 0, and the maximum value is the **End** value.

**Note:** When **Loop Lock** is on, the loop position (as determined in the **Loop** field) is the same as the pad start. When off, the loop position is independent from the pad start.

Use the **End** field to determine the position (in samples) where the pad’s playback will stop. The minimum value is the **Start** value, and the maximum value is the sample’s total length (in samples).
Use the **Loop** menu to select the Pad Loop mode.

**Important**: For Pad Loop to work, you must (1) set the **Sample Play** field to **Note On** in the Pad Play Modes section of Program Edit Mode (see *Modes > Program Edit Mode*) and (2) set the **Slice** field to **Pad**.

### Off: The sample will not loop.

**Fwd**: You can hold down the pad to cause that sample to repeat from the **Loop** position to the end of the sample. Release the pad to stop the repeating playback.

**Rev**: You can hold down the pad to cause that sample to play in reverse, repeating from the end of the sample to the **Loop** position. Release the pad to stop the repeating playback.

**Alt**: You can hold down the pad to cause that sample to play from the **Loop** position to the end of the sample and then play in reverse until it reaches the **Loop** position again. This will repeat as long as you are holding the pad down. Release the pad to stop the repeating playback.

Click the **lock icon** to turn Loop Lock on or off. When on, the lock icon will be red and the Loop field will be disabled.

Use the **Slice** field to select what part/parts of the sample will play:

- **All**: The entire sample will play.
- **Pad**: The sample will play from the **Start** position to the **End** position. This also lets you activate Pad Loop.
- **Slice 1, 2, 3, etc.**: If you have sliced the sample in Chop Mode, you can select which slice will play when you trigger the pad.

Use the **Offset** field to determine a time offset for the sample’s playback.

- **Positive values**: When the pad is played, playback will start immediately but at a later point in the sample specified by the offset value.
- **Negative values**: When the pad is played, playback will be delayed by the amount specified by the offset value.

Click **Rev** to reverse the sample's playback.

Click **Warp** to lengthen or shorten the sample (based on the BPM) without changing its pitch.

Use the **Stretch** field to set the “stretch factor,” which affects how the sample is warped (if Warp is on).

Use the **BPM** field to enter a tempo, which affects how the sample is warped (if Warp is on). You can also click **X2** to double the value or **/2** to halve it.

Click the **circular-arrows icon** to enable or disable BPM Sync. When BPM Sync and Warp are both enabled, the sample’s BPM will be “locked” to the tempo of the sequence. When BPM Sync is disabled but Warp is enabled, the sample will be independent of the tempo of your sequence—use the **Stretch** field to lengthen or shorten a sample.

**Tip**: You can configure audio track recording to ensure the resulting track region is warped automatically. You can then adjust the sequence tempo while track region remains in time. See *Preferences > General* to learn about this.

**Note**: When you record an audio file, the current sequence tempo will be embedded with it. This information is stored within the sample file when you save the project. When you warp an audio track region, the warping algorithm uses this sequence tempo and the current value in the BPM field to generate the “stretch factor.”

**Note**: The Warp algorithms are very CPU-intensive and can result in audio drop-outs during playback if used too freely. Be mindful of how (and how often) you use the warp function. You can reduce the CPU resources required by doing any/all of the following:

- Avoid using extreme **Stretch** values, especially anything below **100**.
- Minimize the amount of pitch adjustment (e.g., the **Semi** and **Fine** parameters) of warped audio.
- Avoid warping very small track regions.
- Warp as few tracks or track regions as possible (i.e., reduce the number of total number of voices of the polyphonic limit that use the Warp algorithm at a given time), especially instances where the warped regions start at the same time.
- Avoid rapidly triggering samples that are warped.
- If you have warped samples used in a drum program, consider using the **Flatten Pad** function to consolidate the affected pad’s layers into one audio sample (see *here* to learn about this). After you flatten the pad, its sample/samples no longer need to be warped.
- Use a Warp algorithm other than Elastique Pro, which is very CPU-intensive. See *Preferences > General* to learn how to change this.
- Using a higher buffer size (usually above **256**) can reduce the possibility of CPU issues. See *Preferences > Audio* to learn how to do this.
Click the gear icon to enable or disable **Link Slices** and **Zero Snap**, to select an editing process (**Process Sample**), to set the **Slice Preview** behavior:

**Link Slices**: When **Link Slices** is set to **On**, changing the start point of a slice (after you have created slices of a sample in Chop Mode) will also change the end point of the previous slice. Similarly, changing the end point of a slice will also change the start point of the next slice. When set to **Off**, you can create slices that are nonsequential, noncontiguous, or overlapping. This is the same as clicking the Link Slices button in the *Q-Links* panel in Sample Edit Mode.

**Process Sample**: Select an editing process to apply to the sample. These are the same processes available in Sample Edit Mode while in Program Mode (see *Modes > Sample Edit Mode > Program Mode* to learn more).

**Slice Preview**: This determines if/how audio is played as you move a slice marker. As you move the slice marker through a sample waveform, you can set it to play the small part of the sample before the slice marker (**Before**), play the small part of the sample after the slice marker (**After**), or not play at all (**Off**). You can also configure this setting in the Preferences (see *Preferences > General*).

**Zero Snap**: Enable Zero Snap to force start points, end points, and loop points to occur only at the waveform’s “zero-crossings.” This can help to avoid clicks and glitches when playing a sample. This is the same as clicking the Zero Snap button in the *Q-Links* panel in Sample Edit Mode.

The large waveform display shows the “active” section of the sample waveform. The strip above the large display shows an overview of the entire sample waveform. If the waveform display is showing only part of the entire sample waveform, a white box in the overview will indicate the current position.

The timeline provides a reference for the length of the sample. Click the down arrow (▼) or right-click anywhere on the timeline to select the increments it will use: **Time (secs:ms)**, **Samples**, or **Beats**.

Scroll left or right on the waveform to move through it. Use the sliders in the lower-right corner or click the timeline and drag down or up to zoom in or out.

The green marker and red marker are the start point and end point (respectively). These two points define the region of the sample that will be played.
List Editor

In the List Editor, you can perform the same operations as in the Grid Editor but with a different interface/workflow.

The sequence for the track will be shown as a list of events, with the following parameters:

- **#: This is number of the note event.**

  **Time:** This is the position of the note event in bars, beats, and ticks. Hover the mouse over the value to see its equivalent in pulses. If multiple note events occur at the same time, additional note events will be listed immediately below, but their **Time** values will be grayed out.

  **Event Type:** This icon indicates the type of event (e.g., **Note, Aftertouch, Track Automation**, etc.). See the description of the **View** menu below for a list of types of events to learn how to show only specific ones.

  **Pad/Note:** This is the pad and/or corresponding MIDI note number. For drum programs, you will see the pad number. For keygroup programs, plugin programs, and midi programs, you will see the note.

  **Length:** This is the length of the note event in ticks. Click and drag the field to adjust it.

  **Velocity:** This is the velocity of the note event with a velocity bar of corresponding color and length below it. Click and drag the field to adjust it.

  **Mod Type:** This is the type of modifier used on the note event via automation.

  **Value:** This is the value of the modifier automation. Click and drag the field to adjust it.

To edit the parameters of an event, double-click it. In the window that appears, use the fields and menus to edit the event. Click **OK** to confirm your edits or **Cancel** to close the window without changing anything.

To show or hide specific parameter columns, right-click one of the parameter names, and select the parameter column to show or hide. You can also choose to **Auto-size this column** or **Auto-size all columns** to fit the contents.

The red arrow (►) on the left side of the list represents the playhead’s current position. If your sequence is playing, the arrow will move accordingly.
Click the **View** menu in the lower-right corner of the List Editor to select which types of events are shown in the list.

- **All**: Select this option to show all event types.
- **Notes**: Select this option to show only notes.
- **Aftertouch**: Select this option to show only aftertouch messages.
- **Track Automation**: Select this option to show only track automation events.
- **Program Automation**: Select this option to show only program automation events.
- **Pitch Bend**: Select this option to show only pitch bend events.
- **Control Change**: Select this option to show only MIDI CC messages.
- **Program Change**: Select this option to show only MIDI program change.
- **Ch Pressure**: Select this option to show only channel pressure messages.
- **Solo/Mute**: Select this option to show only solo and mute events for tracks, programs, and pads.
- **Other**: Select this option to show other types of events not listed above, such as pad or keygroup parameters.

The following icons indicate the corresponding types of events:

- ![Note](image)
- ![Track Mixer Automation](image) (*Volume, Pan, Mute, Solo*)
- ![Track MIDI CC Automation](image) (*0–127*)
- ![Track Parameter Automation](image) (*Aftertouch, Pitchbend, Channel Pressure, or Program Change*)
- ![Program Mixer Automation](image) (*Volume, Pan, Mute, Solo, or Send 1–4*)
- ![Program Parameter Automation](image) (options vary based on the type of program)
- ![Program Insert Effect Automation](image) (options vary based on the effect)
- ![Pad/Keygroup Mixer Automation](image) (*Level, Pan, Pad Mute, Pad Solo, or Send 1–4*)
- ![Pad/Keygroup Parameter Automation](image) (options vary based on the type of program)
- ![Pad/Keygroup Insert Effect Automation](image) (options vary based on the effect)
To insert a step in the list, click the + icon in the lower-right corner, and select one of the options:

**Note**: Select this option to create a note in the list. The note will be at the earliest possible location not occupied by another note played by that pad. (This location takes the Time Correct settings into account.)

**Track**: Select this option to create a track automation event. You can select:
- a track mixer parameter: **Mixer > Volume, Pan, Mute** or **Solo**
- a MIDI CC: 0–127
- a track-specific parameter: **Aftertouch, Pitchbend, Channel Pressure**, or **Program Change**

**Program**: Select this option to create a program automation event. Tracks using MIDI programs do not have this option. You can select:
- a program mixer parameter: **Mixer > Volume, Pan, Mute, Solo**, or **Send 1–4**
- a program insert effect parameter (options vary based on the effect)

**Pad/Keygroup**: Select this option to create a pad or keygroup automation event. You can select:
- a pad or keygroup mixer parameter (**Mixer > Level, Pan, Pad Mute, Pad Solo**, or **Send 1–4**)
- a pad, keygroup, or clip program parameter (options vary based on the type of program)
- a pad, keygroup, or clip insert effect parameter (options vary based on the effect)

To duplicate the currently selected step in the list, click the two-pages-and+ icon in the lower-right corner.
Track View

In Track View Mode, the Channel Mixer, and Track Mute Mode, the upper half of the window will show the Track View, an overview of MIDI tracks, audio tracks, and programs as horizontal strips. Each horizontal strip represents a track in the current sequence. MIDI tracks are listed first, audio tracks are listed second, and programs are listed third.

These buttons are available in the upper-right corner:

- Click the left-arrow icon to undo your last action.
- Click the right-arrow icon to redo the last action you undid.
- Click menu icon (≡) in the upper-right corner, and select or deselect Show Unused Tracks, Show Programs, Show Audio Tracks, and Show Midi Tracks. Only selected items will be shown in the Track View.

To move through the list of tracks and programs, scroll up or down.

To expand or collapse each group of tracks or programs, click the > or ∨ above the first track of each type.

All MIDI tracks in the sequence are grouped together.

- Click a MIDI track strip to select it.
- Click the menu below the track name (above the M and S buttons) to select what program the track uses.
- Click the M or S button to mute or solo the track (respectively).
- Click the record button to record-enable the track. When you begin recording, the MIDI data will be recorded to this track. You can select multiple tracks by pressing and holding Ctrl (Windows) or  (macOS) while clicking the Arm button to each track. Alternatively, set the Rec Arm setting in the Preferences to Multi.
- Click the monitor button to set how your MIDI track will be monitored. Clicking it will cycle through its four states:
  - When set to In, the track’s MIDI input is always monitored regardless of the track’s Record Arm state, and playback from recorded events will not be heard.
  - When set to Auto, the track’s MIDI input is monitored when the track is record armed, and playback of recorded events will be heard.
  - When set to Merge, the track’s MIDI input is always monitored, and playback of recorded events will be heard.
  - When set to Off, the track’s MIDI input is not monitored, and playback of recorded events will be heard. This setting is useful when using keyboards with Local Control active.

All audio tracks in the sequence are grouped together.

- Click an audio track strip to select it.
- Click the M or S button to mute or solo the track (respectively).
- Click the Arm button to record-enable the track. When you begin audio recording, the audio signal will be recorded to this track. You can select multiple tracks by pressing and holding Ctrl (Windows) or  (macOS) while clicking the Arm button to each track. Alternatively, set the Rec Arm setting in the Preferences to Multi.
- Click the Monitor button to set how your audio track will be monitored. Clicking it will cycle through its three states:
  - When set to Auto, you will hear incoming audio while the track is record-enabled only.
  - When on, you will hear incoming audio whether or not the track is record-enabled.
  - When off, you will never hear any incoming audio.
All programs in the sequence are grouped together.

Click a program strip to select it.

Click the M or S button to mute or solo the program (respectively).

Above the tracks and programs are buttons and a menu that let you draw or edit track regions or automation.

Click the automation icon in the upper-left corner of the tracks to show or hide automation. When automation is hidden, you can edit the track regions.

When the automation icon is off (gray), you can edit your tracks using the tools at the top of the Track View.

Click one to select its mode:

**Marquee: Marquee Mode:**

To select a track region, click the upper third of it. You may need to click it twice if the track itself is not already selected.

To select or deselect multiple track regions, press and hold Shift and click the upper third of each one. You can select multiple regions within the same track or across different tracks, though you may need to click it twice if the track itself is not already selected.

To move a track region (or multiple selected track regions), click the upper third of a track region and drag it to the desired location. Press and hold Shift while dragging it to move it without restricting (“snapping”) it to the quantization grid. You can move multiple regions within the same tracks or between different tracks, though you cannot move a MIDI track region onto an audio track or vice versa.

To split a track region at two specific points (creating track regions on either side and between them), click and drag across the middle third of it to create a translucent white box, and then click the upper third of that box. You can do this to multiple track regions as well.

To shorten or lengthen a track region (or multiple selected track regions), click and drag the lower third of its left or right edge. Press and hold Shift while dragging it to adjust the length without restricting (“snapping”) it to the quantization grid.

**Arrow: Selection Mode:**

To select a track region, click anywhere in the upper two thirds of it. You may need to click it twice if the track itself is not already selected.

To select or deselect multiple track regions, press and hold Shift and click anywhere in the upper two thirds of each one. You can select multiple regions within the same track or across different tracks, though you may need to click it twice if the track itself is not already selected.

To move a track region (or multiple selected track regions), click the upper third of a track region and drag it to the desired location. Press and hold Shift while dragging it to move it without restricting (“snapping”) it to the quantization grid. You can move multiple regions within the same tracks or between different tracks, though you cannot move a MIDI track region onto an audio track or vice versa.

To shorten or lengthen a track region (or multiple selected track regions), click and drag the lower third of its left or right edge. Press and hold Shift while dragging it to adjust the length without restricting (“snapping”) it to the quantization grid.

**Eraser: Erase Mode:**

To select multiple track regions, click and drag from an empty location on a track to create a translucent white box. Click an empty location on the grid to deselect them.

To erase a track region (or multiple selected track regions), click it. You may need to click it twice if the track itself is not already selected.
**Scissors**: Split Mode:

To select a track region, click its left edge.

To select multiple track regions, click and drag from an empty location on a track to create a translucent white box. Click an empty location on the grid to deselect them.

To split the track at a specific point (creating a track region on either side), click that point in the track. You may need to click it twice if the track itself is not already selected.

**Mute**: Mute Mode:

To select multiple track regions, click and drag from an empty location on a track to create a translucent white box. Click an empty location on the grid to deselect them.

To mute or unmute a track region (or multiple selected track regions), click it.

When the automation icon is on (white), you can select an automation curve to show and edit.

Click the menu in the upper-left of the tracks to show the automation curve of a parameter. You can then use the pencil or marquee tool to create and edit automation curve for this parameter in each track strip or program strip.

See the Automation chapter to learn more about automating parameters for MIDI tracks, audio tracks, programs, and pads.

**Important**: An automation curve consists of several points placed according to current time division—aligned with the quantization grid). You can create or move points without restricting them to the time division by pressing and holding Shift.

Click one to select its mode:

**Pencil**: Draw Mode:

To create a point, click the desired location in the track strip or program strip.

To select a point, click it.

To move a point, click and drag it to another location in the track strip or program strip.

To erase a point, double-click it.

**Marquee**: Marquee Mode:

To select a point, click it.

To select points, click and drag across the track strip or program strip to create a box around them.

To move a point, click and drag it to another location in the track strip or program strip. Press and hold Shift while doing this to move it without restricting (“snapping”) it to the quantization grid.

To move multiple points, select them as described above, and then click and drag them to another location in the track strip or program strip. Press and hold Shift while doing this to move them without restricting (“snapping”) them to the quantization grid.

MIDI track, audio track, and program strips appear slightly differently while displaying their automation curves:

**MIDI track**:

**Audio track**:

**Program**:
Mixer Window

If you want to see channel strips for both the Pad Mixer and the Channel Mixer at the same time, you can open the Mixer Window, which provides an overview of the channel strips in both modes in one screen.

To open or close the mixer window, do one of the following:

- Click the menu icon (≡), and go to View and click Show Mixer Window.
- Click the two-sliders icon in the lower-left corner of the window.

The upper half of this window shows the Pad Mixer channel strips (see Modes > Pad Mixer to learn about these).

The lower half of the window shows the Channel Mixer channel strips (see Modes > Channel Mixer to learn about these).

All selectors and channel strips work as they normally do in their respective modes.

Tip: This window can be very helpful when using a dual-monitor computer setup.

Use the three icons at the top of the window to select which channel strips are shown:

- Click the pad-and-slider icon to show just the Pad Mixer channel strips.
- Click the two-sliders icon to show just the Channel Mixer channel strips.
- Click the pad-and-three-sliders icon to show both Pad Mixer and Channel Mixer channel strips.
Panels

In several modes, the lower half of the window shows several different panels.

To show or hide each panel, click its selector.

To show or hide the entire bottom panel, click the two-panels icon in the lower-left corner of the window.

This chapter describes the available panels.

Note: Similar to these panels, the lower half of the window of the Pad Mixer and Channel Mixer shows several different channel strips, which you can show or hide by clicking the selectors. See Modes > Pad Mixer and Modes > Channel Mixer chapter to learn about these.

MIDI Keyboard

The MIDI keyboard feature is a graphical representation of a piano keyboard at the bottom of the window.

To show or hide the MIDI keyboard, do one of the following:

- Click the menu icon (≡), and go to View and click Show MIDI Keyboard.
- Click the two-panels icon in the lower-left corner of the window.

Whenever a note is played (by pressing a pad, playing the current sequence, etc.), the corresponding keys on the MIDI keyboard will be lit, appearing to be “played.” These keys will correspond to the notes played in the current track only.

Similarly, you can click keys on the MIDI keyboard to trigger those notes on the current track. This can be useful for auditioning the sound of the track’s program in different octaves.

Click the left-arrow or right-arrow button on either side of the MIDI keyboard to shift the range of the keys displayed in the window.

If the MIDI Keys feature is enabled, the corresponding computer keyboard character will be shown above each key, though you can still use MIDI keys even if it is hidden. Furthermore, you can use the MIDI keyboard even if MIDI Keys is disabled. See Toolbar > Menu > Tools to learn about this feature.
Q-Links

The Q-Links panel shows the 16 Q-Link knobs with their assigned parameters listed below.

Click the **Q-Link Mode** menu to select the current edit mode of the Q-Link knobs:

- **Project**: In this edit mode, the Q-Link knobs can control 16 parameters within the current project overall. See the following **Project** section to learn how to use this mode.

- **Program**: In this edit mode, the Q-Link knobs can control 16 program or audio track parameters. See the following **Program** section to learn how to use this mode.

- **Pad Scene** (for drum programs only): In this edit mode, the Q-Link knobs can control 16 parameters for the currently selected pad. See the following **Pad Scene** section to learn how to use this mode.

- **Pad Parameters**: In this edit mode, the 16 Q-Link knobs correspond to the 16 pads, each one controlling the same parameter for each pad. This is useful if you need to adjust the same parameter on multiple pads at once rather than having to select and edit each pad individually. See the following **Pad Parameters** section to learn how to use this mode.

- **Screen**: In this edit mode, the Q-Link knobs will control a default parameter or group of parameters in your currently selected mode (e.g., Main Mode, Sample Edit Mode, etc.).

**Note**: When using MPC hardware with four Q-Link knobs (e.g., MPC Live, MPC Touch, etc.), a gold rectangle in this panel indicates the four knobs that can be controlled by that bank of four Q-Link knobs.

While in any Q-Link Mode other than Screen Mode, click the **Learn** button to turn Learn Mode on or off. When **on**, adjusting a control in the MPC software window will immediately assign it to the currently selected Q-Link knob.

**To assign a function to a Q-Link knob in Learn Mode:**

1. Click **Learn** so the button is lit. (This will stop playback. Resuming playback will exit Learn Mode.)
2. Click the desired **Q-Link knob**.
3. Click the control in the software that you want to assign to the Q-Link knob. The Q-Link knob will be able to control that parameter immediately.

**To assign functions to other Q-Link knobs**, repeat Steps 2–3.

**To clear an assignment from a Q-Link knob**, see the following **Q-Link Setup** section.

**To exit Learn Mode**, click **Learn** (or resume playback).
**Q-Link Setup**

To show or hide the Q-Link Setup subpanel, click the i icon in the upper-right corner of the Q-Links panel.

The top of this subpanel shows the currently selected Q-Link knob number.

The Source menu indicates where the parameter assigned to that Q-Link knob is. The available sources depend on the Q-Link Mode as described in the following sections.

The Q-Link Parameter menu indicates the parameter that the currently selected Q-Link knob controls.

Click the Momentary box to turn momentary behavior on or off.

When on, moving the Q-Link knob will adjust its parameter, but the parameter will immediately return to its original position (when you turned Momentary on) when you release the Q-Link knob.

When off, moving the Q-Link knob will adjust its parameter, and the parameter will remain at its new setting when you release the Q-Link knob.

**Project**

In the Project Q-Link Edit Mode, the Q-Link knobs control 16 parameters within the current project.

These are the available sources for each Q-Link knob:

- **MIDI Track**: MIDI track parameters—select one of the MIDI tracks in your project.
- **Audio Track**: audio track parameters—select one of the audio tracks in your project.
- **Program**: program parameters—select one of the programs in your project. For drum programs and clip programs, you can select either the entire program or a specific pad within it.
- **Return**: return mixer parameters (Returns 1–4).
- **Submix**: submixer parameters (Submixes 1–8).
- **Master**: master mixer parameters (Outputs 1/2–31/32).

These are the available parameters for each Q-Link knob:

- **Mixer**: mixer parameters (options vary based on the Source)
- **Program**: program parameters (options vary based on the type of program; available only if the Source is a drum program, MIDI program, clip program, or CV program)
- **Insert 1–4**: insert effect parameters (options vary based on the effect; available only if the Source has an insert effect loaded)
Program

In the **Program** Q-Link Edit Mode, the Q-Link knobs control 16 parameters within the currently selected program or audio track.

These are the available sources for each Q-Link knob:
- **Program** or **Audio Track**: program or audio track parameters—select the program or audio track. For drum programs and clip programs, you can select either the entire program or a specific pad within it.

These are the available parameters for each Q-Link knob:
- **Mixer**: program mixer parameters (options vary based on the **Source**)
- **Program**: program parameters (options vary based on the type of program; available only if the **Source** is a drum program, MIDI program, clip program, or CV program, not an audio track)
- **Insert 1–4**: insert effect parameters (options vary based on the effect; available only if the **Source** has an insert effect loaded)

Pad Scene

In the **Pad Scene** Q-Link Edit Mode, the Q-Link knobs control your favorite 16 parameters for the currently selected pad. You can select another pad simply by pressing it, allowing you to adjust the same 16 parameters for that new pad. (These 16 parameter assignments are automatically saved with other user settings. Any project you load will use these assignments.)

This option works for drum programs only.

The only available sources for each Q-Link knob are pads within a drum program.

**To select a pad**, press it.

These are the available parameters for each Q-Link knob:
- **Mixer**: pad mixer parameters (**Level**, **Pan**, **Pad Mute**, **Pad Solo**, or **Send 1–4**)
- **Program**: pad parameters (i.e., parameters used in Program Edit Mode)

Pad Parameters

In the **Pad Parameters** Q-Link Edit Mode, the Q-Link knobs control the same pad parameter for each of the 16 pads in the current pad bank.

For example, if the **Parameter** is set to **Level**, the 16 Q-Link knobs will adjust the 16 independent **Level** settings for each pad in the current pad bank. You could then set the **Parameter** to **Pan** and use the Q-Link knobs to adjust the panning of all 16 pads.

This option works for drum programs only.

The only available sources for each Q-Link knob are pads within a drum program.

**To select a pad**, press it.

These are the available parameters for each Q-Link knob:
- **Mixer**: pad mixer parameters (**Level**, **Pan**, **Pad Mute**, **Pad Solo**, or **Send 1–4**)
- **Program**: pad parameters (i.e., parameters used in Program Edit Mode)

Screen

In the **Screen** Q-Link Edit Mode, the Q-Link knobs will control a default parameter or group of parameters in your currently selected mode (e.g., Main Mode, Sample Edit Mode, etc.).
Pads

The Pads panel shows the 16 pads with their assigned samples. All pads will display their assigned colors.

Click a Pad Bank letter at the top of this panel to select a pad bank.

Each pad will display different contents, depending on the current mode. See the description of this panel in the chapter for each mode.

Each pad can also display a color, which you can customize for each program. See Pad Color to learn how to do this.

Program Editor

The Program Editor panel contains the parameters for Program Edit Mode, which vary depending on the type of program. Learn about the specific parameters for each program type in Modes > Program Edit Mode.
Parameters

The Parameters panel shows the available parameters and editing processes in Sample Edit Mode.

See the Modes > Sample Edit Mode chapter to learn more about this panel and its different features in Trim Mode, Chop Mode, and Program Mode.

Project

The Project panel is a list of all available programs, sequences, and samples in the project.

To duplicate a program in the project, right-click it and click Duplicate. An identical program will be created immediately. The duplicate program will use the same name but appended with a number (e.g., Program 002).

To duplicate a program in the project and use it on a new track, right-click it and click Duplicate to New Track. An identical program and new track that uses it will be created immediately. The duplicate program will use the same name but appended with a number (e.g., Program 002). The new track will be named Track and appended with a number (e.g., Track 06).

To copy pads (and their parameters) from one program into another, right-click the program and click Merge. This essentially consolidates two programs into one. See Editing Processes > Sequence for more information.

To delete samples from the project, click the trash can icon. In the screen that appears, select Purge Unused Samples to delete all unused samples from the project (from all programs, sequences, and audio or MIDI tracks), or select Delete All Samples to delete all samples from the project.

To delete a program or sample, right-click it and click Delete. Click Delete or Delete Sample to confirm your choice or Cancel to cancel the deletion.

To save a program or sample, right-click it and click Save. Use the window that appears to enter a name for the program file (.xpm) or sample file (.wav) and select a location. Click Save to confirm your choice or Cancel to cancel saving.

To rename a program or sample, right-click it and click Rename. Enter a name in the window that appears, and then click OK to confirm your choice or Cancel to cancel saving.

To view a sample in Sample Edit Mode, right-click it and click Edit. Alternatively, double-click the sample. You will immediately enter Sample Edit Mode and show the sample’s waveform in the Wave Editor.

To add the sample as an audio track, right-click it and click Add to current audio track. This will immediately create a new audio track named Audio and appended with a number (e.g., Audio 002), and the sample will be loaded on it.

This panel is identical to the Project Info Browser (see Browser > Project Info Browser) but in a horizontal layout rather than vertical.
Sampler & Looper

The Sampler and Looper panels show similar controls for setting levels, monitoring, inputs, and effects of your incoming audio signal. See Modes > Sampler and Modes > Looper to learn more about each one.

Pad Banks & Mute

The Pad Banks and Mute panels let you select pads, assign pad or track groups, and adjust timing correct settings in Pad Mute Mode and Track Mute Mode. See Modes > Pad Mute Mode and Modes > Track Mute Mode to learn more about each one.
Sequence List

The **Sequence List** panel has different appearances in Next Sequence Mode and Song Mode.

In Next Sequence Mode, it shows a list of all available sequences in your project as well as their length and tempo. See **Modes > Next Sequence Mode** to learn about this.

In Song Mode, it shows the list of steps in the song, including the number of repeats, the tempo of each sequence, and the length of each step. See **Modes > Song Mode** to learn about this.

Performance Controls

The **Performance Controls** panel shows the available commands you can execute in Next Sequence Mode.

See **Modes > Next Sequence Mode** to learn about this.

Song Parameters

The **Song Parameters** panel shows the available controls to create a song in Song Mode. This includes controls for inserting and deleting song steps, a sequence selector for the current step, and parameters that determine how long each step plays.

See **Modes > Song Mode** to learn about this.
Preferences

The Preferences window contains many customizable elements of the software. Click the corresponding tab on the left to select it (e.g., MIDI, Sequencer, etc.). Click the OK button to close the Preferences window. Changes to the Preferences are saved automatically except for Vintage Mode (in the General tab) and Start Time (in the MIDI / Sync tab).

To open the Preferences:

- **Windows**: Click the menu icon (≡), select Edit, and click Preferences.
- **macOS**: Click the MPC menu, and click Preferences.

Audio

Audio Device Type and Device or Output & Input: Click these drop-down menus to select an audio hardware driver in your computer system.

Test: Click this button to play a test tone. This is for checking your audio output. Careful! You should lower the volume on your audio system beforehand.

Sample Rate: Click this to drop-down menu to select the desired sample rate for your project. This depends on the available sample rates of the type of MPC hardware you are using or of your audio interface (i.e., select 96000 Hz only if your interface allows a 96 kHz sample rate).

Audio Buffer Size: Click this drop-down menu to set your audio system’s latency. Lower values result in a more immediate playing response but also more CPU consumption. If you are working with larger projects, this may cause audible clicks and pops. Higher values are more CPU-friendly but can produce more delay between pressing a pad and hearing the corresponding sound. The ideal audio buffer size also depends on your computer’s CPU performance. Experiment with this to find the best setting for your system.

Latency Adjust: This indicates the amount of latency (delay) in your audio system.

MIDI / Sync

The settings on this screen determine how the MPC software sends, receives and synchronizes with connected USB and MIDI devices.

Input Ports: This indicates the available installed MIDI Input ports on your computer system and any connected devices. Next to each port are three options:

- **Master**: Enable this option to always send incoming MIDI data from this port to the current track.
- **Control**: Enable this option to send incoming MIDI data from this port to MIDI Learn.
- **Track**: Enable this option for this MIDI port to appear in the list of available track MIDI inputs.

Output Ports: This indicates the available MIDI Output ports. Next to each port are two options:

- **Sync**: Enable this option to send MIDI Clock or MTC information over this output port, based on the Sync Output setting.
- **Track**: Enable this option for this MIDI port to appear in the list of available track MIDI outputs.

Note: When using the MPC software as a plugin, the only option you can select for your Midi Output Port is your host software (DAW).

Enable MIDI ports when discovered: When enabled, the Track ports are automatically turned on when a MIDI device is plugged in so it can immediately be selected as an input or output.

MIDI Machine Control (MMC) Receive: When enabled, the MPC software will be able to receive MIDI Machine Control (MMC) information. When disabled, the MPC software will not receive this information.

Sync Input: This determines whether the MPC software receives MIDI Clock information (MIDI Clock), MIDI Time Code information (MIDI Time Code (MTC)), communication from Ableton Link, or no synchronization information (Off).

MIDI Machine Control (MMC) Send: When enabled, the MPC software will be able to send MIDI Machine Control (MMC) information. When disabled, the MPC software will not send this information.

Sync Output: This determines whether the MPC software sends MIDI Clock information (MIDI Clock), MIDI Time Code information (MIDI Time Code (MTC)), or neither (Off).

MTC Frame Rate: This determines the frame rate used by MIDI Time Code (MTC), which is important for correct timing, especially when working on film scoring projects: 24, 25, 30 drop, or 30 non-drop. In most cases, you should select 25.

Start Time: This is the starting time that will be sent when Sync Output is set to anything other than Off. The time is formatted in hours:minutes:seconds:frames.
Plugins

Here you can select up to four locations on your hard disk where the software will look for installed VST or AU plugins that you can use in the MPC software.

Click the … button to the right of the field to select a desired location. After selecting a new location, we recommend using the Scan New function. When you configure these Plugin tab settings for the first time, you should click Rescan All to perform a complete scan of all selected plugin locations.

See the Plugins chapter to learn about managing your plugins once they are scanned.

Sequencer

The settings on this screen determine how sequencing works in Grid Editor and in the Step Sequencer.

**Instant Track Mute:** When disabled, if you mute a track, its Note On messages will be ignored, and samples and notes that are playing will finish playing their entire length (this is how legacy MPCs’ track-muting worked). This is useful if you are using loops and want a loop to play to the end of a bar but not play the next time the sequence loops. When enabled, if you mute a track, the MIDI track volume (0) will be sent. The loop will continue to play but at zero volume, allowing the loop to continue playing when the track is unmuted. This is useful when you want to have the track muted immediately.

**Play Track Mute and Solo Events:** When enabled, track mute and solo events are played back when you are in Track Mute Mode. When disabled, track mute and solo events will not be played back while in Track Mute Mode.

**Rec Arm:** This determines the behavior of the Record Arm buttons. When set to Single, selecting a different track will automatically arm that track and disarm all other tracks. This is the default mode and it is the same as previous MPC releases. When set to Multi, you can tap any track’s record button to add it to the group of armed tracks.

**Record Track Mute and Solo Events:** When enabled, track mute and solo events are recorded when you are in Track Mute Mode (timing correct settings will affect the recorded position events). When disabled, track mute and solo events will not be recorded while in Track Mute Mode. This feature is useful if you want to use Track Mute Mode to record track mutes or solos into your sequences as opposed to using Track Mute Mode for performance or listening purposes only.

**Record Pad Aftertouch Events:** When enabled, pad aftertouch data (from your MPC hardware’s pressure-sensitive pads) will be recorded. When disabled, pad aftertouch data will be ignored.

**Place Events Recorded During Count-In at Start Point:** When enabled, pressing a pad during the recording’s pre-count will record that note event at the start of the recording (this is how the MPC3000 worked). When disabled, no notes will be recorded until the pre-count is finished and recording has begun.

**Note:** This setting is ignored when recording with the Arpeggiator active.

**Truncate Duration:** This determines if/how events are cropped if they exceed the length of the current Sequence:

- **To Sequence Length:** If the length of an event exceeds the length of the sequence, it will be truncated. This ensures that the event will not overlap itself when the sequence loops.

- **To Sequence End:** If an event exceeds the length of the sequence, it will be truncated to the end of the current sequence. In other words, the event will stop playing when the sequence ends or loops.

- **As Played:** Events will play back exactly as they were recorded, even if they overlap themselves when the sequence loops.

For example, if you record a note starting on the second bar of a 4-bar loop and hold it for 5 bars, the note would end: at bar 7 (As Played), at bar 6 (To Sequence Length), or bar 4 (To Sequence End). See image for details.

**Q-Link Swing Applied On Release:** When this box is selected, moving the Swing parameter assigned to a Q-Link knob will apply the timing correct settings (including the new Swing value) when you release the knob.

**Display Resolution:** This is the display resolution (in PPQN—pulses per quarter note) of pulse values in certain areas of the operating system. Please note that this setting affects the display resolution, not the timing.
Hardware

The settings on this screen determine the behavior of your MPC hardware’s pads as well as connected footswitches.

**Pad Threshold:** This determines how much force is required to strike the pads for them to trigger.

**Pad Sensitivity:** This determines how the pads respond to touch. At lower values, you need to use more force to generate a high-velocity note. At higher values, it is easier to generate high-velocity notes, even if you do not use much force while pressing a pad.

**Pad Curve:** This determines how striking the pads translates into velocity values. The A curve is essentially linear, while the B, C, and D curves are exponential.

**Pad Response (Velocity & Aftertouch):** View these meters when striking and pressing the pads to help gauge the force and pressure you are applying to them. These meters are useful when adjusting the Pad Threshold and Pad Sensitivity parameters (above).

**Footswitch 1 & Footswitch 2:** These determine how footswitches connected to your MPC hardware will work. You can select either transport commands (e.g., Play or Stop) or trigger commands for pads and other buttons.

**Display:** This determines how the display functions for a connected MPC Touch.

**Screen Dimming:** This determines how much time must pass before your MPC hardware automatically dims its touchscreen (if it uses a battery, this can help preserve battery life).

**VU Meter Source** (only when using MPC X in Controller Mode): This determines what audio signal level is shown in the level meters (on the right side of the screen). When set to Master, the level meters show the audio signal sent out of Outputs 1/2 (the Main L/R outputs on the rear panel). When set to Current Program, the level meters show the audio signal of the currently selected program (i.e., the program used by the currently selected track and any other tracks that also use it).

**Show Hardware Info:** Click this button to open a window with information about your connected MPC hardware (firmware version, driver version, etc.).

Project Defaults

The settings on this screen determine various default values for any new project that you create.

**Default Tempo:** This is the default tempo in BPM.

**Default Master Tempo:** When set to On, the default tempo value will be used for the master tempo. When set to Off, the default tempo will be used for sequences.

**Default Sequence Bars:** This determines the default number of bars of a new sequence.

**Default Time Signature** (Numerator/Denominator): This determines the default time signature of a new sequence. The numerator is the number of beats per bar, while the denominator is the value of each beat.

**Default Pad Slice:** This determines how new samples will play when you load them or record them into a project. When set to Pad, the Slice menu in Program Edit Mode will be set to Pad, which lets you set the start point, end point, etc. for the layer. When set to All, the Slice menu in Program Edit Mode will be set to All, in which the entire sample plays.

**Default Drum/Keygroup Filter:** This determines the default type of filter that drum and keygroup programs will use. See Appendix > Glossary > Filter to learn about this.

**Default Plugin Synth:** This determines the default instrument plugin that a new plugin program will use. Use the window that appears to select it. See Plugins > Selecting Plugins to learn about this.
**Project Load/Save**

The settings on this screen determine if (and how) projects are automatically saved.

- **Auto Load File:** Click the ... button to select a project (.xpj) or program (.xpm) on your hard disk to load automatically anytime the software opens.

  **Tip:** To “bypass” or ignore the auto load file, press and hold Shift while opening the MPC software. This will open an empty project instead of your selected Auto Load file.

- **Enabled:** When enabled, the MPC software will automatically save your current project after each Timeout interval. When disabled, the MPC software will not automatically save your project; you must save your project manually.

- **Timeout:** Use this field to select how often your project will automatically save.

- **Template File:** Click the ... button to select a project to load when you create a new project from a template. To do this, click the menu icon (≡) in the upper-left corner of the window, select File, and then click New From Template.

**Record/Export**

The settings on this screen determine the parameters for recording and exporting.

- **Recording Bit Depth:** This determines bit depth of the audio recorded from a sample.

- **Include Program Volume/Pan Settings:** When enabled, the exported audio or MIDI file will include its volume and pan settings. When disabled, the volume and pan settings will be set to 0 dB and center (C), respectively.

- **Bypass Program Effects Plugins:** When enabled, the exported audio or MIDI file will include any third-party effect plugins that are used with it, but those effects will be bypassed (deactivated). When disabled, those effects will be activated.

- **Audio Tail Length:** This determines the length of an audio tail (silence) that will be applied to the exported audio file. When set to 0, the audio file will not have any additional audio tail.

- **Audio Export:** This determines what part of the sequence is exported when you click the Export Audio icon.
  - **Track:** When this is selected, Export Audio will export the currently shown track in the current sequence.
  - **Program:** When this is selected, Export Audio will export all tracks in that sequence that use the currently shown program.
  - **Master:** When this is selected, Export Audio will export all tracks in that sequence that use programs routed to master outputs.

- **MIDI Export:** This determines what part of the sequence is exported when you click the Export MIDI icon.
  - **Track:** When this is selected, Export MIDI will export the currently shown track in the current sequence.
  - **Sequence:** When this is selected, Export MIDI will export all tracks in the current sequence.

- **Bounce Bit Depth:** This determines bit depth of the audio file that is exported when you click the Export Audio icon: 16-bit or 24-bit.

**General**

The settings on this screen determine how other features work in the hardware and operating system.

- **Tap Tempo:** This determines how many times you have to press the Tap Tempo button before the new tempo is recognized.

- **Flash Tap Tempo Light:** When enabled, the Tap Tempo button’s light will flash in time with the tempo. When disabled, the Tap Tempo button’s light will be off.

- **Filter ‘All Notes Off’ CC:** When enabled, “All Notes Off” (“MIDI panic”) messages will be ignored. This is useful if you are using an external MIDI device that can send these types of messages but you want to filter them out. When disabled, “All Notes Off” messages will be received normally.

- **Program Change:** This determines what an incoming MIDI program change message will change: a Program, Sequence, or Track.

- **Vintage Mode:** This determines the type of emulation applied to the audio output. You can apply the particular sonic qualities of, for example, the MPC3000 or MPC60, or of course no emulation (None).
Audition Auto Play: This determines how long a sample will sound when auto-previewing it.

Audition Outputs: This determines which pair of outputs will play any auditioned sounds: Out 1,2–31,32. These sounds include: samples, programs, and projects in the Browser; sample playback, Cue Preview, and Slice Preview in Sample Edit Mode; and sample playback in the Keep or Discard Sample window in the Sampler.

Cue Preview: This determines if/how audio is played as you move the cue playhead. As you move the cue playhead through a sample waveform, you can set it to play the small part of the sample before the cue playhead (Before), play the small part of the sample after the cue playhead (After), or not play at all (Off).

Slice Preview: This determines if/how audio is played as you move a slice marker. As you move the slice marker through a sample waveform, you can set it to play the small part of the sample before the slice marker (Before), play the small part of the sample after the slice marker (After), or not play at all (Off). You can also configure this setting in the Wave Editor (see Editors > Wave Editor).

Audio Warp Algorithm: This determines how a sample is “warped” when you adjust the length of a sample without changing its pitch (e.g., the Warp function in Audio Edit Mode for audio tracks or in Program Edit Mode for clip programs).

Note: The Warp algorithms are very CPU-intensive and can result in audio drop-outs during playback if used too freely. Be mindful of how (and how often) you use the warp function. You can reduce the CPU resources required by using a Warp algorithm other than Elastique Pro, which is very CPU-intensive.

Audio Tracks Auto Warp: This determines how recorded audio track regions are warped. When set to On, any audio track region that you record will be warped automatically to match the current sequence tempo. You can then adjust the sequence tempo while the audio track region remains in time.

BPM Detection Range: This defines the range of detectable BPM values when you use any automatic BPM detection function in the software or when you press the Tap Tempo button to enter a new tempo.

Bank Button Press: This determines how the Pad Bank buttons work.

Select A-D: Pressing a Pad Bank button once will select the corresponding bank from Pad Banks A–D. Pressing and holding Shift while pressing a Pad Bank button will select the corresponding bank from Pad Banks E–H.

Select/toggle bank: Pressing a Pad Bank button will alternate between the corresponding bank from Pad Bank A–D and Pad Bank E–H. In other words, you do not need to hold Shift to select one of Pad Banks E–H.

Allow Multiple Plugin Windows: This determines whether multiple plugin windows can be displayed at the same time (a feature added to MPC 2.1) or only one plugin window can be displayed at a time (how plugin windows worked prior to MPC 2.1).

Desktop Screensaver Disable: This determines if/when your computer’s screensaver is disabled while using the software (using your MPC hardware in Controller Mode):

Never: Your computer’s screensaver will function normally.

When hardware used: As long as your MPC hardware is connected to your computer and being used, your computer’s screensaver will be disabled.

When hardware attached: As long as your MPC hardware is connected to your computer and powered on, your computer’s screensaver will be disabled. It will function normally again if you power off or disconnect your MPC hardware from your computer.

Always: Your computer’s screensaver will be disabled as long as the MPC software is open (whether or not your MPC hardware is connected or powered on).

Q-Link Playhead Increment: This determines whether turning Q-Link Knob 2 (Playhead) in Main Mode will move the playhead location by 1/16th-note increments (1/16 Note) or according to the time division (TC Division).

Collect Usage Statistics: This determines whether or not your usage statistics will be sent occasionally to us, enabling us to improve the MPC experience.

Multi Process Threads: This determines how many cores of your computer’s processor will be used to render audio. The available range depends on your processor.
The **Timing Correct** window contains various settings to help quantize events in your sequence. You can quantize note events on MIDI tracks or track regions on audio tracks (though you cannot apply all types of quantization to audio tracks).

**To open the Timing Correct settings**, click the menu icon (≡), select **Edit**, select **Time Correct**, and click **Settings**….

**To enable or disable Global Timing Correct**, click the **Global Timing Correct** button.

**To apply the settings you selected to all tracks**, click **All Tracks**.

**To apply the settings you selected to the current track**, click **Do It**.

**To cancel and return to the previous screen**, click **Close**.

*Use the **Type** selector to set how timing corrections are applied.*

- **Start**: The entire note event or audio track region will be nudged forward or backward so the start point aligns with the closest time division marker in the grid. You can apply this to MIDI tracks or audio tracks.

- **End**: The end points of note events will be extended or shortened to align with the closest time division marker in the grid. The start points will remain untouched. You can apply this to MIDI tracks only.

- **Length**: The end points of note events will be extended or shortened so that each event’s length is a multiple of the time division, regardless of where it is in the grid. The start points will remain untouched. You can apply this to MIDI tracks only.

- **Legato**: The end points of note events will be extended or shortened to create a long, unbroken phrase from the first note event’s start point to the last note event’s end point. Each note event will sustain until another note event starts. If multiple note events start at the same time (and are not the last note events), their lengths will become identical. Selecting **Legato** disables all other options in this window. You can apply this to MIDI tracks only.

Without legato applied. With legato applied.

*Use the **Time Division** selector to set the quantization value. Events will “snap” to these time divisions on the grid. The T indicates a triplet-based value.*

Alternatively, click the **TC** field at the top of the window and select a time division.

*Use the **Swing** field to set the amount of swing from **50%** to **75%**. Swing lets you “shuffle” your beats—from subtle to extreme.*

*Use the **Shift Timing** field to shift all events by clock ticks.*

*Use the **Window** field to set how many events around a quantize value will be quantized. Any events outside this range will not be quantized; events inside will.*
Use the **Strength** field to set how strictly events will be quantized (i.e., shifted toward the quantize value). Lower values move events a little bit towards the closest quantize value, resulting in a less mechanical feel than a strict quantization (a higher value).

Use the **Events** selector to set the target range for the time correction. You can apply the time correction to **All** note events or to just the **Selected** ones. To select note events to which to apply time correction, either use the various tools in the **editors**, or press or click the **pad** with the desired events (while **Hitting Pad Selects All Events** is set to **On**). You must do this **before** opening the Time Correct window.

When **Range** is selected, you can define the locations (**From** and **To**) as well as the pads or keys that will be quantized. When applying time correction to an audio track region, you will not be able to specify pads or keys.

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**Metronome**

The **Metronome** menu contains all settings regarding the metronome (click track).

**To view the metronome settings**, click the **menu icon** (≡), select **Tools**, and click **Metronome**.

Use the **Count-In** submenu to set if/when the metronome counts before recording.

- **Off** disables the metronome pre-count.
- **Record** enables the pre-count during recording only.
- **Record + Play** enables pre-count in both Record and Playback Modes.

Use the **Enable** submenu to set if/when the metronome is enabled.

- **Off** disables the metronome.
- **Play** enables the metronome sound during playback only.
- **Record** enables the metronome sound during recording only.
- **Record + Play** enables the metronome to happen in both Record and Playback Modes.

Use the **Rate** submenu to select the metronome click’s time division: 1/4, 1/4T, 1/8, 1/8T, 1/16, 1/16T, 1/32 or 1/32T. **T** indicates a triplet-based time division.

Use the **Sound** submenu to select the sound that you want to hear for the metronome: **Sidestick 1, Sidestick 2, Clap, Metroclick, Shake, Tambourine**, or **MPC Click**.

Use the **Output** menu to set where the metronome signal will be heard: a pair of master outputs (**Out 1,2–31,32**) or a single master output (**Out 1–32**).

Use the **Metro** meter at the top of the window to set the volume of your metronome click.

Click the **metronome icon** at the top of the window to enable or disable the metronome.
Editing Processes

You can use the processes described in this chapter to edit an Audio Region, Sequence, Track, or Program.

Audio Region

You can use any of these functions on the currently selected region of an audio track. These functions are available in the menu (Edit > Audio Region) only if the Audio tab is selected in the Inspector and if an audio region is selected in the Grid Editor. To learn about using many of these functions in Grid Editor, see Views > Grid Editor > Audio.

- The Duplicate function copies and pastes the track region immediately after the original one.
  
  To duplicate the track region, select it, click the menu icon (≡), select Edit > Audio Region, and click Duplicate.

- The Mute function silences the track region.
  
  To mute the track region, select it, click the menu icon (≡), select Edit > Audio Region, and click Mute.

- The Reverse function reverses the track region.
  
  To reverse the track region, select it, click the menu icon (≡), select Edit > Audio Region, and click Reverse.

- The Warp function lengthens or shortens the track region without changing its pitch.
  
  To warp the track region, select it, click the menu icon (≡), select Edit > Audio Region, and click Warp.
  
  Use the BPM field above the Grid Editor to change the tempo, which will change the length of the track region accordingly.
  
  Use the Semi and Fine fields above the Grid Editor to change the pitch (this is useful for matching the durations of two samples with different pitches).

  **Note:** The Warp algorithms are very CPU-intensive and can result in audio drop-outs during playback if used too freely. Be mindful of how (and how often) you use the warp function.

You can also do the following while editing an audio track:

- The Clear Regions function erases all regions from the audio track without erasing the track itself.

  To clear all track regions, click the menu icon (≡), select Edit > Track, and click Clear Regions. Click OK to continue or Cancel to return to the previous screen. Alternatively, right-click the Track field in the Inspector and click Clear Regions.

- The Reset Channel Strip function:
  
  - clears all Insert effect slots;
  - turns Mute, Solo, automation, and Monitor off;
  - resets the pan knob to the center;
  - resets the level slider to 0.00 dB; and
  - turns the Record Arm (✓) button off.

  It does not change the track's inputs or outputs.

  To reset the channel strip, right-click the Track field in the Inspector and click Reset Channel Strip. Click Reset to continue or Cancel to return to the previous screen.
• The **Copy Audio Track** function copies the contents of one track to another.

  **To copy the audio track**, click the **menu icon (≡)**, select **Edit > Sequence**, and click **Copy Audio Track**.

  Click the **Copy Contents of Track** field and select a track. This is the track whose events you want to copy.

  Click the **Over Contents of Track** field and select a track. This is the track where the source track will be copied.

  Use the **Track Name** field to set the name of the destination track.

  Click **OK** to continue or **Cancel** to return to the previous screen.

**Sequence**

You can use any of these functions on the currently selected sequence.

• The **Clear** function erases all events from the sequence and resets all of its settings.

  **To clear the sequence**, click the **menu icon (≡)**, select **Edit > Sequence**, and click **Clear**. Click **OK** to continue or **Cancel** to return to the previous screen. Alternatively, right-click the **Sequence** field in the Inspector and click **Clear**. Click **OK** to continue or **Cancel** to return to the previous screen.

• The **Half Length** function will immediately halve the length of the sequence (without deleting any note events).

  **To halve the sequence length**, click the **menu icon (≡)**, select **Edit > Sequence**, and click **Half Length**. Alternatively, right-click the **Sequence** field in the Inspector and click **Half length**.

• The **Double Length** function will immediately double the sequence and copy all events from the first half to the second half.

  **To double the sequence length**, click the **menu icon (≡)**, select **Edit > Sequence**, and click **Double Length**. Alternatively, right-click the **Sequence** field in the Inspector and click **Double length**.

• The **Insert Blank Bars** function adds empty bars to a sequence at a specified point.

  **To insert blank bars**, click the **menu icon (≡)**, select **Edit > Sequence**, and click **Insert Blank Bars**. Alternatively, right-click the **Sequence** field in the Inspector and click **Insert bars**.

  Use the **Sequence** field to select the desired sequence.

  Use the **# of Bars** field to set how many bars you will insert.

  Use the two **Time Sig** fields to set the time signature of the inserted bars.

  Use the **Before Bar** field to set where you will insert the bars. The bars will be inserted before this one.

  Click **Do It** to continue or **Cancel** to return to the previous screen.

• The **Delete Bars** function removes a range of bars from a sequence.

  **To delete bars**, click the **menu icon (≡)**, select **Edit > Sequence**, and click **Delete Bars**. Alternatively, right-click the **Sequence** field in the Inspector and click **Delete bars**.

  Use the **Sequence** field to select the sequence whose bars you want to delete.

  Use the **First Bar** and **Last Bar** fields to set the range of bars you want to delete. The bar in each field and all bars in between them will be deleted.

  Click **Do It** to continue or **Cancel** to return to the previous screen.
The **Copy Bars** function copies a range of bars from a sequence and adds them to another at a specified point.

To copy bars, click the menu icon (≡), select **Edit > Sequence**, and click **Copy Bars**. Alternatively, right-click the **Sequence** field in the Inspector and click **Copy bars**.

Use the **Copy From > Sequence** field to select the “source” sequence. This is the sequence whose bars you want to copy.

Use the **First Bar** and **Last Bar** fields to set the range of bars to copy in the source sequence.

Use the **Paste To > Sequence** field to select the “destination” sequence. This is the sequence where the source sequence bars will be copied.

Use the **After Bar** field to set where you want to add the copied bars. The copied bars will be inserted after this one.

Use the **Copies** field to set how many instances of the copied bars you want to add.

Click **Replace** to overwrite the destination sequence.

Click **Merge** to add the events to the destination sequence without erasing anything.

Click **Cancel** to return to the previous screen.

The **Copy Events** function copies a range of events or selected audio track regions from a sequence and adds them to another at a specified point.

To copy events, click the menu icon (≡), select **Edit > Sequence**, and click **Copy Events**. Alternatively, right-click the **Sequence** field in the Inspector and click **Copy events**.

Use the **Copy From > Sequence** field to select the “source” sequence. This is the sequence whose events you want to copy.

Use the **Copy From > Track** field to select the “source” track. This is the track whose events you want to copy.

Use the **Copy From > Time** fields to set the time range (in bars, beats, and ticks) of the events you want to copy. The **Time** field sets the start of the time range, and the **To** fields set the end of the time range.

Click the **Copy All Events/Copy Only Selected Events** menu to select either option. Select **Copy All Events** to copy and paste all events in the track. Select **Copy Only Selected Events** to copy and paste only the events that are currently selected.

Use the **Paste To > Sequence** field to select the “destination” sequence. This is the sequence where the source sequence events will be copied.

Use the **Paste To > Track** field to select the “destination” track. This is the track where the source track events will be copied.

Use the **Paste To > Time** fields to set where (in bars, beats, and ticks) you want to add the copied events. The events will be added after this point.

Use the **Copies** field to set how many instances of the copied events you want to add.

Click **Replace** to overwrite the destination sequence.

Click **Merge** to add the events to the destination sequence without erasing anything.

Click **Cancel** to return to the previous screen.

The **Copy Sequence** function copies the contents of one sequence to another.

To copy a sequence, click the menu icon (≡), select **Edit > Sequence**, and click **Copy Sequence**. Alternatively, right-click the **Sequence** field in the Inspector and click **Copy**.

Use the **Copy Contents of Sequence** field to select the “source” sequence. This is the sequence whose events you want to copy.

Use the **Over Contents of Sequence** field to select the “destination” sequence. This is the sequence where the source sequence will be copied.

Use the **Sequence Name** field to rename the destination sequence.

Click **Do It** to continue or **Cancel** to return to the previous screen.
• The **Copy Track** function copies the contents of one track to another.

**To copy the track**, click the **menu icon** (≡), select **Edit > Sequence**, and click **Copy Track**.

Use the **Copy Contents of Track** field to select the “source” track. This is the track whose events you want to copy.

Use the **Over Contents of Track** field to select the “destination” track. This is the track where the source track will be copied.

Use the **Track Name** field to rename the destination track.

Click **Do It** to continue or **Cancel** to return to the previous screen.

• The **Transpose** function transposes a range of events on a track in a sequence. The events within that range will shift accordingly in the Grid Editor.

**To transpose the track**, click the **menu icon** (≡), select **Edit > Sequence**, and click **Transpose**.

Use the **Sequence** field to select the sequence you want to transpose.

Use the **Track** field to select the track you want to transpose within the sequence.

Use the **Start** and **End** fields to set the time range (in bars, beats, and ticks) of the sequence you want to transpose. The **Start** fields set the start of the time range, and the **End** fields set the end of the time range.

For **drum programs**, use the two **Pad** fields to select the “source” pad (whose events you want to move) and “destination” pad (where the events will be placed). Tap each field and then press the desired pad.

For **keygroup programs**, **plugin programs**, and **MIDI programs**, set the range and amount of transposition:

- **Range**: Use the two **Note** fields to set the range of notes of the events you want to transpose. Note events within this range will be transposed, while note events outside of this range will remain unchanged.

- **Transpose**: Use this field to set how many semitones up or down you want to transpose the note events.

Click **Do It** to continue or **Cancel** to return to the previous screen.

• The **Erase** function erases all or part of a track in a specific sequence.

**To erase events in the track**, click the **menu icon** (≡), select **Edit > Sequence**, and click **Erase**. Alternatively, right-click the **Sequence** field in the Inspector and click **Erase**.

Use the **Sequence** field to select the sequence you want to erase.

Use the **Track** field to select the track you want to erase within the sequence.

Use the **Start** and **End** fields to set the time range (in bars, beats, and ticks) of the sequence you want to erase. The **Start** fields set the start of the time range, and the **End** fields set the end of the time range.

Select one of the **Erase** options to select what types of events you erase:

- **All** erases all pad events from the designated time range and reset all of its settings.

- **Automation** erases only automation from the designated time range. Use the **Parameter** field to select what type of automation is erased.

- **Note** erases only specific pad events from the designated time range. In the diagram of the eight pad banks that appears, press each pad in each bank to select or deselect its notes.

- **Except Note** erases everything except pad events from the designated time range.

Click **Do It** to continue or **Cancel** to return to the previous screen.

• The **Events Double Speed** function **immediately** halves the lengths of all note events on all tracks in the sequence as well as the distance between them. In other words, all tracks’ notes are pressed closer together so the sequence sounds like it is playing at twice the previous speed. This does not actually affect the pitches of notes or the tempo.

**To double the speed of all note events in the sequence**, click the **menu icon** (≡), select **Edit > Sequence**, and click **Events Double Speed**.
• The **Events Half Speed** function immediately doubles the lengths of all note events on all tracks in the sequence as well as the distance between them. In other words, all tracks’ notes are spread further apart so the sequence sounds like it is playing at half of the previous speed. This does not actually affect the pitches of notes or the tempo.

  To halve the speed of all note events in the sequence, click the menu icon (≡), select **Edit > Sequence**, and click **Events Half Speed**.

• The **Next Sequence** and **Previous Sequence** options select the next or previous sequence in your project (respectively). If you select one of these during playback, the next or previous sequence will be selected when the current one is done playing.

  To select the next or previous sequence, click the menu icon (≡), select **Edit > Sequence**, and click **Next Sequence** or **Previous Sequence** (respectively).

• The **Next Sequence Now** and **Previous Sequence Now** options immediately select the next or previous sequence in your project (respectively).

  To select the next or previous sequence immediately, click the menu icon (≡), select **Edit > Sequence**, and click **Next Sequence Now** or **Previous Sequence Now** (respectively).

• **Export as MIDI** lets you export the current sequence as a standard MIDI (.mid) file.

  To export the sequence as a MIDI file, click the menu icon (≡), select **Edit > Sequence**, and click **Export as MIDI**. Alternatively, right-click the Sequence field in the Inspector and click **Export as MIDI**. You can also press **Shift+Alt+S** (Windows) or **Shift+Option+S** (macOS).

• The **Bounce to Sample** function immediately renders the sequence (all of its tracks) as an audio sample and places it in the project’s sample pool. By default, it will be named **Bounce -** and appended with the sequence name. If you have already used this function on this sequence, then it will create another audio sample appended with the next-highest number.

  To bounce the sequence to a sample, click the menu icon (≡), select **Edit > Sequence**, and click **Bounce to Sample**. Alternatively, right-click the **Sequence** field in the Inspector and click **Bounce to sample**. You can also press **Shift+Alt+S** (Windows) or **Shift+Option+S** (macOS).

• The **Bounce to New Audio Track** function immediately renders the sequence (all of its tracks) as an audio track in the project. The Audio tab will be automatically selected. By default, the sample will be named **Bounce -** and appended with a number. This function does not work for tracks that use MIDI programs or CV programs.

  To bounce the sequence to an audio track, click the menu icon (≡), select **Edit > Sequence**, and click **Bounce to New Audio Track**. Alternatively, right-click the **Sequence** field in the Inspector and click **Bounce to new audio track**. You can also press **Alt+S** (Windows) or **Option+S** (macOS).
**Track**

You can use any of these functions on the currently selected track.

- **The Select All function** selects all events or audio track regions in the current sequence and track.  
  To select all events or audio track regions in the track, click the **menu icon (≡)**, select **Edit > Track**, and click **Select All**.

- **The Deselect function** deselects all events or audio track regions in the current sequence and track.  
  To deselect all events or audio track regions in the track, click the **menu icon (≡)**, select **Edit > Track**, and click **Deselect**.

- **The Delete function** erases the entire audio track. This cannot be used on MIDI tracks.  
  To delete the track, select the **Audio** tab, click the **menu icon (≡)**, select **Edit > Track**, and click **Delete**.  
  Click **OK** to continue or **Cancel** to return to the previous screen. Alternatively, right-click the **Track** field in the Inspector and click **Delete Audio Track**.

- **The Clear function** erases all note events from the current track.  
  To clear the track, click the **menu icon (≡)**, select **Edit > Track**, and click **Clear**. Alternatively, right-click the **Track** field in the Inspector and click **Clear**.  
  Click **Clear** to continue or **Cancel** to return to the previous screen.

- **The Explode function** immediately splits the current MIDI track into multiple MIDI tracks—one for each distinct pad or note (pitch, not event). The current track also remains present and intact, while each track created from it is labeled with the track name and pad name or number. This cannot be used on audio tracks.  
  To explode the track, select the **MIDI** tab, click the **menu icon (≡)**, select **Edit > Track**, and click **Explode**.

- **The Events Double Speed function** immediately halves the lengths of all note events on the track as well as the distance between them. In other words, the track’s notes are pressed closer together so the track sounds like it is playing at twice the previous speed. This does not actually affect the pitches of notes or the tempo.  
  To double the speed of all note events in the track, click the **menu icon (≡)**, select **Edit > Track**, and click **Events Double Speed**.

- **The Events Half Speed function** immediately doubles the lengths of all note events on the track as well as the distance between them. In other words, the track’s notes are spread further apart so the track sounds like it is playing at half of the previous speed. This does not actually affect the pitches of notes or the tempo.  
  To halve the speed of all note events in the track, click the **menu icon (≡)**, select **Edit > Track**, and click **Events Double Speed**.

- **The Split Events function** divides all notes or the selected notes into multiple parts.  
  To split note events, click the **menu icon (≡)**, select **Edit > Track**, and then **Split Events**. Select one of the preset number of events (2–9), or click **Split Events…** to open the Split Events Setup window.

- **The Next Track and Previous Track options** select the next or previous track in your sequence (respectively).  
  To select the next or previous track, click the **menu icon (≡)**, select **Edit > Track**, and click **Next Track** or **Previous Track** (respectively).

- **Export as MIDI** lets you export the current track as a standard MIDI (.mid) file.  
  To export the track as a MIDI file, click the **menu icon (≡)**, select **Edit > Track**, and click **Export as MIDI**. Alternatively, right-click the **Track** field in the Inspector and click **Export as MIDI**.

  In the **Export Current Track as Standard MIDI file** window, do any of the following:
  - **To select the storage device you want to view**, click the **down arrow (▼)** next to the file path. If you have storage devices connected to your MPC hardware, they will appear in this column, as well.
  - **To enter a folder**, double-click it or press **Enter**.
  - **To create a new folder**, click **New Folder**, type a name for the new folder, and then click **OK** or press **Enter** to confirm the name, or click **Cancel** or press **Esc** to keep the original name. You will immediately enter the new folder.
  - **To move up one folder level**, click the **up arrow (▲)**.
  - **To name the file**, click the **File** field at the bottom of the window, and type a name.
  - **To save the file**, click **Save** or press **Enter**.
  - **To cancel**, click **Cancel** or press **Esc**.
• The **Bounce to Sample** function immediately renders the track as an audio sample and places it in the project’s sample pool. By default, it will be named **Bounce** - and appended with the sequence name. If you have already used this function on this sequence, then it will create another audio sample appended with the next-highest number.

  **To bounce the track to a sample**, click the menu icon (≡), select **Edit** > **Track**, and click **Bounce to Sample**. Alternatively, right-click the **Track** field in the Inspector and click **Bounce to sample**.

• The **Bounce to New Audio Track** function immediately renders the track (for the current sequence only) as an audio track in the project. The Main Mode will automatically switch to the **Audio** tab, and the original track will be muted. By default, it will be named **Audio** and appended with a number (e.g., **Audio 002**). This function does not work for tracks that use MIDI programs or CV programs.

  **To bounce the MIDI track to an audio track**, click the menu icon (≡), select **Edit** > **Track**, and click **Bounce to New Audio Track**. Alternatively, right-click the **Track** field in the Inspector and click **Bounce to new audio track**.

**Program**

You can use any of these functions on the currently selected program. These functions are shown in the menu (**Edit** > **Program**) only if the **MIDI** tab is selected in the Inspector.

• The **Pad Color** option opens the **Pad Color** window where you can assign specific colors to your pads in each program. See the **Pad Color** chapter to learn how to use this.

  **To open the Pad Color window**, click the menu icon (≡), select **Edit** > **Program**, and click **Pad Color**.

• The **Note Mapping** option opens the **Note Mapping** window where you can assign a MIDI note to each pad in a program. See the **Note Mapping** chapter to learn how to use this.

  **To open the Note Mapping window**, click the menu icon (≡), select **Edit** > **Program**, and click **Note Mapping**.

• The **Flatten Pad** option opens the **Flatten Pad** window where you can select a pad whose layered samples will be consolidated into a single audio sample on just its first layer. This function renders all samples on a pad as an audio sample and places it on the first layer of that pad. The resulting sample is the audio signal produced by that pad at full velocity (127) after the pad channel strip, which means that it includes any assigned pad insert effects and the results of warping the sample. This function is useful if you need to reduce how CPU-intensive a pad or program is by essentially "embedding" the warping and effects in the sample itself. By default, it will use the name of the first sample. This function works for drum programs only. (This is the same as the Flatten Pad button shown at the top of the touchscreen in Program Edit Mode.)

  **To flatten the samples of a pad**, click the menu icon (≡), select **Edit** > **Program**, and click **Flatten Pad**.

  Use the **Pad** menu to select the pad whose samples you want to flatten. Alternatively, press the desired pad.

  Use the **Name** field to enter a name for the flattened sample.

  Use the **Tail Length** field to set the length of the audio tail. This will add extra seconds to the end of the resulting audio file. This is useful if you are using effects or samples whose sounds exceed the defined audio length (e.g., long reverb or delay, one-shot samples with long decays, etc.). We recommend using an audio tail of at least a couple of seconds.

  Click **Do it** to continue or **Cancel** to return to the previous screen.

• The **Refresh Samples Metadata** option opens the **Refresh Samples Metadata** window, where you can refresh the samples in a selected program to update the associated file information.

  **To refresh sample metadata**, click the menu icon (≡), select **Edit** > **Program**, and click **Refresh Samples Metadata**.

  The **Program Name** menu shows the name of the currently selected program.

  Check **Update All Slice start, end and loop start from smpl riff file data** to refresh the associated file information.

  Check **Decrement All Slice loop start by one sample** to add an extra sample at the start of each slice loop.

  Click **Do it** to continue or **Close** to return to the previous screen.
The **Tidy Keygroup Sample Names** function immediately renames samples in the selected keygroup according to the program name and other information.

To update the keygroup sample names, click the menu icon (≡), select Edit > Program, and click Tidy Keygroup Sample Names.

The **Duplicate** function immediately creates an identical program. The duplicate program will use the same name but appended with a number (e.g., Program 002).

To duplicate the program, click the menu icon (≡), select Edit > Program, and click Duplicate. Alternatively, right-click a program in the Project panel and click Duplicate.

The **Duplicate to Track** function immediately creates an identical program on a new track. The duplicate program will use the same name but appended with a number (e.g., Program 002). The new track will be named Track and appended with a number (e.g., Track 06).

To duplicate the program to a new track, click the menu icon (≡), select Edit > Program, and click Duplicate to Track. Alternatively, right-click a program in the Project panel and click Duplicate to Track.

The **Merge** function lets you copy the pads (and their parameters) from one program into another, essentially consolidating two programs into one. The name of the new program will be the names of the original two programs separated by and.

To merge two programs, click the menu icon (≡), select Edit > Program, and click Merge. Alternatively, right-click a program in the Project panel and click Merge.

Use the Pads from program menu to select the program you want to copy.

Use the into program menu to select the program to which the copied pads will be added.

Select the Start on next bank box if you want the copied pads to start on Pad 01 of the next available bank. Deselect this box if you want the copied pads to start on the next available pad, regardless of the bank.

Click OK to continue or Cancel to return to the previous screen.

The **Copy Pads** option opens the Copy Pads window which lets you copy one or more pads from one program to another.

To copy pads, click the menu icon (≡), select Edit > Program, and click Copy Pads. Alternatively, right-click a program in the Project panel and click Copy Pad.

Use the Copy Type menu to select the whether you want to copy an individual Pad, a Bank of pads or a Range of pads. Use the fields that appear to select the Pad, From Bank or Start/End Pads that will be copied.

Use the From Program menu to select the program from which the pads will be copied.

Use the To Program menu to select the program to which the copied pads will be added.

Use the Pad, To Bank or Start Pad where the copied pads will be added starting from.

Click Apply to confirm your setting, and then click Do It to copy the pads or Cancel to return to the previous screen.

The **Delete** function erases the program from the project. The samples used in that program will remain in the project’s sample pool and any other programs that use them.

To delete the program, click the menu icon (≡), select Edit > Program, and click Delete. Alternatively, right-click the Program field in the Inspector and click Delete. You can also right-click a program in the Project panel and click Delete.

The **Rename** function lets you enter a new name for the program. Type a name and click OK to continue or Cancel to return to the previous screen.

To rename the program, click the menu icon (≡), select Edit > Program, and click Rename. Alternatively, right-click a program in the Project panel and click Rename.

The **Bounce to Sample** function immediately renders all tracks that use that program (for the current sequence only) as an audio sample and places it in the project’s sample pool. By default, it will be named Bounce - and appended with the program name. This function does not work for MIDI programs or CV programs.

To bounce the program to a sample, click the menu icon (≡), select Edit > Program, and click Bounce to Sample. Alternatively, right-click the Program field in the Inspector and click Bounce to sample.
• The **Bounce to New Audio Track** function immediately renders that program (for the current sequence only) as an audio track in the project. The Main Mode will automatically switch to the **Audio** tab, and the original program will be muted. By default, it will be named **Audio** and appended with a number (e.g., **Audio 002**). This function does not work for MIDI programs or CV programs.

  To bounce the program to an audio track, click the **menu icon** (≡), select **Edit > Program**, and click **Bounce to Audio Track**. Alternatively, right-click the **Program** field in the Inspector and click **Bounce to new audio track**.

• The **Previous Preset** and **Next Preset** functions let you switch presets in the current plugin program.

• The **Save Plugin Preset**... and **Load Plugin Preset**... functions let you save the current plugin preset or load one into the current plugin program.

**Effects**

You can apply various effects to the pads, keygroups, audio tracks, programs, submixes, and master outputs, using **insert** and **send/return** effects. This chapter can help you get a good overall understanding of how the effects work.

See **Appendix > Effects & Parameters** for a list of all available effects (with a brief description of each) and their editable parameters.

**Overview**

In a program, each **pad** or **keygroup** can have up to **four insert effects** applied to it. An entire **program** can have up to **four insert effects** applied to it, as well.

An **audio track**, like a program, can have up to **four insert effects** applied to it, as well.

For even further flexibility, each **submix** can have up to **four insert effects** applied to it. You can route pads, keygroups, audio tracks, or programs to a submix, which is then routed to a master output.

Additionally, each **pad**, **keygroup**, **audio track**, **program**, and **submix** can be sent to (up to) **four return channels** (returns), each of which can have up to **four insert effects** of their own. Their audio will be routed through the insert effects on those returns, and the processed audio will be sent to a master output.

Finally, you can apply up to **four insert effects** to each master output (a stereo pair of channels: **Outputs 1/2**, **Outputs 3/4**, etc.).

When you create an audio mixdown of a sequence or song, you can choose whether or not master insert effects are included or send/return effects are included, depending on what you are mixing down:

  - If you are creating an audio mixdown of a pair of **master outputs**, you can choose whether or not **master insert effects** will be included in the mixdown.
  - If you are creating an audio mixdown of **separate programs** or **exploded tracks**, you can choose whether or not **send/return effects** will be included in the mixdown.

See **Audio Mixdown** to learn about these options.

The Sampler and Looper handle effects differently:

  - The **Sampler** can use up to **four insert effects**, which are applied to the audio as you record it. This means that the effects cannot be “removed” from the sound later. Learn more about the Sampler in the **Modes > Sampler** chapter.

  - Similarly, the **Looper** can use up to **four insert effects**, which are applied to the audio as you record it. This means that the effects cannot be “removed” from the sound later. Learn more about the Looper in the **Modes > Looper** chapter.

Please see the rest of this chapter to learn how to use insert effects as well as send/return effects.
You can load, edit, remove, and activate or deactivate effects in the **Inserts** section of a channel strip. Each **Inserts** section has four insert effect slots.

**To load an effect**, double-click an empty slot in the **Inserts** section of a channel strip. In the window that appears:

- Click the + or – button to expand or collapse each category.
- The right edge of the window shows how many MIDI channels can be sent to and from each effect.
- Select **Sort by type** to sort the effects by type.
- Select **Sort by manufacturer** to sort the effects by manufacturer.
- Double-click an effect or click it and then click **Select** to load it.
- Click the **gear icon** to open the **Plugin Manager**. See **Plugins > Plugin Manager** to learn about this.
- Click **Close** or press **Esc** to close the window without loading any effect.

**To remove a loaded effect**, double-click the down arrow (▼) next to its name the **Inserts** section. In the window that appears, double-click the <none> option at the top of the list of effects or click it once and then click **Select**.

**To edit an effect**, double-click its name in the **Inserts** section of a channel strip. A window with the effect’s parameters will appear.

- **To adjust a parameter**, click and drag its knob up or down.
- **To make finer adjustments**, press and hold **Ctrl** (Windows) or **⌘** (macOS) and then click and drag its knob up or down.
- **To enable or disable the effect**, click the **On/Off** button in the upper-left corner.
- **To keep the window on top at all times**, click the down arrow (▼) in the upper-right corner so it becomes an up arrow (▲). Click it again to allow the window to be hidden under others.
- **To close the window**, click the **X** in the upper-right corner.

**To activate or deactivate an effect**, click the on/off button next to it.

**To deactivate all four effects**, click the on/off button next to **Inserts** so it turns **gray** (off). Previously active effects will be off even though the button appears to be on.

**To reactivate the previously active effects**, click the on/off button next to **Inserts** so it turns **blue** (on).

**To move an effect from one slot to another**, click and drag it from its original slot to another slot (the new slot will be outlined in **yellow** before you release it). The effect will retain all of its editable parameters.

**To copy an effect from one slot to another**, press and hold **Alt** (Windows) or **Option** (macOS) and then click and drag it from its original slot to another slot (the new slot will be **yellow** before you release it). The effect will retain all of its editable parameters.
Insert Effects

Insert effects can be applied to a pad, keygroup, audio track, program, submix or master output. The audio signal produced by that source is processed by any insert effect/effects that are loaded to that source (in the Inserts section of its channel strip) and activated. Each one can have up to four insert effects loaded and activated.

Below is an outline of where you can set the effects for a pad, keygroup, audio track, program, submix, or master output.

**Note:**

If the Inserts section is not shown in a channel strip in the Inspector, click the menu icon (≡), go to View > Inspector, and click Inserts.

If the Inserts section is not shown in a channel strip in the Pad Mixer or Channel Mixer, click the box icon.

**Pad:** You can load up to four insert effects to each pad. The Inserts section for a pad is available in two places:
- the pad channel strip in the Inspector (in any mode)
- the pad channel strip in the Pad Mixer

**Tip:** When using pad insert effects, they will be applied to the selected pad only. This means that you could apply unique combinations of effects to each pad within a program. If you want to apply the same effect to all pads, do this with a program insert effect.

**Keygroup:** You can load up to four insert effects to each keygroup. The Inserts section for a keygroup is available in two places:
- the keygroup channel strip in the Inspector (in any mode)
- the keygroup channel strip in the Pad Mixer

**Important:** When using keygroup insert effects, they will be applied to that keygroup only. Keep this in mind if you load insert effects to multiple keygroups with overlapping note ranges—the effects will overlap in that range as well.

**Audio Track:** You can load up to four insert effects to each audio track. The Inserts section for an audio track is available in three places:
- the audio track channel strip in the Inspector
- the audio track channel strip in the Pad Mixer
- the audio track channel strip in the Channel Mixer

**Program:** You can load up to four insert effects to each program. The Inserts section for a program is available in three places:
- the program channel strip in the Inspector
- the program channel strip in the Pad Mixer
- the program channel strip in the Channel Mixer

**Submix:** You can load up to four insert effects to each submix. The Inserts section for a submix is available only in the submix channel strip in the Channel Mixer.

**Master Output:** You can load up to four insert effects to each master output (a stereo pair of channels: Outputs 1/2, Outputs 3/4, etc.). The Inserts section for a master output is available in two places:
- the master channel strip in the Inspector
- the master channel strip in the Channel Mixer
Send/Return Effects

Send/return effects work in the following way:

1. A pad, keygroup, audio track, program, or submix can send its audio to a return at a designated send level.
2. That audio is processed by the effects on the return. Each return can have up to four insert effects loaded and activated.
3. The processed audio is sent to a pair of master outputs (stereo) or a single master output (mono).

There are four available returns. Any pad, keygroup, audio track, program, or submix can send its audio to any combination of those returns at the same time.

You can load send/return effects and set the return levels in two places:

- the return channel strip in the Inspector
- the return channel strip in the Channel Mixer

Below is a description of where to set the desired send levels for a pad, keygroup, audio track, program, or submix.

**Note:**

If the Send knobs are not shown in a channel strip in the Inspector, click the menu icon (≡), go to View > Inspector, and click Sends.

If the Send knobs are not shown in a channel strip in the Pad Mixer or Channel Mixer, click the four-circles icon.

**Pad:** The Send knobs for a pad are available in two places:

- the pad channel strip in the Inspector (in any mode)
- the pad channel strip in the Pad Mixer

**Keygroup:** The Send knobs for a keygroup are available in two places:

- the keygroup channel strip in the Inspector (in any mode)
- the keygroup channel strip in the Pad Mixer

**Important:** When using keygroup send/return effects, they will be applied to that keygroup only. Keep this in mind if you use send/return effects with multiple keygroups with overlapping note ranges—the effects will overlap in that range as well.

**Audio Track:** The Send knobs for an audio track are available in three places:

- the audio track channel strip in the Inspector
- the audio track channel strip in the Pad Mixer
- the audio track channel strip in the Channel Mixer

**Program:** The Send knobs for a program are available in three places:

- the program channel strip in the Inspector
- the program channel strip in the Pad Mixer
- the program channel strip in the Channel Mixer

**Submix:** The Send knobs for a submix are available only in the submix channel strip in the Channel Mixer.
Automation

You can set the automation for programs and audio tracks to be “written,” “read,” or disabled entirely. You can do this globally or for individual programs and audio tracks.

Global

A button in the upper-right corner of the toolbar controls the global automation. When you click this button to change its state, it will change the automation state for all programs in the project. (If you have changed the automation state of an individual program or audio track as described below, then this global automation button will indicate that rather than the global automation state.)

Click this global automation button to toggle between two states:

When set to Read (R), automation data will be read but not recorded. You can still manually edit and enter automation. (Think of this as a protective feature to prevent accidental changes to your automation while recording.)

When set to Write (W), automation can be recorded and will overwrite any existing automation. (Make sure not to touch Q-Link knobs accidentally while you are recording.)

Press and hold Shift on your keyboard and click the global automation button to disable or enable global automation. When off, automation data will be ignored.

Important: If you have already recorded automation and turn it off, the track will still use the effect and its parameter values at the point where you turned it off.

Programs & Audio Tracks

You can also set the automation for each program or audio track by using the program/audio track automation button in the channel strip for that program or audio track (shown in the Inspector, Pad Mixer, and Channel Mixer). Automation is available for all program types.

Note: Remember that clicking the global automation button will change the automation state for all programs in the project; if they were originally different, all of them will then match the global automation state.

Click this program/audio track automation button to toggle between two states:

When set to Read (R), the program will read automation data but will not record any additional automation over it. You can still manually edit and enter automation. (Think of this as a protective feature to prevent accidental changes to your automation while recording.)

When set to Write (W), the program can record automation. (If you have any Q-Link knobs assigned to automatable parameters, make sure not to touch any accidentally while you are recording.)

Press and hold Shift on your keyboard and click the program/audio track automation button to disable or enable program/audio track automation. When off, the program will ignore automation data.

Important: If you have already recorded automation and turn it off, the track will still use the effect and its parameter values at the point where you turned it off.
Recording Automation

Automating various parameters is a good way to add some motion and dynamism to your sequences.

You can automate three types of parameters for MIDI tracks:

- **Track Parameters**:
  - the mixer parameters of the track (Volume, Pan, Mute, and Solo)
  - the MIDI CCs of the track (0–127)
  - aftertouch messages
  - channel pressure messages
  - program change messages

- **Program Parameters** (not available for MIDI programs):
  - the mixer parameters of the program (Volume, Pan, Mute, Solo, and Send 1–4)
  - parameters of the program (options vary based on the type of program)
  - parameters for insert effects on the program (options vary based on the effect)

- **Pad Parameters** (for drum programs, keygroup programs, and clip programs):
  - the mixer parameters of the pad/keygroup (Level, Pan, Pad Mute, Pad Solo, or Send 1–4)
  - parameters of the pad/keygroup (options vary based on the type of program)
  - parameters for insert effects on the pad/keygroup (options vary based on the effect)

You can automate only one set of parameters for audio tracks:

- **Audio Track Parameters**:
  - the mixer parameters of the audio track (Volume, Pan, Mute, Solo, and Send 1–4)
  - parameters for insert effects on the audio track (options vary based on the effect)

To enter automation for track parameters on a MIDI track:

1. Select the track, and then click **Rec (●)** or **Overdub (⊕)** to record-arm it.
2. Click **Play (▶)** or **Play Start (▶|)** to start playback of the sequence.
3. Use whatever controls you want to adjust the parameter/parameters as the sequence plays. Your changes will be recorded in real time. Note that recording automation is not an overdub-style process (even if you clicked Overdub to record-arm the track); when the sequence repeats, it will overwrite/replace any automation that was previously recorded.
4. Click **Stop (■)** to stop the automation recording.

Alternatively, create the automation curves manually (see *Editing Automation* to learn how to do this).

To record automation of a program parameter or pad parameter:

1. Set the program/audio track automation button to the red Write (W) option for any program or audio track whose parameters (or pad parameters) you want to automate. Alternatively, click the global automation button in the upper-right corner of the window to change the state of all programs and audio tracks.
2. Click **Play (▶)** or **Play Start (▶|)** to start playback of the sequence.
3. Use whatever controls you want to adjust the parameter/parameters as the sequence plays. Your changes will be recorded in real time. Note that recording automation is not an overdub-style process; when the sequence repeats, it will overwrite/replace any automation that was previously recorded.
4. Click **Stop (■)** to stop the automation recording.

Once you are done, we recommend setting the program/audio track automation button for that program or audio track to the green Read (R) option. This ensures your track uses the automation you just recorded when you play it back (and will not be overwritten by any future adjustments you make to parameters during sequence playback).
Editing Automation

You can use automation editing tools to adjust or create automation curves for all available parameters.

To edit automation of a program parameter or pad parameter, use the automation lane in the Grid Editor:

1. In the Grid Editor, make sure the automation lane is shown. If it is not, click the up arrow (^) in the lower-left corner of the Grid Editor.
2. Click the down arrow (▼) in the lower-left corner of the Grid Editor. Use the menu and submenus that appear to select the desired parameter. The parameter name will then appear below Modifier.
3. Use the pencil and marquee tools described below to create and edit automation for this parameter in the automation lane.

Use these tools in the Grid Editor to create or edit the automation curve in the automation lane. See Editors > Grid Editor to learn more about using the Grid Editor in general.

Important: An automation curve consists of several points placed according to current time division—aligned with the quantization grid). You can create or move points without restricting them to the time division by pressing and holding Shift.

**Pencil**: Draw Mode:

- **To create a point**, click the desired location in the automation lane.
- **To select a point**, click it.
- **To move a point**, click and drag it to another location in the automation lane. Press and hold Shift while doing this to move it without restricting (“snapping”) it to the quantization grid.
- **To erase a point**, double-click it.

**Marquee**: Marquee Mode:

- **To select a point**, click it.
- **To select multiple points**, click and drag across the automation lane to create a box around them.
- **To move a point**, click and drag it to another location in the automation lane. Press and hold Shift while doing this to move it without restricting (“snapping”) it to the quantization grid.
- **To move multiple points**, select them as described above, and then click and drag them to another location in the automation lane. Press and hold Shift while doing this to move them without restricting (“snapping”) them to the quantization grid.
To edit automation of a track parameter for a MIDI track, use the automation lane in the Grid Editor, as described above. Alternatively, use the Track View in Track View Mode, the Channel Mixer, or Track Mute Mode.

To edit automation of a track parameter in the Track View:

1. In the Track View, make sure the tracks you want are shown. If they are not, click menu icon (≡) in the upper-right corner, and select or deselect Show Unused Tracks, Show Programs, Show Audio Tracks, and Show Midi Tracks.
2. Click the A icon in the upper-left corner so it is white. The menu next to will be enabled, and Automation and its editing tools will appear above the middle of the Track View.
3. Click the menu next to the A icon to select the desired parameter.
4. Use the pencil and marquee tools described below to create and edit the automation curve for this parameter in the track strip or program strip.

MIDI track, audio track, and program strips appear slightly differently while displaying their automation curves:

MIDI track:

Audio track:

Program:

Use these tools in the Track View Editor to create or edit the automation curve. See Track View to learn more about using the Track View in general.

Important: An automation curve consists of several points placed according to current time division—aligned with the quantization grid. You can create or move points without restricting them to the time division by pressing and holding Shift.

Pencil: Draw Mode:

To create a point, click the desired location in the track strip or program strip.

To select a point, click it.

To move a point, click and drag it to another location in the track strip or program strip.

To erase a point, double-click it.

Marquee: Marquee Mode:

To select a point, click it.

To select points, click and drag across the track strip or program strip to create a box around them.

To move a point, click and drag it to another location in the track strip or program strip. Press and hold Shift while doing this to move it without restricting (“snapping”) it to the quantization grid.

To move multiple points, select them as described above, and then click and drag them to another location in the track strip or program strip. Press and hold Shift while doing this to move them without restricting (“snapping”) them to the quantization grid.
When 16 Level is first activated, the selected pad (Pad A01 by default) will be temporarily copied to all 16 pads. The pads will now output the same note number as the initial pad, but a selectable parameter will be fixed at values that increase as the pad numbers increase (e.g., Pad 1 is the minimum, Pad 16 is the maximum), regardless of how hard you press them.

To show the 16 Level window, click the menu icon (≡), select Tools, and click 16 Level. Alternatively, click the 16 Level button above the Pads section in Main Mode or Program Edit Mode.

To select a pad, do one of the following:
- Press and hold 16 Level, and then press the desired pad.
- Click the 16 Levels box to deselect it (temporarily disabling the feature), press the desired pad, and then click the 16 Levels box again to select it.
- Click the Pad field, and use the data dial or +/- buttons.
- Double-click the Pad field, and click the desired pad in the list that appears.

In the 16 Levels window, click the Type menu to choose the parameter: Velocity, Tune, Filter, Layer, Attack, or Decay.

When Type is set to Layer, pads with multiple samples will play back each layer according to the Velocity Start and Velocity End settings for each layer.

If the Type is set to Tune, click the Original pad menu and select the pad that will contain the note at its original pitch (tuning).

**Note Mapping**

Note Mapping lets you assign specific MIDI notes to your pads in each program except for keygroup programs.

To show the Note Mapping window, click the menu icon (≡), select Edit > Program, and click Note Mapping.

**Important:** If the Note Mapping window is already open and you want to assign pad colors for another program, click Close, select a track that uses the desired program, and then open the Note Mapping window again.

The Pad column indicates the pad bank and number of each pad in the program.

The Note Name column indicates the note value (e.g., G#3, A 4, etc.).

The MIDI Note column indicates the MIDI note number (corresponding to the note value).

Click Edit next to each pad to open a submenu listing the available octaves. Select an octave and then select the note you want to assign to the pad.

Click Classic MPC to assign a preconfigured note mapping to the pads that was used on early MPCs.

Click Chromatic to assign all notes to all pads chromatically in an ascending order (i.e. C-2/MIDI Note 0, assigned to Pad A01, through G 8/MIDI Note 127, assigned to Pad H16).

Click Close to close this window and use the current note mapping.
Pad Color

Pad Color lets you assign specific colors to your pads in each program.

**To show the Pad Color window,** click the menu icon (≡), select Edit > Program, and click Pad Color.

**Important:** If the Pad Color window is already open and you want to assign pad colors for another program, click Close, select a track that uses the desired program, and then open the Pad Color window again.

Use the **Display As** field to set how the pad lights will display:

- **Off:** The pads will be unlit whether you are playing them or not.
- **Classic Velocity:** The pads will be unlit while you are not playing them. When you press them, they will light with colors according to the velocity: red indicates a high velocity, yellow indicates a low velocity.
- **Fixed:** The pads will be lit with their assigned colors whether you are playing them or not.
- **Off->Velocity:** The pads will be unlit when you are not playing them. When you press them, they will light with their assigned color with a brightness that corresponds with the velocity.
- **Dim->Velocity:** The pads will be dimly lit when you are not playing them. When you press them, they will light with their assigned color with a brightness that corresponds with the velocity.
- **Bright->Velocity:** The pads will be brightly lit when you are not playing them. When you press them, they will light with their assigned color with a brightness that corresponds with the velocity.

Use the **Pads** field to determine whether you are setting the color for one pad (Edit single pads) or all pads (Edit all pads).

**Tip:** To quickly assign that color to all pads in the program, press and hold **Shift** while clicking a color button.

Use the **Empty pads** menu to set how empty pads will display:

- **Empty pads off:** Pads without any sounds will remain off.
- **Empty pads dim:** Pads without any sounds will remain more dimly lit than pads with sounds assigned.
- **Empty pads normal:** Pads without any sounds will appear the same as pads with sounds assigned.

Click a **pad** to select it, and then click one of the **color buttons** to assign its color.

**Tip:** To select the color button corresponding a specific pad’s color, press and hold **Shift**, and then press the pad or click it on the window.

To make the current pad color settings the defaults for all programs on the same type (e.g., drum programs, keygroup programs, etc.), click **Make Default**.

Click **Close** to close the window.
The Audio Mixdown window lets you render and export either the current sequence or song as an audio file. In Song Mode, this will export the entire song. In any other mode, this will export the current sequence only.

To open the Audio Mixdown window, click the menu icon (≡), and go to File > Export and click As Audio Mixdown.

### Audio Length

Use the Start Bar and End Bar fields to define where the resulting audio file will start and end, respectively.

Use the Audio Tail field to add extra seconds to the end of the resulting audio file. This is useful if you are using effects or samples whose sounds exceed the defined audio length (e.g., long reverb or delay, one-shot samples with long decays, etc.). We recommend using an audio tail of at least a couple of seconds.

### Render Source

Select Stereo Output and use the adjacent field to select a pair of outputs: Out 1,2–31,32. The mixdown will be taken from these outputs.

Select Separate Programs to create a mixdown of each program used in the sequence or song.

Select Explode Tracks to create a mixdown of each track used in the sequence (you cannot use this option for an entire song).

**Important:** Each pad or keygroup must have their output routed to Program to be included in the mixdown. This is the typical (and default) setting.

### Render Options

If your Render Source is set to Stereo Output, select Master Inserts to include master insert effects in the mixdown.

If your Render Source is set to Separate Programs or Explode Tracks, select Export Returns to include return buses in the mixdown.

If your Render Source is set to Stereo Output, click Save as Project Preview to save the sequence or song as a project preview file (which you can play for reference in the Browser). If you select this box, Stereo Output will automatically be selected, as well.

### File Formats

Click WAV, AIFF, MP3, FLAC or OGG to select the file format of the mixdown.

For WAV and AIFF files, use the Bit Depth field to select a bit depth of 8, 16, or 24 bits, or 32 bits, floating point (32 F). For FLAC files, you can select a bit depth of 16 or 24 bits. For MP3 and OGG files, you can select a Bitrate of 128, 160, 192, or 320 kbps.

Use the Sample Rate field to select a sample rate of 44.1 kHz, 48 kHz, 88.2 kHz, or 96 kHz. In most cases, we recommend selecting 44.1 kHz.

Click Export to enter the Save screen where you can select a name and location to save your audio mixdown.

Click Cancel to return to the previous screen.
Plugins

The MPC software enables you to scan third-party plugins (VST or AU formats) to use within your projects.

**Instrument plugins** can be used with plugin programs. See Programs > Plugin Programs to learn about this.

**Effect plugins** can be used as insert effects on pads, keygroups, audio tracks, most types of programs, submixes, returns, and master outputs. See Effects > Insert Effects to learn about this.

See the following Scanning Plugins section to learn how to scan your computer and external storage devices for the plugins you want to use.

See the Plugin Manager section to learn how to manage all of your scanned plugins.

See the Selecting Plugins section to learn how to select a plugin when using plugin programs or insert effects.

Scanning Plugins

In order to use plugins in the MPC software, the software must scan any folders on your computer or external storage device where they are located.

**To scan your plugins:**

1. **Windows**: Click the menu icon (≡), select Edit, and click Preferences.
   macOS: Click the MPC menu and click Preferences.
2. In the Preferences window that appears, click the Plugins tab.
3. Click the ... button next to one of the VST Folders fields.
4. In the window that appears, select the location where your plugins are stored. Select the folder and click Open (while not actually in the folder).
5. The file path will appear in the VST Folders field. Click the box next to it so it is selected.
   If you have plugins stored in other locations, you can repeat Steps 3–5 to select those locations.
6. Click Scan New to scan these recently selected locations. This is helpful if you have already scanned other locations and want to scan just the one/ones you recently added.
   Alternatively, click Rescan All to scan all four locations again.
   The list of scanned plugins will appear in the list below. When the scan is completed, the status bar above it will show Done.
7. Click OK to close the window.
Plugin Manager

The Plugin Manager lets you view and manage the status of all plugins in your MPC software.

To open the Plugin Manager, click the menu icon (≡), select Tools, and click Plugin Manager. The Plugins window will appear. Alternatively, click the gear icon in the lower-left corner of the window that appears when selecting a plugin or an insert effect.

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Use these boxes and the Search field to filter the plugins shown in the list below.

**Instruments**: Select this box to show instrument plugins.

**FX**: Select this box to show effect plugins.

**Good**: Select this box to show plugins that were successfully scanned.

**Bad**: Select this box to show plugins that failed to scan.

**Search**: Use this field to enter a search term. The results will appear in the list below.

The columns (described below, left to right) indicate the plugins’ status. Click a column to sort the list by that category. Right-click the top of a column to auto-size this column, auto-size all columns, or to show or hide specific columns.

**Note**: The MPC software supports VST or AU plugins.

**Use**: Select this box to allow the MPC software access to this plugin. If this box is deselected, it will not appear if you select an instrument plugin (to use for a plugin program) or an effect plugin (to use on an insert effect slot).

**Name**: This is the plugin’s name.

**Manufacturer**: This is the plugin’s manufacturer.

**Version**: This is the version of the plugin.

**Type**: This is the type of plugin. A waveform and fx indicate an effect plugin. A guitar indicates an instrument plugin.

**Path**: This is where the plugin is located on your computer or external storage device.
Channels: This is how many MIDI channels can be sent to and from the plugin.

OK: This indicates whether the plugin has been successfully scanned or not. OK indicates that the plugin is properly scanned and can be used in the MPC software. Failed indicates that the plugin was not properly scanned. To rescan the plugin, click it and then click Rescan in the lower-right corner.

Fav: This indicates whether the plugin is a “favorite” or not. Favorites will appear in a separate category when you select an instrument or effect plugin. Click the box to select or deselect it.

Rescan: Click this to prompt the MPC software to rescan the selected plugin.

Close: Click this to close the window. Alternatively, press Esc.

Selecting Plugins

Instrument plugins can be used with plugin programs (see Programs > Plugin Programs to learn how to create a plugin program).

To select an instrument plugin for a plugin program, select the track that uses that program, and then click the Plugin field in the Program section of the Inspector.

In the window that appears:

- Click the + or − button to expand or collapse each category. Favorites are instrument plugins whose Fav box is selected in the Plugin Manager.
- The right edge of the window shows how many MIDI channels can be sent to and from each plugin.
- Select Sort by type to sort the plugins by type.
- Select Sort by manufacturer to sort the plugins by manufacturer.
- Double-click a plugin or click it and then click Select to load it.
- Click the gear icon to open the Plugin Manager. See Plugin Manager to learn about this.
- Click Close or press Esc to close the window without loading any plugin.

Effect plugins can be used as insert effects on pads, keygroups, audio tracks, most types of programs, submixes, returns, and master outputs (see Effects > Insert Effects to learn how these work).

To load an effect plugin, double-click an empty slot in the Inserts section of a channel strip. In the window that appears:

- Click the + or − button to expand or collapse each category. Favorites are effect plugins whose Fav box is selected in the Plugin Manager.
- The right edge of the window shows how many MIDI channels can be sent to and from each effect.
- Select Sort by type to sort the effects by type.
- Select Sort by manufacturer to sort the effects by manufacturer.
- Double-click an effect or click it and then click Select to load it.
- Click the gear icon to open the Plugin Manager. See Plugin Manager to learn about this.
- Click Close or press Esc to close the window without loading any effect.
Expansions

The MPC software enables you to use MPC Expansions, collections of samples, loops, riffs, etc. available in the Akai Professional Expansion Store.

To open the Expansion Store:

- **Windows**: Click the menu icon (≡), select Help, and select Expansion Store.
- **macOS**: Click the MPC menu and click Expansion Store.

This opens an online store of available MPC Expansions on the Akai Professional website. You must have an internet connection to use this feature.

See the Expansion Manager chapter to learn how to manage all of your scanned MPC Expansions.

See the Selecting Expansions section to learn how to select an MPC Expansion when using plugin programs.

See the Browser > Expansion Browser chapter to learn how to use the Expansion Browser.

Expansion Manager

The Expansion Manager lets you view and manage the status of all MPC Expansions in your MPC software.

To open the Expansion Manager, click the menu icon (≡), select Tools, and click Expansion Manager. The Expansions window will appear.

The columns (described below, left to right) indicate the MPC Expansions’ status. Right-click the top of a column to auto-size this column or auto-size all columns.

- **Use**: Select this box to allow the MPC software access to this MPC Expansion. If this box is deselected, it will not appear in the Expansion Browser.
- **Expansion Details**: This shows the MPC Expansion’s name, the manufacturer, and the version.
- **Type**: This indicates the type of MPC Expansion. A gear icon indicates an MPC Expansion that is included by default with the MPC software.
- **Close**: Click this to close the window. Alternatively, press Esc.
Selecting Expansions

MPC Expansions can be used with plugin programs (see Programs > Plugin Programs to learn how to create a plugin program).

To select an MPC Expansion for a plugin program, select the track that uses that program, and then click the Plugin field in the Program section of the Inspector.

In the window that appears:

- Click the + or – button to expand or collapse each category.
- Favorites are instrument plugins whose Fav box is selected in the Plugin Manager.
- The right edge of the window shows how many MIDI channels can be sent to and from each plugin or MPC Expansion.
- Select Sort by type to sort the list by type.
- Select Sort by manufacturer to sort the list by manufacturer.
- Double-click a plugin or MPC Expansion or click it and then click Select to load it.
- Click the gear icon to open the Plugin Manager. See Plugins > Plugin Manager to learn about this.
- Click Close or press Esc to close the window without loading any plugin or MPC Expansion.

Exporting Expansions

You can export MPC Expansion Packs (installed on your computer) to your MPC X, MPC Live, MPC Live MKII or MPC One for use in its Standalone Mode.

To export MPC Expansions:

1. Connect your MPC X, MPC Live, MPC Live MKII or MPC One to your computer. Make sure both are powered on.
2. On your computer, open the MPC software.
3. On your MPC, enter Controller Mode.
4. In the MPC software window, click the menu icon (≡), select File > Export, and then click Expansion....
5. In the Export Expansion to Standalone MPC window that appears, click the Drive menu and select a storage device that you will use with your MPC: the internal SATA drive (if you have installed one in your MPC X, MPC Live, MPC Live MKII or MPC One), an SD card, or a USB flash drive.
6. In the Expansions list, click the box next to each one to select or deselect it. Only the selected ones will be exported. Click Select all to select all of them or Select none to deselect all of them.
7. Click Export to start exporting, or click Cancel to close the window and not export anything.

The exporting process creates an Expansions folder at the root level of your storage device and copies your MPC Expansions into it.
Modes

The MPC software is always in one of 14 modes. This chapter describes the various features and functions of each one.

To enter a mode, click its mode icon. If its icon is not shown, click the down arrow (▼) to show a menu of all modes, and then click it.

You can customize which mode icons are shown here by click the menu icon (≡) in the upper-left corner and going to View > Toolbar > Toolbar Modes.

Important: If a sequence is currently playing, you will not be able to enter Song Mode. Stop playback before entering Song Mode.

Click an icon below to skip directly to that chapter.
Main Mode

Main Mode provides access to all three editors as well as basic track editing functions.

To enter Main Mode, do any of the following:

- Click the house icon in the toolbar (if shown).
- Click the down arrow (▼) next to the other mode icons in the toolbar, and click Main Mode.
- Click the menu icon (≡), and go to View > Mode and click Main.

The upper half of the window can display the Grid Editor, Wave Editor, or List Editor. Click the Grid, Wave, or List tab to enter the corresponding editor. See General Features > Editors to learn more about each one.

The lower half of the window can display the Q-Links panel, Pads panel, and Project panel. Click the corresponding selector to show or hide each one. See General Features > Panels to learn more about the Q-Links or Project panels. The Pads panel is described below.
Pads

When the MIDI tab is selected in Main Mode, the Pads panel shows information for each pad, depending on the currently selected program.

**Drum Programs** and **Keygroup Programs**: Each pad will show the samples assigned to it (all four layers). Click the Pad Bank letters to access additional pads or the full range of notes. For keygroup programs, Pad D13 plays the sample at its original pitch. Click a pad to play its sample/samples or note.

**Plugin Programs**, **MIDI Programs**, and **CV Programs**: Each pad will show the note it will play as both a MIDI note number (0–127) and note value (e.g., C-1, G#5, etc.). Click the Pad Bank letters to access the full range of notes. Click a pad to play its note.

**Clip Programs**: Each pad will show the loop (clip) assigned to it. Click the Pad Bank letters to access additional banks of clips. Click a pad to launch that clip. (If the clip belongs to a mute group, other clips in that mute group will stop playing when that clip starts. See Program Edit Mode > Program Editor > Clip Programs to learn about this.)

Each pad can also display a color, which you can customize for each program. See General Features > Pad Color to learn how to do this.

When the Audio tab is selected in Main Mode, the Pads panel is not available.
Track View Mode

Track View Mode gives you an overview of the tracks and programs of each sequence. You can use this mode to edit multiple tracks at once in the current sequence.

To enter Track View Mode, do any of the following:

- Click the horizontal bars icon in the toolbar (if shown).
- Click the down arrow (▼) next to the other mode icons in the toolbar, and click Track View.
- Click the menu icon (≡), and go to View > Mode and click Track View.

The upper half of the window displays the Track View. See General Features > Track View to learn more about this.

The lower half of the window can display the Grid Editor, Wave Editor, or List Editor. Click the Grid, Wave, or List tab. See General Features > Editors to learn more about each one.

The only addition in Track View Mode is an option to keep the zoom distances of the upper and lower halves of the window identical. You could also choose to allow them to remain independent.

To lock or unlock the tracks and editor, click the lock-and-arrows icon.
Program Edit Mode contains all parameters for editing your Programs.

For **drum programs**, this mode includes the parameters of four layers as well as all synthesis parameters and insert effect settings. See the *Drum Programs* section to learn more.

For **keygroup programs**, this mode contains slightly more parameters than drum programs. See the *Keygroup Programs* section to learn more.

For **plugin programs**, this mode shows the graphical user interface for the plugin. Skip to *Plugin Programs* to learn more.

For **clip programs**, this mode looks very different from that of other programs due to how clip launching works. See the *Clip Programs* section to learn more.

For **MIDI programs** and **CV programs**, skip to *MIDI Programs* and *CV Programs*.

For general information on the differences between the types of programs, please see *General Features > Programs*.

To enter Program Edit Mode, do any of the following:

- Click the **four-pads icon** in the toolbar (if shown).
- Click the **down arrow** (▼) next to the other mode icons in the toolbar, and click **Program Edit**.
- Click the **menu icon** (≡), and go to **View > Mode** and click **Program Edit**.
The upper half of the window can display the Grid Editor, Wave Editor, or List Editor. Click the Grid, Wave, or List tab to enter the corresponding editor. See General Features > Editors to learn more about each one.

The lower half of the window can display the Q-Links panel, Pads panel, Program Editor panel, and Project panel. Click the corresponding selector to show or hide each one. See General Features > Panels to learn more about the Q-Links or Project panels. The Pads panel is described in this chapter here. The Program Editor panel is described in this chapter here.

**Pads**

When the MIDI tab is selected in Program Edit Mode, the Pads panel shows information for each pad, depending on the currently selected program.

- **Drum programs and keygroup programs:** Each pad will show the samples assigned to it (all four layers). Click the Pad Bank letters to access additional pads or the full range of notes. For keygroup programs, Pad D13 plays the sample at its original pitch. Click a pad to play its sample/samples or note.

- **Plugin programs, MIDI programs, and CV programs:** Each pad will show the note it will play as both a MIDI note number (0–127) and note value (e.g., C-1, G#5, etc.). Click the Pad Bank letters to access the full range of notes. Click a pad to play its note.

- **Clip programs,** each pad will show the loop (clip) assigned to it. Click the Pad Bank letters to access additional banks of clips. Click a pad to launch that clip. (If the clip belongs to a mute group, other clips in that mute group will stop playing when that clip starts. See Program Editor > Clip Programs to learn about this.)

Each pad can also display a color, which you can customize for each program. See General Features > Pad Color to learn how to do this. In Program Edit Mode, these colors will be displayed only when the pad is being played with the exception of clip programs, whose pad colors will always be displayed to help you distinguish the pads’ mute groups.

When the Audio tab is selected in Program Edit Mode, the Pads panel is not available.
Program Editor

When the MIDI tab is selected in Program Edit Mode, the Program Editor shows different settings depending on the type of program that is selected.

When the Audio tab is selected in Program Edit Mode, the Program Editor is non-functional.

Drum Programs

When using a drum program, the Program Editor shows the parameters for each pad and the program overall.

To select a pad, press it. Its parameters will appear on the screen immediately.

In the **Master** section, set the playback mode and tuning for the overall program.

**Note:** The **Sample Layers** section has some parameters similar to those in this section (Semi, Fine). Remember that the **Master** section parameters control the overall settings for the sample, while **Sample Layers** controls the settings for each layer (up to 4).

Polyphony sets the playback mode for the program’s pads. In Mono Mode, only one pad will sound at a time. If a pad is played while another (or the same one) is still playing its sample/samples, the new pad will immediately mute all other currently playing pads in that program. In Poly Mode, several pads can be triggered at the same time (limited only by the total number of voices available).

Semi lets you transpose the program up to 36 semitones up or down.

Fine provides fine-tuning of the program up to 99 cents up or down.

In the **Pad** section, set the volume and panning for the current pad.

**Note:** The **Sample Layers** section has some parameters similar to those in this section (Level, Pan). Remember that the **Pad** section parameters control the overall settings for the sample, while **Sample Layers** controls the settings for each layer (up to 4).

Level controls the overall volume level of the loaded sample/samples.

Pan controls the overall panning of the loaded sample/samples in the stereo field.

The **Simultaneous Play** section lets you set up to four pads that can be triggered by pressing one pad only. This function is useful for triggering a stack of sounds (e.g., layered bass drums). Use each **Pad** menu to select the desired pad.

The **Mute Targets** section lets you select up to four pads (in the same program) for the currently selected pad. When the currently selected pad is played, it will immediately silence its mute targets. Use each **Pad** menu to select the desired mute target.

**Tips:**
This feature is useful for programming realistic hi-hats, especially if only the open or closed hat should be heard. This feature is similar to the mute group feature, available for both drum programs and keygroup programs.

The **Edit Zones** section is an overview of any selected pads. Use the selector at the top to set how the selected pads will be edited:

- **Current:** Only the currently selected pad will be edited.
- **Multiple:** All selected pads will be edited simultaneously.
- **All:** All pads will be edited simultaneously.
The **Sample Layers** section shows four layers, each of which can use an assigned sample. Each layer has identical, independently assignable parameters.

Click the **Sample** menu to select the sample for that layer. Remember that the sample has to be loaded into the project’s sample pool beforehand.

- **Semi** lets you transpose the selected layer up to 36 semitones up or down.
- **Fine** provides fine-tuning of each layer up to 99 cents up or down.
- **Level** lets you adjust each layer’s volume, letting you control the “balance” of the samples assigned to the pad.

Use the pan knob to adjust the stereo placement of the respective layer.

Use the **Velocity** slider to define the velocity range of each layer.

A range from 0 to 127 lets the layer respond to the entire velocity range which is input from the respective pad while, for example, a range from 100 to 127 lets the layer respond only to higher velocity levels. By assigning several samples of one instrument, you can create a realistic-sounding “multi-sample” by adjusting the velocity ranges of each layer accordingly.

For example, you may have three samples of a drum hit with low force, medium force, and high force. You can set each sample to a layer and set the Velocity ranges so only low velocities trigger the low-force sample, only mid-range velocities trigger the medium-force sample, and only high velocities trigger the high-force sample.

The **Filter** section lets you set the type and characteristics of the filter.

Click the **Type** menu to select a filter for the selected pad. See Appendix > Glossary > Filter for an explanation of the available filter types. You can set the default Type setting for new drum programs and keygroup programs in Project tab of the Preferences (see General Features > Preferences).

Use the Cutoff knob to set the cutoff frequency for low-pass and high-pass filter types or the center frequency for band-pass and band-stop filter types.

Use the Res knob to set the resonance/emphasis of the frequencies around the cutoff point.

**Tip:** Use values lower than 80 to give more brilliance to the sound. At values higher than 80, the sound will result in a strong audible boost around the cutoff frequency.

Use the Env knob to determine the amount of influence the filter envelope has on the cutoff frequency. Higher settings will increase the modulation of the filter by the envelope; lower settings will result in only subtle changes of the filter Cutoff over time.

**Tip:** To give a sound a more distinctive attack, increase the Env setting and set low Attack and Decay values as well as a medium-low Sustain value of the Filter Envelope. This will start a sound with the filter opened and close it shortly afterward, giving it a bright start followed by a darker sustain. String sounds, on the other hand, can sound much more “alive” with low Env settings and a high Attack value, resulting in a slight fade-in of the higher frequencies.

The **Modulation Sources** section lets you set how much velocity is required to modulate certain other parameters as well as your filter envelope and amp envelope.

- **V>Start** (Velocity ➔ Start) sets how much velocity is needed (for a triggered pad) to modulate the sample start point.
- **V>Attack** (Velocity ➔ Attack) sets how much velocity is needed (for a triggered pad) to modulate the Attack phase for the Amp envelope.
- **V>Env** (Velocity ➔ Envelope) enables velocity information to control the amount of the filter envelope’s effect on the cutoff frequency.
- **V>Filter** (Velocity ➔ Filter) uses the velocity to modulate the cutoff frequency directly.

The **Filter Envelope** controls affect the filter frequency. Use the fields or click and drag the “handles” of the envelope to shape the envelope or time-variant modulation output. Adjust the envelope’s influence on the filter frequency with the Env knob. See the later Anatomy of an Envelope section to learn about the envelope parameters.

The **Amp Envelope** controls affect level changes over time. Use the fields or click and drag the “handles” of the envelope to shape the envelope or time-variant modulation output. Adjust the envelope’s influence on the filter frequency with the Env knob. See the later Anatomy of an Envelope section to learn about the envelope parameters.
The **Pad Play Modes** section lets you set the behavior for each pad’s samples in a drum program.

Click the **Mute Group** menu to assign the selected pad to one of the 32 available groups. When pads assigned to the same mute group receive MIDI notes, the last pad played will silence all other pads in that mute group. A mute group affects pads within that program only; mute groups do not affect pads in other programs.

**Tip**: This feature is useful for programming realistic hi-hats, especially if only the open or closed hat should be heard.

Click the **Sample Play** menu to determine how much of the sample is played.

- **One-Shot**: The entire sample will play from start to end. Use this when you want to play short sounds.
- **Note-On**: The sample will play only as long as the pad is held. This is better for longer samples so you can control a sound’s duration by pressing and holding its corresponding pad. If this option is selected, the **Filter Envelope** and **Amp Envelope** will use an **ADSR** type rather than **AD** or **AHDS** (see **Anatomy of an Envelope** to learn about this).

Click the **Pad Poly** menu to determine how the pad’s sound behaves when multiple hits are registered. When set to **Mono**, only one pad will sound at a time. If a pad is played while another (or the same one) is still playing its sample/samples, the new pad will immediately mute all other currently playing pads in that program. When set to **Poly**, several pads can be triggered at the same time (limited only by the total number of voices available). You can also select a specific number of pads (2–64) so that you can trigger up to this many pads at the same time (unless they exceed the total number of voices available).

Click the **Layer Play** menu to determine how multiple samples assigned to the same pad are played:

- **Cycle**: Each time the pad is played, it will play the next layer’s sample. In other words, the samples will cycle through the layers as follows: 1, 2, 3, 4, 1, 2, 3, 4… etc.
- **Velocity**: The pad will switch between layers depending on how hard you press a pad.
- **Random**: Each time the pad is played, it will play one of its layer’s samples at random.

The **Velocity Sensitivity** section determines how much the velocity affects the pitch of the sound (**Pitch**), the attack of the filter envelope (**Attack**), the volume level of the filter envelope (**Amp**) and or the panning of the sound (**Pan**). Use the sliders to adjust the setting of each.

When you press a pad softly, only minimal modulation is applied. When you press it harder, the modulation amount also gets stronger depending on the setting of the corresponding knob.

The **LFO** section lets you select a periodic waveform generated by the low-frequency oscillator. You can adjust the frequency and shape for modulation purposes.

Click the **Wave** menu to select the LFO waveform type:

- **Sine** (best suited for smooth modulations)
- **Triangle** (best suited for smooth modulations)
- **S&H** (samples a random value and holds it until the next value is generated)
- **Saw** (can generate interesting filter or volume changes)
- **Saw Down** (can generate interesting filter or volume changes)
- **Square** (interesting results with hard-panning modulations)
- **Noise** (generates random values and glides)

Use the **Rate** knobs to determine the LFO frequency when **Sync** is on. At lower values, it might take some time for the LFO to complete a cycle, while higher values will come closer to audible range.

Click the **Sync** menu to set how the LFO’s rate is synchronized with the tempo. You can select one of several time divisions. When **None** is selected, **Sync** is off.

Use the **Destinations** sliders to determine how much the LFO affects the pitch of the sound (**Pitch**), the cutoff frequency of the filter (**Filter**), the volume level of the sound (**Amp**) and panning of the sound (**Pan**).
Keygroup Programs

When using a keygroup program, the Program Editor shows the parameters for each keygroup and the program overall.

**To select a keygroup**, press a pad within that keygroup. Its parameters will appear on the screen immediately.

In the **Master** section, set the playback mode and tuning for the overall program.

- **Polyphony** sets the playback mode for the program’s keygroups. In **Mono** Mode, only one keygroup will sound at a time. If a keygroup is played while another (or the same one) is still playing its sample/samples, the new keygroup will immediately mute all other currently playing keygroups in that program. In **Poly** Mode, several keygroups can be triggered at the same time (limited only by the total number of voices available).

- **Num of KG** (number of keygroups) lets you create up to 128 keygroups within a keygroup program. This is useful when working with multi-samples. For example, if you want to create a realistic piano, you can use different keygroups (e.g., 88 for a grand piano) with every keygroup containing its own sampled note (with up to four possible velocity layers).

- **Semi** lets you tune the program up to 36 semitones up or down.

- **Fine** provides fine-tuning of the program up to 99 cents up or down.

- **Trans** shifts the pitch of the MIDI notes sent to the program up to 36 semitones up or down.

Use the **Keygroup** section to set the playback modes, level, tuning, and other settings for the keygroup.

**Note:** The **Sample Layers** section has some parameters similar to those in this section (**Level**, **Pan**, **Semi**, **Fine**). Remember that **Keygroup** section parameters control the overall settings for the sample, while **Sample Layers** controls the settings for each layer (up to 4).

- **KG Select** (Keygroup Select) lets you select a specific keygroup for editing. This parameter works in conjunction with the **Num of KG** (number of keygroups) parameter at the top of the window, which lets you create up to 128 keygroups within one keygroup program. A default keygroup program contains only one single keygroup. When you have created more than one keygroup with **Num of KG**, use **KG Select** to select any keygroup for editing.

- **All** selects all available keygroups of a keygroup program for simultaneous editing.

- **Key Track** allows you to switch a sample’s automatic transposition on or off. If this is off, you will always hear the same pitch of the sample, no matter which note is triggered by pads or a connected MIDI keyboard.

- **Level** controls the overall volume level of the loaded sample/samples.

- **Pan** controls the overall panning of the loaded sample/samples in the stereo field.

- **Note Range** lets you restrict the key range used for a sample’s playback. Only notes with a key number higher or equal (Lo) or lower and equal (Hi) to the selected value will trigger a sound.

**Tip:** Set the **Lo** parameter to **A0** and the **Hi** parameter to **C8** to emulate the range of a standard 88-key piano.

- **Pitch** lets you transpose the sample 36 semitones up or down, while **Fine** provides fine-tuning of each layer up to 99 cents up or down.
Click the **KG Poly** (keygroup polyphony) menu to determine how the keygroup will play. When set to **Mono**, only one pad will sound at a time. If a pad is played while another (or the same one) is still playing its sample/samples, the new pad will immediately mute all other currently playing pads in that program. When set to **Poly**, several pads can be triggered at the same time, limited only by the total number of voices available. You can also select a specific number of pads (2–64) so that you can play up to this many pads at the same time (unless they exceed the total number of voices available).

Click the **Mute Group** menu to assign the selected pad to one of the 32 available groups. When pads assigned to the same mute group receive MIDI notes, the last pad played will silence all other pads in that mute group. A mute group affects pads within that program only; mute groups do not affect pads in other programs.

**Layer Play** determines how multiple samples assigned to the same pad are played:

- **Cycle**: Each time the pad is played, it will play the next layer’s sample. In other words, the samples will cycle through the layers as follows: 1, 2, 3, 4, 1, 2, 3, 4… etc.

- **Velocity**: The pad will switch between layers depending on how hard you press a pad.

- **Random**: Each time the pad is played, it will play one of its layer’s samples at random.

**Sample Play** determines how much of the sample is played:

- **One-Shot**: The entire sample will play from start to end. Use this when you want to play short sounds.

- **Note-On**: The sample will play only as long as the pad is held. This is better for longer samples so you can control a sound’s duration by pressing and holding its corresponding pad. If this option is selected, the **Filter Envelope** and **Amp Envelope** will use an **ADSR** type rather than AD or AHDS (see *Anatomy of an Envelope* to learn about this).

The **Sample Layers** section shows four layers, each of which can use an assigned sample. Each layer has identical, independently assignable parameters.

- **Click the Sample menu** to select the sample for that layer. Remember that the sample has to be loaded into the project’s sample pool beforehand.

- **Semi** lets you transpose the selected layer up to 36 semitones up or down.

- **Fine** provides fine-tuning of each layer up to 99 cents up or down.

- **Level** lets you adjust each layer’s volume, letting you control the “balance” of the samples assigned to the pad.

Use the **pan knob** to adjust the stereo placement of the respective layer.

Use the **Velocity** slider to define the velocity range of each layer.

A range from 0 to 127 lets the layer respond to the entire velocity range which is input from the respective pad while, for example, a range from 100 to 127 lets the layer respond only to higher velocity levels. By assigning several samples of one instrument, you can create a realistic-sounding “multi-sample” by adjusting the velocity ranges of each layer accordingly.

For example, you may have three samples of a piano key with low force, medium force, and high force. You can set each sample to a layer and set the **Velocity** ranges so only low velocities trigger the low-force sample, only mid-range velocities trigger the medium-force sample, and only high velocities trigger the high-force sample.

The **Filter** section lets you set the type and characteristics of the filter.

- **Click the Type menu** to select a filter for the selected keygroup. See *Appendix > Glossary > Filter* for an explanation of the available filter types. You can set the default **Type** setting for new drum programs and keygroup programs in the **Project** tab of the **Preferences** (see *General Features > Preferences*).

Use the **Cutoff** knob to set the cutoff frequency for low-pass and high-pass filter types or the center frequency for band-pass and band-stop filter types.

Use the **Res** knob to set the resonance/emphasis of the frequencies around the cutoff point.

**Tip**: Use values lower than 80 to give more brilliance to the sound. At values higher than 80, the sound will result in a strong audible boost around the cutoff frequency.

Use the **Env** knob to determine the amount of influence the filter envelope has on the cutoff frequency. Higher settings will increase the modulation of the filter by the envelope; lower settings will result in only subtle changes of the filter **Cutoff** over time.

**Tip**: To give a sound a more distinctive attack, increase the **Env** setting and set low **Attack** and **Decay** values as well as a medium-low **Sustain** value of the **Filter Envelope**. This will start a sound with the filter opened and close it shortly afterward, giving it a bright start followed by a darker sustain. String sounds, on the other hand, can sound much more “alive” with low **Env** settings and a high **Attack** value, resulting in a slight fade-in of the higher frequencies.
The **Modulation Sources** section lets you set how much velocity is required to modulate certain other parameters as well as your filter envelope and amp envelope.

- **Kbd>Filter** (Keyboard ➔ Filter) sets how much the note value will be added to the filter cutoff. This allows higher notes to sound brighter.
- **V>Attack** (Velocity ➔ Attack) sets how much velocity is needed (for a triggered pad) to modulate the Attack phase for the Amp envelope.
- **V>Env** (Velocity ➔ Envelope) enables velocity information to control the amount of the filter envelope’s effect on the cutoff frequency.
- **V>Filter** (Velocity ➔ Filter) uses the velocity to modulate the cutoff frequency directly.

The **Filter Envelope** controls affect the filter frequency. Use the fields or click and drag the “handles” of the envelope to shape the envelope or time-variant modulation output. Adjust the envelope’s influence on the filter frequency with the **Env** knob. See the later **Anatomy of an Envelope** section to learn about the envelope parameters.

The **Amp Envelope** controls affect level changes over time. Use the fields or click and drag the “handles” of the envelope to shape the envelope or time-variant modulation output. Adjust the envelope’s influence on the filter frequency with the **Env** knob. See the later **Anatomy of an Envelope** section to learn about the envelope parameters.

The **Velocity Sensitivity** section determines how much the velocity affects the pitch of the sound (**Pitch**), the attack of the filter envelope (**Attack**), the volume level of the filter envelope (**Amp**) and or the panning of the sound (**Pan**). Use the sliders to adjust the setting of each.

When you press a pad softly, only minimal modulation is applied. When you press it harder, the modulation amount also gets stronger depending on the setting of the corresponding knob.

The **LFO** section lets you select a periodic waveform generated by the low-frequency oscillator. You can adjust the frequency and shape for modulation purposes.

- Click the **Wave** menu to select the LFO waveform type:
  - **Sine** (best suited for smooth modulations)
  - **Triangle** (best suited for smooth modulations)
  - **S&H** (samples a random value and holds it until the next value is generated)
  - **Saw** (can generate interesting filter or volume changes)
  - **Saw Down** (can generate interesting filter or volume changes)
  - **Square** (interesting results with hard-panning modulations)
  - **Noise** (generates random values and glides)

Use the **Rate** knobs to determine the LFO frequency when **Sync** is on. At lower values, it might take some time for the LFO to complete a cycle, while higher values will come closer to audible range.

- Click the **Sync** menu to set how the LFO’s rate is synchronized with the tempo. You can select one of several time divisions. When **None** is selected, **Sync** is off.

- Use the **Destinations** sliders to determine how much the LFO affects the pitch of the sound (**Pitch**), the cutoff frequency of the filter (**Filter**), the volume level of the sound (**Amp**) and panning of the sound (**Pan**).

The **Controller Mod** section determines the influence of additional play controllers on various sound parameters.

**Important:** To use these parameters, make sure that a connected MIDI device can send pitch bend messages as well as aftertouch and modulation wheel data.

- **Pitch Bend** sets the range (in semitones) of a connected MIDI keyboard’s pitch-bend wheel.
- **Wheel>LFO** determines how much a connected MIDI keyboard’s modulation wheel affects the LFO intensity.
- **Aft>Filt** (Aftertouch ➔ Filter Cutoff) determines how much a connected MIDI keyboard’s aftertouch data affects the filter cutoff.
Plugin Programs

When using a plugin program, the Program Editor shows the parameters of that plugin. Its appearance and available options depend on the plugin.

MIDI Programs

When using a MIDI program, the Program Editor shows a series of knobs corresponding to MIDI CC values—six banks of knobs with 16 knobs in each bank (a total of 96 knobs).

To set the MIDI CC of a knob, click the area above it next to down arrow icon (▼) and select a number from the menu.

To adjust the value that each MIDI CC sends, click and drag its knob.
Clip Programs

When using a clip program, the Program Editor shows various settings to determine how each pad launches its assigned sample (a loop called a **clip**).

**To select a pad**, press it. Its parameters will appear in the **Program Editor** panel immediately, and it will appear in the **Wave Editor** in the upper half of the window (see **General Features > Editors > Wave Editor** to learn about this).

**To learn how to assign a clip to a pad**, use the menu at the top of the **Pad** section (described below) or see **General Features > Programs > Clip Programs**.

The **Program** section lets you adjust the program’s overall tuning and quantization.

- **Semi**: lets you transpose the program up to 36 semitones up or down.
- **Fine**: provides fine-tuning of the program up to 99 cents up or down.

Click the **Quantize** menu to set the quantization of the program: **1/64 bar**, **1/32 bar**, **1/16 bar**, **1/8 bar**, **1/4 bar**, **1/2 bar**, **1 bar**, **2 bars**, **4 bars**, **8 bars**, or **None**. When set to **None**, the program will not follow any quantization at all.

The **Pad** section controls how the clip plays.

Click the menu at the top of the **Pad** section to select the clip you want to assign to the pad.

Use the **Start** or **End** fields to set the start point or end point of the region of the clip that will be played. Alternatively, click and drag the **green** start point marker and **red** end point marker in the **Wave Editor**.

Use the **Pad Play** field to determine how the clip is played.

- **One Shot**: When you press the pad, the entire clip will play from start to end and then stop.
- **Toggle**: When you press the pad, the entire clip will play from start to end and loop indefinitely. Pressing it again—or launching another in the same mute group—will stop its playback. This is the most common usage.
- **Semi**: lets you transpose the pad up to 36 semitones up or down.
- **Fine**: provides fine-tuning of the pad up to 99 cents up or down.

Click the **Mute Group** menu to assign the selected pad to one of the 32 available groups. When pads assigned to the same mute group receive MIDI notes, the last pad played will silence all other pads in that mute group. A mute group affects pads within that program only; mute groups do not affect pads in other programs.

**Note**: By default, each column of pads is assigned to the same mute group. This means only one pad from each column can be playing its clip at a time. You can use the **Mute Group** field to configure this any way you like, though.

Click the **Pad Quantize** menu to set the quantization of the pad: **1/64 bar**, **1/32 bar**, **1/16 bar**, **1/8 bar**, **1/4 bar**, **1/2 bar**, **1 bar**, **2 bars**, **4 bars**, **8 bars**, **None**, or **Program**. When set to **Program**, the pad uses the same quantization as the overall program (the **Quantize** field in the adjacent **Program** section). When set to **Off**, the pad will not follow any quantization at all.

Click **Warp** to lengthen or shorten the clip without changing its pitch, and use the **BPM** field to change the tempo. Use the **Coarse** and **Fine** sliders if you want to change the pitch.

**Note**: The Warp algorithms are very CPU-intensive and can result in audio drop-outs during playback if used too freely. Be mindful of how (and how often) you use the warp function.

Click **Reverse** to reverse the clip’s audio.

Use the **Fade** button to apply a very small fade-in and fade-out at the start and end of the clip. This can help prevent “clicks” and glitches that may occur if the start point or end point is not placed at the waveform’s “zero-crossings.”
When using a CV program, the Program Editor shows a series of knobs. The first eight knobs correspond to CV Outputs 1–8. Although this option is selectable, it is usable only with MPC hardware that has CV outputs (e.g., MPC X).

To set the CV output of a knob, click the area above it next to down arrow (▼) and select an output from the menu.

To adjust the voltage of each one, click and drag its knob.
Anatomy of an Envelope

An envelope creates a variable control signal. It can be used, for instance, to modulate the filter settings of a sound over a given period of time.

For drum programs, use the AD/AHDS selector to select an AD or AHDS envelope. When Sample Play is set to Note-On, it will use an ADSR envelope.

Keygroup programs use AHDS envelopes. When Sample Play is set to Note-On, it will use an ADSR envelope.

With AHDS envelopes, the following happens when you trigger a sample:
1. Within the period of time defined by Attack, the sample volume rises to its maximum value.
2. The sample’s maximum volume will be maintained during the Hold phase.
3. During the Decay phase, the sample’s volume will gradually drop to the Sustain level.
4. The sample’s volume will stay at the Sustain level until the pad is released.

With AD envelopes, the following happens when you trigger a sample:
1. Within the period of time defined by Attack, the sample volume rises to its maximum value.
2. The sample’s maximum volume will be maintained until its Decay phase, when the sample’s volume will gradually drop to “zero” over the set duration. Click the Type drop-down menu to select how the decay functions:
   - Decay From Start: The volume will start decreasing immediately after reaching its maximum level.
   - Decay From End: The maximum volume will be maintained for a hold phase until it reaches the decay phase.

With ADSR envelopes, the following happens when you trigger a sample:
1. Within the period of time defined by Attack, the sample volume rises to its maximum value.
2. During the Decay phase, the sample’s volume will gradually drop to the Sustain level.
3. The sample’s volume will stay at the Sustain level until the Release phrase begins.
4. The sample’s volume will drop to “zero” over the duration set by Release.
Sample Edit Mode lets you edit samples using various functions.

To enter Sample Edit Mode, do any of the following:

- Click the **waveform-and-flags icon** in the toolbar (if shown).
- Click the **down arrow (▼)** next to the other mode icons in the toolbar, and click **Sample Edit**.
- Click the **menu icon (≡)**, and go to **View > Mode** and click **Sample Edit**.
- Double-click the desired sample in the **Project** panel or **Project Info** Browser.
- Right-click the desired sample in the **Project** panel or **Project Info** Browser, and click **Edit**.

To select a sample to edit, click it in the **Project** panel or **Project Info** Browser.
The upper half of the window shows the waveform. While you can edit the waveform in this part of the window, it is different from the standard Wave Editor.

The large waveform display shows the “active” section of the sample waveform. The strip above the large display shows an overview of the entire sample waveform. If the waveform display is showing only part of the entire sample waveform, a white box in the overview will indicate the current position.

The timeline provides a reference for the length of the sample. Click the down arrow (▼) or right-click anywhere on the timeline to select the increments it will use: **Time ( secs:ms )**, **Samples**, or **Beats**.

Scroll left or right on the waveform to move through it. Use the sliders in the lower-right corner or click the timeline and drag down or up to zoom in or out.

The green marker and red marker are the start point and end point (respectively). These two points define the region of the sample that will be played.

**To move the start point or end point of the selected region**, do either of the following:

- Click and drag its marker left or right.
- Use the **Start** or **End** fields in the **Parameters** panel.
- Use the first column of **Q-Link knobs** to adjust the start point or the second column of **Q-Link knobs** to adjust the end point. The top-most Q-Link knob provides coarse adjustment (x1000), while the bottom-most one knob provides fine adjustment (x1).

**Tip**: A recorded sample may have some silence at the beginning or end, which makes it difficult to time it correctly in a musical context. Fix this by adjusting the start point. You can also adjust end point to remove any extra silence or unwanted audio at the end. In addition to making your workflow easier, having a “tight,” well-edited sample can enhance your production or performance.

The lower half of the window can display the **Q-Links** panel, **Pads** panel, **Parameters** panel, and **Project** panel. Click the corresponding selector to show or hide each one. See **General Features > Panels > Project** to learn more about the **Project** panel.

The other three panels vary based on the current editing method: **Trim Mode**, **Chop Mode**, or **Program Mode**. The options for each mode are slightly different. Please refer to the following **Trim Mode**, **Chop Mode**, and **Program Mode** parts of this chapter to learn how each works.

**Tip**: You can use Trim Mode for a specific slice of the sample, previously created and selected in Chop Mode. This allows for a more detailed view of a single slice than in Chop Mode and gives you more options for auditioning the slice. You can easily switch between Trim Mode and Chop Mode while doing this.

**To use both Trim Mode and Chop Mode to edit a sample slice**:

1. Click **Chop** in the **Q-Links** panel.
2. Set all fields as desired to create your sample slices.
3. Select the desired slice.
4. Click **Trim** in the **Q-Links** panel. The region you are now editing is indicated by the normal start point and end point markers rather than slice markers.

Click **Chop** at any time to return to Chop Mode.
Trim Mode

We recommend using Trim Mode to simply crop the start and/or end from a sample.

To enter Trim Mode, click the Trim tab in the Q-Links panel.

Q-Links

In the Q-Links panel:

- Use the first column of Q-Link knobs to adjust the start point. This is the same as adjusting the Start field in the Parameters panel.
- Use the second column of Q-Link knobs to adjust the end point. This is the same as adjusting the End field in the Parameters panel.
- Use the third column of Q-Link knobs to adjust the loop point if Loop Lock is off. If Loop Lock is on, adjusting the loop point will also adjust the start point. This is the same as adjusting the Loop field in the Parameters panel.
- Use Q-Link Knob 16 to select the desired slice, if the sample has been split into multiple slices in Chop Mode. This is the same as adjusting the Slice field in the Parameters panel.
- Use Q-Link Knob 8 to scroll through the waveform in the large waveform display above.
- Use Q-Link Knob 4 to zoom in or zoom out of the waveform.

For the first three columns, the top-most Q-Link knob provides coarse adjustment (x1000), while the bottom-most one knob provides fine adjustment (x1).
When Link Slices is enabled (after you have created slices in Chop Mode), changing the start point of a slice will also change the end point of the previous slice. Similarly, changing the end point of a slice will also change the start point of the next slice. Disable Link Slices if you are trying to create slices that use non-contiguous parts of the sample. This is the same as clicking the gear icon in the upper-right corner of the Wave Editor and using the Link Slices submenu.

**Important:** Link Slices must be disabled to make slices nonsequential, noncontiguous, or overlapping.

Enable Zero Snap to force start points, end points, and loop points to occur only at the waveform’s “zero-crossings.” This can help to avoid clicks and glitches when playing a sample. This is the same as clicking the gear icon in the upper-right corner of the Wave Editor and using the Zero Snap submenu.

**Pads**

The Pads panel enables you to play certain parts of the selected sample:

- **Play Sample (One Shot) (Pad 10)** plays the sample once from the start point to the end point. Press the pad once to play it.
- **Play Sample (Note On) (Pad 11)** plays the sample once from the start point to the end point. Press and hold the pad to play it, and release the pad to stop playing it. Alternatively, click and hold anywhere in the waveform display.
- **Play Loop Continuous (Pad 16)** plays the sample repeatedly from the loop point to the end point.
- **Play Loop (Pad 13)** plays the sample from the loop point to the end point. Press and hold the pad to play it, and release the pad to stop playing it.
- **Play to Loop Start (Pad 14)** plays the part of the sample just before the loop point. Press and hold the pad to play it, and release the pad to stop playing it.
- **Play from Loop Start (Pad 15)** plays the sample from the loop point to the end of the sample regardless of the end point. Press and hold the pad to play it, and release the pad to stop playing it.
- **Play All (Pad 9)** plays the entire sample.

Pads 1–4 have the same respective functions as Pads 5–8, but Pads 1–4 play the sample part as “One Shots” (pressing the pad once will play the entire part) while Pads 5–8 play the sample part as “Note Ons” (pressing the pad and holding it will play the part; releasing it will stop playback):

- **Play from Start (Pad 1, Pad 5)** plays the sample from the start point to the end point.
- **Play to Start (Pad 2, Pad 6)** plays the part of the sample just before the start point to the start point.
- **Play to End (Pad 3, Pad 7)** plays the part of the sample just before the end point to the end point.
- **Play from End (Pad 4, Pad 8)** plays the part of the sample from the end point to the end of the sample.
Parameters

The Parameters panel includes controls for editing the sample length and tuning as well as buttons for assigning the sample (see this section) and processing the slice or sample (see this section).

Use the Slice field to select the desired slice, if the sample has been split into multiple slices in Chop Mode. This is the same as adjusting Q-Link Knob 16 in the Q-Links panel.

Use the Start field to adjust the start point. This is the same as adjusting the first column of Q-Link knobs in the Q-Links panel.

Use the End field to adjust the end point. This is the same as adjusting the second column of Q-Link knobs in the Q-Links panel.

Use the Loop field to adjust the loop point if Loop Lock is off. If Loop Lock is on, adjusting the loop point will also adjust the start point. This is the same as adjusting the third column of Q-Link knobs in the Q-Links panel.

Click the Lock button to turn Loop Lock on or off. When on, the loop point is the same as the start point. When off, the loop point is independent from the start point and indicated by a separate loop marker.

Click the Loop menu to cycle between the three loop modes:

- **Off**: The sample will not loop.
- **Forward (Fwd)**: When the loop reaches its end point, it will start playing again from the loop point.
- **Reverse (Rev)**: When the loop reaches its end point, it will play in reverse. When it reaches the loop point again, it will return to the end point and continue playing in reverse.
- **Alternating (Alt)**: When the loop reaches its end point, it will play in reverse. When it reaches the loop point again, it will start playing forward again from the loop point.

Use the Crossfade field to apply a crossfade to a looping sample. See Addenda > Updates in MPC 2.3 > New Features > Crossfade Looping for more information about this.

Use the Tune field to transpose the sample from its original pitch up to 24.00 semitones up or down.

Use the Root Nt field to set the root note of the sample. This defines which note will play the sample at its original pitch when in a keygroup program.
Click **From BPM** to tune a sample to the current sequence. In the **Edit Tuning** window that appears:

Use the **Beats** field to match the number of beats in the sequence.

**To tune the sample to the sequence**, click **Match**. The **Tune** field will adjust automatically and close the window. The sample is now tuned to the sequence.

**To tune the sample to the sequence and adjust the sequence tempo**, click **To Sequence**. This is the same as clicking **Match** but it also changes the sequence’s tempo to the BPM shown in the Tempo field on the right.

**To close the window**, click **Close**.

Use the **BPM** field to enter a tempo manually. You can also click **X2** to double the value or **/2** to halve it.

Click **Detect BPM** to automatically detect the tempo. In the **Detect BPM** window that appears:

Use the **BPM** field to enter a tempo manually. You can also click **X2** to double the value or **/2** to halve it.

Click **Detect** to detect the tempo automatically.

Click **Tap Tempo** at the bottom of the window at the desired rate to use it as the tempo. You can play a sequence in the background to help with your timing.

Click **Close** to close the window.

**Note:** Before detecting tempo, it is recommended that you **Normalize** samples for best results.
Assigning Samples

You can assign your new sample directly to a pad from Trim Mode.

Click **Assign** to assign a sample. In the **Assign Sample** window that appears, you can click the **Assign To** menu to select a different assignment, and then click **Do It** to assign the sample or **Cancel** to close the window without assigning the sample.

**Important:** Assigning a sample to a pad in this way will replace the sample on the first layer of the pad.

If you set the **Assign To** menu to **Assign slice to a pad**, the pad will simply refer to the slice in this sample instead of creating a new sample. This is useful for reducing clutter in your project.

Use the **Pad** menu to select the desired pad. Alternatively, press the desired pad.

Use the **Slice Type** menu to select how the pad’s layer settings will be set when the slice is assigned to it:

- **Non-Destructive Slice:** The pad’s Slice setting will be set to the slice number.
- **Pad Parameters:** The pad’s Slice setting will be set to Pad. The Pad Start and Pad End will be set to the slice’s start point and end point values, and the Loop Position will be set to the slice’s start point but with Pad Loop deactivated.

Use the **Program** menu to specify the program to which you want to add the slice.

If you set the **Assign To** menu to **Make new sample**, this will create a new sample in your project. (The original sample will remain as it is.)

Use the **Pad** menu to select the desired pad. Alternatively, press the desired pad.

Select the **Crop Sample** box to delete the unused parts from the sample when it’s created and assigned. This feature is destructive, though the project will still contain your original sample.

Leave this box deselected to keep the unused parts of the sample when it is created and assigned. This way, you will still be able to edit the entire sample further even though you are using only part of it at the moment.

Use the **Program** menu to specify the program to which you want to add the slice.
Processing Slices & Samples

Use the column of Process buttons to select an editing process. In the Process Sample window that appears, you can click the Function menu to select a different process, and then click Do It to apply the process or Cancel to close the window without processing the sample.

You can use any of these functions as described below.

**Note:** All Slice processes will affect only the part of the sample between the start point and the end point. The Sample processes (Bit Reduce and Stereo > Mono) will affect the entire sample regardless of its start point or end point.

The Discard process deletes the regions before the start point and after the end point.

The Delete process deletes the region between the start point and end point and closes the gap between them.

The Silence process replaces the region between the start point and end point with silence.

The Extract process deletes the regions before the start point and after the end point and saves it as a new sample in your current project.

Use the Name field to name the new sample.

**Tip:** This is useful if you recorded a drum loop and wanted to remove just a snare drum hit, a kick drum hit, etc. to use separately in the project.

The Normalize process increases a sample’s level to the highest level possible without distortion. This is essentially a kind of digital gain optimization, so you do not have to worry about excessive level settings when working with samples with a wide range of amplitudes.
The **Reverse** process reverses the region between the start point and end point.

The **Fade In** process sets a fade-in between the start point and end point. Click the **Type** menu to select a type of fade:

- **Linear** fades the audio in with a linear curve—a straight line between the start and end.
- **Log** fades the audio in with a logarithmic curve—quickly rising at the start and flattening out towards the end.
- **Exp** fades the audio in with an exponential curve—slowly rising in the beginning and growing steeper towards the end.

The **Fade Out** process sets a fade-out between the start point and end point. Click the **Type** menu to select a type of fade:

- **Linear** fades the audio out with a linear curve—a straight line between the start and end.
- **Log** fades the audio out with a logarithmic curve—quickly rising at the start and flattening out towards the end.
- **Exp** fades the audio out with an exponential curve—slowly rising in the beginning and growing steeper towards the end.

The **Pitch Shift** process changes the pitch of the sample without changing its length. This lets you set the sample’s pitch to your sequence without affecting the sample’s tempo or duration. Keep in mind that the audio quality may decrease at more extreme settings.

Use the **Pitch** field to shift the pitch up to **12.00** semitones up or down.

The **Time Stretch** process lengthens or shortens the sample without changing its pitch. This is useful for matching the durations of two samples with different pitches. You can enter the original tempo of the sample and the desired tempo after processing.

Use the **Number of Beats** field to set the desired value number of beats.

Use the **New** field to set the new tempo. The **Ratio** field will then automatically show the time stretch factor.

Alternatively, to adjust the ratio instead, use the **Ratio** field to set the desired ratio, and then the **New** field will change automatically based on the new time stretch factor.
The **Gain Change** process raises or lowers the volume of the sample. Use the **Gain Amount** field to adjust the gain up to 18 dB up or down. This function is different than Normalize because it will allow volumes beyond clipping level. This may be a desired effect, but remember to watch your output level!

The **Copy** process saves a copy of the sample. Use the **Name** field to name the new sample. Otherwise, the process will add a consecutive number after the sample name.

The **Bit Reduce** process lowers the bit resolution of a sample, effectively reducing its degree of faithful reproduction. Use the **Bit Depth** field to set the bit depth from 1 bit to 16 bits.

The resulting sound is similar to the Resampler effect, but Bit Reduce will permanently alter the sample.

**Tip:** Use this on drum loops to get a dirty, “old-school” sizzle but with a digital “edge.”

**Note:** This process affects the entire sample regardless of its start point or end point.

The **Stereo > Mono** process converts a stereo sample to a new mono sample and saves it as a new sample.

Click the **Source** menu to select which channels will be converted:

- **Left** will convert the left channel only.
- **Right** will convert the right channel only.
- **Sum** will combine the left and right audio channels to a single mono channel.

Use the **Name** field to name the new sample. Otherwise, the process will add a consecutive number after the sample name.

**Note:** This process affects the entire sample regardless of its start point or end point.
Chop Mode

While Trim Mode crops only the start and/or end off of a sample, Chop Mode divides the sample into multiple regions called slices. We recommend using Chop Mode when working with a long sample with different sounds throughout (e.g., a drum loop or a long melodic or harmonic passage).

To enter Chop Mode, click the Chop in the Q-Links panel.

To select a slice to edit, do one of the following:

- Click the lower half of the slice in the waveform in the upper half of the window.
- Click the corresponding pad in the Pads panel.
- Use Q-Link Knob 16.
- Adjust the Slice field in the Parameters panel.
Q-Links

In the Q-Links panel:

- Use the first column of Q-Link knobs to adjust the start point. This is the same as adjusting the Start field in the Parameters panel.
- Use the second column of Q-Link knobs to adjust the end point. This is the same as adjusting the End field in the Parameters panel.
- Use Q-Link Knob 15 to adjust the cue playhead. This is the same as adjusting the Cue field in the Parameters panel.
- Use Q-Link Knob 16 to select the desired slice. This is the same as adjusting the Slice field in the Parameters panel or clicking or pressing the corresponding pad.
- Use Q-Link Knob 8 to scroll through the waveform in the large waveform display above.
- Use Q-Link Knob 4 to zoom in or zoom out of the waveform.

When the Chop To menu is set to Regions, use Q-Link Knob 11 to set into how many regions the sample will be divided.

For the first three columns, the top-most Q-Link knob provides coarse adjustment \((x1000)\), while the bottom-most one knob provides fine adjustment \((x1)\).

When Link Slices is enabled, changing the start point of a slice will also change the end point of the previous slice. Similarly, changing the end point of a slice will also change the start point of the next slice. Disable Link Slices if you are trying to create slices that use non-contiguous parts of the sample. This is the same as clicking the gear icon in the upper-right corner of the Wave Editor and using the Link Slices submenu.

**Important:** Link Slices must be disabled to make slices nonsequential, noncontiguous, or overlapping.

Enable Zero Snap to force start points, end points, and loop points to occur only at the waveform’s “zero-crossings.” This can help to avoid clicks and glitches when playing a sample. This is the same as clicking the gear icon in the upper-right corner of the Wave Editor and using the Zero Snap submenu.

Pads

The Pads panel enables you to play and select each slice of the selected sample:

Press the pad to play and select its corresponding slice. If your sample has more than 16 slices, use the additional pad banks. This is the same as turning Q-Link Knob 16 in the Q-Links panel or using the Slice field in the Parameters panel.

**Note:** When the Pad Audition menu is set to One Shot, clicking or pressing the pad will play the slice from its start marker. When Pad Audition is set to Note On, clicking (or pressing) and then holding the pad will play the slice from its start marker—releasing the pad will stop playback.
Parameters

The Parameters panel includes controls for editing the sample length and tuning as well as buttons for converting or assigning the sample (see this section) and processing the slice or sample (see this section).

Use the Chop To menu to choose how you want to use Chop Mode:

Manual
This method lets you insert slices at locations you select.

Threshold
This method uses an adjustable detection algorithm that derives the number of slices created from the volume levels present in the sample.

Use the Threshold field to set the threshold level. Alternatively, turn Q-Link Knob 11. The higher the selected value, the more slices will be created.

Use the Min Time field to set the minimum length of a slice in milliseconds.

Regions
This method divides a sample into slices of equal length.

Use the Num Regions field to set into how many regions the sample will be divided. Alternatively, turn Q-Link Knob 11. The higher the selected value, the more slices will be created.

BPM
This method divides a sample into slices based on the tempo (beats per minute).

Use the Bars field to set how many bars are in the sample. Alternatively, turn the second Q-Link knob in the third bank.

Use the Beats field to set how many beats are in each bar. Alternatively, turn the third Q-Link knob in the third bank.

Use the Time Div field to set a note division. Alternatively, turn the bottom-most Q-Link knob in the third bank. The slice markers will be placed according to this setting. You can select 1/4, 1/8, 1/16, or 1/32. (In most cases, you should set this parameter to 1/16.)
Use the **Slice** field to select the desired slice. This is the same as turning **Q-Link Knob 16** field in the **Q-Links** panel or clicking or pressing the corresponding **pad**.

Use the **Start** field to adjust the start point. This is the same as turning the **first** column of **Q-Link knobs** in the **Q-Links** panel.

Use the **End** field to adjust the end point. This is the same as turning the **second** column of **Q-Link knobs** in the **Q-Links** panel.

**Note:** When **Link Slices** is enabled, changing the start point of a slice will also change the end point of the previous slice. Similarly, changing the end point of a slice will also change the start point of the next slice. Disable **Link Slices** if you are trying to create slices that use non-contiguous parts of the sample.

Click **+Slice** (under the **End** field) to add a slice at the current playhead position. You can do this at any point during sample playback.

**To insert a slice marker manually**, click the upper part of the waveform at the desired location (the cursor will appear as a **red** arrow with a **+** symbol: 

**To insert a slice marker during sample playback**, press an **unlit pad** (usually **Pad 1**) to start playback of the sample, and then press an **unlit pad** during playback to place a slice marker at each location of the playhead. (If you press a lit pad, playback will restart from that pad’s corresponding slice marker.) The number of the pad that is lit **green** is the number of the most-recently inserted slice marker. The numbers of the pads that are lit **yellow** are the numbers of the slice markers that are already inserted.

Click the **–** button (to the right of the **Slice** field) to combine the currently selected slice with the one before it.

Click the **+** button (to the right of the **Slice** field) to split the currently selected slice into two slices of the same size.

Click **–All** (to the right of the **Slice** field) to remove all slices from a sample.

The cue playhead is useful when manually inserting slice markers. You can set its position and behavior to suit your workflow.

Use the **Cue** field (below the **Start** field) to adjust the position of the cue playhead. Alternatively, click and drag the white marker with the triangle (▼) in the timeline.

Click **>Play** to play the sample from the cue playhead.

Click **+Slice** to create a slice marker at the cue playhead position.

Click the **Cue Audition** menu to select how the audio plays from the cue playhead:

- **One Shot**: Clicking **>Play** will play the entire sample from the cue playhead.
- **Toggle**: Clicking **>Play** once will start playback from cue playhead. Clicking it once more will stop playback.

Click the **Pad Audition** menu to select how each slice plays from each start marker when you press the corresponding **pad**:

- **One Shot**: Clicking or pressing the **pad** will play the slice from its start marker.
- **Note On**: Clicking (or pressing) and then holding the **pad** will play the slice from its start marker. Releasing the **pad** will stop playback.
Converting or Assigning Slices

In Chop Mode, you can assign your new sample directly to a pad or convert the new sample into a new program or patched phrase.

Use the buttons in the Non-Destructive Convert and Extract New Samples sections to select a conversion and assignment process. In the Convert or Assign Slices window that appears, you can click the Convert To menu to select a different process, and then click Do It to apply the process or Close to close the window without processing the sample.

If you set the Convert To menu to New [program type] program using slices, this will create a new program and assign the sample’s slices to its pads. The pads will simply refer to the slices in this sample instead of creating new samples. This is useful for reducing clutter in your project. The new program will be named after the sample and appended with ch.

Use the Slice Type menu to select how each pad’s layer settings will be set when the slices are assigned to them (see Program Edit Mode to learn more about the parameters mentioned below):

- **Non-Destructive Slice**: Each pad’s Slice setting will be set to the slice number.
- **Pad Parameters**: Each pad’s Slice setting will be set to Pad. The Pad Start and Pad End parameters will be set to the slice’s start point and end point values, and the Loop Pos parameter will be set to the slice’s start point but with Pad Loop deactivated.

Select the Create Events box to automatically create a new track for the new program in which each pad plays its corresponding slice in ascending sequence by pad number.

If Create Events is selected, use the Bars field to set how many bars the slices’ events will occupy.

If you set the Convert To menu to New clip program, this will create a new clip program and assign the sample’s slices to its pads as clips. The pads will simply refer to the slices in this sample instead of creating new samples. This is useful for reducing clutter in your project. The new program will be named after the sample and appended with ch.

Use the Tempo field to enter the tempo of the clips in the new program.

Select the Create Events box to automatically create a new track for the new program in which each pad plays its corresponding slice in ascending sequence by pad number.

If Create Events is selected, use the Number of Bars field to set how many bars the slices’ events will occupy.
If you set the **Convert To** menu to **New program with new samples**, this will create a new sample from each slice and assign them to pads in a new program.

The new program will be named after the sample and appended with *ch*. The new samples will be appended with *SI-* # (where # is a consecutive number).

Select the **Crop Samples** box to delete the unused parts from the sample when they are created and assigned. This feature is destructive, though the project will still contain your original sample.

Leave this box deselected to keep the unused parts of the samples when they’re created and assigned. This way, you will still be able to edit the entire samples further even though you are using only part of them at the moment.

By default, this option already will create a new program. You can **deselect** the **Create New Program** box to convert each slice into a sample that is placed in the project’s sample pool but not assigned to a program or pad.

If **Create New Program** is selected, select the **Create Events** box to automatically create a new track in which each pad plays its corresponding slice in ascending sequence by pad number.

If **Create Events** is selected, use the **Number of Bars** field to set how many bars the slices’ events will occupy.

If you set the **Convert To** menu to **Assign slice to a pad**, the pad will simply refer to the slice in this sample instead of creating a new sample. This is useful for reducing clutter in your project.

**Important:** Assigning a sample to a pad in this way will replace the sample on the first layer of the pad.

Use the **Pad** menu to select the desired pad. Alternatively, press the desired pad.

Use the **Slice Type** menu to select how the pad’s layer settings will be set when the slice is assigned to it (see **Program Edit Mode** to learn more about the parameters mentioned below):

- **Non-Destructive Slice:** The pad’s Slice setting will be set to the slice number.

- **Pad Parameters:** The pad’s Slice setting will be set to Pad. The Pad Start and Pad End will be set to the slice’s start point and end point values, and the Loop Position will be set to the slice’s start point but with Pad Loop deactivated.

Use the **Program** menu to specify the program to which you want to add the slice.
If you set the **Convert To** menu to **New Sample to Pad**, this will create a new sample in your project. (The original sample will remain as it is.)

**Important**: Assigning a sample to a pad in this way will replace the sample on the first layer of the pad.

Use the **Pad** menu to select the desired pad. Alternatively, press the desired pad.

Select the **Crop Sample** box to delete the unused parts from the sample when it’s created and assigned. This feature is destructive, though the project will still contain your original sample.

Leave this box deselected to keep the unused parts of the sample when it is created and assigned. This way, you will still be able to edit the entire sample further even though you are using only part of it at the moment.

Use the **Program** menu to specify the program to which you want to add the slice.

If you set the **Convert To** menu to **Patched phrase**, this will create a new sample that will play based on the tempo of your Sequence, and places it in the current project. The patched phrase will have the same name as the original sample but appended with **pp** and will use a different icon when viewing your project information.

Use the **Bars** field to set how many bars long the patched phrase is meant to be.
Processing Slices

Use the column of Process buttons to select an editing process. In the Process Sample window that appears, you can click the Function menu to select a different process, and then click Do It to apply the process or Cancel to close the window without processing the sample.

You can use any of these functions as described below.

Important: Chop Mode is non-destructive: You can choose the slice/edit behavior without destroying your original sample, giving you more control over sample playback; you can save your sliced sample and but also reuse all of the slice data in another project.

The Silence process replaces the region between the start point and end point with silence.

The Extract process deletes the regions before the start point and after the end point and saves it as a new sample in your current project.

Use the Name field to name the new sample.

Tip: This is useful if you recorded a drum loop and wanted to remove just a snare drum hit, a kick drum hit, etc. to use separately in the project.

The Normalize process increases a sample’s level to the highest level possible without distortion. This is essentially a kind of digital gain optimization, so you do not have to worry about excessive level settings when working with samples with a wide range of amplitudes.

The Reverse process reverses the region between the start point and end point.
The **Fade In** process sets a fade-in between the start point and end point. Click the **Type** menu to select a type of fade:

- **Linear** fades the audio in with a linear curve—a straight line between the start and end.
- **Log** fades the audio in with a logarithmic curve—quickly rising at the start and flattening out towards the end.
- **Exp** fades the audio in with an exponential curve—slowly rising in the beginning and growing steeper towards the end.

The **Fade Out** process sets a fade-out between the start point and end point. Click the **Type** menu to select a type of fade:

- **Linear** fades the audio out with a linear curve—a straight line between the start and end.
- **Log** fades the audio out with a logarithmic curve—quickly rising at the start and flattening out towards the end.
- **Exp** fades the audio out with an exponential curve—slowly rising in the beginning and growing steeper towards the end.

The **Pitch Shift** process changes the pitch of the sample without changing its length. This lets you set the sample’s pitch to your sequence without affecting the sample’s tempo or duration. Keep in mind that the audio quality may decrease at more extreme settings.

Use the **Pitch** field to shift the pitch up to **12.00** semitones up or down.

The **Gain Change** process raises or lowers the volume of the sample.

Use the **Gain Amount** field to adjust the gain up to **18 dB** up or down.

This function is different than Normalize because it will allow volumes beyond clipping level. This may be a desired effect, but remember to watch your output level!
Program Mode

Program Mode lets you edit a sample in the context of the program in which you will use it. You can adjust the pad parameters as though you were in Program Edit Mode, auditioning and hearing how it will sound in the program’s audio path.

To enter Program Mode, click Program in the Q-Links panel.

Q-Links

In the Q-Links panel:

Use the first column of Q-Link knobs to adjust the start point. This is the same as adjusting the Start field in the Parameters panel.

Use the second column of Q-Link knobs to adjust the end point. This is the same as adjusting the End field in the Parameters panel.

Use the third column of Q-Link knobs to adjust the loop point if Loop Lock is off. If Loop Lock is on, adjusting the loop point will also adjust the start point. This is the same as adjusting the Loop field in the Parameters panel.

Use Q-Link Knob 16 to display either the sample as it has been edited (Pad) or the entire sample (All). This is the same as adjusting the Slice field in the Parameters panel.

Use Q-Link Knob 8 to scroll through the waveform in the large waveform display above.

Use Q-Link Knob 4 to zoom in or zoom out of the waveform.

For the first three columns, the top-most Q-Link knob provides coarse adjustment (x1000), while the bottom-most one knob provides fine adjustment (x1).
When **Link Slices** is enabled (after you have created slices in Chop Mode), changing the start point of a slice will also change the end point of the previous slice. Similarly, changing the end point of a slice will also change the start point of the next slice. Disable **Link Slices** if you are trying to create slices that use non-contiguous parts of the sample. This is the same as clicking the gear icon in the upper-right corner of the Wave Editor and using the Link Slices submenu.

**Important:** **Link Slices** must be disabled to make slices nonsequential, noncontiguous, or overlapping.

Enable **Zero Snap** to force start points, end points, and loop points to occur only at the waveform’s “zero-crossings.” This can help to avoid clicks and glitches when playing a sample. This is the same as clicking the gear icon in the upper-right corner of the Wave Editor and using the Zero Snap submenu.

**Pads**

The **Pads** panel shows their assigned samples in the current program.

Click each pad to hear its sample/samples. The sample on its first layer will automatically appear in the waveform display for editing.

**Parameters**

The **Parameters** panel includes controls for editing the sample length and tuning as well as buttons for assigning the sample (see this section) and processing the slice or sample (see this section).

Use the **Slice** field to display either the sample as it has been edited (Pad) or the entire sample (All). This is the same as adjusting Q-Link Knob 16 in the Q-Links panel.

If the **Slice** field is set to All, you can display the sample as it has been edited but keep the start point and end point by clicking To Pad. The **Slice** field will change to Pad, but the start point and end point will remain in their current locations.

Use the **Start** field to adjust the start point. This is the same as adjusting the first column of Q-Link knobs in the Q-Links panel.

Use the **End** field to adjust the end point. This is the same as adjusting the second column of Q-Link knobs in the Q-Links panel.

Use the **Loop** field to adjust the loop point if Loop Lock is off. If Loop Lock is on, adjusting the loop point will also adjust the start point. This is the same as adjusting the third column of Q-Link knobs in the Q-Links panel.
Click the **Lock** button to turn Loop Lock on or off. When **on**, the loop point is the same as the start point. When **off**, the loop point is independent from the start point and indicated by a separate loop marker.

Click the **Loop** menu to cycle between the three loop modes:
- **Off**: The sample will not loop.
- **Forward (Fwd)**: When the loop reaches its end point, it will start playing again from the loop point.
- **Reverse (Rev)**: When the loop reaches its end point, it will play in reverse. When it reaches the loop point again, it will return to the end point and continue playing in reverse.
- **Alternating (Alt)**: When the loop reaches its end point, it will play in reverse. When it reaches the loop point again, it will start playing forward again from the loop point.

Use the **Crossfade** field to apply a crossfade to a looping sample. See **Addenda > Updates in MPC 2.3 > New Features > Crossfade Looping** for more information about this.

Use the **Tune** field to transpose the sample from its original pitch up to **24.00** semitones up or down.

Use the **Root Nt** field to set the root note of the sample. This defines which note will play the sample at its original pitch when in a keygroup program.

Click **From BPM** to tune a sample to the current sequence. In the **Edit Tuning** window that appears:

- **Beats** field to match the number of beats in the sequence.

  **To tune the sample to the sequence**, click **Match**. The **Tune** field will adjust automatically and close the window. The sample is now tuned to the sequence.

  **To tune the sample to the sequence and adjust the sequence tempo**, click **To Sequence**. This is the same as clicking Match but it also changes the sequence’s tempo to the BPM shown in the Tempo field on the right.

  **To close the window**, click **Close**.

Use the **BPM** field to enter a tempo manually. You can also click **X2** to double the value or **/2** to halve it.

Click **Detect BPM** to automatically detect the tempo. In the **Detect BPM** window that appears:

- **BPM** field to enter a tempo manually. You can also click **X2** to double the value or **/2** to halve it.

  **Click Detect** to detect the tempo automatically.

  **Click Tap Tempo** at the bottom of the window at the desired rate to use it as the tempo. You can play a sequence in the background to help with your timing.

  **Click Close** to close the window.

**Note**: Before detecting tempo, it is recommended that you **Normalize** samples for best results.
Assigning Samples

You can assign your new sample directly to a pad from Program Mode.

Click **Assign** to assign a sample. In the **Assign Sample** window that appears, you can click the **Assign To** menu to select a different assignment, and then click **Do It** to assign the sample or **Cancel** to close the window without assigning the sample.

**Important:** Assigning a sample to a pad in this way will replace the sample on the first layer of the pad.

If you set the **Assign To** menu to **Assign slice to a pad**, the pad will simply refer to the slice in this sample instead of creating a new sample. This is useful for reducing clutter in your project.

Use the **Pad** menu to select the desired pad. Alternatively, press the desired pad.

Use the **Slice Type** menu to select how the pad’s layer settings will be set when the slice is assigned to it:

- **Non-Destructive Slice**: The pad’s Slice setting will be set to the slice number.
- **Pad Parameters**: The pad’s Slice setting will be set to Pad. The Pad Start and Pad End will be set to the slice’s start point and end point values, and the Loop Position will be set to the slice’s start point but with Pad Loop deactivated.

Use the **Program** menu to specify the program to which you want to add the slice.

If you set the **Assign To** menu to **Make new sample**, this will create a new sample in your project. (The original sample will remain as it is.)

Use the **Pad** menu to select the desired pad. Alternatively, press the desired pad.

Select the **Crop Sample** box to delete the unused parts from the sample when it’s created and assigned. This feature is destructive, though the project will still contain your original sample.

Leave this box deselected to keep the unused parts of the sample when it is created and assigned. This way, you will still be able to edit the entire sample further even though you are using only part of it at the moment.

Use the **Program** menu to specify the program to which you want to add the slice.
Processing Slices

Use the column of Process buttons to select an editing process. In the Process Sample window that appears, you can click the Function menu to select a different process, and then click Do It to apply the process or Cancel to close the window without processing the sample.

You can use any of these functions as described below.

**Important:** Program Mode is non-destructive: You can choose the slice/edit behavior without destroying your original sample, giving you more control over sample playback; you can save your sliced sample and but also reuse all of the slice data in another project. See the Program Edit Mode chapter to learn more about setting a pad to play the entire sample, a specific slice of a sample, or a specific region of the sample (independent of its slice markers).

The Silence process replaces the region between the start point and end point with silence.

The Extract process deletes the regions before the start point and after the end point and saves it as a new sample in your current project.

Use the Name field to name the new sample.

**Tip:** This is useful if you recorded a drum loop and wanted to remove just a snare drum hit, a kick drum hit, etc. to use separately in the project.

The Normalize process increases a sample’s level to the highest level possible without distortion. This is essentially a kind of digital gain optimization, so you do not have to worry about excessive level settings when working with samples with a wide range of amplitudes.

The Reverse process reverses the region between the start point and end point.
The **Fade In** process sets a fade-in between the start point and end point. Click the **Type** menu to select a type of fade:

- **Linear** fades the audio in with a linear curve—a straight line between the start and end.
- **Log** fades the audio in with a logarithmic curve—quickly rising at the start and flattening out towards the end.
- **Exp** fades the audio in with an exponential curve—slowly rising in the beginning and growing steeper towards the end.

The **Fade Out** process sets a fade-out between the start point and end point. Click the **Type** menu to select a type of fade:

- **Linear** fades the audio out with a linear curve—a straight line between the start and end.
- **Log** fades the audio out with a logarithmic curve—quickly rising at the start and flattening out towards the end.
- **Exp** fades the audio out with an exponential curve—slowly rising in the beginning and growing steeper towards the end.

The **Pitch Shift** process changes the pitch of the sample without changing its length. This lets you set the sample’s pitch to your sequence without affecting the sample’s tempo or duration. Keep in mind that the audio quality may decrease at more extreme settings.

Use the **Pitch** field to shift the pitch up to **12.00** semitones up or down.

The **Gain Change** process raises or lowers the volume of the sample.

Use the **Gain Amount** field to adjust the gain up to **18 dB** up or down.

This function is different than Normalize because it will allow volumes beyond clipping level. This may be a desired effect, but remember to watch your output level!
In the Pad Mixer, you can set a program’s levels, stereo panning, routing, and effects.

To enter the Pad Mixer, do any of the following:

- Click the pad-and-sliders icon in the toolbar (if shown).
- Click the down arrow (▼) next to the other mode icons in the toolbar, and click Pad Mixer.
- Click the menu icon (≡), and go to View > Mode and click Pad Mixer.

The Pad Mixer works like an audio mixer with various settings for each pad.

The upper half of the window can display the Grid Editor, Wave Editor, or List Editor. Click the Grid, Wave, or List tab. See General Features > Editors to learn more about each one.
The lower half of the window displays channel strips representing the pads of the current program (used by the currently selected track) used in the current sequence. Each type has a slightly different appearance.

**Tip:** If you want to see channel strips for both the Channel Mixer and the Pad Mixer at the same time, use the **Mixer Window**, which provides an overview of the channel strips in both modes in one screen. See **General Features > Mixer Window** to learn about this.

Select a track to view the channel strips for its program and pads. When an audio track or a track using a plugin program is selected, there will be no pad channel strips. When a track using a MIDI program or CV program is selected, there will be no pad channel strips or program strips.

Use the buttons in the lower-left corner of this area to show or hide different parts of the channel strips:
- Click the **box icon** to show or hide the **Inserts** slots on the channel strips.
- Click the **four-circles icon** to show or hide the **Send** knobs on the channel strips.
- Click the **pad icon** to show or hide the **pad** on the channel strips for drum programs.

Use the selectors between the upper and lower halves of the window to filter which channel strips are shown or hidden:

**Events:** When **Events** is selected, the channel strips that are shown or hidden depend on whether **Trk** or **Seq** is selected next to it:
- **Trk:** When **Trk** is selected, channel strips whose pads play in the current track will be shown. All others will be hidden.
- **Seq:** When **Seq** is selected, channel strips whose pads play in the current sequence (if multiple tracks use this program) will be shown. All others will be hidden.

**Samples:** When **Samples** is selected, only channel strips whose pads or keygroups have samples assigned to them will be shown. When **Samples** is deselected, channel strips for all pads or keygroups will be shown.

**Program:** When **Program** is selected, the program channel strip will be shown on the right edge of the lower half of the window. When **Program** is deselected, the program channel strip will be hidden.
When a MIDI track is selected, the **pad channel strips** or **keygroup channel strips** for that program are grouped together on the left. The corresponding **program channel strip** will appear on the right. (When an audio track or a track using a plugin program is selected, there will be no pad channel strips. When a track using a MIDI program or CV program is selected, there will be no pad channel strips or program strips.)

**Pad Channel Strip**

When a track using a drum program or clip program is selected, the **pad channel strip** has these controls:

- Click a pad channel strip to select it.

  The number of the pad is at the bottom of the channel strip. If pads are shown at the bottom of the channel strips, you can click a pad to select its channel strip and play its sound.

- The **Inserts** slots show any enabled or disabled effects for that pad. See **General Features > Effects > Insert Effects** to learn more about pad insert effects.

- Click and drag the **Send** knobs, which control the send levels for the pad. See **General Features > Effects > Send/Return Effects** to learn more about pad send/return effects.

  The menu below the **Send** knobs shows where the pad is routed, which you can set to the current program (**Program**), a submix (**Submix > Sub 1–8**), a pair of master outputs (**Stereo Output > Out 1,2–31,32**), or a single master output (**Mono Output > Out 1–32**). Usually, this is set to **Program**.

- Click **M** or **S** to mute or solo the pad (respectively).

  **To change the panning or level of the pad**, adjust the **pan knob** or **level slider**. The **green** level meter next to the slider shows the pad’s current volume level in **dB**.

**Keygroup Channel Strip**

When a track using a keygroup program is selected, the **keygroup channel strip** has these controls:

- Click a keygroup channel strip to select it. Alternatively, click the **KG** menu at the top of the channel strip and select one—that channel strip will then display that keygroup.

- The number of the keygroup is at the bottom of the channel strip.

- The **Inserts** slots show any enabled or disabled effects for that keygroup. See **General Features > Effects > Insert Effects** to learn more about keygroup insert effects.

- Click and drag the **Send** knobs, which control the send levels for the keygroup. See **General Features > Effects > Send/Return Effects** to learn more about keygroup send/return effects.

  The menu below the **Send** knobs shows where the keygroup is routed, which you can set to the current program (**Program**), a submix (**Submix > Sub 1–8**), a pair of master outputs (**Stereo Output > Out 1,2–31,32**), or a single master output (**Mono Output > Out 1–32**). Usually, this is set to **Program**.

- Click **M** or **S** to mute or solo the keygroup (respectively).

  **To change the panning or level of the keygroup**, adjust the **pan knob** or **level slider**. The **green** level meter next to the slider shows the keygroup’s current volume level in **dB**.
Program Channel Strip

When a track using a drum program, keygroup program, plugin program, or clip program is selected, the program channel strip has these controls:

The name of the program is at the bottom of the channel strip.

The first menu shows the current program (which you can change).

The Inserts slots show any enabled or disabled effects for that program. See General Features > Effects > Insert Effects to learn more about program insert effects.

Click and drag the Send knobs, which control the send levels for the program. See General Features > Effects > Send/Return Effects to learn more about program send/return effects.

The menu below the Send knobs shows where the program is routed, which you can set to a submix (Submix > Sub 1–8), a pair of master outputs (Stereo Output > Out 1,2–31,32), or a single master output (Mono Output > Out 1–32).

Click M or S to mute or solo the program (respectively).

Click the program automation button to toggle between two possible states of program automation:

- When set to Read (R), the program will read automation data but will not record any additional automation over it. You can still manually edit and enter automation. (Think of this as a protective feature to prevent accidental changes to your automation while recording.)

- When set to Write (W), the program can record automation. (If you have any Q-Link knobs assigned to automatable parameters, make sure not to touch any accidentally while you are recording.)

To disable or enable program automation, hold Shift and press the program automation button. When off, the program will ignore automation data. If you have already recorded or entered automation, clicking this will switch between Read (R) and Write (W) only, but you can override this and turn it off by pressing and holding Shift while clicking the button.

Important: If you have already recorded automation and turn it off, the track will still use the effect and its parameter values at the point where you turned it off.

See General Features > Automation to learn about recording and editing automation.

Tip: You can quickly set all programs and audio tracks to the same automation by clicking the global automation button in the upper-right corner of the window.

Adjust the pan knob or level slider to change the panning or level (respectively) of the program. The green level meter next to the slider shows the program’s current volume level in dB.
Channel Mixer

In the Channel Mixer, you can set levels, stereo panning, and other settings for your tracks, programs, returns, submixes, and masters.

To open the Channel Mixer, do any of the following:

- Click the sliders icon in the toolbar (if shown).
- Click the down arrow (▼) next to the other mode icons in the toolbar, and click Channel Mixer.
- Click the menu icon (≡), and go to View > Mode and click Channel Mixer.

The Channel Mixer works like an audio mixer for the currently selected sequence with various settings for each MIDI track, audio track, program, submix, return, or master output.
The upper half of the window displays the Track View. See *General Features > Track View* to learn more about this.

The lower half of the window displays channel strips representing the MIDI tracks, audio tracks, programs, submixes, returns, and master outputs used in the current sequence. Each type has a slightly different appearance.

**Tip:** If you want to see channel strips for both the Channel Mixer and the Pad Mixer at the same time, use the *Mixer Window*, which provides an overview of the channel strips in both modes in one screen. See *General Features > Mixer Window* to learn about this.

Select a sequence to view its channel strips. There will be no program strips shown for MIDI programs or CV programs, though channel strips will be shown for any MIDI tracks that use those programs.

Use the buttons in the lower-left corner of this area to show or hide different parts of the channel strips:

- Click the **box icon** to show or hide the **Inserts** slots on the channel strips.
- Click the **four-circles icon** to show or hide the **Send** knobs on the channel strips.

Click the **menu icon** (≡) in the upper-right corner of the channel strips, and select or deselect **Show Unused Programs** and/or **Show Unused Tracks**.

Use the selectors between the upper and lower halves of the window to filter which channel strips are shown or hidden. When an option is selected, those channel strips will be shown. When it is deselected, its channel strips will be hidden.
MIDI Track Channel Strip

A MIDI track channel strip has these controls:

- The name of the track is at the bottom of the channel strip.
- The Send To menu sets where the MIDI track data is sent.
- The MIDI Input and Channel menus set where the MIDI data is received from.
- When a MIDI track with a MIDI program is selected, you can also set the MIDI Output port and Channel using the next menus.
- Click M or S to mute or solo the track (respectively).
- Click the Monitor button to set how your MIDI track will be monitored. Clicking it will cycle through its three states:
  - When set to In, the track’s MIDI input is always monitored regardless of the track’s Record Arm state, and playback from recorded events will not be heard.
  - When set to Auto, the track’s MIDI input is monitored when the track is record armed, and playback of recorded events will be heard.
  - When set to Merge, the track’s MIDI input is always monitored, and playback of recorded events will be heard.
  - When set to Off, the track’s MIDI input is not monitored, and playback of recorded events will be heard. This setting is useful when using keyboards with Local Control active.

To change the panning or level of the track, adjust the pan knob or level slider. The blue level meter next to the slider shows the track’s current velocity level (0–127).

Click the Record Arm (✓) button to record-enable the track. When you begin recording, the MIDI date will be recorded to this track.

**Tip:** You can select record-enable multiple tracks by pressing and holding Ctrl (Windows) or ⌘ (macOS) while clicking the Arm button to each track (in the upper half of the window or in the channel strips). You can also adjust the Rec Arm behavior in the Preferences menu.
Audio Track Channel Strip

An audio track channel strip has these controls:

- The name of the track is at the bottom of the channel strip.
- The **Inserts** slots show any enabled or disabled effects for that track. See **General Features > Effects > Insert Effects** to learn more about audio track insert effects.
- Click and drag the **Send** knobs, which control the send levels for the track. See **General Features > Effects > Send/Return Effects** to learn more about audio track send/return effects.

The first menu defines the input source of the external audio signal, which you can set to a pair of inputs (**Stereo > Input 1,2–31,32**) or a single input (**Mono > Input 1–32**).

The menu below the **Send** knobs shows where the track is routed, which you can set to a submix (**Submix > Sub 1–8**), a pair of master outputs (**Stereo Output > Out 1,2–31,32**), or a single master output (**Mono Output > Out 1–32**).

Click **M** or **S** to mute or solo the track (respectively).

Click the **audio track automation button** to toggle between two possible states of audio track automation:

- When set to **Read (R)**, the audio track will read automation data but will not record any additional automation over it. You can still manually edit and enter automation. (Think of this as a protective feature to prevent accidental changes to your automation while recording.)
- When set to **Write (W)**, the audio track can record automation. (If you have any Q-Link knobs assigned to automatable parameters, make sure not to touch any accidentally while you are recording.)

To disable or enable audio track automation, hold **Shift** and press the **audio track automation button**. When **off**, the audio track will ignore automation data. If you have already recorded or entered automation, clicking this will switch between Read (R) and Write (W) only, but you can override this and turn it off by pressing and holding **Shift** while clicking the button.

**Important**: If you have already recorded automation and turn it off, the track will still use the effect and its parameter values at the point where you turned it off.

- See **General Features > Automation** to learn about recording and editing automation.
- **Tip**: You can quickly set all programs and audio tracks to the same automation by clicking the global automation button in the upper-right corner of the window.

Click the **Monitor** button to set how your audio track will be monitored. Clicking it will cycle through its three states:

- When set to **Auto**, you will hear incoming audio while the track is record-enabled only.
- When **on**, you will hear incoming audio whether or not the track is record-enabled.
- When **off**, you will never hear any incoming audio.

Adjust the **pan knob** or **level slider** to change the panning or level (respectively) of the track. The green level meter next to the slider shows the track’s current volume level in dB.

Click the **Record Arm ()** button to record-enable the track. When you begin audio recording, the audio signal will be recorded to this track.

**Tip**: You can select record-enable multiple tracks by pressing and holding **Ctrl** (Windows) or **⌘** (macOS) while clicking the **Arm** button to each track (in the upper half of the window or in the channel strips). You can also adjust the **Rec Arm** behavior in the **Preferences** menu.
Program Channel Strip

A program channel strip has these controls:

- The name of the program is at the bottom of the channel strip.
- The **Inserts** slots show any enabled or disabled effects for that program. See [General Features > Effects > Insert Effects](#) to learn more about program insert effects.

  Click and drag the **Send** knobs, which control the send levels for the program. See [General Features > Effects > Send/Return Effects](#) to learn more about program send/return effects.

  The menu below the **Send** knobs shows where the program is routed, which you can set to a submix (Submix > Sub 1–8), a pair of master outputs (Stereo Output > Out 1,2–31,32), or a single master output (Mono Output > Out 1–32).

- Click **M** or **S** to mute or solo the program (respectively).

- Click the **program automation button** to toggle between two possible states of program automation:
  - When set to **Read (R)**, the program will read automation data but will not record any additional automation over it. You can still manually edit and enter automation. (Think of this as a protective feature to prevent accidental changes to your automation while recording.)
  - When set to **Write (W)**, the program can record automation. (If you have any Q-Link knobs assigned to automatable parameters, make sure not to touch any accidentally while you are recording.)

  To disable or enable program automation, hold **Shift** and click the **program automation button**. When off, the program will ignore automation data. If you have already recorded or entered automation, clicking this will switch between Read (R) and Write (W) only, but you can override this and turn it off by pressing and holding **Shift** while clicking the button.

  **Important**: If you have already recorded automation and turn it off, the track will still use the effect and its parameter values at the point where you turned it off.

  See [General Features > Automation](#) to learn about recording and editing automation.

- **Tip**: You can quickly set all programs and audio tracks to the same automation by clicking the global automation button in the upper-right corner of the window.

  Adjust the **pan knob** or **level slider** to change the panning or level (respectively) of the program. The **green** level meter next to the slider shows the track’s current volume level in **dB**.

Submix Channel Strip

A submix channel strip has these controls:

- The number of the submix is at the bottom of the channel strip.
- The **Inserts** slots show any enabled or disabled effects for that submix. See [General Features > Effects > Insert Effects](#) to learn more about submix insert effects.

  Click and drag the **Send** knobs, which control the send levels for the submix. See [General Features > Effects > Send/Return Effects](#) to learn more about submix send/return effects.

  The menu below the **Send** knobs shows where the program is routed, which you can set to a pair of master outputs (Stereo Output > Out 1,2–31,32), or a single master output (Mono Output > Out 1–32).

- Click **M** to mute the submix.

- Adjust the **pan knob** or **level slider** to change the panning or level (respectively) of the submix. The **green** level meter next to the slider shows the submix’s current volume level in **dB**.
Return Channel Strip

A return channel strip has these controls:

- The number of the return is at the bottom of the channel strip.
- The Inserts slots show any enabled or disabled effects for that return. See General Features > Effects > Send/Return Effects to learn more about send/return effects.
- The menu above the M button shows where the return is routed, which you can set to a pair of master outputs (Stereo Output > Out 1,2–31,32) or a single master output (Mono Output > Out 1–32).

Click M to mute the return.

Adjust the pan knob or level slider to change the panning or level (respectively) of the return. The green level meter next to the slider shows the return’s current volume level in dB.

Master Channel Strip

A master channel strip has these controls:

- The number of the pair of master outputs is at the bottom of the channel strip.
- The Inserts slots show any enabled or disabled effects for that pair of outputs. See General Features > Effects > Insert Effects to learn more about master insert effects.
- Click M to mute the outputs.

Adjust the pan knob or level slider to change the panning or level (respectively) of the outputs. The green level meter next to the slider shows the outputs’ current volume level in dB.
Step Sequencer

The Step Sequencer lets you create or edit sequences by using the pads as “step buttons,” simulating the experience of a traditional step-sequencer-style drum machine.

This is available for MIDI tracks only, not audio tracks.

To enter the Step Sequencer, do any of the following:

- Click the step-bars icon in the toolbar (if shown).
- Click the down arrow (▼) next to the other mode icons in the toolbar, and click Step Sequencer.
- Click the menu icon (≡), and go to View > Mode and click Step Sequencer.

To enter or delete steps in a sequence:

1. Use the Pad field in the Pads area to select the pad whose steps you want to enter or delete. The current pad number is shown in the upper-left corner.
2. Use the Bar field in the Pads area to select the bar of the sequence whose steps you want to enter or delete. The current bar number is shown in the upper-left corner.
3. Click the pads. Each pad corresponds to a step in the bar and will light with a color corresponding to its velocity. Keep in mind that for time divisions larger than 16, the bar’s steps will be represented by multiple pad banks. In this case, use Pad Bank Buttons A and B to view all the steps within a bar.
The upper half of the window can display the Grid Editor, Wave Editor, or List Editor. Click the Grid, Wave, or List tab to enter the corresponding editor. See General Features > Editors to learn more about each one.

The lower half of the window can display the Q-Links panel, Pads panel, and Project panel. Click the corresponding selector to show or hide each one. See General Features > Panels to learn more about the Project panel. The Q-Links and Pads panels are described below.

Q-Links

The Q-Links panel (when Q-Link Mode is set to Screen) lets you to adjust the velocity of each step. The number of each step will be shown under the corresponding Q-Link knob.

Use each Q-Link knob to adjust the velocity (1–127) of its corresponding step. Setting a value of 0 (Off) will delete the note event from that step. Changing a velocity from 0 (Off) to a value of 1 or greater will enter a note event at that step.

Pads

The Pads panel lets you quickly create and delete note events as “steps” by using the pads of your MPC hardware or MPC software, similar to step recording with drum machines in the 1980s.

Each pad represents a step in the bar. Keep in mind that the total number of steps depends on the Time Correct setting. For time divisions larger than 16 (e.g., 32), the bar’s steps will be represented by multiple pad banks. In that case, use the Pad field to view all the steps within a bar.

Use the Bar field or the arrows (◄ or ►) on either side of it to select the bar whose steps you want to edit.

Use the Pad Select button to select the pad whose steps you want to edit. Click Pad Select to activate it, click a pad (the currently selected pad is lit green), and then click Pad Select again to deactivate it.

Alternatively, click and drag the Pad field up or down. You can also click a pad in the Grid Editor.

Click an unlit pad to enter a note event at that step. The pad will light up with a color corresponding to its velocity.

Click a lit pad to delete the note event from that step. The pad will be unlit.

The green pad indicates the current step (playhead position) in the sequence.
The Sampler lets you record audio samples to use in your projects. **Important:** To record any audio, you need to connect an audio source to your MPC hardware or to your computer’s audio interface.

**To open the Sampler,** do any of the following:

- Click the vinyl icon in the toolbar (if shown).
- Click the down arrow (▼) next to the other mode icons in the toolbar, and click Sampler.
- Click the menu icon (≡), and go to View > Mode and click Sampler.

**To set up the Sampler before recording:**

1. Make sure to reduce the volume levels of your audio source and speakers, headphones, and/or monitors before you make any connections to avoid “pops” or feedback.
2. Connect a synthesizer or other line-level audio source to the input/inputs of your MPC hardware or external audio interface.
3. On your MPC hardware or external audio interface, turn the Rec Vol knob to set the input level while playing your audio source. You should now see the level in the meter. Make sure it does not exceed the maximum level (the meter should not be “peaking” constantly).
4. Set the recording controls as desired (described in this chapter).
5. Click the Arm button to record-arm the Sampler.
The upper half of the window shows the waveform. Unlike other times the waveform is shown here, you cannot edit the waveform in this part of the window; you must use the Wave Editor in Main Mode or Sample Edit Mode instead.

The timeline provides a reference for the length of the sample. Click the down arrow (▼) or right-click anywhere on the timeline to select the increments it will use: Time (secs:ms), Samples, or Beats.

Scroll left or right on the waveform to move through it. Use the sliders in the lower-right corner or click the timeline and drag down or up to zoom in or out.

The lower half of the window can display the Q-Links panel, Pads panel, Sampler panel, and Project panel. Click the corresponding selector to show or hide each one. See General Features > Panels > Project to learn more about the Project panel.

The Pads panel varies based on the four different recording methods: Sample, Slice, Pad Tap, or Pad Hold, all described in this chapter.

Q-Links

In the Q-Links panel:

Use Q-Link Knob 1 to adjust the threshold. This is the same as adjusting the threshold slider in the Sampler panel.

Use Q-Link Knobs 3 and 4 to define the maximum sampling time. This is the same as adjusting the Max Length field as shown on your MPC hardware. You can record up to 19 minutes and 59 seconds (19:59) per sample. We recommend setting these to values that roughly match your estimated recording duration.
The **Pads** panel has three different appearances, depending on the recording method:

### Sample Method

While using the **Sample** Method, the Pads panel shows information for each pad, depending on the currently selected program. This is identical to how the Pads panel appears in Main Mode (see the **Main Mode** chapter to learn more).

### Slice Method

While using the **Slice** Method, the pads correspond to slices of the currently recorded sample. See **Recording Methods > Slice** to learn how to use the Pads panel with this method.

### Pad Tap & Pad Hold Methods

While using the **Pad Tap** or **Pad Hold** Methods, clicking a pad or clicking and holding a pad immediately starts or continues recording directly to that pad. See **Recording Methods > Pad Tap** or **Pad Hold** to learn how to use the Pads panel with those methods.
Sampler

The **Input Source** menu in the upper-left corner of the **Sampler** panel defines whether you are going to record an external audio signal (**Stereo** or **Mono**) or an internal signal from within the MPC software (**Resample L**, **Resample R**, or **Resample L+R**).

Resampling does not require an audio connection because the source is within the MPC software and is therefore recorded without any loss in audio quality. You can, for example, use Resample to record two or more samples by pressing the corresponding pads simultaneously or by simply playing a sequence.

The **Inserts** slots show any enabled or disabled effects for the Sampler. See **General Features > Effects > Insert Effects** to learn more about insert effects.

**Important**: These effects are applied to the audio as you record it. This means that the effects cannot be “removed” from the sound later.

Click the **Mono/Stereo** menu to choose whether your recorded samples will be monaural (**Mono**) or binaural (**Stereo**).

Click the **Monitor** button to set how the Sampler will be monitored:

- When set to **In**, the audio you hear in your headphones will be taken **before** it reaches the Sampler, ensuring zero latency.
- When **off**, the audio you hear in your headphones will be taken **after** it is processed in the Sampler, so there may be some latency, but you will hear the audio source as it sounds in the recording.

**Tip**: To avoid possible clicks or feedback while input monitoring, reduce the level of the audio sources.

Use the **threshold slider** to adjust the threshold. Alternatively, turn **Q-Link Knob 1**.

When the Sampler is record-armed, it automatically starts recording when the level of the incoming source exceeds this setting. If you set it too high, the recording may not start when you play the input source, or the start of the material you wanted to record may be missing. If you set it too low, the recording may start too early, before you play the external source. Set this parameter to an appropriate level using the level meter.

For reference, the **Sample Length** counter shows you the length of your sample during the recording procedure.

Click **Arm** to record-arm the Sampler. The button will then change to **Record**.

At that point, start recording by doing either of the following:

- Start performing so that the incoming audio level exceeds the level of the **threshold slider**.
- Click the **Record** button under the **Sample Length** counter.

Click the **Record Method** menu to select the recording method you want to use: **Sample, Slice, Pad Tap, or Pad Hold**, all described in the following section.

Click **Add Slice** as the sample records to insert a slice marker in a sample while recording. Each time you press it, a slice marker will be placed at that location.
Recording Methods

Sample

Using this method, you can insert slice markers directly in your sample as you record it. Slice markers divide the sample into multiple regions called *slices*, which you can adjust in the Chop Mode of Sample Edit Mode (see *Sample Edit Mode > Chop Mode* for more information). This is useful when working with a long sample with different sounds throughout (e.g., a drum loop or a long melodic or harmonic passage).

To start recording, do one of the following:
- Start performing so that the incoming audio level exceeds the level of the *threshold slider*.
- Click the *Record* button under the *Sample Length* counter.

To insert a slice marker in a sample while recording, click *Add Slice* as the sample records. Each time you press it, a slice marker will be placed at that location.

To stop recording, click the *Stop* button under the *Sample Length* counter.

After you stop your recording, the *Keep or Discard Sample* window will appear.

Use the *New Name* field to name the new sample. Otherwise, the process will add a consecutive number after the sample name.

Click the *Program* menu to assign the new sample to a drum program. Select *<none>* if you want to save it to the project without assigning it to a program.

Use the *Assign to Pad* field to assign the sample to a pad in the selected drum program.

Use the *Root Note* field to set where the sample's original pitch will be on the keyboard.

If you recorded a sample while a sequence was playing, the *Keep or Discard Sample* window will show a few more options after you select a pad.

Check the *Add Event* box to automatically add the sample to the currently playing sequence.

Use the *At* menu to select where you want the event to start:
- **Start**: The sample will be a note event at the start of the currently playing sequence.
- **Trigger**: The sample will be a note event where you began recording it in the currently playing sequence.

Use the *Track* field to set which track will contain the new event.

To save the recording, click *Save*.

To play the recording, click *Play*.

To discard the recording and close the window, click *Discard*.

To confirm your selections, click *Keep*.

To edit the recording in *Sample Edit Mode* (recommended), click *Edit*. 
Slice

Using this method, the pads correspond to slices of the currently recorded sample. Slice markers divide the sample into multiple regions called slices, which you can adjust in the Chop Mode of Sample Edit Mode (see Sample Edit Mode > Chop Mode for more information). This is useful when working with a long sample with different sounds throughout (e.g., a drum loop or a long melodic or harmonic passage).

To start recording, do one of the following:
- Start performing so that the incoming audio level exceeds the level of the threshold slider.
- Click the Record button under the Sample Length counter.

To insert a slice marker in a sample while recording, press any pad as the sample records. Each time you press it, a slice marker will be placed at that location.

The number of the pad that flashes red is the number of the slice marker that will be inserted next. The numbers of the pads that are lit yellow are the numbers of the slice markers that are already inserted.

When you are done recording, you can name the sample and create a new program using the slices.

To stop recording, click the Stop button under the Sample Length counter.

After you stop your recording, the Keep or Discard Sample window will appear.

Use the New Name field to name the new sample. Otherwise, the process will add a consecutive number after the sample name.

Click the Create New Program menu to assign the new sample to a new program:

- **Off**: No program will be created. The slices will still be added to your project’s sample pool.
- **With Non-Destructive Slices**: In the new program, each pad’s Slice setting will be set to the corresponding slice number. This is identical to how you can assign samples in Sample Edit Mode (as described in Sample Edit Mode > Chop Mode).
- **With Pad Parameters**: In the new program, each pad’s Slice setting will be set to Pad. The Pad Start and Pad End will be set to the slice’s start point and end point values, and the Loop Position will be set to the slice’s start point but with Pad Loop deactivated. This is identical to how you can assign samples in Sample Edit Mode (as described in Sample Edit Mode > Chop Mode).

To save the recording, click Save.

To play the recording, click Play.

To discard the recording and return to the Sampler, click Discard.

To confirm your selections, click Keep.

To edit the recording in Sample Edit Mode (recommended), click Edit.
Pad Tap

**Important:** This mode works for **drum programs only**; you must select a drum program before using this mode. Otherwise, this feature will not do anything, even though it may appear to work.

With this method, clicking or pressing a pad immediately starts or continues recording directly to that pad (make sure you are using the desired program before you start recording). Pads with assigned samples are lit **bright yellow**. Pads without samples are lit **dim yellow**.

**To start recording to a pad**, click or press it. Recording will start immediately, and the pad will flash **red**. If you click or press a new pad, the recording will stop on the previous pad, which will turn **green**, and start on the new pad, which will flash **red**.

**Note:** If you start recording by clicking **Record** under the **Sample Length** counter—or if the volume exceeds the level of the **threshold slider**—the sample will record to your project’s sample pool, not to a pad.

**To stop recording to a pad**, click or press the currently recording **pad**, which is flashing **red**. The sample will continue recording. You can start recording on another **pad** at any time.

**To stop all recording**, click the **Stop** button under the **Sample Length** counter.

When you are done recording, each pad that you have clicked or pressed during recording:

- will have its **Slice** setting set to **Pad**;
- will have its **Pad Start** and **Pad End** set to the slice’s start point and end point values; and
- will have its **Loop Position** set to the slice’s start point but with **Pad Loop** deactivated.

This is identical to how you can assign samples in Sample Edit Mode (described in **Sample Edit Mode > Chop Mode**).

**Tip:** We recommend editing your recorded sample in **Sample Edit Mode** (see **Sample Edit Mode** for more information).

Pad Hold

**Important:** This mode works for **drum programs only**; you must select a drum program before using this mode. Otherwise, this feature will not do anything, even though it may appear to work.

With this method, clicking or pressing and holding a pad immediately starts or continues recording directly to that pad (make sure you are using the desired program before you start recording). Pads with assigned samples are lit **bright yellow**. Pads without samples are lit **dim yellow**.

**To start recording to a pad**, click and hold it, or press and hold it. Recording will start immediately, and the pad will light **red**.

**Note:** If you start recording by clicking **Record** under the **Sample Length** counter—or if the volume exceeds the level of the **threshold slider**—the sample will record to your project’s sample pool, not to a pad.

**To stop recording**, release the **pad**. The pad will light **green**, and the sample will continue recording. You can start recording on another **pad** at any time.

**To stop all recording**, click the **Stop** button under the **Sample Length** counter.

When you are done recording, each pad that you have clicked or pressed during recording:

- will have its **Slice** setting set to **Pad**;
- will have its **Pad Start** and **Pad End** set to the slice’s start point and end point values; and
- will have its **Loop Position** set to the slice’s start point but with **Pad Loop** deactivated.

This is identical to how you can assign samples in Sample Edit Mode (described in **Sample Edit Mode > Chop Mode**).

**Tip:** We recommend editing your recorded sample in **Sample Edit Mode** (see **Sample Edit Mode** for more information).
The Looper lets you record and overdub audio in real time—a great tool for live performance as well as spontaneous moments in the studio. You can export the loop as a sample to use in your project.

To open the Looper, do any of the following:

- Click the **loop-and-waveform icon** in the toolbar (if shown).
- Click the **down arrow (▼)** next to the other mode icons in the toolbar, and click **Looper**.
- Click the **menu icon (≡)**, and go to **View > Mode** and click **Looper**.
Below is a brief step-by-step process so you can get started quickly. Continue reading the rest of this chapter to learn how to use the Looper in different cases.

To get started using the Looper:

1. Make sure to reduce the volume levels of your audio source and speakers/headphones/monitors before you make any connections to avoid “pops” or feedback.
2. Connect a synthesizer, audio player, etc. to the input/inputs of your MPC hardware or external audio interface.
3. On your MPC hardware or external audio interface, turn the Rec Vol knob to set the input level while playing your audio source. You should now see the level in the meter in the Looper panel. Make sure it does not exceed the maximum level (the meter should not be “peaking” constantly).
4. In the Looper panel, set the recording controls as desired (described later in this chapter).
5. Click the Record To menu in the Looper panel and select Overdub.
6. Click the Ovr (⊕) button in the Looper panel to record-arm the Looper.
7. Play your audio source. The Looper will start recording immediately when the input level reaches the threshold value. Alternatively, click Play (▶) in the Looper panel to manually start recording.
   
   Each time the Looper repeats, its contents are being overdubbed—a new layer of audio will be added each time you let the Looper repeat as it records.
   
   **Tip:** You can record a loop while playing a sequence in the background for reference.
8. **To stop recording,** click Play (▶) in the Looper panel.
   
   **To export your loop as a sample,** click Export to open the Export Loop as Sample window.
   
   **To clear the contents of the Looper,** click Clear.
The upper half of the window shows the real-time waveform of the Looper’s audio. Unlike other times the waveform is shown here, you cannot edit the waveform in this part of the window.

The audio playhead indicates the Looper’s current playback and/or recording position.

The timeline provides a reference for the length of the sample as bars.beats.ticks.

The lower half of the window can display the Q-Links panel, Pads panel, Looper panel, and Project panel. Click the corresponding selector to show or hide each one.

The Pads panel shows information for each pad, depending on the currently selected program. This is identical to how the Pads panel appears in Main Mode (see the Main Mode chapter to learn more).

See General Features > Panels > Project to learn more about the Project panel.

The Q-Links panel and Looper panel are described in the following sections.

Q-Links

In the Q-Links panel:

Use Q-Link Knob 1 to adjust the threshold. This is the same as adjusting the threshold slider in the Looper panel.

Use Q-Link Knob 4 to adjust the Looper’s output gain level. This is the same as adjusting the Output Gain slider in the Looper panel.
Looper

The Input Source menu in the upper-left corner of the Looper panel defines whether you are going to record an external audio signal (Stereo or Mono) or an internal signal from within the MPC software (Resample L, Resample R, or Resample L+R).

Resampling does not require an audio connection because the source is within the MPC software and is therefore recorded without any loss in audio quality. You can, for example, use Resample to record two or more samples by pressing the corresponding pads simultaneously or by simply playing a sequence.

The Inserts slots show any enabled or disabled effects for the Looper. See General Features > Effects > Insert Effects to learn more about insert effects.

**Important:** These effects are applied to the audio as you record it. This means that the effects cannot be “removed” from the sound later.

Click the Mono/Stereo menu to choose whether your recorded loop will be monaural (Mono) or binaural (Stereo).

Click the Monitor button to set how the Looper will be monitored:

- When set to In, the audio you hear in your headphones will be taken before it reaches the Sampler, ensuring zero latency.
- When off, the audio you hear in your headphones will be taken after it is processed in the Sampler, so there may be some latency, but you will hear the audio source as it sounds in the recording.

**Tip:** To avoid possible clicks or feedback while input monitoring, reduce the level of the audio sources.

Use the threshold slider to adjust the threshold. Alternatively, turn Q-Link Knob 1.

When the Looper is record-armed, it automatically starts recording when the level of the incoming source exceeds this setting. If you set it too high, the recording may not start when you play the input source, or the start of the material you wanted to record may be missing. If you set it too low, the recording may start too early, before you play the external source. Set this parameter to an appropriate level using the level meter.

Click Rplc or Ovr (⊕) to record-arm the Looper. The Play (▶) and Ovr (⊕) buttons will then flash.

At that point, start recording by doing either of the following:

- Start performing so that the incoming audio level exceeds the level of the threshold slider.
- Click the Play (▶) button in the Looper panel.

Click Rev (⇄) to reverse playback and recording of the Looper.

Use the Bars field to define the length of your loop. Regardless of how much or how little audio you record, this is how long your loop will be.

Click Sync button to sync or un-sync the looper with sequence playback. When on, the Looper will stay in step with your current sequence. When you play or record into the Looper, it will wait until the sequence starts playing Bar 1 to start.
Use the Record To selector to determine the loop recording behavior:

- **Play**: Before recording, you must first click the Play (▶) button on the window, which will start playing the Looper.
- **Overdub**: Before recording, you must first click Rplc or Ovr (⊕) to record-arm the Looper.

Click Clear × to erase the loop immediately.

Click Export × to open the Export Loop as a Sample window.

Use the Output Gain slider to adjust the Looper’s output gain level. This is the same as adjusting Q-Link Knob 4 in the Q-Links panel.

Below are step-by-step instructions for using the Looper’s functions.

**To record with the Looper:**

- **Important:**
  - To record without erasing any audio you’ve already recorded in the loop, use the ⊕/Ovr button.
  - To overwrite the audio you’ve already recorded, use the Rplc button.
  
  If Record To is set to Play:
    - To start recording, click the Rplc or Ovr (⊕) button as the loop is playing. The Looper will start recording immediately.
    - To stop recording, click the Rplc or Ovr (⊕) button. The Looper will stop recording but continue playing.
    - To stop playback and recording, click the Play (▶) button.
  
  If Record To is set to Overdub:
    - To start recording, click the Play (▶) button on the window.
      - If Sync is off, you can also play your audio source so that the input level reaches the threshold value.
      - If Sync is on, you can also click the Play (▶) or Play Start (▶|) button in the toolbar to start playing a sequence; recording will start when the sequence starts on Bar 1.
    - To stop recording, click the Ovr (⊕) button. The Looper will stop recording but continue playing.
    - To stop playback and recording, click the Play (▶) button, or press stop to stop sequence playback.

  To play or stop the loop (without recording), click the Play (▶) button on the window.

To reverse loop playback, click the Rev (◄) button. If Seq Sync is on, playback will reverse once the Looper’s playhead reaches the end of the loop. If Seq Sync is off, playback will reverse immediately.

To erase the loop immediately, click Clear ×.
To export the loop as a sample:

1. Click Export × to open the Export Loop as a Sample window.

2. Use the New Name field to name the new sample. Otherwise, the process will add a consecutive number after the sample name.

3. Optional: Click the Program menu to assign the new sample to a program. Select <none> if you want to save it to the project without assigning it to a program.

4. Optional: Use the Assign to Pad field to assign the sample to a pad in the program.

5. Use the Root Note field to set where the sample’s original pitch will be on the keyboard.

   To save the recording, click Save.

   To play the recording, click Play.

   To close the window without exporting, click Cancel.

   To confirm your selections and export the loop, click Do It.

   To edit the recording in Sample Edit Mode (recommended), click Edit.
Pad Mute Mode

Pad Mute Mode lets you easily mute pads within a program or set mute groups for each pad within a program.

To enter Pad Mute Mode, do any of the following:

- Click the square-and-X icon in the toolbar (if shown).
- Click the down arrow (▼) next to the other mode icons in the toolbar, and click Pad Mute.
- Click the menu icon (≡), and go to View > Mode and click Pad Mute.

While Pad Mute is selected in the Mute panel, you can mute or unmute individual sounds (on a single track) in real time by pressing the pads. This is useful if you want to hear a track without a particular sound or if you want to isolate specific sounds or combinations of sounds.

Tip: This function is similar to muting pads one at a time in the grid but more convenient.

The Pad Group feature in the Mute panel extends the concept of pad mutes: you can mute or unmute multiple pads (on a single track) by pressing one pad that you have assigned to a group. This is useful if you want to hear a track without a particular group of sounds or if you want to isolate specific sounds in various combinations. You can create up to 16 different groups.

The upper half of the window can display the Grid Editor, Wave Editor, or List Editor. Click the Grid, Wave, or List tab to enter the corresponding editor. See General Features > Editors to learn more about each one.

The lower half of the window can display the Pad Banks panel, Pads panel, Mute panel, and Project panel. Click the corresponding selector to show or hide each one. See General Features > Panels > Project to learn more about the Project panel. The other panels are described below: Pad Banks, Pads, and Mute.
Pad Banks

The Pad Banks panel is an overview of all pads in all eight pad banks.

Click a pad bank to select it. That bank will also appear in the Grid Editor and the Pads panel.

While using the Pad Mute function (selected in the Mute panel), click a pad with a sample to mute or unmute it. Muted pads are red. Unmuted pads are yellow.

While using the Pad Group function (selected in the Mute panel), click a pad to select it to assign to a group. The selected pad is green. Pads that belong to the same group flash yellow.

Pads

The Pads panel represents the pads in the current bank. If a pad is assigned to a group, the group number will appear at the bottom of the pad.

Click a pad bank to select it. That bank will also appear in the Grid Editor and the Pad Banks panel.

While using the Pad Mute function (selected in the Mute panel), click a pad with a sample to mute or unmute it. Muted pads are red. Unmuted pads are yellow.

While using the Pad Group function (selected in the Mute panel), click a pad to select it to assign to a group. The selected pad is green. Pads that belong to the same group flash yellow.

Mute

The Mute panel lets you configure how pad mutes work.

Click Pad Mute to use Pad Mute Mode normally. Clicking or pressing a pad will mute or unmute it (and any pads in the same group).

Click Pad Group to assign pads to groups. Clicking or pressing a pad will select it.

Click the Time Correct menu to select a time division to quantize pad mutes in this mode. For example, while set to 1 Bar, your mutes will always align with the beginning of the measure immediately after you press the pad. Select Off to deactivate this feature.

While Pad Group is selected, click the Pad menu to assign the currently selected pad to a group. Select Group Off to un-assign the pad from any group.
Track Mute Mode

Track Mute Mode lets you easily mute MIDI tracks within a sequence or set track groups, enabling you to mute multiple tracks at once.

**Important:** Track Mute Mode applies to MIDI tracks only—not audio tracks.

To enter Track Mute Mode, do any of the following:

- Click the bars-and-X icon in the toolbar (if shown).
- Click the down arrow (▼) next to the other mode icons in the toolbar, and click Track Mute.
- Click the menu icon (≡), and go to View > Mode and click Track Mute.

While Track Mute is selected in the Mute panel, you can mute, unmute, or solo MIDI tracks (in a single sequence) in real time by pressing the pads. This is useful if you want to hear a sequence without a particular MIDI track (e.g., muting your keyboard track to focus on the bass) or if you want to isolate specific sounds or combinations of sounds that are separated by track.

**Tip:** This function is similar to, but more convenient than, muting MIDI tracks one at a time in the Track View.

The Track Group feature in the Mute panel extends the concept of track mutes: you can mute or unmute multiple MIDI tracks (in a single sequence) by pressing one pad that you have assigned to a track group. This is useful if you want to hear a track without a particular group of sounds or if you want to isolate specific sounds in various combinations. You can create up to 16 different track groups.
The upper half of the window displays the Track View. See General Features > Track View to learn more about this.

The lower half of the window can display the Pad Banks panel, Pads panel, Mute panel, and Project panel. Click the corresponding selector to show or hide each one. See General Features > Panels > Project to learn more about the Project panel. The other panels are described below: Pad Banks, Pads, and Mute.

**Pad Banks**

The Pad Banks panel is an overview of all pads in all eight pad banks. Each pad represents a MIDI track in the current sequence.

Click a pad bank to select it.

While using the Track Mute function (selected in the Mute panel), click a pad to mute or unmute its track. Pads with muted tracks are red. Pads with unmuted tracks are yellow.

While using the Track Group function (selected in the Mute panel), click a pad to select its track to assign to a group. The pad with the selected track is green. Pads with tracks that belong to the same group flash yellow.

While using the Solo function (selected in the Mute panel), click a pad to solo its track (muting all others). The pad with the soloed track is green. The colors of other pads will not change when using this feature.

**Pads**

The Pads panel represents 16 MIDI tracks (per bank) in the current sequence. If a pad’s track is assigned to a group, the group number will appear at the bottom of the pad.

Click a pad bank to select it.

While using the Track Mute function (selected in the Mute panel), click a pad to mute or unmute its track. Pads with muted tracks are red. Pads with unmuted tracks are yellow.

While using the Track Group function (selected in the Mute panel), click a pad to select its track to assign to a group. The pad with the selected track is green. Pads with tracks that belong to the same group flash yellow.

While using the Solo function (selected in the Mute panel), click a pad to solo its track (muting all others). The pad with the soloed track is green. The colors of other pads will not change when using this feature.
Mute

The Mute panel lets you configure how track mutes work.

Click **Track Mute** to use Track Mute Mode normally. Clicking or pressing a **pad** will mute or unmute its track (and any tracks in the same group).

Click **Track Group** to assign tracks to groups. Clicking or pressing a **pad** will select its track.

Click the **Time Correct** menu to select a time division to quantize track mutes in this mode. For example, while set to **1 Bar**, your mutes will always align with the beginning of the measure immediately after you press the pad. Select **Off** to deactivate this feature.

While **Track Group** is selected, click the **Track** menu to assign the track of the currently selected pad to a group. Select **Group Off** to un-assign the track from any group.

Click **Solo** to enable or disable the solo feature. When enabled, click a **pad** to solo its track (muting all others).
Next Sequence Mode

Next Sequence Mode lets you trigger different sequences simply by playing the pads. This is useful for live performances, letting you change a song’s structure in real time.

To enter Next Sequence Mode, do any of the following:

- Click the **double-arrow icon** in the toolbar (if shown).
- Click the **down arrow (▼)** next to the other mode icons in the toolbar, and click **Next Sequence**.
- Click the **menu icon (≡)**, and go to **View > Mode** and click **Next Sequence**.

In Next Sequence Mode, every pad is assigned to a sequence, starting from **Pad A01 with Sequence 1** and ascending from there.

In this mode, you can start playback and choose the sequence that plays next in real time. Select the next sequence by pressing its corresponding pad. Alternatively, allow the current sequence to repeat indefinitely. When you stop playback, you can copy the order of sequences you played into Song Mode to export it.
The upper half of the window displays a representation of the sequences that have played.

The dark blue timeline at the top indicates the number of bars that have elapsed with each sequence. The white arrow (▼) is the audio playhead, indicating the current playback position.

Each block represents a sequence with miniature track note events. The sequence number and name is at the top of each block. A repeat symbol (|||) next to the sequence name indicates it is a repeat of the previous sequence.

Use the sliders in the lower-right corner of this area (along each axis) to zoom in or zoom out.

The lower half of the window can display the **Sequence List** panel, **Pads** panel, **Performance Controls** panel, and **Project** panel. Click the corresponding selector to show or hide each one. See **General Features > Panels > Project** to learn more about the **Project** panel. The other panels are described below: **Sequence List**, **Pads**, and **Performance Controls**.

**Sequence List**

The **Sequence List** panel shows a list of all available sequences in your project as well as their length and tempo. The currently selected one is highlighted. Select one by clicking or pressing its corresponding pad.

The **Sequence** column shows the name of the sequence.

The **Length** column indicates the length of the sequence in bars.

The **Tempo** column indicates the tempo of the sequence in BPM. Keep in mind that each sequence will not play back at this tempo if the Seq/Mst button in the toolbar is set to Mst; if it is set to Seq, then each sequence follows its own tempo during playback.

**Note:** To set the BPM of a sequence, select that sequence and then use (A) the BPM field in its Sequence section of the Inspector or (B) the BPM field in the toolbar (when set to Seq instead of Mst).
Pads

The Pads panel represents 16 sequences (per bank). Each pad shows the length of the sequence in bars, the tempo of the sequence in BPM, and the name of the sequence. (Keep in mind that each sequence will not play back at this tempo if the Seq/Mst button in the toolbar is set to Mst; if it is set to Seq, then each sequence follows its own tempo during playback.)

Click a pad bank to select it.
Click a pad to select its sequence.
If a sequence on another pad will play next, that pad will flash green.
During playback, the pad with the currently playing sequence will be lit green.

Performance Controls

The Performance Controls panel shows the available commands you can execute.

As a sequence plays, you can use the buttons in this panel to change how playback works in this mode:

Click Hold to repeat the current sequence indefinitely and temporarily ignore pad presses. Click it again to return to normal operation. This is useful if you want to select other pads without selecting them to play next.
Click Sudden to switch to the currently selected sequence immediately. The new sequence will start playing whether or not the current sequence is done. This is useful in live performances if you need to switch to the next sequence instantly at a certain cue.
Click Next Bar to switch to the currently selected sequence at the beginning of the next bar. This is useful if you want to switch to another sequence before the current one ends without having to worry about timing issues.
If there is a sequence that will play next, you can click Clear to cancel it. The current sequence will continue playing or you can click or press a pad to select another sequence to play next. This option is available only if that sequence is not playing at that moment.

While playback is stopped, you can use these buttons:

While playback is stopped, click Copy to Song to copy the sequence playlist to a song (see the Song Mode chapter to learn about creating a song).
While playback is stopped, click Erase Song to clear all sequences from the upper half of the window.
**Song Mode**

Song Mode lets you arrange sequences in a specific order and/or repetition to create songs. You can edit the structure of a song during playback for easy, on-the-fly composing.

A project can contain up to 32 songs, each consisting of up to 999 “steps.” Each step can have an assigned sequence as well as the number of times that sequence will repeat.

**To open Song Mode,** do any of the following:
- Click the musical-notes icon in the toolbar (if shown).
- Click the down arrow (▼) next to the other mode icons in the toolbar, and click Song.
- Click the menu icon (≡), and go to View > Mode and click Song.

**Important:** If a sequence is currently playing, stop playback before entering Song Mode. You cannot enter Song Mode during playback.

In Song Mode, every pad is assigned to a sequence, starting from Pad A01 with Sequence 1 and ascending from there.

In this mode, you can create a song as a list “steps.” Each step corresponds to a sequence and will play a certain number of times.

**Important:** When creating a song, the program used by each track in the song’s first sequence will be used by all subsequent tracks. In other words, all identically numbered tracks (across sequences) will use the program used by the first sequence in the song—regardless of what programs each track uses while not in Song Mode.

For example, if you create a project in this way...
- Track 1 of Sequence 1 uses a drum program.
- Track 1 of Sequence 2 uses a keygroup program.

A song uses Sequence 1 as its first sequence and then uses Sequence 2 any time after it.

...then, in that song, Track 1 in Sequence 2 will use the same drum program as Track 1, Sequence 1.

Because of this, we recommend trying to be consistent while creating tracks in sequences that you intend to use in a single song. Remember that you can copy one track to another if you ever need to reorder the tracks of a sequence (see **General Features > Editing Processes** to learn about this).
The upper half of the window displays a representation of the sequences in the song.

The dark blue timeline at the top indicates the number of bars that have elapsed with each sequence. The white arrow (▼) is the audio playhead, indicating the current playback position.

Each block represents a sequence with miniature track note events. The sequence number and name is at the top of each block. A repeat symbol (♫) next to the sequence name indicates it is a repeat of the previous sequence.

- Click the blue bar at the top of each block to select that step in the song. The bar will be yellow when selected. If the step contains repetitions of a sequence, all repetitions in that step will be selected.
- Click the X in the blue bar at the top of a block to delete that step in the song. If the step contains repetitions of a sequence, all repetitions in that step will be deleted.

Use the sliders in the lower-right corner of this area (along each axis) to zoom in or zoom out.

The lower half of the window can display the Sequence List panel, Pads panel, Song Parameters panel, and Project panel. Click the corresponding selector to show or hide each one. See General Features > Panels > Project to learn more about the Project panel. The other panels are described below: Sequence List, Pads, and Song Parameters.
Sequence List

The **Sequence List** panel shows a list of the steps of the song. Each step can have one sequence assigned to it and will show its information. The currently selected one is highlighted. Select one by clicking it.

The **Step** column shows the number of the step. Each song can contain up to **999 steps**.

The **Sequence** column shows the number and name of the assigned sequence. Click this menu to select a different sequence. This is the same as the **Step** menu in the **Song Parameters** panel.

The **Rpts** column indicates how many times the sequence plays. Click and drag this field up or down to set the number of repeats. Each step can play up to **999 times**. You can set it to **Hld** (the lowest/minimum value) to set the sequence to repeat indefinitely until you stop playback.

The **BPM** column indicates the tempo of the sequence in **BPM**. Keep in mind that each sequence will not play back at this tempo if the **Seq/Mst** button in the toolbar is set to **Mst**; if it is set to **Seq**, then each sequence follows its own tempo during playback.

**Note:** To set the **BPM** of a sequence, select that sequence and then use (**A**) the BPM field in its **Sequence** section of the Inspector or (**B**) the BPM field in the toolbar (when set to **Seq** instead of **Mst**).

The **Bars** column indicates the length of the sequence in **bars**.

---

Pads

The **Pads** panel represents 16 sequences (per bank). Each pad shows the length of the sequence in **bars**, the tempo of the sequence in **BPM**, and the name of the sequence. (Keep in mind that each sequence will not play back at this tempo if the **Seq/Mst** button in the toolbar is set to **Mst**; if it is set to **Seq**, then each sequence follows its own tempo during playback.)

The pad whose sequence is assigned to the currently selected step will flash **green**.

Click a **pad bank** to select it.

Click and drag a **pad** onto one of the following locations to use it in the song:

- onto a step in the **Sequence List** panel or onto a block in the upper half of the window. This will replace its currently assigned sequence with the one you clicked and dragged onto it.
- between two steps in the **Sequence List** panel or between two blocks in the upper half of the window. This will insert a step at that location and assign the sequence to it.

If a sequence on another pad will play next, that pad will flash **yellow**.

During playback, the pad with the currently playing sequence will be lit **green**.
Song Parameters

The Song Parameters panel shows the available controls for Song Mode. You can use the buttons in this panel to edit the song.

Click the Song menu to select the song you want to show.
Double-click the name in this menu to rename the song.

Click Convert > Seq to open the Convert Song window. In this window:

- Click the To Sequence menu to select the sequence that will use the converted song.
- Click the Track Status menu to select how you want to convert muted tracks. Select Include Muted Tracks if you want muted tracks to be included in the converted song. Select Ignore Muted Tracks if you want muted tracks to be excluded from the converted song.
- Click Do It to convert the song to that sequence, or click Close to close the window without converting.

Click Clear to clear the entire sequence playlist (delete all steps) and the name of the song.

Click Insert Step to insert a step after the currently selected one.

Click Delete Step to delete the currently selected step.

The Step menu shows the number and name of the sequence assigned to the currently selected step. Click this menu to select a different sequence. This is the same as the Sequence menu/column in the Sequence List panel.

The First Bar and Last Bar values indicate the numbers of the bars (in the entire song) where the step starts and ends, respectively.

The Total Bars value indicates the length of the sequence in bars.

The Repeats value indicates how many times the sequence plays. Click and drag the Rpts field in the Sequence List panel up or down to set the number of repeats. Each step can play up to 999 times. When this is set to Hold (the lowest/minimum value), the sequence to repeat indefinitely until you stop playback.

The Time Sig value indicates the time signature of the sequence.

The BPM value indicates the tempo of the sequence assigned to the currently selected step in BPM. Keep in mind that each sequence will not play back at this tempo if the Seq/Mst button in the toolbar is set to Mst; if it is set to Seq, then each sequence follows its own tempo during playback.

To render/export your song as an audio file, click the menu icon (≡), and go to File > Export and click As Audio Mixdown. See General Features > Audio Mixdown to learn how to use this screen to export your song.
MIDI Control Mode

You can use MIDI Control Mode to customize what MIDI messages are sent from certain controls on your MPC hardware. This custom “control map” will then work whenever you are in MIDI Control Mode. The edits you make in MIDI Control Mode will be retained with the current MPC project.

This is helpful when using the MPC software as a plugin: you can use MIDI Control Mode to use your MPC hardware to control your host software, and then switch back to any other mode to control the MPC plugin.

To enter MIDI Control Mode, do any of the following:

- Click the MIDI-controller icon in the toolbar (if shown).
- Click the down arrow (▼) next to the other mode icons in the toolbar, and click MIDI Control.
- Click the menu icon (≡), and go to View > Mode and click MIDI Control.

Important: Make sure your MPC hardware is connected to your computer and powered on. MIDI Control Mode is not functional without a connected MPC hardware unit.

In the window, use the following fields and selectors to set each control’s parameters to your preference. The available parameters depend on its type: Pads, Buttons, Q-Link Knobs, and XY Pad. When you have set all of the parameters as desired, you can select another control or enter another mode.

The software window will also display a graphical representation of your MPC hardware. Editable controls show their current MIDI message. Pads and Q-Link knobs show their current MIDI channels.
To select a control to edit, do one of the following:

- Press or turn it on your MPC hardware.
- Click it on the graphical representation of your MPC hardware.
- Click the Control menu in the upper-left corner of the window and select one.

**Note:** The Control menu may show many more hardware controls than are actually available on your MPC hardware. This is because the list includes all possible controls from all current MPC models (MPC Renaissance, MPC Studio, MPC Touch, etc.).

### Pads

These are the MIDI parameters you can edit for each pad:

- **Control**: This is the hardware control you are currently editing (Pad 1–Pad 16). Click this menu to select another control.
- **Bank**: This is the pad bank of the current pad (A–H). If you select the Set All box, the pad’s messages and parameters will be identical across all eight banks. Click this menu to select another bank.
- **Set All**: Click this box to select or deselect it. When selected, the pad’s messages and parameters will be identical across all eight banks. When deselected, the pad’s messages and parameters will apply to the current pad only.
- **Light LED**: This determines how the pad’s LEDs will behave. Click this menu to select an option:
  - When set to **Never**, the LEDs will always be off.
  - When set to **MIDI Input**, the LEDs will light up when the software receives a MIDI message that matches the pad.
  - When set to **Local**, the LEDs will light up when you press the pad and/or MIDI input is received.
- **MIDI Ch**: This determines which MIDI channel (1–16) the pad will use to send its message to the software.
- **CC Number**: This determines what MIDI Control Change number the pad will send to the software when you press it.
- **Velocity**: This determines whether the pad will be velocity-sensitive (On) or not (Off). When set to Off, pressing the pad will send a note at full-level (127) always.
- **Aftertouch**: This determines how the pad’s aftertouch (pressure applied to the pad after the initial press) behaves.
  - **Off**: The pad will not send any aftertouch messages.
  - **Channel**: If you press multiple pads that have this setting, the aftertouch messages they send will be identical.
  - **Poly**: If you press multiple pads, the aftertouch message each pad sends will be independent from the others.
Buttons

These are the MIDI parameters you can edit for each button:

- **Control**: This is the hardware control you are currently editing (Erase, Tap Tempo, Undo, Copy, etc.). Click this menu to select another option.
- **Light LED**: This determines how the button’s LED/LEDs will behave. Click this menu to select an option:
  - When set to Never, the LEDs will always be off.
  - When set to MIDI Input, the LEDs will light up when the software receives a MIDI message that matches the button.
  - When set to Local, the LEDs will light up when you press the button and/or MIDI input is received.
- **MIDI Ch**: This determines which MIDI channel (1–16) the button will use to send its message to the software.
- **CC Number**: This determines what MIDI control change number the button will send to the software.
- **Type**: This determines whether the button will behave as a Momentary switch or Toggle (latching) switch.

Q-Link Knobs

These are the MIDI parameters you can edit for each Q-Link knob:

- **Control**: This is the hardware control you are currently editing (Q-Link 1–16). Click this menu to select another option.
- **Light LED**: Although you can edit this parameter, it does not actually have a function on your MPC hardware. Click this menu to select an option:
  - When set to Never, the LEDs will always be off.
  - When set to MIDI Input, the LEDs will light up when the software receives a MIDI message that matches the Q-Link knob.
  - When set to Local, the LEDs will light up when you touch or turn the Q-Link knob and/or MIDI input is received.
- **MIDI Ch**: This determines which MIDI channel (1–16) the Q-Link knob will use to send its message to the software.
- **CC Number**: This determines what MIDI Control Change number the Q-Link knob will send to the software.
- **Mode**: This determines how the Q-Link knob will control its parameter.
  - **Absolute**: The Q-Link knob’s current position determines its parameter’s value; moving it may cause its parameter to “snap” to a new position if you’re using it to control different parameters in different modes.
  - **Relative**: Moving the Q-Link knob will increase or decrease its parameter regardless of its physical position.
- **Low Range**: This is the Q-Link knob’s lowest possible value (0–127).
- **High Range**: This is the Q-Link knob’s highest possible value (0–127).
- **Touch Sense**: This activates or deactivates the Q-Link knob’s touch-capacitive circuitry.
  - **On**: You can touch the Q-Link knob to send a Note On message to the software (this is how your MPC hardware normally works).
  - **Off**: The Q-Link knob will not send any Note On messages; it will only send CC messages when you turn it.
- **Touch Note**: This is the MIDI note number the Q-Link knob will send to the software when you touch it (0–127 or C-2 to G8). **Touch Sense** must be set to **On** for this to work.
**XY Pad**

These are the MIDI parameters you can edit for each axis of the **XY pad** of an MPC X, MPC Live, MPC Live MKII, MPC One, or MPC Touch:

- **Control**: This is the axis you are currently editing (**XYFX X-Axis** or **XYFX Y-Axis**).
- **Mute**: This button determines whether the axis is muted or not. When muted, its MIDI output is disabled. You must be viewing the **Settings** to do this.
- **MIDI Ch**: This determines which MIDI channel (1–16) the axis will use to send its message to the software.
- **CC Number**: This determines what MIDI Control Change number the axis will send to the software.
- **Low Range**: This is the axis's lowest possible value (0–127).
- **High Range**: This is the axis's highest possible value (0–127).
Appendix

Effects & Parameters

This chapter lists the available effects and their parameters. To learn more about how effects work in general in the MPC software, please see *Operation > General Features > Effects*.

**Note:** Some of these effects have a “sync” version (e.g., Flanger Sync, Autopan Sync, etc.) whose rates will be affected by the current tempo. While viewing the rate of these effects, a “.” next to the time division indicates a triplet-based rate.

### Reverbs

**Options:** Reverb Small, Reverb Medium, Reverb Large, Reverb Large 2, Reverb In Gate, Reverb Out Gate

**Reverb Small**

This is a spatial effect, designed to emulate a small room.

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<td>Diffuse</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Decay</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Lo-Cut</td>
<td>0–100</td>
<td>15</td>
</tr>
<tr>
<td>Hi-Cut</td>
<td>0–100</td>
<td>10</td>
</tr>
</tbody>
</table>

**Reverb Medium**

This is a spatial effect, designed to emulate a medium room.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>50</td>
</tr>
<tr>
<td>Pre-Delay</td>
<td>1–100</td>
<td>50</td>
</tr>
<tr>
<td>Early Reflection</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Density</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Diffuse</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Decay</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Lo-Cut</td>
<td>0–100</td>
<td>15</td>
</tr>
<tr>
<td>Hi-Cut</td>
<td>0–100</td>
<td>10</td>
</tr>
</tbody>
</table>
### Reverb Large

This is a spatial effect, designed to emulate the sound of a large hall.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>50</td>
</tr>
<tr>
<td>Pre-Delay</td>
<td>1–100</td>
<td>50</td>
</tr>
<tr>
<td>Early Reflection</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Density</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Diffuse</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Decay</td>
<td>0–100</td>
<td>75</td>
</tr>
<tr>
<td>Lo-Cut</td>
<td>0–100</td>
<td>10</td>
</tr>
<tr>
<td>Hi-Cut</td>
<td>0–100</td>
<td>10</td>
</tr>
</tbody>
</table>

### Reverb Large 2

This is a less CPU-intensive spatial effect, emulating the sound of a large hall.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>50</td>
</tr>
<tr>
<td>Pre-Delay</td>
<td>1–100</td>
<td>50</td>
</tr>
<tr>
<td>Early Reflection</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Density</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Diffuse</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Decay</td>
<td>0–100</td>
<td>75</td>
</tr>
<tr>
<td>Lo-Cut</td>
<td>0–100</td>
<td>10</td>
</tr>
<tr>
<td>Hi-Cut</td>
<td>0–100</td>
<td>10</td>
</tr>
</tbody>
</table>

### Reverb In Gate

This is a hall reverb with an additional control. The reverb effect is cut off when the input drops below the level set in the Gate In parameter.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>50</td>
</tr>
<tr>
<td>Pre-Delay</td>
<td>1–100</td>
<td>50</td>
</tr>
<tr>
<td>Early Reflection</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Density</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Diffuse</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Decay</td>
<td>0–100</td>
<td>75</td>
</tr>
<tr>
<td>Lo-Cut</td>
<td>0–100</td>
<td>10</td>
</tr>
<tr>
<td>Hi-Cut</td>
<td>0–100</td>
<td>10</td>
</tr>
<tr>
<td>Gate In</td>
<td>0–100</td>
<td>0</td>
</tr>
</tbody>
</table>
Reverb Out Gate

This is a hall reverb that has an additional control. The reverb effect is cut off when the output drops below the level set in the Gate Out parameter.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>50</td>
</tr>
<tr>
<td>Pre-Delay</td>
<td>1–100</td>
<td>50</td>
</tr>
<tr>
<td>Early Reflection</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Density</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Diffuse</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Decay</td>
<td>0–100</td>
<td>75</td>
</tr>
<tr>
<td>Lo-Cut</td>
<td>0–100</td>
<td>10</td>
</tr>
<tr>
<td>Hi-Cut</td>
<td>0–100</td>
<td>10</td>
</tr>
<tr>
<td>Gate Out</td>
<td>0–100</td>
<td>0</td>
</tr>
</tbody>
</table>

Delays

Delays the original signal for a specified period of time and plays it back over an adjustable period of time.

Options: Delay Mono, Delay Mono Sync, Delay Stereo, Delay Sync (Stereo), Delay LP, Delay HP, Delay Analog, Delay Analog Sync, Delay Tape Sync, Delay Ping Pong, Delay Multi-Tap

Delay Mono

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>50</td>
</tr>
<tr>
<td>Time</td>
<td>2–2000 ms</td>
<td>100</td>
</tr>
<tr>
<td>Feedback</td>
<td>0–100</td>
<td>25</td>
</tr>
<tr>
<td>Damping</td>
<td>0–100</td>
<td>100</td>
</tr>
</tbody>
</table>

Delay Mono Sync

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>50</td>
</tr>
<tr>
<td>Time</td>
<td>1 bar – 1/16 triplets</td>
<td>1/4</td>
</tr>
<tr>
<td>Feedback</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Damping</td>
<td>0–100</td>
<td>100</td>
</tr>
</tbody>
</table>

Delay Stereo

Stereo Delay operates similarly to Mono Delay but in true stereo.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>50</td>
</tr>
<tr>
<td>Time</td>
<td>2–2000 ms</td>
<td>100</td>
</tr>
<tr>
<td>Feedback</td>
<td>0–100</td>
<td>25</td>
</tr>
<tr>
<td>Damping</td>
<td>0–100</td>
<td>100</td>
</tr>
</tbody>
</table>
Delay Sync (Stereo)

Stereo Delay operates similarly to Mono Delay but in true stereo.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>50</td>
</tr>
<tr>
<td>Time</td>
<td>1 bar – 1/16 triplets</td>
<td>1/4</td>
</tr>
<tr>
<td>Feedback</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Damping</td>
<td>0–100</td>
<td>100</td>
</tr>
</tbody>
</table>

Delay LP

LP Delay is identical to the Mono Delay, but it uses a resonant low-pass filter in the delay line.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>50</td>
</tr>
<tr>
<td>Time</td>
<td>2–2000 ms</td>
<td>500</td>
</tr>
<tr>
<td>Feedback</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Cutoff</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Resonance</td>
<td>0–100</td>
<td>20</td>
</tr>
</tbody>
</table>

Delay HP

HP Delay is identical to the Mono Delay, but it uses a resonant high-pass filter in the delay line.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>50</td>
</tr>
<tr>
<td>Time</td>
<td>2–2000 ms</td>
<td>100</td>
</tr>
<tr>
<td>Feedback</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Cutoff</td>
<td>0–100</td>
<td>33</td>
</tr>
<tr>
<td>Resonance</td>
<td>0–100</td>
<td>33</td>
</tr>
</tbody>
</table>

Delay Analog

Analog Delay is similar to the Mono Delay, except that it’s designed to emulate an analog “Bucket Brigade”-style delay. This delay has a unique character to it that gives a warmer sound by adding subtle inaccuracies in phase and timing.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>50</td>
</tr>
<tr>
<td>Time</td>
<td>2–2000 ms</td>
<td>100</td>
</tr>
<tr>
<td>Feedback</td>
<td>0–100</td>
<td>25</td>
</tr>
</tbody>
</table>

Delay Analog Sync

Analog Delay is similar to Mono Delay, except that it’s designed to emulate an analog “Bucket Brigade”-style delay. This delay has a unique character to it that gives a warmer sound by adding subtle inaccuracies in phase and timing.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>50</td>
</tr>
<tr>
<td>Time</td>
<td>1 bar – 1/16 triplets</td>
<td>1/4</td>
</tr>
<tr>
<td>Feedback</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Ramp</td>
<td>0–100</td>
<td>50</td>
</tr>
</tbody>
</table>
Delay Tape Sync

Tape Delay emulates a delay system using an analog tape loop and a series of tape heads to produce an echo effect. This delay type yields a very distinct echo sound often heard in reggae and dub-style music.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>50</td>
</tr>
<tr>
<td>Time</td>
<td>1 bar – 1/16 triplets</td>
<td>1/4</td>
</tr>
<tr>
<td>Feedback</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Ramp</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Head 1</td>
<td>0–100</td>
<td>100</td>
</tr>
<tr>
<td>Head 2</td>
<td>0–100</td>
<td>0</td>
</tr>
<tr>
<td>Head 3</td>
<td>0–100</td>
<td>0</td>
</tr>
<tr>
<td>Head 4</td>
<td>0–100</td>
<td>0</td>
</tr>
<tr>
<td>Tone</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Spread</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Wow &amp; Flutter</td>
<td>0–100</td>
<td>50</td>
</tr>
</tbody>
</table>

Delay Ping Pong

This stereo delay allows you to set different delay times for its left and right repeats.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>50</td>
</tr>
<tr>
<td>Time, Left</td>
<td>2–2000 ms</td>
<td>100</td>
</tr>
<tr>
<td>Time, Right</td>
<td>2–2000 ms</td>
<td>100</td>
</tr>
<tr>
<td>Feedback</td>
<td>0–100</td>
<td>25</td>
</tr>
<tr>
<td>Damping</td>
<td>0–100</td>
<td>100</td>
</tr>
</tbody>
</table>

Delay Multi-Tap

This delay is a mono delay which has three delay generators with independently adjustable delay times and stereo position.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>50</td>
</tr>
<tr>
<td>Time 1</td>
<td>2–2000 ms</td>
<td>100</td>
</tr>
<tr>
<td>Time 2</td>
<td>2–2000 ms</td>
<td>100</td>
</tr>
<tr>
<td>Time 3</td>
<td>2–2000 ms</td>
<td>100</td>
</tr>
<tr>
<td>Feedback</td>
<td>0–100</td>
<td>25</td>
</tr>
<tr>
<td>Pan 1</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Pan 2</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Pan 3</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Damping</td>
<td>0–100</td>
<td>100</td>
</tr>
<tr>
<td>Gain 1</td>
<td>0–100</td>
<td>25</td>
</tr>
<tr>
<td>Gain 2</td>
<td>0–100</td>
<td>25</td>
</tr>
<tr>
<td>Gain 3</td>
<td>0–100</td>
<td>25</td>
</tr>
</tbody>
</table>
Flangers

A flanger is a modulated delay to emulate the sound created when running two analog tape machines in parallel with a slight time disalignment. Slow Rate settings can produce a “whooshing” jet engine sound, while faster rates result in more of a “warble.”

Options: Flanger, Flanger Sync

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Rate</td>
<td>0–100</td>
<td>10</td>
</tr>
<tr>
<td>Feedback</td>
<td>-100 – 100</td>
<td>0</td>
</tr>
<tr>
<td>Delay</td>
<td>0–100</td>
<td>20</td>
</tr>
<tr>
<td>Width</td>
<td>0–100</td>
<td>80</td>
</tr>
</tbody>
</table>

**Flanger Sync**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Rate</td>
<td>8 bars – 1/16 triplets</td>
<td>1/4</td>
</tr>
<tr>
<td>Feedback</td>
<td>-100 – 100</td>
<td>0</td>
</tr>
<tr>
<td>Delay</td>
<td>0–100</td>
<td>20</td>
</tr>
<tr>
<td>Width</td>
<td>0–100</td>
<td>80</td>
</tr>
</tbody>
</table>

Choruses

A chorus effect uses an LFO to modulate the pitch and a delay of the input signal, which are then added to the dry signal. In small amounts, this creates the illusion of multiple voices playing at once. Turn up the Feedback and Depth for more pronounced “shimmering” and “watery” sounds.

Options: Chorus 2-Voice, Chorus 4-Voice

**Chorus 2-Voice**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100</td>
<td>100</td>
</tr>
<tr>
<td>Delay</td>
<td>0–100</td>
<td>20</td>
</tr>
<tr>
<td>Amount</td>
<td>0–100</td>
<td>80</td>
</tr>
<tr>
<td>Width</td>
<td>0–100</td>
<td>80</td>
</tr>
<tr>
<td>Feedback</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Rate</td>
<td>0–100</td>
<td>10</td>
</tr>
</tbody>
</table>

**Chorus 4-Voice**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100</td>
<td>100</td>
</tr>
<tr>
<td>Delay</td>
<td>0–100</td>
<td>20</td>
</tr>
<tr>
<td>Amount</td>
<td>0–100</td>
<td>80</td>
</tr>
<tr>
<td>Width</td>
<td>0–100</td>
<td>80</td>
</tr>
<tr>
<td>Feedback</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Rate</td>
<td>0–100</td>
<td>10</td>
</tr>
</tbody>
</table>
Autopans

This effect uses an LFO to move the incoming signal back and forth across the stereo field, creating a rotary effect.

Options: Autopan, Autopan Sync

Autopan

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Rate</td>
<td>0–100</td>
<td>10</td>
</tr>
</tbody>
</table>

Autopan Sync

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Rate</td>
<td>8 bars – 1/32 triplets</td>
<td>1/4</td>
</tr>
</tbody>
</table>

Tremolos

This effect uses an LFO to increase and decrease the volume of the signal. Depending on the LFO shape, this can produce a smooth wave effect (sine wave) or a stuttering “on-off” effect (square wave).

Options: Tremolo, Tremolo Sync

Tremolo

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Rate</td>
<td>0–100</td>
<td>10</td>
</tr>
<tr>
<td>Sine to Square</td>
<td>0–100 (sine–square)</td>
<td>0</td>
</tr>
</tbody>
</table>

Tremolo Sync

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Rate</td>
<td>1 bar – 1/16 triplets</td>
<td>1/4</td>
</tr>
<tr>
<td>Sine to Square</td>
<td>0–100 (sine–square)</td>
<td>0</td>
</tr>
</tbody>
</table>
Phasers

The phaser is a classic effect, created by multiple ganged all-pass filters to create “notches,” or sharp spikes, in the frequency spectrum. The frequencies of these all-pass filters are usually modulated by an LFO to create a sweeping sound.

Options: Phaser 1, Phaser 2, Phaser Sync

Phaser 1

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Rate</td>
<td>0–100</td>
<td>10</td>
</tr>
</tbody>
</table>

Phaser 2

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Rate</td>
<td>0–100</td>
<td>10</td>
</tr>
</tbody>
</table>

Phaser Sync

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Rate</td>
<td>1 bar – 1/16 triplets</td>
<td>1/4</td>
</tr>
</tbody>
</table>

HP (High-Pass) Filters

Options: HP Filter, HP Filter Sweep, HP Filter Sync, HP Shelving Filter

HP Filter

This effect is a static filter without modulation.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>10–19999 Hz</td>
<td>1500</td>
</tr>
<tr>
<td>Resonance</td>
<td>0–100</td>
<td>0</td>
</tr>
</tbody>
</table>

HP Filter Sweep

This effect is a high-pass filter with its cutoff frequency modulated by an LFO.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>80</td>
</tr>
<tr>
<td>Low Frequency</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>High Frequency</td>
<td>0–100</td>
<td>100</td>
</tr>
<tr>
<td>Resonance</td>
<td>0–100</td>
<td>33</td>
</tr>
<tr>
<td>Rate</td>
<td>0–100</td>
<td>10</td>
</tr>
</tbody>
</table>
HP Filter Sync
This effect is a high-pass filter with its cutoff frequency modulated by an LFO.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Low Frequency</td>
<td>0–100</td>
<td>0</td>
</tr>
<tr>
<td>High Frequency</td>
<td>0–100</td>
<td>100</td>
</tr>
<tr>
<td>Resonance</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Rate</td>
<td>8 bars – 1/32</td>
<td>1/4</td>
</tr>
</tbody>
</table>

HP Shelving Filter
This filter differs from the standard filter type, as it attenuates all frequencies after the cutoff point equally.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>22–19999 Hz</td>
<td>1500</td>
</tr>
<tr>
<td>Resonance</td>
<td>0–100</td>
<td>0</td>
</tr>
<tr>
<td>Gain</td>
<td>-18.0 – 18.0 dB</td>
<td>0.0</td>
</tr>
</tbody>
</table>

LP (Low-Pass) Filters

Options: LP Filter, LP Filter Sweep, LP Filter Sync, LP Shelving Filter

LP Filter
This effect is a static filter without modulation.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>22–19999 Hz</td>
<td>1500</td>
</tr>
<tr>
<td>Resonance</td>
<td>0–100</td>
<td>0</td>
</tr>
</tbody>
</table>

LP Filter Sweep
This effect is a low-pass filter with its cutoff frequency modulated by an LFO.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>80</td>
</tr>
<tr>
<td>Low Frequency</td>
<td>0–100</td>
<td>0</td>
</tr>
<tr>
<td>High Frequency</td>
<td>0–100</td>
<td>100</td>
</tr>
<tr>
<td>Resonance</td>
<td>0–100</td>
<td>33</td>
</tr>
<tr>
<td>Rate</td>
<td>0–100</td>
<td>10</td>
</tr>
</tbody>
</table>

LP Filter Sync
This effect is a low-pass filter with its cutoff frequency modulated by an LFO.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Low Frequency</td>
<td>0–100</td>
<td>0</td>
</tr>
<tr>
<td>High Frequency</td>
<td>0–100</td>
<td>100</td>
</tr>
<tr>
<td>Resonance</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Rate</td>
<td>8 bars – 1/32</td>
<td>1/4</td>
</tr>
</tbody>
</table>

LP Shelving Filter
This filter differs from the standard filter type, as it attenuates all frequencies after the cutoff point equally.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>22–19999 Hz</td>
<td>1500</td>
</tr>
<tr>
<td>Resonance</td>
<td>0–100</td>
<td>0</td>
</tr>
<tr>
<td>Gain</td>
<td>-18.0 – 18.0 dB</td>
<td>0.0</td>
</tr>
</tbody>
</table>
Parametric EQs

Options: **PEQ 2-Band, 2-Shelf, PEQ 4-Band**

**PEQ 2-Band, 2-Shelf**

This effect is a combination of one two-band parametric equalizer and two shelving filters.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Frequency</td>
<td>22–1000 Hz</td>
<td>220</td>
</tr>
<tr>
<td>Frequency 1</td>
<td>82–3900 Hz</td>
<td>820</td>
</tr>
<tr>
<td>Frequency 2</td>
<td>220–10000 Hz</td>
<td>2200</td>
</tr>
<tr>
<td>High Frequency</td>
<td>560–19999 Hz</td>
<td>5600</td>
</tr>
<tr>
<td>Q1</td>
<td>0–100</td>
<td>0</td>
</tr>
<tr>
<td>Q2</td>
<td>0–100</td>
<td>0</td>
</tr>
<tr>
<td>Low Gain</td>
<td>-18.0 – 18.0 dB</td>
<td>0.0</td>
</tr>
<tr>
<td>Gain 1</td>
<td>-18.0 – 18.0 dB</td>
<td>0.0</td>
</tr>
<tr>
<td>Gain 2</td>
<td>-18.0 – 18.0 dB</td>
<td>0.0</td>
</tr>
<tr>
<td>High Gain</td>
<td>-18.0 – 18.0 dB</td>
<td>0.0</td>
</tr>
</tbody>
</table>

**PEQ 4-Band**

This effect is a powerful four-band parametric equalizer with four independent EQ ranges.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Frequency</td>
<td>22–1000 Hz</td>
<td>220</td>
</tr>
<tr>
<td>Frequency 1</td>
<td>82–3900 Hz</td>
<td>820</td>
</tr>
<tr>
<td>Frequency 2</td>
<td>220–10000 Hz</td>
<td>2200</td>
</tr>
<tr>
<td>High Frequency</td>
<td>560–19999 Hz</td>
<td>5600</td>
</tr>
<tr>
<td>Q1</td>
<td>0–100</td>
<td>5</td>
</tr>
<tr>
<td>Q2</td>
<td>0–100</td>
<td>5</td>
</tr>
<tr>
<td>Q3</td>
<td>0–100</td>
<td>5</td>
</tr>
<tr>
<td>Q4</td>
<td>0–100</td>
<td>5</td>
</tr>
<tr>
<td>Gain 1</td>
<td>-18.0 – 18.0 dB</td>
<td>0.0</td>
</tr>
<tr>
<td>Gain 2</td>
<td>-18.0 – 18.0 dB</td>
<td>0.0</td>
</tr>
<tr>
<td>Gain 3</td>
<td>-18.0 – 18.0 dB</td>
<td>0.0</td>
</tr>
<tr>
<td>Gain 4</td>
<td>-18.0 – 18.0 dB</td>
<td>0.0</td>
</tr>
</tbody>
</table>
## Distortions

**Options:** *Distortion Amp, Distortion Fuzz, Distortion Grimey, Distortion Overdrive, Distortion Custom*

### Distortion Amp

This effect is designed to reproduce the sound of a tube amplifier at high volumes.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Drive</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Tone</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Dynamics</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Output</td>
<td>0–100</td>
<td>50</td>
</tr>
</tbody>
</table>

### Distortion Fuzz

This popular effect uses hard clipping of the audio signal, which, at extreme settings, can turn a standard waveform into a square wave, producing a “razor” effect.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Drive</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Output</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Low</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Low-Mid</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>High-Mid</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>High</td>
<td>0–100</td>
<td>50</td>
</tr>
</tbody>
</table>

### Distortion Grimey

This is a unique distortion effect that distorts a frequency range in a selectable band.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Drive</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Grime</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Center</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Width</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Resonance</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Output</td>
<td>0–100</td>
<td>50</td>
</tr>
</tbody>
</table>

### Distortion Overdrive

This distortion is designed to sound like a mildly distorting amplifier at medium volumes. It is the smoothest distortion type available.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Drive</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Tone</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Output</td>
<td>0–100</td>
<td>50</td>
</tr>
</tbody>
</table>
Distortion Custom

This effect is a highly customized distortion, capable of a wide range of usable sounds.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Drive</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>+Soft</td>
<td>5–75</td>
<td>2</td>
</tr>
<tr>
<td>+Clip</td>
<td>5–50</td>
<td>25</td>
</tr>
<tr>
<td>–Soft</td>
<td>5–75</td>
<td>2</td>
</tr>
<tr>
<td>–Clip</td>
<td>5–50</td>
<td>25</td>
</tr>
<tr>
<td>Low</td>
<td>-18.0 – 18.0 dB</td>
<td>0.0</td>
</tr>
<tr>
<td>Mid</td>
<td>-18.0 – 18.0 dB</td>
<td>0.0</td>
</tr>
<tr>
<td>High</td>
<td>-18.0 – 18.0 dB</td>
<td>0.0</td>
</tr>
<tr>
<td>Output</td>
<td>-18.0 – 18.0 dB</td>
<td>50</td>
</tr>
</tbody>
</table>

Compressors

A compressor is an effect that changes the dynamic range of a signal by automatically reducing its gain.

Options: Compressor Master, Compressor Opto, Compressor VCA, Compressor Vintage

Compressor Master

This is the most transparent compressor, able to perform substantial volume adjustments without artifacts.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Attack</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Release</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Threshold</td>
<td>-50 – 0 dB</td>
<td>0</td>
</tr>
<tr>
<td>Ratio</td>
<td>1–20</td>
<td>1</td>
</tr>
<tr>
<td>Oldskool</td>
<td>Off, On</td>
<td>Off</td>
</tr>
<tr>
<td>Output</td>
<td>-6 – 24 dB</td>
<td>0</td>
</tr>
</tbody>
</table>

Compressor Opto

The Opto Compressor is modeled after a vintage compressor type using an optical circuit to control the volume reduction of the input signal. These compressors are usually associated with soft and unobtrusive attack and release characteristics.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Input</td>
<td>-6 – 18 dB</td>
<td>0</td>
</tr>
<tr>
<td>Attack</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Release</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Threshold</td>
<td>-50 – 0 dB</td>
<td>0</td>
</tr>
<tr>
<td>Ratio</td>
<td>1–20</td>
<td>1</td>
</tr>
<tr>
<td>Knee</td>
<td>1–100</td>
<td>1</td>
</tr>
<tr>
<td>Output</td>
<td>-6 – 24 dB</td>
<td>0</td>
</tr>
</tbody>
</table>
Compressor VCA

This compressor is more modern-sounding, with a slightly more transparent sound. A VCA Compressor tends to have quicker attack and release times than an Opto Compressor.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Input</td>
<td>-6 – 18 dB</td>
<td>0</td>
</tr>
<tr>
<td>Attack</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Release</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Threshold</td>
<td>-50 – 0 dB</td>
<td>0</td>
</tr>
<tr>
<td>Ratio</td>
<td>1–20</td>
<td>1</td>
</tr>
<tr>
<td>Knee</td>
<td>1–100</td>
<td>1</td>
</tr>
<tr>
<td>Output</td>
<td>-6 – 24 dB</td>
<td>0</td>
</tr>
</tbody>
</table>

Compressor Vintage

This compressor has a sound similar to classic tube compressors, with their gentle yet pumping response and a dash of tube saturation.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Input</td>
<td>-6 – 18 dB</td>
<td>0</td>
</tr>
<tr>
<td>Attack</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Release</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Threshold</td>
<td>-50 – 0 dB</td>
<td>0</td>
</tr>
<tr>
<td>Ratio</td>
<td>1–20</td>
<td>1</td>
</tr>
<tr>
<td>Knee</td>
<td>1–100</td>
<td>1</td>
</tr>
<tr>
<td>Output</td>
<td>-6 – 24 dB</td>
<td>0</td>
</tr>
</tbody>
</table>

Bit Reducers

Options: Decimator, Resampler

Decimator

Decimator down-samples the incoming signal by removing bits from the digital signal. The difference between decimation and resampling is that Decimator does not use any filtering to mask or correct digital artifacts. The result is an effect ranging from mild to almost completely pure digital distortion, depending on the setting and the source material.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Decimate</td>
<td>0–100</td>
<td>0</td>
</tr>
<tr>
<td>Bit Reducer</td>
<td>4–32</td>
<td>32</td>
</tr>
</tbody>
</table>

Resampler

Resampler is similar to Decimator in that it removes bits from an incoming signal. The difference is that Resampler applies a complex suite of filters and anti-aliasing to attempt to retain the original sound quality. This is a method used by popular vintage samplers and sampling drum machines from the 1980s. Resampler can be used to achieve a “dirty” sound on drum loops, without the harshness of distortion.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Rate</td>
<td>0–100</td>
<td>0</td>
</tr>
<tr>
<td>Decimate</td>
<td>0–100</td>
<td>0</td>
</tr>
</tbody>
</table>
Options: **Auto Wah, Frequency Shifter, Transient Shaper**

**Auto Wah**

This effect is a low-pass filter modulated by an envelope that yields a classic funky “wah-wah”- like sound. The envelope is triggered by the incoming signal’s amplitude. The amount of the envelope on the cutoff frequency is user-definable.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Resonance</td>
<td>0–100</td>
<td>75</td>
</tr>
<tr>
<td>Attack</td>
<td>0–100</td>
<td>30</td>
</tr>
<tr>
<td>Release</td>
<td>0–100</td>
<td>30</td>
</tr>
<tr>
<td>Center</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>0–100</td>
<td>50</td>
</tr>
</tbody>
</table>

**Frequency Shifter**

A frequency shifter changes the frequencies of an input signal by a fixed amount and alters the relationship of the original harmonics. This can produce a chorus-like effect as well as very crazy artificial timbres.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Frequency</td>
<td>-1000 – 1000</td>
<td>0</td>
</tr>
<tr>
<td>Asynchrony</td>
<td>0–1000</td>
<td>0</td>
</tr>
<tr>
<td>A Pan</td>
<td>0–100</td>
<td>0</td>
</tr>
<tr>
<td>B Pan</td>
<td>0–100</td>
<td>100</td>
</tr>
<tr>
<td>A Gain</td>
<td>0–100</td>
<td>75</td>
</tr>
<tr>
<td>B Gain</td>
<td>0–100</td>
<td>75</td>
</tr>
</tbody>
</table>

**Transient Shaper**

A transient shaper can be used to enhance or soften the Attack and Release phases of audio material.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry/Wet</td>
<td>0–100 (dry–wet)</td>
<td>100</td>
</tr>
<tr>
<td>Attack</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Release</td>
<td>0–100</td>
<td>50</td>
</tr>
<tr>
<td>Output</td>
<td>0–100</td>
<td>50</td>
</tr>
</tbody>
</table>
This glossary briefly defines and explains many of the technical terms used throughout this manual.

**Aftertouch**
The majority of contemporary keyboards are capable of generating aftertouch messages. On this type of keyboard, when you press harder on a key you are already holding down, a MIDI aftertouch message is generated. This feature makes sounds even more expressive (e.g., through vibrato).

**Aliasing**
Aliasing is an audible side effect arising in digital systems as soon as a signal contains harmonics higher than half the sampling frequency.

**Amount**
Describes to which extent a modulation source influences a given parameter.

**Amplifier**
An amplifier is a component that influences the volume level of a sound via a control signal. It can be modulated by a control signal (e.g., generated by an envelope or an LFO).

**Attack**
An envelope parameter. This term describes the ascent rate of a time-relevant process (e.g., an envelope from its starting point to the point where it reaches its highest value). The attack phase is initiated immediately after a trigger signal is received (e.g., after you play a note on a trigger pad or a keyboard).

**Bit Rate**
Bit rate (also known as word length), is the number of bits used to store the level information of each single sample slice within a whole sample. The higher the bit rate, the more precise the information about a sample (i.e., its dynamics’ resolution). Normal audio CDs are 16-bit. MPC supports full 24-bit resolution.

**Bounce**
When you “bounce” a sequence, track, or program, you are rendering that part of your project as an audio file (as opposed to a MIDI file). The MPC software lets you bounce sequences, tracks, or programs as samples (saved to your project’s sample pool) or as full audio tracks (saved to your project’s sample pool and added directly to the current sequence).

Bouncing a track will render that track after it is sent through its program. Bouncing a program will render all tracks that use that program after they are sent through it. Bouncing a sequence will render all tracks in that sequence after they are sent through their respective programs.

**Clipping**
Clipping is a sort of distortion that occurs when a signal exceeds the maximum value that can be handled by a signal processing system it is fed into. The curve of a clipped signal is dependent on the system where the clipping occurs. In the analog domain, clipping effectively limits the signal to a given maximum level. In the digital domain, clipping is similar to a numerical overflow, resulting in negative polarity of the signal’s portions exceeding the maximum level.

**Control Change (Controllers)**
MIDI messages enable you to manipulate the behavior of a sound generator to a significant degree. This message essentially consists of two components:

- The controller number, which defines the parameter to be influenced. It can range from 0 to 127.
- The controller value, which determines the extent of the modification.

Controllers can be used for effects such as slowly swelling vibrato, changing the stereo panning position and influencing filter frequency.

**Cutoff**
The cutoff frequency is a significant factor for a filter. A low-pass filter for example dampens the portion of the signal that lies above this frequency. Frequencies below this value are allowed to pass through without being processed.
CV  CV stands for control voltage, an analog method of sending control messages to external synthesizers, drum machines, etc. CV messages are typically used in conjunction with Gate messages (CV messages determine the pitch of notes while Gate messages determine note activation and length). CV messages are sent from the CV out ports of your MPC hardware (e.g., MPC X) and to the CV in ports of your external MIDI device.

Please note that each external MIDI device uses a specific control voltage range, which determines how many volts are used in each octave (e.g., 1V/oct). Be mindful of this when setting it up with the MPC software and/or controller hardware—mismatched voltage ranges can produce unusual/undesirable “re-scaling” of the octaves.

Decay  Decay describes the descent rate of an envelope once the attack phase has reached its maximum and the envelope drops to the level defined by the sustain value.

Envelope  An envelope is used to modulate a sound-shaping component within a given time. For instance, an envelope that modulates the cutoff frequency of a filter opens and closes this filter over a period of time. An envelope is started via a trigger, usually a MIDI note.

The classic ADSR envelope consists of four individually variable phases: attack, decay, sustain, and release. Attack, decay and release are time or slope values, while sustain is an adjustable level. Once an incoming trigger is received, the envelope runs through the attack and decay phases until it reaches the programmed sustain level. This level remains constant until the trigger is terminated. The envelope then initiates the release phase until it reaches the minimum value.

You can see and read about the envelopes used in the MPC software in Operation > Modes > Program Edit Mode > Anatomy of an Envelope.

Filter  A filter is a component that allows some of a signal’s frequencies to pass through it and dampens other frequencies. The most important aspect of a filter is the filter cutoff frequency. Filters generally come in four categories: low-pass, high-pass, band-pass, and band-stop.

These are the available filters in the MPC software:

- A low-pass filter (the most common type) dampens all frequencies above the cutoff frequency.
- A high-pass filter in turn dampens the frequencies below the cutoff.
- A band-pass filter allows only those frequencies around the cutoff frequency to pass. All others are dampened.
- A band-stop filter does the opposite of a band-pass: it dampens only the frequencies around the cutoff frequency.
- A band-boost filter boosts the frequencies around the cutoff frequency, similar to what a band on an equalizer would do. All other frequencies pass through normally.

The number of poles in a filter’s “slope” determines how extreme or subtle the effect of the filter will be. Filters with one or two poles produce a subtler sound while filters with six or eight poles are much more pronounced.

In the MPC software, the Model filters are analog-style emulations of famous vintage synth filters. Model1 is a four-pole filter that distorts at high input levels. Model2 uses a mellow resonance with a “fattening” distortion in the lower frequencies. Model3 can produce howling, piercing resonances and extreme sub frequencies—watch your speakers!

In the MPC software, the Vocal filters are formant filters that emulate the human voice. Vocal1 produces “ah” and “ooh” vowel sounds. Vocal2 uses three bands to produce “oh” and “ee” vowel sounds. Vocal3 uses five bands to emulate an idealized model of the vocal tract.

In the MPC software, MPC3000 LPF is a dynamic, resonant low-pass filter (12 dB/oct) that was used on the original MPC3000, released in 1994.

Please also see the entry for Resonance, an essential characteristic of a filter’s sound.
Gate messages are analog messages sent to external synthesizers, drum machines, etc. Gate messages are typically used in conjunction with CV messages (CV messages determine the pitch of notes while Gate messages determine note activation and length). Gate messages are sent from the CV out ports of your MPC hardware (e.g., MPC X) and to the CV/Gate in ports of your external MIDI device.

LFO is an acronym for low-frequency oscillator. The LFO generates a periodic oscillation at a low frequency and features variable waveshapes. Similar to an envelope, an LFO can be used to modulate a sound-shaping component.

MIDI stands for musical instrument digital interface. Developed in the early 1980s, MIDI enables interaction between various types of electronic music instruments from different manufacturers. At the time a communications standard for heterogeneous devices did not exist, so MIDI was a significant advance. It made it possible to link various devices with one another through simple, standardized connectors.

Essentially, this is how MIDI works: One sender is connected to one or several receivers. For instance, if you want to use a computer to play a MIDI synthesizer, the computer is the sender and the synthesizer acts as the receiver. With a few exceptions, the majority of MIDI devices are equipped with two or three ports for this purpose: MIDI In, MIDI Out and in some cases MIDI Thru. The sender transfers data to the receiver via the MIDI Out jack. Data are sent via a cable to the receiver’s MIDI In jack.

MIDI Thru has a special function. It allows the sender to transmit to several receivers. It routes the incoming signal to the next device without modifying it. Another device is simply connected to this jack, thus creating a chain through which the sender can address a number of receivers. Of course, it is desirable for the sender to be able to address each device individually. To achieve this, a MIDI channel message is sent with each MIDI event.

MIDI Channel is a very important element of most messages. A receiver can only respond to incoming messages if its receive channel is set to the same channel as the one the sender is using to transmit data. Subsequently, the sender can address specific receivers individually. MIDI Channels 1–16 are available for this purpose.

MIDI Clock The MIDI clock message transmits real-time tempo information to synchronize processes among several connected devices (e.g., a sound generator’s delay time to a MIDI sequencer).

Modulation A modulation influences or changes a sound-shaping component via a modulation source. Modulation sources include envelopes, LFOs or MIDI messages. The modulation destination is a sound-shaping component such as a filter or a VCA.

Note On & Note Off This is the most important MIDI message. It determines the pitch and velocity of a generated note. A note-on message will start a note. Its pitch is derived from the note number, which can range from 0 to 127. The velocity ranges from 1 to 127. A velocity value of 0 is equivalent to a note-off message.

Normalize Normalization is a function to raise the level of a sample to its maximum (0 dB) without causing distortion. This function automatically searches a sample for its maximum level and consequently raises the entire sample's level until the previously determined maximum level reaches 0 dB. In general, this results in a higher overall volume of the sample.

Panning The process or the result of changing a signal's position within the stereo panorama.

Pitch-Bend Pitch-bend is a MIDI message. Although pitch-bend messages are similar in function to control change messages, they are a distinct type of message. The resolution of a pitch-bend message is substantially higher than that of a conventional controller message. The human ear is exceptionally sensitive to deviations in pitch, so the higher resolution is used because it relays pitch-bend information more accurately.
Program

A program is a file that contains a list of all samples to be used, and settings for each sample (e.g., pad assignments, loop points, pitch tuning, effects, etc.) MPC’s Program Edit Mode is where you can edit and assign samples (read more about this in Operation > Modes > Program Edit Mode.). You can have a total of 128 programs in a project.

There are three kinds of programs that use samples for their sound source. Drum programs are mostly used for creating drum programs and easy and quick assigning of samples to a pad. With keygroup programs, you can use one sample (or more) and spread it across two or more keys and play the sample chromatically over a keyboard. That way, there is no need to sample every key of, for instance, a piano. Clip programs use several samples that can be looped (clips), each of which can assigned to a pad; launching different combinations of clips together lets you create intriguing, layered performances.

Program Change

These are MIDI messages that select sound programs. Programs 1 through 128 can be changed via program change messages.

Release

An envelope parameter. This term describes the descent rate of an envelope to its minimum value after a trigger is terminated. The release phase begins immediately after the trigger is terminated, regardless of the envelope’s current status. For instance, the release phase may be initiated during the attack phase.

Resonance

Resonance or emphasis is an important filter parameter. It emphasizes the frequencies around the filter cutoff frequency by amplifying them with a narrow bandwidth. This is one of the most popular methods of manipulating sounds. If you increase the emphasis to a level where the filter enters a state of self-oscillation, it will generate a relatively pure sine waveform.

Root Key

The root key defines the original pitch of a recorded instrument or of a sample. Samples in the MPC software contain the dedicated root key information. This information will be created automatically during recording or importing.

Sample

When you tap the pads on your MPC hardware, you can trigger sounds that we call samples. Samples are digitized snippets of audio that can be recorded using the recording (sampling) function of your MPC hardware or loaded from the Browser.

You can edit and process a sample in different ways. For example, a sample can be trimmed, looped, pitch-shifted or processed, using various effects. When you have finished editing your sample, you can assign it to one or more drum pads to play it. Samples can be either mono or stereo.

Sample Rate

This is the frequency representing the amount of individual digital sample scans per second that are taken to capture an analog signal digitally. For normal CD audio recordings, 44100 samples per second are used, also written as 44.1 kHz. The MPC software offers sampling rates up to 96 kHz.

Sequence

A sequence is the most basic “building block” of music you can compose in the MPC software. MIDI information from the MPC hardware pads, buttons, and Q-Link knobs are recorded to the tracks of a sequence. Each sequence can contain 128 MIDI tracks and 128 audio tracks. Each project can store up to 128 separate sequences.

The length of a sequence can be set from 1 to 999 bars, which would be enough to create an entire song using only one sequence. However, the MPC software has a dedicated Song Mode that lets you chain sequences together to create a song.

Song

The MPC software’s Song Mode that allows you to arrange different sections (verse, chorus, hook, etc.) in order to build a song. Each song can have up to 999 “steps” (stages in which a sequence may play one or more times). Each project can store up to 32 songs.
Stretch Factor  
The stretch factor is a value generated by the *Warp* algorithm in the software. When you record an audio file, the current sequence tempo will be embedded with it. This information is stored within the sample file when you save the project. When you warp an audio track region, the warping algorithm uses this sequence tempo and the current value in the BPM field to generate the stretch factor.

Sustain  
This term describes the level of an *envelope* remaining constant after it has passed the attack and decay phases. Once reached, the sustain level is kept until the trigger is terminated.

Time-Stretch  
See *Warp* below.

Track  
A sequence can contain 128 MIDI tracks and 128 audio tracks.

Each MIDI track contains MIDI note events and controller data. In this case, the track contains no audio information—only MIDI information that uses the samples in a program (or an external MIDI sound module) to generate its audio. You can edit your performance in many different ways once the performance has been captured.

Each audio track contains an audio signal that has been recorded or imported into your project. You can edit this audio within the software and incorporate it into your sequences alongside your MIDI tracks.

Trigger  
A trigger is a signal that initiates events. Trigger signals are very diverse. For instance, a MIDI note or an audio signal can be used as a trigger. The events a trigger can initiate are also very diverse. A common application for a trigger is its use to start an envelope.

Warp  
The Warp feature in the MPC software lengthens or shortens a region of an audio track or sample without changing its pitch. This enables you to fit the length of an audio track or sample to the length of a sequence, a bar in your sequence, etc. while maintaining its original key.

Please note that the Warp algorithms are very CPU-intensive and can result in audio drop-outs during playback if used too freely. Be mindful of how (and how often) you use the warp function. You can reduce the CPU resources required by doing any/all of the following:

- Minimize the amount of pitch adjustment of warped audio.
- In the Wave Editor, avoid using extreme Stretch values, especially anything below 100.
- Avoid warping very small audio regions.
- Warp as few tracks or track regions as possible (i.e., reduce the number of total number of voices of the polyphonic limit that use the Warp algorithm at a given time), especially instances where the warped regions start at the same time.
- Avoid rapidly triggering samples that are warped.
- If you have warped samples used in a drum program, consider using the Flatten Pad function to consolidate the affected pad’s layers into one audio sample (see here to learn about this). After you flatten the pad, its sample/samples no longer need to be warped.
- Use a Warp algorithm other than Elastique Pro, which is very CPU-intensive. See Operation > General Features > Preferences > General to learn how to change this.
- Using a higher buffer size (usually above 256) can reduce the possibility of CPU issues. See Operation > General Features > Preferences > Audio to learn how to do this.
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Addenda

Updates in MPC 2.1

New Features

Exporting Expansions

You can export MPC Expansion Packs (installed on your computer) to your MPC X or MPC Live for use in its Standalone Mode. (This has been added to Operation > General Features > Expansions > Exporting Expansions.)

To export MPC Expansions:

1. Connect your MPC X or MPC Live to your computer. Make sure both are powered on.
2. On your computer, open the MPC software.
3. On your MPC X or MPC Live, enter Controller Mode.
4. In the MPC software window, click the menu icon (≡), select File > Export, and then click Expansion....
5. In the Export Expansion to Standalone MPC window that appears, click the Drive menu and select a storage device that you will use with your MPC X or MPC Live: the internal SATA drive (if you have installed one in your MPC X or MPC Live), an SD card, or a USB flash drive.
6. In the Expansions list, click the box next to each one to select or deselect it. Only the selected ones will be exported. Click Select all to select all of them or Select none to deselect all of them.
7. Click Export to start exporting, or click Cancel to close the window and not export anything.

The exporting process creates an Expansions folder at the root level of your storage device and copies your MPC Expansions into it.

To use your expansions, restart your MPC X or MPC Live in Standalone Mode, enter the Browser, and tap Expansion.
Snap: Absolute & Relative

While editing a MIDI or audio track, you can now use the Grid Editor to move or copy events using two different ways of “snapping” note events to the grid: Absolute or Relative. (This has been added to Operation > General Features > Editors.)

To switch between Absolute and Relative, click the magnet icon above the grid:

**Absolute:** Events will “snap” to the nearest time division on the grid (as determined by the TC field or Time Correct window). This is the typical and traditional method of using the snap/quantization feature.

**Relative:** Events will “snap” to the nearest time division on the grid (as determined by the TC field or Time Correct window) plus the original time position of the event (e.g., an event that is originally three ticks past a time division on the grid will snap only to positions that are three ticks past every time division).

Pitch Quantization

In a MIDI track, you can now force the pitches of note events into a specific scale. (This has been added to Operation > General Features > Toolbar > Menu > Edit.)

To open the Pitch Quantize window, click the menu icon (≡), select Edit, and click Pitch Quantize.

Click the Setup menu and select the desired root note of the scale.

Click the Scale menu and select a type of scale.

Click **Only apply to selected events** to select or deselect it. When selected, only the currently selected note events will be quantized. When deselected, all pitches in the current track will be quantized.

Click the **Start note** and **End note** menus and select the lowest-possible and highest-possible pitches (respectively) where the quantized note events will be placed. If a note event is originally outside of this range, it will be forced to the nearest pitch (within the scale) inside the range.

Click **Do It** to continue or **Close** to return to the previous screen.
Step Sequencer: Velocity Adjustment via Q-Links

While using the Step Sequencer, you can now use the Q-Link knobs to adjust the velocity of the note event at each step (while Q-Link Mode is set to Screen). The number of each step will be shown under the corresponding Q-Link knob. (This has been added to Operation > Modes > Step Sequencer > Q-Links.)

To adjust the velocity of each note event, use the corresponding Q-Link knob to select a value (1–127).

To enter a note event at a step, use the corresponding Q-Link knob to change its velocity from 0 (Off) to a value of 1 or greater.

To delete a note event from a step, set the corresponding Q-Link knob to its minimum position, 0 (Off).

Faster Attack for Amp Envelopes

In the amp envelope of a drum program or keygroup program, an attack value of 0 now produces a much faster response, thus making your drum hits even punchier than before. (You can set the attack value in Program Edit Mode. See Operation > Modes > Program Edit Mode > Drum Programs and Keygroup Programs to learn more.)

Important: Any drum or keygroup programs that you created and saved before this update will load in MPC 2.1 with an attack value of 1 to ensure backwards compatibility.

Multiple Plugin Windows

You can now view multiple plugin windows at the same time.

Support for Akai Professional MPD2 & MPK2 Series

The software now supports pad control, pad colors, and bank-switching while using an MPK225, MPK249, or MPK261. It also now supports pad control while using an MPD218, MPD226, or MPD232.
Updates in MPC 2.2

New Features

MIDI Learn

You can now use the MIDI Learn function to assign areas of the MPC software to external MIDI controllers.

To display the MIDI Learn browser, do either of the following:
- Click the menu icon (≡), select View > Browser, and then click MIDI Learn Browser.
- In the lower-right corner, click the MIDI controller icon.

To select a MIDI Learn mode, click Global or Project at the top of the browser to show its assignments below. Global MIDI mappings are helpful if you use certain MIDI controllers across multiple projects. Project MIDI mappings are saved within a project, which can be helpful if your MIDI controller usage is particular to each one. See Global or Project below.

Each assignment has the following settings:

**Target**: This is the assigned command or parameter. The list of targets in the Global tab is comprehensive, while the list of targets in the Project tab must be added and selected.

**Type**: This is the type of message: Toggle Button, Momentary Button, Fixed Button, Note, Abs CC, Rel CC Offset, Rel CC 2’s Complement. This is automatically detected based on the parameter itself, but you can use this field to assign it manually if it does not detect it properly.

**Ch**: This is the MIDI channel the control is using.

**Data**: This is the MIDI note number or CC number.

**Flip**: Click this box to select or deselect it. When selected, the control’s polarity will be reversed (e.g., a button’s “off” state will become its “on” state and vice versa).
Use the Global MIDI Learn feature to assign your MIDI controller to pads, Q-Link knobs, transport controls, or other assignable parameters in the MPC software.

To assign a global parameter to a hardware control:

1. Click **Learn** at the top of the MIDI Learn browser so it turns **yellow**. (The **Enable** button will also activate and turn **light gray** if it is not already activated.)

2. Click a parameter that has a **yellow** overlay to select it. Alternatively, click it in the list in the MIDI Learn Browser.

3. Move or press the desired control on your MIDI controller.

   **To assign more controls**, repeat **Steps 2–3**.

   **To stop assigning controls**, click **Learn** again so it turns **gray**.

**To clear an assignment**, right-click or press and hold **Ctrl** (Windows) or **Control** (macOS) and click the assignment in the MIDI Learn browser. Click **Clear MIDI Mapping** to clear the assignment, or press **Esc** or click anywhere else to cancel.

**To select an assignment**, click **Learn** so it turns **yellow**, and then press and hold **Shift** while moving the control on your MIDI controller.

Each collection of these assignments is called a **MIDI map**, which you can export as a file (.xmm) to import into other MPC projects. You can also disable, re-enable, or switch between different MIDI maps while working with your project.

- **To select a MIDI map**, click the menu next to **Enable**. Select **Factory** to view the available preset MIDI maps, or select **User** to view MIDI maps you have created.
- **To enable or disable a MIDI map**, click **Enable** at the top of the MIDI Learn browser. The button is **light gray** when activated and **dark gray** when deactivated.
- **To show only mappings for specific controls or commands**, click the **View** menu above the list of assignments, and then click a type of control or command.
- **To show only mappings for the selected control type**, click the **three-lines icon** next to the controller menu, and then click **List Follows Control** so it is selected.
- **To create a new MIDI map**, click the **three-lines icon** next to the controller menu, and then click **New MIDI Map**.
To create a duplicate of the current MIDI map, click the three-lines icon next to the controller menu, and then click Duplicate. An identical MIDI map will be created and appended with Copy.

To clear all assignments from the current MIDI map, click the three-lines icon next to the controller menu, and then click Clear. In the window that appears, click OK to continue and clear the assignments, or click Cancel to close the window and keep them. (You can do this with MIDI maps from the list of User maps only, not the Factory list.)

To delete the current MIDI map, click the three-lines icon next to the controller menu, and then click Delete. In the window that appears, click OK to continue and delete the MIDI map, or click Cancel to close the window and keep it. (You can do this with MIDI maps from the list of User maps only, not the Factory list.)

To export the current MIDI map, click three-lines icon next to the controller menu, and then click Export. In the Export MIDI Mapping window that appears, do any of the following:

To select the storage device you want to view, click the down arrow (▼) next to the file path. If you have storage devices connected to your MPC hardware, they will appear in this column, as well.

To enter a folder, double-click it or press Enter.

To create a new folder, click New Folder, type a name for the new folder, and then click OK or press Enter to confirm the name, or click Cancel or press Esc to keep the original name. You will immediately enter the new folder.

To move up one folder level, click the up arrow (▲).

To name the file, click the File field at the bottom of the window, and type a name.

To save the file, click Save or press Enter.

To cancel, click Cancel or press Esc.

To refresh the list of MIDI maps, click the three-lines icon next to the controller menu, and then click Refresh. Do this if you have manually placed a MIDI map file (.xmm) in the Midi Learn folder (in the MPC application folder) and need it to appear in the list.
Project

Use the Project MIDI Learn feature to assign your MIDI controller to various parameters in your specific MPC project:

- Mixer parameters such as volume, pan, mute, and solo for MIDI or audio tracks, programs, returns, submixes, and master outputs
- Pad parameters (for drum programs and clip programs only) such as tuning, filter and amp envelopes, layer settings, LFO settings, and velocity
- Program parameters, which depend on the program type
- Insert effects parameters, which depend on the effect type
- Plugin instrument parameters, which depend on the plugin

These assignments will be saved with your MPC project.

Tip: Because these MIDI assignments are saved within a project, you can use them while working with a project on both the desktop version of the MPC software or your MPC hardware in Standalone Mode.

To assign a project parameter to a hardware control:

1. Click Learn at the top of the MIDI Learn browser so it turns yellow. (The Enable button will also activate and turn light gray if it is not already activated.)
2. Click the + icon in the upper-right corner of the browser to create an “empty” assignment (its Target menus will be set to None and Off).
   Alternatively, click an assignment that is already in the list if you want to change it.
3. Click a project-specific parameter (e.g., a mixer setting or program parameter) to select it. The two Target menus will indicate the parameter you selected.
   Alternatively, click the first Target menu to select a MIDI or audio track, program, return, submix, or master output (for drum programs and clip programs, you can select the entire program or a single pad within it). After that, click the second Target menu to select the parameter.
4. Move or press the desired control on your MIDI controller. You can press and hold Alt (Windows) or Option (macOS) while moving or pressing multiple controls to assign them simultaneously.

   To assign more controls, repeat Steps 2–4.

   To stop assigning controls, click Learn again so it turns gray.

To clear an assignment, right-click or press and hold Ctrl (Windows) or ⌘ (macOS) and click the assignment in the MIDI Learn browser. Click Clear MIDI Mapping to clear the assignment, or press Esc or click anywhere else to cancel.

To delete an assignment (the entire slot), right-click or press and hold Ctrl (Windows) or ⌘ (macOS) and click the assignment in the MIDI Learn browser. Click Delete Assignment to delete the assignment, or press Esc or click anywhere else to cancel.

To clear all assignments, click the three-lines icon next to the controller menu, and then click Clear All Assignments. In the window that appears, click OK to continue and delete the assignments, or click Cancel to close the window and keep them.
Humanize

You can now apply randomization to the timing, length, and/or velocity of MIDI events.

To open the Humanize window, click the menu icon (≡), select Edit, and click Humanize.

Click each checkbox to select or deselect its option.

Click and drag each slider left or right to set its value. Alternatively, click anywhere along its length, or click it, type a value, and press Enter.

- **Humanize Time** determines whether or not humanization will be applied to the timing of MIDI events.
- **Amount (Pulses)** determines the maximum number of pulses by which the timing of an event will be adjusted.
- **Eagerness** determines how dramatically the humanization effect is applied to the timing. Negative values correspond to playing “ahead of the beat” while positive values correspond to playing “behind the beat.”
- **Humanize Note Length** determines whether or not humanization will be applied to the duration of MIDI note events.
- **Length (%)** determines how dramatically the humanization effect is applied to note lengths.
- **Humanize Velocity** determines whether or not humanization will be applied to the velocities of MIDI note events.
- **Strength (%)** determines how dramatically the humanization effect is applied to note velocities.
- **Only apply to selected events** determines whether or not these humanization values will be applied to all notes in the track (deselected) or just the currently selected notes (selected).

Click **Apply** to apply the humanization values while keeping this window open.

Click **Do It** to apply the humanization values and close the window.

Click **Close** to close the window without making any changes.
Generate Random Events

You now create random melodic or drum patterns on the current MIDI track.

To open the Generate Random Events window, click the menu icon (≡), select Tools, and click Generate Random Events.

Click the Event Type menu to select the type of events you want to create: Drum events or Melodic events.

Click the Replace menu to select how the events will be created relative to the existing events on the track:

- **Replace all events**: Select this option to replace all events on the track with the randomly generated ones.
- **Replace events in note range**: Select this option to replace all events in the designated note range on the track with the randomly generated ones. Use the Bank or Start pad and End pad menus to set the note range for drum events or the Start note and End note menus to set the note range for melodic events.
- **Add to existing events**: Select this option to add the randomly generated events to the track without replacing or overwriting the existing ones.

Click and drag the Pattern size (bars) field up or down to set how many bars the events will use. Alternatively, click it, type a value, and press Enter. The highest possible value is the number of bars in the current sequence.

Click the Note length menu to select the duration of the events. (This feature is nonfunctional if Legato is enabled while generating melodic events.)

Click Apply to generate the events while keeping this window open.

Click Do It to generate the events and close the window.

Click Close to close the window without generating any events.

If Event Type is set to Drum events:

Click the Bank menu to select the pad bank that will be used to generate the events or select Range to use the Start pad and End pad menus to define a specific pad range instead.

Click the Start pad or End pad menus to define a specific pad range over which the events will be generated. You can use these menus only if the Bank menu is set to Range.

Click and drag the Density (%) slider left or right to set how closely together the events will be placed in the track. Alternatively, click anywhere along its length, or click it, type a value, and press Enter.

Click and drag the Rhythm variation slider left or right to set how widely or narrowly the rhythmic patterns of the generated notes vary. Alternatively, click anywhere along its length, or click it, type a value, and press Enter.
If **Event Type** is set to **Melodic events**:

- **Start note** or **End note** menus to define a specific note range over which the events will be generated.

- **Legato** to select or deselect it. When selected, the generated notes will be extended or shortened to create a long, unbroken phrase from the first note event’s start point to the last note event’s end point. Each note event will sustain until another note event starts. If multiple note events start at the same time (and are not the last note events), their lengths will become identical. When deselected, the generated notes will use the duration set by the **Note length** menu.

![Without legato applied.](image1)

![With legato applied.](image2)

- Click and drag the **Polypophy** field up or down to set the maximum number of note events that can be sounding simultaneously in the track: 1–8. Alternatively, click it, type a value, and press **Enter**.

- **Constrain notes to scale** to select or deselect it. When selected, the notes will be within the scale determined by the **Scale** menu. When deselected, the notes will be chromatic.

- Click and drag the **Density (%)** slider left or right to set how closely together the events will be placed in the track. Alternatively, click anywhere along its length, or click it, type a value, and press **Enter**.

- Click the **Root note** menu to set the root note of the scale that the generated notes will use.

- Click the **Scale** menu to select the scale or mode that the notes will use (based on the **Root note** selection).

### Multiple Plugin Windows Enable/Disable

You can now choose to allow multiple plugin windows to be displayed at the same time (a feature added to MPC 2.1) or to restrict it to single plugin windows (how plugin windows worked prior to MPC 2.1). (This has been added to **Operation > General Features > Preferences > General**.)

To **enable or disable multiple plugin windows**, click the **menu icon** (≡), select **Edit**, and click **Preferences**. In the **Preferences** window, click the **General** tab, and then click **Allow Multiple Plugin Windows** to select or deselect the option.
Updates in MPC 2.3

New Features

AIR Instrument Plugins

The MPC software now includes three new plugin instruments: AIR TubeSynth, AIR Bassline, and AIR Electric.

AIR Bassline

The AIR Bassline plugin emulates the sound of classic mono synths, with a contemporary twist. Bassline also comes packaged with four integrated AIR effects (Chorus, Delay, Compressor and Hype), as well as two built-in distortion algorithms (Overdrive and Clip).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Value Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oscillator</td>
<td>Waveform</td>
<td>Continuously variable waveshape for the oscillator.</td>
</tr>
<tr>
<td></td>
<td>Sub-Octave</td>
<td>Amount of sub-octave oscillator.</td>
</tr>
<tr>
<td></td>
<td>Fifth</td>
<td>Amount of fifth-oscillator.</td>
</tr>
<tr>
<td></td>
<td>Start Phase</td>
<td>Position of the waveform when a note is triggered.</td>
</tr>
<tr>
<td></td>
<td>Glide Time</td>
<td>Amount of time to slide from the pitch of one note to the next note played.</td>
</tr>
<tr>
<td></td>
<td>Boost</td>
<td>Boosts the signal of the oscillator.</td>
</tr>
<tr>
<td></td>
<td>Boost Freq.</td>
<td>Center frequency of the boost.</td>
</tr>
<tr>
<td></td>
<td>Boost Envelope</td>
<td>Amount of effect of the envelope on the Boost section.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adjust Gain to control the amount of boost.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adjust Frequency to control the center frequency of the boost.</td>
</tr>
<tr>
<td>Filter</td>
<td>LP Cutoff</td>
<td>Cutoff frequency for the low-pass filter.</td>
</tr>
<tr>
<td></td>
<td>Reso</td>
<td>Resonance of the filter.</td>
</tr>
<tr>
<td></td>
<td>Filter Env</td>
<td>Envelope of the filter.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>At negative values, decreases the cutoff value based on the decay value.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>At positive values, increases the cutoff value based on the decay value.</td>
</tr>
<tr>
<td></td>
<td>HP Cutoff</td>
<td>Cutoff frequency for the high-pass filter.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
<td>Value Range</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>Envelope</td>
<td>Amp Attack Length of time for the note to reach full volume.</td>
<td>100–0% Soft to 0–100% Hard</td>
</tr>
<tr>
<td></td>
<td>Amp Decay Length of time for the note to reach the sustained volume.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Filter Decay Length of time for the filter to reset after being released.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Pitch Mod Amount of pitch modulation applied to the envelope.</td>
<td>0–100%</td>
</tr>
<tr>
<td>Velocity</td>
<td>Amp Control The amount of effect velocity has on amplitude control.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Filter Control The amount of effect velocity has on filter control.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Boost Control The amount of effect velocity has on boost control.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Env Retrigger Sets whether the envelope will retrigger when a note is played</td>
<td>Off, On</td>
</tr>
<tr>
<td></td>
<td>while another note is being held.</td>
<td></td>
</tr>
<tr>
<td>Master</td>
<td>Master Volume Sets the volume level.</td>
<td>-Inf dB – +6.0 dB</td>
</tr>
<tr>
<td></td>
<td>Drive Type Choose one of two drive algorithms.</td>
<td>Overdrive, Clip</td>
</tr>
<tr>
<td></td>
<td>Drive Amount Amount of drive applied.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Bend Range Number of semitones up or down controlled by MIDI pitch bend</td>
<td>0–12</td>
</tr>
<tr>
<td></td>
<td>messages</td>
<td></td>
</tr>
<tr>
<td>Chorus</td>
<td>Rate Modulation speed of the chorus effect.</td>
<td>20.0 Hz – 20.0 kHz</td>
</tr>
<tr>
<td></td>
<td>Depth Modulation depth of the chorus effect.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Mix Wet/dry amount of the chorus effect.</td>
<td>-100% – 0 – 100%</td>
</tr>
<tr>
<td></td>
<td>On/Off Enables or disables the effect.</td>
<td>Off, On</td>
</tr>
<tr>
<td>Delay</td>
<td>Time Length of time of the delayed signal.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>When Syn is set to Free: 1 ms</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– 2.00 s</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When Syn is set to Sync: 1/32</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– 8/4</td>
</tr>
<tr>
<td></td>
<td>Sync Sync the Delay Time to the Global Tempo or set to Free to adjust Time</td>
<td>Free, Sync</td>
</tr>
<tr>
<td></td>
<td>by milliseconds.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mix Wet/dry amount of the delay effect.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Feedback Amount of signal fed back into the delay line.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Damp Center frequency of where the delay signal will be dampened.</td>
<td>1.00 – 20.0 kHz</td>
</tr>
<tr>
<td></td>
<td>Reso Amount of resonance of the feedback signal.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Reso Freq Center frequency for feedback resonance.</td>
<td>100 Hz – 10.0 kHz</td>
</tr>
<tr>
<td></td>
<td>Ratio Reduces the delay Time in either the Left or Right stereo field.</td>
<td>L 50:100, R 50:100</td>
</tr>
<tr>
<td></td>
<td>HPF Center frequency for delay signal high-pass filter.</td>
<td>20.0 Hz – 1.0 kHz</td>
</tr>
<tr>
<td></td>
<td>Width Stereo width of delay signal. Higher values give wider stereo</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>separation.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>On/Off Enables or disables the effect.</td>
<td>Off, On</td>
</tr>
</tbody>
</table>
### Parameter Description Value Range

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Value Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Compressor</strong></td>
<td>Threshold</td>
<td>Signal level after which the compressor will be applied.</td>
</tr>
<tr>
<td></td>
<td>Ratio</td>
<td>Amount of compression applied.</td>
</tr>
<tr>
<td></td>
<td>Output</td>
<td>Amount of additional output gain for the compressed signal.</td>
</tr>
<tr>
<td></td>
<td>Mix</td>
<td>Wet/dry mix of the compressor effect.</td>
</tr>
<tr>
<td></td>
<td>Knee</td>
<td>How gradually the compressor reacts as the threshold is reached. Lower values apply a &quot;soft&quot; knee (compression is applied more slowly as signal approaches the threshold), and higher values apply a &quot;hard&quot; knee (compression is immediately applied when the threshold is reached).</td>
</tr>
<tr>
<td></td>
<td>Attack</td>
<td>Length of time to apply the compression.</td>
</tr>
<tr>
<td></td>
<td>Release</td>
<td>Length of time for compressed signal to return to original level.</td>
</tr>
<tr>
<td></td>
<td>On/Off</td>
<td>Enables or disables the effect.</td>
</tr>
<tr>
<td><strong>Hype</strong></td>
<td>High</td>
<td>Dampens or maximizes high end frequencies.</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>Dampens or maximizes low end frequencies.</td>
</tr>
<tr>
<td></td>
<td>On/Off</td>
<td>Enables or disables the effect.</td>
</tr>
</tbody>
</table>
AIR Electric

The AIR Electric plugin emulates the sound of classic electric pianos. Dedicated Pickup, Envelope, Bell and Noise parameter sections provide a huge amount of flexibility to configure the timbre of the electric piano sound. Electric also includes five AIR effects: Tremolo, Tube Distortion, Chorus, Delay and Spring Reverb.

To enable or disable any sound or effect, press the circle in the upper-right corner of each section.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Value Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pickup</td>
<td>Type</td>
<td>Type of pickup emulated.</td>
</tr>
<tr>
<td>Height</td>
<td>Height of the pickup to the tines.</td>
<td>0.0 – 5.0 mm</td>
</tr>
<tr>
<td>Distance</td>
<td>Distance of the pickup to the tines.</td>
<td>0.1 – 10.0 mm</td>
</tr>
<tr>
<td>Clip</td>
<td>Amount of clipping applied to the signal.</td>
<td>0–100%</td>
</tr>
<tr>
<td>Keytrack</td>
<td>Ties the pickup parameters to the pitch being played.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>At higher values, the <strong>Distance</strong> is increased as the pitch is increased.</td>
<td></td>
</tr>
<tr>
<td>Envelope</td>
<td>Attack</td>
<td>Length of time for the note to reach full volume.</td>
</tr>
<tr>
<td></td>
<td>Decad</td>
<td>Length of time for the note to reach the sustained volume.</td>
</tr>
<tr>
<td></td>
<td>Release</td>
<td>Length of time for the note to become silent after being released.</td>
</tr>
<tr>
<td></td>
<td>Peak Length</td>
<td>Length of time full volume is held before decaying.</td>
</tr>
<tr>
<td>Keytrack</td>
<td>Ties the envelope parameters to the pitch being played.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>At higher values, the envelope time is decreased as the pitch is increased.</td>
<td></td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
<td>Value Range</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Bell</td>
<td>Tune Pitch of the bell sound, in semitones above the root pitch.</td>
<td>0–60 semitones</td>
</tr>
<tr>
<td></td>
<td>Dry/PU Mix of Dry versus Pickup signal for the bell sound.</td>
<td>-100% – 0% – +100%</td>
</tr>
<tr>
<td></td>
<td>Volume Level of the bell sound.</td>
<td>-Inf dB – +6.0 dB</td>
</tr>
<tr>
<td></td>
<td>Tune Keytrack Ties the tuning of the bell sound to the pitch being played.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Decay How long it takes for the bell sound to dissipate</td>
<td>100 ms – 7.0 s</td>
</tr>
<tr>
<td></td>
<td>Keytrack Ties the amount of bell sound to the pitch being played.</td>
<td>-100% – 0% – +100%</td>
</tr>
<tr>
<td>Noise</td>
<td>Freq Center frequency of the noise effect</td>
<td>200 Hz – 16.0 kHz</td>
</tr>
<tr>
<td></td>
<td>Random Amount of randomization applied to the noise effect</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Mix Level of noise effect present</td>
<td>-Inf dB – +6.0 dB</td>
</tr>
<tr>
<td></td>
<td>Attack Length of time for the noise effect to reach full level</td>
<td>1–50 ms</td>
</tr>
<tr>
<td></td>
<td>Decay Length of time for the noise effect to dissipate</td>
<td>100 ms – 3.00 s</td>
</tr>
<tr>
<td></td>
<td>Keytrack Ties the Freq to the pitch being played.</td>
<td>0–100%</td>
</tr>
<tr>
<td>Polyphony</td>
<td>Number of voices available.</td>
<td>1–16 Voices</td>
</tr>
<tr>
<td>Master Volume</td>
<td>Overall level of the plugin.</td>
<td>-Inf dB – +6.0 dB</td>
</tr>
<tr>
<td>Velo Level</td>
<td>Adjusts how much incoming velocity is applied.</td>
<td>0–100%</td>
</tr>
<tr>
<td>Velo Tone</td>
<td>Ties the incoming velocity to tone.</td>
<td>0–100%</td>
</tr>
<tr>
<td>Velo Attack</td>
<td>Ties the incoming velocity to the attack envelope.</td>
<td>0–100%</td>
</tr>
<tr>
<td>Tremolo</td>
<td>Rate Modulation speed of the effect.</td>
<td>0.25 – 13.00 Hz</td>
</tr>
<tr>
<td></td>
<td>When Sync is set to Free:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When Sync is set to Sync:</td>
<td>8/4 – 1/16</td>
</tr>
<tr>
<td></td>
<td>Sync Sync the Tremolo Rate to the Global Tempo or let it run Free.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mode Select Pan for stereo field modulation, or Tremolo for amplitude modulation.</td>
<td>Pan, Tremolo</td>
</tr>
<tr>
<td></td>
<td>Depth Amount of modulation applied.</td>
<td>0–100%</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
<td>Value Range</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Tube</td>
<td>Drive Amount of drive applied.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Headroom Amount of gain reduction between the clean signal and the driven signal.</td>
<td>-30.0 – 0.0 dB</td>
</tr>
<tr>
<td></td>
<td>Saturation Amount of saturation applied.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Output Output level of the tube driven signal.</td>
<td>-20.0 – 0.0 – +20.0 dB</td>
</tr>
<tr>
<td>Chorus</td>
<td>Rate Modulation speed of the effect.</td>
<td>0.40 – 3.20 Hz</td>
</tr>
<tr>
<td></td>
<td>Depth Amount of pitch modulation of the effect.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Mix Wet/dry amount of the chorus effect.</td>
<td>0–100%</td>
</tr>
<tr>
<td>Delay</td>
<td>Time Amount of time between the dry signal and the delayed signal.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When Sync is set to Free: 1 ms – 2.00 s</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When Sync is set to Sync: 1/32 – 8/4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sync Sync the Delay Time to the Global Tempo or set to Free to adjust Time by milliseconds.</td>
<td>Free, Sync</td>
</tr>
<tr>
<td></td>
<td>Mix Wet/dry amount of the delay effect.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Feedback Amount of signal fed back into the delay line.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Damp Center frequency of where the delay signal will be dampened.</td>
<td>1.00 – 20.0 kHz</td>
</tr>
<tr>
<td></td>
<td>Reso Amount of resonance of the feedback signal.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Reso Freq Center frequency for feedback resonance.</td>
<td>100 Hz – 10.0 kHz</td>
</tr>
<tr>
<td></td>
<td>Ratio Reduces the delay Time in either the Left or Right stereo field. This is useful for creating offset, panned delays.</td>
<td>L 50:100, R 50:100</td>
</tr>
<tr>
<td></td>
<td>HPF Center frequency for delay signal high-pass filter.</td>
<td>20.0 Hz – 1.0 kHz</td>
</tr>
<tr>
<td></td>
<td>Width Stereo width of delay signal. Higher values give wider stereo separation.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Spring Reverb Pre-Delay Length of time between dry signal and reverberated signal.</td>
<td>0 ms – 250 ms</td>
</tr>
<tr>
<td></td>
<td>Time Length of reverb tail.</td>
<td>1.0 – 10.0 s</td>
</tr>
<tr>
<td></td>
<td>Mix Wet/dry amount of the reverb effect.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Diffusion Rate of increasing density of reverb reflections. At lower settings, the sound of individual reflections is more present. At higher settings, reflections are more uniform.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Width Stereo width of reverb signal. Higher values give wider stereo separation.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Low Cut Center frequency for reverb signal low-cut filter.</td>
<td>20.0 Hz – 1.00 kHz</td>
</tr>
</tbody>
</table>
AIR TubeSynth

The AIR TubeSynth plugin emulates the sound of classic vintage analog polysynths. TubeSynth is based on the highly acclaimed AIR Vacuum Pro desktop synth plugin and also includes 5 integrated AIR effects.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Value Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oscillator 1 Octave</td>
<td>Coarse tuning of the oscillator by octaves. The <strong>Wide</strong> setting provides additional <strong>Fine</strong> tuning controls.</td>
<td>Wide, 32', 16', 8', 4', 2'</td>
</tr>
<tr>
<td>Fine</td>
<td>Fine tuning of the oscillator by semitones. When <strong>Octave</strong> is set to <strong>Wide</strong>: -70.00 – 0.00 – +70.00 When <strong>Octave</strong> is set to <strong>32'–2'</strong>: -12.00 – 0.00 – +12.00</td>
<td></td>
</tr>
<tr>
<td>Shape</td>
<td>Waveshape of Oscillator 1 (continuously variable)</td>
<td>Triangle, Saw, Square, Pulse</td>
</tr>
<tr>
<td>F-Env→Shape</td>
<td>Amount of Filter Envelope output subtracted from or added to the value defined by the Osc 1 <strong>Shape</strong> parameter.</td>
<td>-100 – 0 – +100%</td>
</tr>
<tr>
<td>Quad</td>
<td>Enables or disables four-voice emulation for the oscillator.</td>
<td>Off, On</td>
</tr>
<tr>
<td>Detune</td>
<td>Adjusts tuning of the additional <strong>Quad</strong> voices.</td>
<td>0–100%</td>
</tr>
<tr>
<td>Oscillator 2 Octave</td>
<td>Coarse tuning of the oscillator by octaves, all the way down to LFO speed.</td>
<td>LFO, 32', 16', 8', 4', 2'</td>
</tr>
<tr>
<td>Fine</td>
<td>Fine tuning of the oscillator. When <strong>Octave</strong> is set to <strong>LFO</strong>: 0.01 – 20.00 Hz When <strong>Octave</strong> is set to <strong>32'–2'</strong>: -12.00 – 0.00 – +12.00 semitones</td>
<td></td>
</tr>
<tr>
<td>Shape</td>
<td>Waveshape of Oscillator 2 (continuously variable)</td>
<td>Noise, Saw, Square, Pulse</td>
</tr>
<tr>
<td>F-Env→Shape</td>
<td>Amount of Filter Envelope output subtracted from or added to the value defined by the Osc 2 <strong>Shape</strong> parameter.</td>
<td>-100 – 0 – +100%</td>
</tr>
<tr>
<td>Sync</td>
<td>Enables or disables syncing of Oscillator 2 to Oscillator 1.</td>
<td>Off, On</td>
</tr>
<tr>
<td>Micro Detune</td>
<td>Additional detuning of Oscillator 2.</td>
<td>0–100%</td>
</tr>
<tr>
<td>Phase</td>
<td>Position of the waveshape when the sound is triggered.</td>
<td>0 – 360 degrees</td>
</tr>
<tr>
<td>Sub Oscillator Shape</td>
<td>Waveshape of the sub oscillator.</td>
<td>Triangle, Saw, Square, Pulse</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
<td>Value Range</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Osc 2 EQ</td>
<td><strong>Gain</strong> Amount of gain applied to the selected <strong>Frequency</strong>.</td>
<td>-48 – 0 – +48 dB</td>
</tr>
<tr>
<td></td>
<td><strong>Frequency</strong> Center frequency for the equalization band.</td>
<td>25–10,000 Hz</td>
</tr>
<tr>
<td></td>
<td><strong>Drive</strong> Amount of drive added to the EQ signal.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td><strong>Keytrack</strong> Ties the EQ settings to the pitch being played</td>
<td>0–100%</td>
</tr>
<tr>
<td>Mixer</td>
<td><strong>Osc 1</strong> Level of Oscillator 1.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td><strong>Osc 2</strong> Level of Oscillator 2.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td><strong>Sub Osc</strong> Level of the Sub Oscillator.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td><strong>Ring Mod</strong> Level of Ring Modulation effect.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td><strong>Drive</strong> Level of Drive effect.</td>
<td>0–100%</td>
</tr>
<tr>
<td>LP Filter</td>
<td><strong>Cutoff</strong> Center frequency of the low-pass filter cutoff.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td><strong>Reso</strong> Amount of resonance of the low-pass filter.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td><strong>Slope</strong> Amount of attenuation applied above the cutoff frequency.</td>
<td>0–24 dB/oct</td>
</tr>
<tr>
<td></td>
<td><strong>Saturation</strong> Amount of saturation applied to the low-pass filter.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td><strong>Env</strong> Percentage of the envelope output subtracted from or added to the LP Filter <strong>Cutoff</strong>.</td>
<td>-100 – 0 – +100%</td>
</tr>
<tr>
<td></td>
<td><strong>Keytrack</strong> Ties the LP Filter <strong>Cutoff</strong> to the pitch being played.</td>
<td>0–100%</td>
</tr>
<tr>
<td>Filter Envelope</td>
<td><strong>Attack</strong> Length of time for the filter to reach full level.</td>
<td>1.00 ms – 100 s</td>
</tr>
<tr>
<td></td>
<td><strong>Decay</strong> Length of time for the filter to reach sustain level.</td>
<td>1.00 ms – 100 s</td>
</tr>
<tr>
<td></td>
<td><strong>Sustain</strong> Length of time for the filter to hold sustain level.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td><strong>Release</strong> Length of time for the filter to dissipate when released.</td>
<td>1.00 ms – 100 s</td>
</tr>
<tr>
<td>Amp Envelope</td>
<td><strong>Attack</strong> Length of time for the note to reach full level.</td>
<td>1.00 ms – 100 s</td>
</tr>
<tr>
<td></td>
<td><strong>Decay</strong> Length of time for the note to reach sustain level.</td>
<td>1.00 ms – 100 s</td>
</tr>
<tr>
<td></td>
<td><strong>Sustain</strong> Length of time for the note to hold sustain level.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td><strong>Release</strong> Length of time for the note to dissipate when released.</td>
<td>1.00 ms – 100 s</td>
</tr>
<tr>
<td>Envelope 3</td>
<td><strong>Start Level</strong> Initial velocity level of the envelope.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td><strong>Start Time</strong> Length of time for the envelope to start.</td>
<td>0–5000 ms</td>
</tr>
<tr>
<td></td>
<td><strong>Slope Hold</strong> Amount of Envelope subtracted from or added to the <strong>Destination</strong> when a note is held.</td>
<td>-100 – 0 – +100%</td>
</tr>
<tr>
<td></td>
<td><strong>Slope Rel</strong> Amount of Envelope subtracted from or added to the <strong>Destination</strong> when a note is released.</td>
<td>-100 – 0 – +100%</td>
</tr>
<tr>
<td></td>
<td><strong>Destination</strong> Where the envelope will be applied to.</td>
<td>Off, Pitch, Osc 2 Pitch, LFO 1/2 Rate, Osc1 Quad Det., Osc 1/2 Shape, Osc 1/2 Level, Ring Level</td>
</tr>
</tbody>
</table>
### Parameter Description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Value Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>LFO 1/LFO 2</td>
<td><strong>Shape</strong> Waveshape of the low-frequency oscillator.</td>
<td>Sine, Square, Saw Up, Saw Down, Pump, S&amp;H, Drift</td>
</tr>
<tr>
<td></td>
<td><strong>Destination</strong> Where the low-frequency oscillator is sent.</td>
<td></td>
</tr>
<tr>
<td>Rate</td>
<td>Speed of modulation.</td>
<td>When Sync is Off: 0.01 – 20.00 Hz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When Sync is On: 8/4 – 1/32</td>
</tr>
<tr>
<td>Depth</td>
<td>Amount of modulation applied.</td>
<td>0–100%</td>
</tr>
<tr>
<td>Fade</td>
<td>Apply a fade-in or fade-out of the LFO signal.</td>
<td>0.00 – 20.00 s out, No fade, 0.00 – 20.00 s in</td>
</tr>
<tr>
<td>Sync</td>
<td>Sync the LFO <strong>Rate</strong> to the <strong>Global Tempo</strong> or turn Off to adjust <strong>Rate</strong> by Hertz.</td>
<td>Off, On</td>
</tr>
<tr>
<td>Modulation</td>
<td><strong>Source</strong> Where the modulation signal is sent from.</td>
<td>Filter Env, Amp Env, Osc 1, Osc 2</td>
</tr>
<tr>
<td></td>
<td><strong>Destination</strong> Where the modulated signal is received.</td>
<td>Pitch, Osc 1/2 Shape, Osc 1/2 Pitch, LPF, Quad Detune, Osc EQ Freq, Osc 2 EQ Gain, Ring Level</td>
</tr>
<tr>
<td></td>
<td><strong>Depth</strong> Amount of modulation applied.</td>
<td>0–100%</td>
</tr>
</tbody>
</table>
## AIR TubeSynth (continued)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Value Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Controller Destinations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Velocity 1</td>
<td>Send Velocity data to one of the following control destinations.</td>
<td>Amp, Cutoff, Osc1 Shape, Osc2 Shape, Osc1&amp;2 Shape</td>
</tr>
<tr>
<td>Depth</td>
<td>Amount of modulation applied.</td>
<td>0–100%</td>
</tr>
<tr>
<td>Velocity 2</td>
<td>Send Velocity data to one of the following control destinations.</td>
<td>Amp, Cutoff, Osc1 Shape, Osc2 Shape, Osc1&amp;2 Shape</td>
</tr>
<tr>
<td>Depth</td>
<td>Amount of modulation applied.</td>
<td>0–100%</td>
</tr>
<tr>
<td>Modwheel</td>
<td>Send Modwheel data to one of the following control destinations.</td>
<td>Amp, Cutoff, Osc1 Shape, Osc2 Shape, Osc1&amp;2 Shape</td>
</tr>
<tr>
<td>Depth</td>
<td>Amount of modulation applied.</td>
<td>-100 – 0 – 100%</td>
</tr>
<tr>
<td>Aftertouch</td>
<td>Send Aftertouch data to one of the following control destinations.</td>
<td>LFO 1 Depth, Cutoff, Osc1 Shape, Osc2 Shape, Osc1&amp;2 Shape</td>
</tr>
<tr>
<td>Depth</td>
<td>Amount of modulation applied.</td>
<td>-100 – 0 – 100%</td>
</tr>
<tr>
<td><strong>Setup</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polyphony</td>
<td>Number of allowable voices, and how voices are triggered.</td>
<td>Legato, Retrigger, 2, 3, 4</td>
</tr>
<tr>
<td>Bend Range</td>
<td>Number of semitones up or down controlled by MIDI pitch bend messages</td>
<td>2–12 (semitones)</td>
</tr>
<tr>
<td>Glide Time</td>
<td>Amount of time to slide from the pitch of one note to the next note played.</td>
<td>1.00 ms – 100 s</td>
</tr>
<tr>
<td>Glide All</td>
<td>Enables or disables pitch gliding for all triggered notes, not just legato notes.</td>
<td>Off, On</td>
</tr>
<tr>
<td>Detune</td>
<td>Amount of detuning applied. This setting is only applied when <strong>Doubling</strong> is enabled.</td>
<td>0–100%</td>
</tr>
<tr>
<td>Doubling</td>
<td>Enables or disables voice doubling.</td>
<td>Off, On</td>
</tr>
<tr>
<td><strong>Output</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shape</td>
<td>Amount of signal sent to a Tube Drive.</td>
<td>0–100%</td>
</tr>
<tr>
<td>Width</td>
<td>Stereo width of the audio signal. Higher values give wider stereo separation.</td>
<td>0–100%</td>
</tr>
<tr>
<td>Level</td>
<td>Overall output volume of the plugin.</td>
<td>-Inf dB – +12.0 dB</td>
</tr>
</tbody>
</table>
### AIR TubeSynth Parameter List

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Value Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chorus</td>
<td>Rate Modulation speed of the effect.</td>
<td>0.01 – 10.0 Hz</td>
</tr>
<tr>
<td></td>
<td>Delay Length of time the wet signal is offset from the dry signal.</td>
<td>0.00 – 24.00 ms</td>
</tr>
<tr>
<td></td>
<td>Voices Number of voices used in the chorus effect.</td>
<td>3, 4, 6</td>
</tr>
<tr>
<td></td>
<td>LFO Wave Waveshape of the low-frequency oscillator for the chorus effect.</td>
<td>Tri, Sine</td>
</tr>
<tr>
<td></td>
<td>Depth Amount of pitch modulation of the effect.</td>
<td>0.00 – 24.00 ms</td>
</tr>
<tr>
<td></td>
<td>Width Stereo width of the chorus effect. Higher values give wider stereo separation.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Lo Cut Center frequency for the chorus low-cut filter.</td>
<td>20.0 Hz – 1.0 kHz</td>
</tr>
<tr>
<td></td>
<td>Mix Wet/dry amount of the chorus effect.</td>
<td>0–100%</td>
</tr>
<tr>
<td>Delay</td>
<td>Time Length of time between the dry signal and the delayed signal.</td>
<td>When Sync is set to Free: 1 ms – 2.00 s When Sync is set to Sync: 1/32 – 8/4</td>
</tr>
<tr>
<td></td>
<td>Sync Enable to sync the Delay Time to the Global Tempo, disable to set the Time in milliseconds.</td>
<td>Off, On</td>
</tr>
<tr>
<td></td>
<td>Feedback Amount of delay signal fed back into the delay line.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Mix Wet/dry amount of the delay effect.</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Damp Center frequency of where the delayed signal will be dampened.</td>
<td>1.00 – 20.0 kHz</td>
</tr>
<tr>
<td></td>
<td>Reso Amount of resonance of the feedback signal</td>
<td>0–100%</td>
</tr>
<tr>
<td></td>
<td>Reso Freq Center frequency for feedback resonance.</td>
<td>100 Hz – 10.0 kHz</td>
</tr>
<tr>
<td></td>
<td>Ratio Reduces the delay Time in either the Left or Right stereo field. This is useful for creating offset, panned delays.</td>
<td>L 100:50, R 50:100</td>
</tr>
<tr>
<td></td>
<td>HPF Center frequency for delay signal high-pass filter.</td>
<td>20.0 Hz – 1.0 kHz</td>
</tr>
<tr>
<td></td>
<td>Width Stereo width of delay signal. Higher values give wider stereo separation.</td>
<td>0–100%</td>
</tr>
<tr>
<td>Parameter</td>
<td>Mode</td>
<td>Value Range</td>
</tr>
<tr>
<td>-----------</td>
<td>--------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Reverb</td>
<td>Type of reverb applied.</td>
<td>Hall, Stadium, Room, Abstract</td>
</tr>
<tr>
<td>Time</td>
<td>Length of reverb tail.</td>
<td>0.4 s – +Inf s</td>
</tr>
<tr>
<td>Lo Cut</td>
<td>Center frequency for the reverb low-pass filter.</td>
<td>1 – 1000 Hz</td>
</tr>
<tr>
<td>Hi Cut</td>
<td>Center frequency for the reverb high-pass filter.</td>
<td>1.0 – 20.0 kHz</td>
</tr>
<tr>
<td>Mix</td>
<td>Wet/dry mix of the reverb effect.</td>
<td>0–100%</td>
</tr>
<tr>
<td>Compressor</td>
<td>Threshold</td>
<td>Signal level after which the compressor will be applied.</td>
</tr>
<tr>
<td>Output</td>
<td>Amount of additional output gain for the compressed signal.</td>
<td>0.0 – +30.0 dB</td>
</tr>
<tr>
<td>Mix</td>
<td>Wet/dry mix of the compressor effect.</td>
<td>0–100%</td>
</tr>
<tr>
<td>Ratio</td>
<td>Amount of compression applied.</td>
<td>1.0:1 – 100.0:1</td>
</tr>
<tr>
<td>Knee</td>
<td>How gradually the compressor reacts as the threshold is reached.</td>
<td>0–100%</td>
</tr>
<tr>
<td>Attack</td>
<td>Length of time to apply the compression.</td>
<td>100 us – 300 ms</td>
</tr>
<tr>
<td>Release</td>
<td>Length of time for compressed signal to return to original level.</td>
<td>10 ms – 4.00 s</td>
</tr>
<tr>
<td>Hype</td>
<td>Dampens or maximizes high end frequencies.</td>
<td>-100 – 0 – +100%</td>
</tr>
<tr>
<td></td>
<td>Dampens or maximizes low end frequencies.</td>
<td>-100 – 0 – +100%</td>
</tr>
</tbody>
</table>
Plugin Preset Support

Internal Akai effects now include all new plugin editors and factory presets.

To load a plugin preset:
1. Open a plugin instrument or effects plugin editor.
2. At the top of the instrument or effect editing window will be a dropdown menu for selecting presets. Click the menu to open it, and click a preset to select it.
   A number of third-party VST plugins will also display a bank of presets when used with MPC.

Instrument plugin presets can also be loaded using the Preset dropdown menu in the Program Inspector:

Additionally, you can now save and load plugin presets.

To save or load a plugin preset:
1. Open a plugin instrument or effects plugin.
2. To the right of the dropdown menu for selecting presets is a gear icon. Click to open a dropdown menu.
3. Select Load Preset to load a plugin preset saved on your computer. Use the window that opens to select the location where the preset is saved.
4. Select Save Preset to save your plugin settings as a new preset. Use the window that opens to select where you would like to save the preset.
**Arpeggiator**

MPC now includes a full-featured arpeggiator and phrase player for melodic program types.

**To use the arpeggiator:**
1. Set the current track type to Plugin, Keygroup, MIDI, or CV.
2. Click the menu icon (≡), select Tools, and click Arpeggiator.

**To activate the arpeggiator**, tap Enable so it is checked. Tap again to Disable the arpeggiator.
**To latch the arpeggiator**, tap Latch so it is checked. Tap again to Disable Latch.

The **Setup** section of the Arpeggiator window sets what kind of arpeggiator will be used and its functions:

- Use the **Action** field to set the type: Arp, Note Repeat, Rhythm and Pattern. See below for more details about these types and their additional parameters.

- Use the **Step Size** field to set the note value of each arpeggiator step from 1/1–1/64 beats, including T (triplet) variations. This field is not used in Pattern mode.

- Use the **Note Length** slider to set the length of the played note in each step, from 1–100%.

- Use the **Velocity** field to set the velocity of the arpeggiator notes. Choose As played, From first note, Accented, Full, 3/4, Half or 1/4.

- Use the **Swing** field to set the amount of swing in the arpeggiator from 50% to 75%. Swing lets you "shuffle" your beats—from subtle to extreme.

The **Arp mode** section of the Arpeggiator window is available when the **Action** is set to Arp. When this action is selected, hold down a chord and the arpeggiator will play a pattern based on the notes held:

- Use the **Pattern** field to set how the arpeggiator triggers the held notes.

- Use the **Octaves** field to set how many octaves of the held notes the arpeggiator will cycle through.

- Use the **Variation** field to apply rhythmic variation to the set pattern.

The **Rhythm** section of the Arpeggiator window is available when **Action** is set to Note Repeat or Rhythm. The Note Repeat action provides traditional MPC Note Repeat behavior. When the Rhythm arpeggiator action is selected, hold down a chord and the arpeggiator will play the held notes in a rhythmic pattern:

- Use the **Spread** field to spread the timing of the held notes, creating a glissando effect.

- Use the **Rhythm Pattern** field to choose the pattern played when notes are held. This is only available for the Rhythm action.
The **Pattern** section of the Arpeggiator window is available when the **Action** is set to **Pattern**. When this arpeggiator action is selected, hold down a single note to trigger a melodic phrase. As you change what note is held, the melodic phrase will be transposed.

   Use the **Pattern** field to choose the pattern.

The **Settings** section of the Arpeggiator window offers additional options to control the arpeggiator.

   If you have a sustain pedal connected, you can enable **Sustain Pedal Latches** to use it to control latching.

   Use the **Latch Mode** setting to set the latch behavior. When set to **Reset**, adding a new note(s) will reset the currently latched note(s). When set to **Add**, new notes will be added to currently latched notes.

Click **Close** to close the Arpeggiator window.
Auto Sampler

You can now capture and convert any plugin preset or external instrument preset into a Keygroup sampler patch.

To open the Auto Sampler window, click the menu icon (≡), select Tools, and click Auto Sampler.

Sample Source Information

The Track name and Program name fields show the target track and program that will be sampled. This will be automatically selected as the active track and program when Auto Sampler is opened.

Use the Record from field to select an external or resample input to record from:

To capture the output of a plugin, simply select a Plugin track before opening Auto Sampler.

Note: When a plugin track is selected, the Auto Sampler will only sample the plugin track, regardless of the setting in the Record From field.

To capture a preset from an external instrument such as a sound module, select the Input that the external instrument is connected to.

Note Range

Use the Min note and Max note settings to determine the lowest and highest notes used to create the sampler patch.

Use the Note stride to determine the range of notes that each sample will cover. For instance, a note stride of 5 means that every 5 notes will utilize a different sample.

Check the Extend min/max notes box to sample all the way to the lowest and highest notes, regardless of the Min Note and Max Note settings.
Velocity

Tap the boxes next to Layers 1–4 to select how many layers will be used to create the sampler patch.

Use the Velocity value sliders to set the velocity of each layer.

Sampling

Use the Note length slider to set the length of the sampled note in seconds.

Use Tail slider to set the length of the Audio Tail in seconds. This will add extra seconds to the end of the resulting audio file. This is useful if you are capturing samples whose sounds exceed the defined audio length (e.g., long reverb or delay, one-shot samples with long decays, etc.). We recommend using an audio tail of at least a couple of seconds.

Use Base name to set the naming convention for the samples that will be created by the Auto Sampler.

Looping

Use the Enable looping field to select how the resulting samples can or cannot be looped:

- Off: The sample will not loop.
- Forward: You can hold down the pad to cause that sample to repeat from the Loop Position to the end of the sample. Release the pad to stop the repeating playback.
- Reverse: You can hold down the pad to cause that sample to play in reverse, repeating from the end of the sample to the Loop Position. Release the pad to stop the repeating playback.
- Alternating: You can hold down the pad to cause that sample to play from the Loop Position to the end of the sample and then play in reverse until it reaches the Loop Position again. This will repeat as long as you are holding the pad down. Release the pad to stop the repeating playback.

Use the Loop start and Loop end sliders to set the starting and ending points in the sample where the loop will occur.

Use the Crossfade slider to set the amount of crossfade between the loop end and loop start in seconds.

Use the Crossfade Type field to select Equal Power or Linear crossfade.

Under On completion, check Make current program to load the completed sampler patch as the current program.

Under Info, the Session Duration field provides an estimate of how long the auto sampling process will take.

Click OK to initiate the auto sampling process. A Progress window will appear. Click Cancel to stop the auto sampling process. Any samples already created will be retained.

Click Cancel to close the Auto Sampler window without continuing.
Crossfade Looping

You can now add real-time crossfade looping to sample playback.

To apply crossfade looping to a sample:
1. Click the menu icon (≡), go to View > Mode, and click Sample Edit.
2. Make sure the loop Lock setting is set to Off.
3. Click the Loop menu to select the Forward (FWD) loop mode.
4. Make sure there is at least 10 samples of space between the Start point and Loop point.
5. Use the X-Fade field to set the length of the crossfade in samples.
6. Click the icons next to the X-Fade field to select a Linear (straight lines) or Equal Power (curved lines) crossfade.
7. Press Pad A16 – Play Continuous Loop to hear the crossfade applied to the sample.

Mode Selection Shortcut

You can now press and hold the Menu button on your MPC X, MPC Live or MPC Touch and press a pad to select a menu mode. The pads follow the 4x4 layout of the Mode Menu.

Q-Link Navigation Enhancements

Q-Link functionality has been enhanced in the following modes: Main Mode, Track View, Next Sequence, Grid Editor, and Audio Edit Mode.

Set the Q-Link Mode to Screen in these pages to access the following controls:
- Use Q-Link Knob 2 to adjust the playhead position.
- Use Q-Link Knob 3 to scroll through the waveform in the large waveform display.
- Use Q-Link Knob 4 to zoom in or zoom out at the playhead position.

Note: For MPC Live and MPC X in standalone mode, the Zoom and Scroll Q-Links are only available in the Grid Editor and Audio Edit Mode.

Split Events

You can now easily split note events, useful for creating intricate hi-hat parts or quintuplet/sextuplet motifs or drum beats.

To split note events, click the menu icon (≡), select Edit, select Track and click Split Events. Select one of the preset number of events (2–9), or click Split Events... to open the Split Events Setup window.

In the Split Events window, you can do the following:
- Use the Into field to set the number of events to divide into, from 2–32.
- Select Only selected events to only divide the selected note events. When unchecked, all note events in the track will be split.
- Click Do It to proceed with splitting events.
- Click Close to exit the Split Events window.
AIR FX Bundle

MPC software now includes the AIR FX Bundle—a collection of 28 effects designed with ease of use in mind with all new touch-interface layouts. These effects include the legendary AIR Creative FX collection that has been used by countless professionals as part of Pro Tools® software since Version 8. They also include 10 new plugins that have been expertly designed by the DSP gurus at AIR Music Technology.

16 classic effects from Pro Tools® now available include the following:

**AIR Distortion**

This effect is a multi-type distortion that adds color to your audio signal with varying types and amounts of distortion.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode</td>
<td>Hard, Soft, Wrap</td>
<td>Hard</td>
</tr>
<tr>
<td>Drive</td>
<td>0 – 60 dB</td>
<td>15 dB</td>
</tr>
<tr>
<td>Output</td>
<td>0–100%</td>
<td>100%</td>
</tr>
<tr>
<td>Mix</td>
<td>0–100% (dry-wet)</td>
<td>100%</td>
</tr>
<tr>
<td>Tone Pre-Shape</td>
<td>-100 – 0 – +100%</td>
<td>0%</td>
</tr>
<tr>
<td>Tone High Cut</td>
<td>1.00 – 20.0 kHz</td>
<td>20.0 kHz</td>
</tr>
<tr>
<td>Stereo</td>
<td>On, Off</td>
<td>Off</td>
</tr>
<tr>
<td>Clipping Thresh.</td>
<td>-20.0 – 0 dB FS</td>
<td>-10.0 dB FS</td>
</tr>
<tr>
<td>Clipping Edge</td>
<td>0–100%</td>
<td>0%</td>
</tr>
</tbody>
</table>

**AIR Enhancer**

This effect enhances the low and high broadband frequencies of the audio signal.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Gain</td>
<td>0.0 – 12.0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td>Low Gain</td>
<td>0.0 – 12.0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td>Output</td>
<td>- Inf – 0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td>Freq. High</td>
<td>1.0 – 10.0 kHz</td>
<td>3.16 kHz</td>
</tr>
<tr>
<td>Freq. Low</td>
<td>40.0 – 640 Hz</td>
<td>160 Hz</td>
</tr>
<tr>
<td>Harmonics</td>
<td>0.0 – 12.0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td>Phase</td>
<td>+ (positive),</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>- (negative)</td>
<td></td>
</tr>
</tbody>
</table>

**AIR Ensemble**

This effect applies fluid, shimmering modulation effects to the audio signal.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>0.01 – 10.0 Hz</td>
<td>1.00 Hz</td>
</tr>
<tr>
<td>Depth</td>
<td>0.00 – 24.00 ms</td>
<td>6.00 ms</td>
</tr>
<tr>
<td>Width</td>
<td>0–100%</td>
<td>100%</td>
</tr>
<tr>
<td>Mix</td>
<td>0–100% (dry-wet)</td>
<td>75%</td>
</tr>
<tr>
<td>Mod. Delay</td>
<td>0.00 – 24.00 ms</td>
<td>0.00 ms</td>
</tr>
<tr>
<td>Mod. Shimmer</td>
<td>0–100%</td>
<td>50%</td>
</tr>
</tbody>
</table>
AIR Filter Gate
This effect chops your audio signal into rhythmic patterns with variable filtering, amplitude and panning.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pattern</td>
<td>Straight, Pulse, Pumper, Marching, Fader, Offbeats, Off+Pan, L/R Pan, LL/RR Pan, Slow Pan, Rand Pan, Shorter, Longer, Reverse, Random, Keyed 1–2, Half Time, 12-Step, Ducked, Trance 1–6, Tech 1–6</td>
<td>Straight</td>
</tr>
<tr>
<td>Rate</td>
<td>1/2–1/32, including Dotted and Triplet</td>
<td>1/16</td>
</tr>
<tr>
<td>Swing</td>
<td>50.0–66.7%</td>
<td>50.0%</td>
</tr>
<tr>
<td>Mix</td>
<td>0–100%</td>
<td>100%</td>
</tr>
<tr>
<td>Filter Mode</td>
<td>Off, LP, BP, HP, Phaser</td>
<td>LP</td>
</tr>
<tr>
<td>Filter Cutoff</td>
<td>-100 – 0 – 100%</td>
<td>0%</td>
</tr>
<tr>
<td>Filter Reso</td>
<td>-100 – 0 – 100%</td>
<td>0%</td>
</tr>
<tr>
<td>Gate Attack</td>
<td>0–100%</td>
<td>25%</td>
</tr>
<tr>
<td>Gate Hold</td>
<td>0–100%</td>
<td>50%</td>
</tr>
<tr>
<td>Gate Release</td>
<td>0–100%</td>
<td>25%</td>
</tr>
<tr>
<td>Mod LFO Wave</td>
<td>Random; 2–12, 16, 24, 32, 48, 64, 96, 128, 192, 256 Steps</td>
<td>Random</td>
</tr>
<tr>
<td>Mod Env</td>
<td>-100 – 0 – 100%</td>
<td>0%</td>
</tr>
<tr>
<td>Mod LFO</td>
<td>0–100%</td>
<td>0%</td>
</tr>
</tbody>
</table>

AIR Flanger
This effect applies a short, modulating delay to the audio signal.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>0.02 – 10.00 Hz</td>
<td>0.40 Hz</td>
</tr>
<tr>
<td>Depth</td>
<td>0–100%</td>
<td>50%</td>
</tr>
<tr>
<td>Feedback</td>
<td>0–100%</td>
<td>50%</td>
</tr>
<tr>
<td>Mix</td>
<td>0–100% (dry–wet)</td>
<td>50%</td>
</tr>
<tr>
<td>Headroom</td>
<td>-20.0 – 0.0 dB FS</td>
<td>-10.0 dB FS</td>
</tr>
</tbody>
</table>

AIR Freq Shift
This effect shifts the audio signal's individual frequencies for unique effects.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode</td>
<td>Up, Down, Up &amp; Down, Stereo</td>
<td>Up</td>
</tr>
<tr>
<td>Frequency</td>
<td>10.0 mHz – 10.0 kHz</td>
<td>316 mHz</td>
</tr>
<tr>
<td>Feedback</td>
<td>0–100%</td>
<td>0%</td>
</tr>
<tr>
<td>Mix</td>
<td>0–100% (dry–wet)</td>
<td>100%</td>
</tr>
</tbody>
</table>
**AIR Fuzz Wah**

This is a multi-effect that combines transistor-like distortion and wah.

<table>
<thead>
<tr>
<th>Tab</th>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuzz-Wah</td>
<td>Mix</td>
<td>0–100% (dry–wet)</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Order</td>
<td>Fuzz&gt;Wah, Wah&gt;Fuzz</td>
<td>Fuzz&gt;Wah</td>
</tr>
<tr>
<td></td>
<td>Fuzz Mix</td>
<td>0–100% (dry–wet)</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Wah Mix</td>
<td>0–100% (dry–wet)</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Fuzz Drive</td>
<td>0 – 40 dB</td>
<td>20 dB</td>
</tr>
<tr>
<td></td>
<td>Fuzz Tone</td>
<td>1.00 – 10.0 kHz</td>
<td>3.16 kHz</td>
</tr>
<tr>
<td></td>
<td>Fuzz Output</td>
<td>-Inf – 0.0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td></td>
<td>Fuzz Enable</td>
<td>Off, On</td>
<td>Off</td>
</tr>
<tr>
<td></td>
<td>Wah Pedal</td>
<td>0–100%</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>Wah Filter Mode</td>
<td>Lowpass, Bandpass, Highpass</td>
<td>Bandpass</td>
</tr>
<tr>
<td></td>
<td>Min. Freq.</td>
<td>50.0 Hz – 4.00 kHz</td>
<td>428 Hz</td>
</tr>
<tr>
<td></td>
<td>Max Freq.</td>
<td>50.0 Hz – 4.00 kHz</td>
<td>2.07 kHz</td>
</tr>
<tr>
<td></td>
<td>Min. Resonance</td>
<td>0–100%</td>
<td>55%</td>
</tr>
<tr>
<td></td>
<td>Max Resonance</td>
<td>0–100%</td>
<td>33%</td>
</tr>
<tr>
<td></td>
<td>Wah Enable</td>
<td>Off, On</td>
<td>On</td>
</tr>
<tr>
<td>Modulation</td>
<td>Mode</td>
<td>LFO, Env</td>
<td>LFO</td>
</tr>
<tr>
<td></td>
<td>Rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LFO</td>
<td>8/4 – 16</td>
<td>4T</td>
</tr>
<tr>
<td></td>
<td>Env</td>
<td>0–100%</td>
<td>75%</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>-100 – 0 – 100%</td>
<td>0%</td>
</tr>
</tbody>
</table>

**AIR Kill EQ**

This effect can zap out the low, mid or high broadband frequency from an audio signal.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Thru, Kill</td>
<td>Thru</td>
</tr>
<tr>
<td>Mid</td>
<td>Thru, Kill</td>
<td>Thru</td>
</tr>
<tr>
<td>Low</td>
<td>Thru, Kill</td>
<td>Thru</td>
</tr>
<tr>
<td>Output</td>
<td>-20.0 – +20.0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td>High Gain</td>
<td>-Inf – +12.0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td>Mid Gain</td>
<td>-Inf – +12.0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td>Low Gain</td>
<td>-Inf – +12.0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td>High Freq.</td>
<td>500 Hz – 8.00 kHz</td>
<td>2.00 kHz</td>
</tr>
<tr>
<td>Offset</td>
<td>-100 – +100%</td>
<td>0%</td>
</tr>
<tr>
<td>Low Freq.</td>
<td>50.0 – 800 Hz</td>
<td>200 Hz</td>
</tr>
</tbody>
</table>
**AIR Lo-Fi**
This effect is used to bit-crush, down-sample, clip, rectify and mangle an audio signal.

<table>
<thead>
<tr>
<th>Tab</th>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lo-Fi</td>
<td>Bit Depth</td>
<td>1.0 – 16.0 bit</td>
<td>16.0 bit</td>
</tr>
<tr>
<td></td>
<td>Sample Rate</td>
<td>500 Hz – 50.0 kHz</td>
<td>50.0 kHz</td>
</tr>
<tr>
<td></td>
<td>Mix</td>
<td>0–100%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Clip</td>
<td>0.0 – 40.0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td></td>
<td>Rectify</td>
<td>0–100%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Noise Mod</td>
<td>0–100%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Pre</td>
<td>0.125 – 2.000 Fs</td>
<td>0.5000 Fs</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>0.125 – 2.000 Fs</td>
<td>1.000 Fs</td>
</tr>
<tr>
<td></td>
<td>Enable</td>
<td>On, Off</td>
<td>Off</td>
</tr>
<tr>
<td>Anti-Alias</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rate</td>
<td>0.01 – 10.0 Hz</td>
<td>1.00 Hz</td>
</tr>
<tr>
<td></td>
<td>Sync Off</td>
<td>8/4 – 16</td>
<td>2T</td>
</tr>
<tr>
<td></td>
<td>Sync On</td>
<td>On, Off</td>
<td>Off</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>-100 – 0 – 100%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Attack</td>
<td>0.1 – 10.0 s</td>
<td>0.5 s</td>
</tr>
<tr>
<td></td>
<td>Release</td>
<td>0.1 – 10.0 s</td>
<td>0.5 s</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>-100 – 0 – 100%</td>
<td>0%</td>
</tr>
</tbody>
</table>

**AIR Multi-Chorus**
This effect applies a thick, complex chorus effect to your audio signal.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>0.01 – 10.0 Hz</td>
<td>1.00 Hz</td>
</tr>
<tr>
<td>Depth</td>
<td>0.00 – 24.00 ms</td>
<td>6.00 ms</td>
</tr>
<tr>
<td>Voices</td>
<td>3, 4, 6</td>
<td>4</td>
</tr>
<tr>
<td>Mix</td>
<td>0–100% (dry–wet)</td>
<td>50%</td>
</tr>
<tr>
<td>Chorus Low Cut</td>
<td>20.0 Hz – 1.00 kHz</td>
<td>20.0 Hz</td>
</tr>
<tr>
<td>Chorus Width</td>
<td>0–100%</td>
<td>100%</td>
</tr>
<tr>
<td>Mod Wave</td>
<td>Sine, Tri</td>
<td>Tri</td>
</tr>
<tr>
<td>Mod Delay</td>
<td>0.00 – 24.00 ms</td>
<td>6.0 ms</td>
</tr>
</tbody>
</table>
**AIR Non-Lin Reverb**

This is a spatial effect, designed to produce synthetic, processed ambience with special gated and reversed reverb effects.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Delay</td>
<td>0–250 ms</td>
<td>0</td>
</tr>
<tr>
<td>Dry Delay</td>
<td>0–1500 ms</td>
<td>0</td>
</tr>
<tr>
<td>Time</td>
<td>0–1000 ms</td>
<td>250</td>
</tr>
<tr>
<td>Mix</td>
<td>0–100% (dry–wet)</td>
<td>50</td>
</tr>
<tr>
<td>Diffusion</td>
<td>0–100%</td>
<td>100</td>
</tr>
<tr>
<td>Width</td>
<td>0–100%</td>
<td>50</td>
</tr>
<tr>
<td>Shape</td>
<td>Gated, Reverse</td>
<td>Gated</td>
</tr>
<tr>
<td>Low-Cut</td>
<td>20.0 Hz–1.00 kHz</td>
<td>141 Hz</td>
</tr>
<tr>
<td>High-Cut</td>
<td>1.00–20.0 kHz</td>
<td>9.46 kHz</td>
</tr>
</tbody>
</table>

**AIR Phaser**

This effect applies a phaser to your audio signal, for that wonderful "wooshy," "squishy" sound.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>0.10 – 10.00 Hz</td>
<td>1.00 Hz</td>
</tr>
<tr>
<td>Depth</td>
<td>0–100%</td>
<td>50%</td>
</tr>
<tr>
<td>Feedback</td>
<td>0–100%</td>
<td>0%</td>
</tr>
<tr>
<td>Mix</td>
<td>0–100% (dry–wet)</td>
<td>50%</td>
</tr>
<tr>
<td>Phaser Model</td>
<td>Vibe, Stone, Ninety, Tron, Ninety</td>
<td></td>
</tr>
<tr>
<td>Offset</td>
<td>-180 – +180 deg.</td>
<td>0 deg., 100%</td>
</tr>
<tr>
<td>Phase Rate</td>
<td>25–400%</td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td>Phase, Rate</td>
<td>Phase</td>
</tr>
</tbody>
</table>
**AIR Reverb**

This is a spatial effect, with a wide range of reverb types to add space or room to your audio signal.

<table>
<thead>
<tr>
<th>Tab</th>
<th>Parameter</th>
<th>Values</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reverb</td>
<td>Pre-Delay</td>
<td>0–250 ms</td>
<td>0 ms</td>
</tr>
<tr>
<td></td>
<td>Room Size</td>
<td>0–100%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Time</td>
<td>0.4 ms – +inf s</td>
<td>1.9 s</td>
</tr>
<tr>
<td></td>
<td>Mix</td>
<td>0–100%</td>
<td>50%</td>
</tr>
<tr>
<td>Early Reflection</td>
<td>Type</td>
<td>Off, Booth, Club, Room, Small Chamber, Medium Chamber, Large Chamber, Small Studio, Large Studio, Scoring Stage, Philharmonic, Concert Hall, Church, Opera House, Vintage 1, Vintage 2</td>
<td>Off</td>
</tr>
<tr>
<td>Reverb</td>
<td>Length</td>
<td>0–100%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>ER / Tail Mix</td>
<td>0–100%</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>Input Width</td>
<td>0–100%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Output Width</td>
<td>0–100%</td>
<td>0%</td>
</tr>
<tr>
<td>Room</td>
<td>Delay</td>
<td>0–250 ms</td>
<td>0 ms</td>
</tr>
<tr>
<td></td>
<td>Ambience</td>
<td>0–100%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Density</td>
<td>0–100%</td>
<td>100%</td>
</tr>
<tr>
<td>Hi/Lo Freq</td>
<td>Time</td>
<td>-100 – 0 – 100%</td>
<td>0%</td>
</tr>
<tr>
<td>Hi Freq</td>
<td>Freq</td>
<td>2.00 – 20.0 kHz</td>
<td>6.32 kHz</td>
</tr>
<tr>
<td>Lo Freq</td>
<td>Cut</td>
<td>1.0 – 20.0 kHz</td>
<td>9.46 kHz</td>
</tr>
<tr>
<td></td>
<td>Time</td>
<td>-100 – 0 – 100%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Freq</td>
<td>20.0 Hz – 2.00 kHz</td>
<td>200 Hz</td>
</tr>
<tr>
<td></td>
<td>Cut</td>
<td>1 – 1000 Hz</td>
<td>1 Hz</td>
</tr>
</tbody>
</table>

**AIR Spring Reverb**

This is a spatial effect, designed to emulate the sound of a spring reverb tank.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Delay</td>
<td>0–250 ms</td>
<td>3 ms</td>
</tr>
<tr>
<td>Time</td>
<td>1.0–10.0 s</td>
<td>4.0 s</td>
</tr>
<tr>
<td>Mix</td>
<td>0–100% (dry–wet)</td>
<td>50%</td>
</tr>
<tr>
<td>Diffusion</td>
<td>0–100%</td>
<td>100%</td>
</tr>
<tr>
<td>Width</td>
<td>0–100%</td>
<td>0%</td>
</tr>
<tr>
<td>Low Cut</td>
<td>20.0 Hz – 1.0 kHz</td>
<td>141 Hz</td>
</tr>
</tbody>
</table>
**AIR Stereo Width**

This effect creates a wider stereo presence in an audio signal.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>0–200%</td>
<td>100%</td>
</tr>
<tr>
<td>Delay</td>
<td>0.0 – 8.0 ms</td>
<td>0.0 ms</td>
</tr>
<tr>
<td>Level Trim</td>
<td>-Inf – +12.0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td>Pan Trim</td>
<td>L100 – &lt;C&gt; – R100</td>
<td>&lt;C&gt;</td>
</tr>
<tr>
<td>High</td>
<td>0–200%</td>
<td>100%</td>
</tr>
<tr>
<td>Mid</td>
<td>0–200%</td>
<td>100%</td>
</tr>
<tr>
<td>Low</td>
<td>0–200%</td>
<td>100%</td>
</tr>
</tbody>
</table>

**AIR Talk Box**

This effect adds voice-like resonances to audio signals.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vowel</td>
<td>OO, OU, AU, AH, AA, AE, EA, EE, EH, ER, UH, OH, OO</td>
<td>AH</td>
</tr>
<tr>
<td>Env Depth</td>
<td>-100 – 0 – +100%</td>
<td>0%</td>
</tr>
<tr>
<td>Formant</td>
<td>-12.00 – +12.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Mix</td>
<td>0–100%</td>
<td>100%</td>
</tr>
<tr>
<td>LFO Wave</td>
<td>Sine, Tri, Saw, Square, S&amp;H, Random</td>
<td>Sine</td>
</tr>
<tr>
<td>LFO Rate</td>
<td>Sync Off: 0.01 – 10.0 Hz Sync On: 8/4 – 16</td>
<td>1.00 Hz 2T</td>
</tr>
<tr>
<td>LFO Sync</td>
<td>Off, On</td>
<td>Off</td>
</tr>
<tr>
<td>LFO Depth</td>
<td>-100 – 0 – +100%</td>
<td>0%</td>
</tr>
<tr>
<td>Env Thresh</td>
<td>-60.0 – 0.0 dB</td>
<td>-30.0 dB</td>
</tr>
<tr>
<td>Env Attack</td>
<td>0.1 – 10.0 s</td>
<td>0.5 s</td>
</tr>
<tr>
<td>Env Release</td>
<td>0.1 – 10.0 s</td>
<td>0.5 s</td>
</tr>
</tbody>
</table>
12 all new plugins from AIR include the following:

**AIR Channel Strip**
This specially-designed plugin combines multiple effects with a fast interface. The EQ section provides a highpass filter, low and high shelves, and a fully parametric mid-band. For dynamics, the AIR Compressor and Gate algorithms are perfect for achieving hard-hitting drum sounds.

<table>
<thead>
<tr>
<th>Tab</th>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>EQ</td>
<td>Enable</td>
<td>Enabled, Bypass</td>
<td>Enabled</td>
</tr>
<tr>
<td></td>
<td>Gate</td>
<td>Enabled, Bypass</td>
<td>Enabled</td>
</tr>
<tr>
<td></td>
<td>Comp</td>
<td>Enabled, Bypass</td>
<td>Enabled</td>
</tr>
<tr>
<td></td>
<td>Output</td>
<td>-inf – +24.00 dB</td>
<td>0.00 dB</td>
</tr>
<tr>
<td>EQ High Shelf Gain</td>
<td>-12.0 – +12.0 dB</td>
<td>0.0 dB</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High Shelf Freq</td>
<td>1.20 – 20.0 kHz</td>
<td>6.00 kHz</td>
</tr>
<tr>
<td></td>
<td>Mid Gain</td>
<td>-18.0 – +18.0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td></td>
<td>Mid Freq</td>
<td>40.0 Hz – 16.0 kHz</td>
<td>247 Hz</td>
</tr>
<tr>
<td></td>
<td>Mid Q</td>
<td>0.40 – 10.00</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>Low Shelf Gain</td>
<td>-12.0 – +12.0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td></td>
<td>Low Shelf Freq</td>
<td>20.0 Hz – 1.00 kHz</td>
<td>100 Hz</td>
</tr>
<tr>
<td></td>
<td>HP Filter</td>
<td>0 – 1000 Hz</td>
<td>0 Hz</td>
</tr>
<tr>
<td>Gate/Comp</td>
<td>Gate Thresh</td>
<td>-120.0 – 0.0 dB</td>
<td>-120.0 dB</td>
</tr>
<tr>
<td></td>
<td>Gate Depth</td>
<td>0 – -120.0 dB</td>
<td>-120.0 dB</td>
</tr>
<tr>
<td></td>
<td>Gate Attack</td>
<td>0.01 – 1000.00 ms</td>
<td>0.18 ms</td>
</tr>
<tr>
<td></td>
<td>Gate Release</td>
<td>1.00 – 3000.00 ms</td>
<td>7.40 ms</td>
</tr>
<tr>
<td></td>
<td>Comp Thresh</td>
<td>0.0 – -60.0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td></td>
<td>Comp Ratio</td>
<td>1.0:1 – 100.0:1</td>
<td>3.9:1</td>
</tr>
<tr>
<td></td>
<td>Comp Attack</td>
<td>100 us – 300 ms</td>
<td>5.48 ms</td>
</tr>
<tr>
<td></td>
<td>Comp Release</td>
<td>10.0 ms – 4.00 s</td>
<td>200 ms</td>
</tr>
</tbody>
</table>

**AIR Compressor**
This basic compressor effect changes the dynamic range of a signal by automatically reducing its gain if it exceeds a certain level.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Threshold</td>
<td>-60.0 – 0 dB</td>
<td>-48.0 dB</td>
</tr>
<tr>
<td>Ratio</td>
<td>1.0:1 – 100.0:1</td>
<td>3.9:1</td>
</tr>
<tr>
<td>Output</td>
<td>0.0 – 30.0 dB</td>
<td>15.0 dB</td>
</tr>
<tr>
<td>Mix</td>
<td>0–100% (dry-wet)</td>
<td>100%</td>
</tr>
<tr>
<td>Knee</td>
<td>0–100%</td>
<td>50%</td>
</tr>
<tr>
<td>Attack</td>
<td>100 us – 300 ms</td>
<td>5.48 ms</td>
</tr>
<tr>
<td>Release</td>
<td>10.0 ms – 4.00 s</td>
<td>200 ms</td>
</tr>
</tbody>
</table>
**AIR Delay**

This is a classic delay line effect with a variable feedback filter. Additional Ratio and Width parameters enable you to achieve a wide range of stereo delay effects.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Time</strong></td>
<td>Sync Off: 1 ms – 2.00 s Sync On: 1/32 – 8/4</td>
<td>388 ms 1/8D</td>
</tr>
<tr>
<td><strong>Sync</strong></td>
<td>Off, On</td>
<td>Off</td>
</tr>
<tr>
<td><strong>Feedback</strong></td>
<td>0–100% (dry–wet)</td>
<td>40%</td>
</tr>
<tr>
<td><strong>Mix</strong></td>
<td>0–100% (dry–wet)</td>
<td>50%</td>
</tr>
<tr>
<td><strong>Delay Ratio</strong></td>
<td>50:100 – 100:50</td>
<td>100:100</td>
</tr>
<tr>
<td><strong>Delay HPF</strong></td>
<td>20.0 Hz – 1.0 kHz</td>
<td>20.0 Hz</td>
</tr>
<tr>
<td><strong>Delay Width</strong></td>
<td>0–100%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Feedback Damp</strong></td>
<td>1.0 – 20.0 kHz</td>
<td>20.0 kHz</td>
</tr>
<tr>
<td><strong>Feedback Reso</strong></td>
<td>0–100%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Fdbk. Reso Freq</strong></td>
<td>100 Hz – 10.0 kHz</td>
<td>1.0 kHz</td>
</tr>
</tbody>
</table>

**AIR Diff Delay**

This is a delay line effect that is synchronized to your session tempo and uses an adjustable amount of diffusion to emulate the dissipation of echoes in reverberant space.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Time</strong></td>
<td>1/64 – 4/4 (including Triplet and Dotted variations)</td>
<td>1/16D</td>
</tr>
<tr>
<td><strong>Mix</strong></td>
<td>0–100% (dry–wet)</td>
<td>40%</td>
</tr>
<tr>
<td><strong>Feedback</strong></td>
<td>0–100%</td>
<td>50%</td>
</tr>
<tr>
<td><strong>Fdbk. Diffusion</strong></td>
<td>0–100%</td>
<td>40%</td>
</tr>
<tr>
<td><strong>Fdbk. High Damp</strong></td>
<td>0–100%</td>
<td>35%</td>
</tr>
</tbody>
</table>

**AIR Filter**

This effect applies a filter to the audio signal and then applies selectable saturation or reduction to the filtered signal.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cutoff Freq</strong></td>
<td>55.0 Hz – 20.0 kHz</td>
<td>20.0 kHz</td>
</tr>
<tr>
<td><strong>Reso Factor</strong></td>
<td>0.7 – 20.0</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Type</strong></td>
<td>LP4–1, BP2, BP4, HP2_LP1, HP3_LP1, HP4–1, BR2, BR4, BR2_LP1, BR2_LP2, HP1_BR2, BP2_BR2, HP1_LP2, HP1_LP3, AP3, AP3_LP1, HP1_AP3</td>
<td>LP4</td>
</tr>
<tr>
<td><strong>Output Gain</strong></td>
<td>-inf dB – 0.0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td><strong>Saturation Type</strong></td>
<td>Resample, Bit Crush, Rectify, Hard Clip, Distort, Overdrive</td>
<td>Overdrive</td>
</tr>
<tr>
<td><strong>Saturation Drive</strong></td>
<td>0.0 – 12.0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td><strong>Saturation Mode</strong></td>
<td>DCF, CVF</td>
<td>DCF</td>
</tr>
</tbody>
</table>
AIR Maximizer

This effect is a limiter optimized for professional mastering.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Threshold</td>
<td>-40.0 – 0.0 dB</td>
<td>-20.0 dB</td>
</tr>
<tr>
<td>Ceiling</td>
<td>-20.0 – 0.0 dB FS</td>
<td>-5.0 dB FS</td>
</tr>
<tr>
<td>Look Ahead</td>
<td>0.0 – 20.0 ms</td>
<td>0.0 ms</td>
</tr>
<tr>
<td>Knee</td>
<td>Hard, Soft</td>
<td>Hard</td>
</tr>
<tr>
<td>Release</td>
<td>10.0 ms – 10.0 s</td>
<td>316 ms</td>
</tr>
<tr>
<td>LF Mono</td>
<td>10.0 Hz – 1.00 kHz</td>
<td>10.0 Hz</td>
</tr>
</tbody>
</table>

AIR Noise Gate

This effect is similar to a compressor, but instead of attenuating audio signal that rises above a threshold, a noise gate attenuates audio signal that falls below a threshold by a set amount. This can help reduce background noise in your audio signal.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Threshold</td>
<td>-120.0 – 0.0 dB</td>
<td>-48.0 dB</td>
</tr>
<tr>
<td>Depth</td>
<td>0 dB – -120.0 dB</td>
<td>-120 dB</td>
</tr>
<tr>
<td>Denoise Filter</td>
<td>Off, On</td>
<td>Off</td>
</tr>
<tr>
<td>Denoise Thresh</td>
<td>-120.0 – 0.0 dB</td>
<td>-60.0 dB</td>
</tr>
<tr>
<td>Attack</td>
<td>0.01 – 1000.00 ms</td>
<td>0.18 ms</td>
</tr>
<tr>
<td>Hold</td>
<td>0 – 1000 ms</td>
<td>250 ms</td>
</tr>
<tr>
<td>Release</td>
<td>1.00 – 3000.00 ms</td>
<td>7.40 ms</td>
</tr>
</tbody>
</table>
AIR Para EQ

This effect is a powerful four-band parametric equalizer with four independent EQ ranges, adjustable Low and High EQ filter types, and dedicated Low Cut and High Cut.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Freq</td>
<td>1.2 – 20.0 kHz</td>
<td>6.00 kHz</td>
</tr>
<tr>
<td>High Q</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shelf</td>
<td>0.40 – 2.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Bell</td>
<td>0.40 – 10.00</td>
<td>1.00</td>
</tr>
<tr>
<td>High Gain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shelf</td>
<td>-12.0 – +12.0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td>Bell</td>
<td>-18.0 – 18.0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td>High Type</td>
<td>Shelf, Bell</td>
<td>Shelf</td>
</tr>
<tr>
<td>High Out/In</td>
<td>Out, In</td>
<td></td>
</tr>
<tr>
<td>High Mid Freq</td>
<td>120 Hz – 16.0 kHz</td>
<td>2.00 kHz</td>
</tr>
<tr>
<td>High Mid Q</td>
<td>0.40 – 10.00</td>
<td>1.00</td>
</tr>
<tr>
<td>High Mid Gain</td>
<td>-18.0 – 18.0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td>High Mid Out/In</td>
<td>Out, In</td>
<td></td>
</tr>
<tr>
<td>Low Mid Freq</td>
<td>40.0 Hz – 16.00 kHz</td>
<td>247 Hz</td>
</tr>
<tr>
<td>Low Mid Q</td>
<td>0.40 – 10.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Low Mid Gain</td>
<td>-18.0 – 18.0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td>Low Mid Out/In</td>
<td>Out, In</td>
<td></td>
</tr>
<tr>
<td>Low Freq</td>
<td>20.0 Hz – 1.00 kHz</td>
<td>100 Hz</td>
</tr>
<tr>
<td>Low Q</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shelf</td>
<td>0.40 – 2.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Bell</td>
<td>0.40 – 10.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Low Gain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shelf</td>
<td>-12.0 – +12.0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td>Bell</td>
<td>-18.0 – 18.0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td>Low Type</td>
<td>Shelf, Bell</td>
<td>Shelf</td>
</tr>
<tr>
<td>Low Out/In</td>
<td>Out, In</td>
<td></td>
</tr>
<tr>
<td>Output</td>
<td>-20.0 – +20.0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td>High Cut Freq</td>
<td>120 Hz – 20.0 kHz</td>
<td>20.0 kHz</td>
</tr>
<tr>
<td>High Cut Type</td>
<td>6, 12, 18, 24 dB</td>
<td>12 dB</td>
</tr>
<tr>
<td>High Cut Out/In</td>
<td>Out, In</td>
<td></td>
</tr>
<tr>
<td>Low Cut Freq</td>
<td>20.0 Hz – 8.00 kHz</td>
<td>100 Hz</td>
</tr>
<tr>
<td>Low Cut Type</td>
<td>6, 12, 18, 24 dB</td>
<td>12 dB</td>
</tr>
<tr>
<td>Low Cut Out/In</td>
<td>Out, In</td>
<td></td>
</tr>
</tbody>
</table>
AIR Pitch Shifter
This effect alters the pitch of the audio signal and can be adjusted based on the source or style of the signal.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode</td>
<td>Vocal, Bass, Beats, Chords, Textures</td>
<td>Vocal</td>
</tr>
<tr>
<td>Shift</td>
<td>-24.0 – 0 – 24.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Mix</td>
<td>0–100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

AIR Pumper
This effect creates a rhythmic pumping effect, similar to that of sidechain compression.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth</td>
<td>0–100%</td>
<td>80%</td>
</tr>
<tr>
<td>Speed</td>
<td>Bar, 1/2 – 1/32T</td>
<td>1/4</td>
</tr>
<tr>
<td>Release Shape</td>
<td>0–100%</td>
<td>10%</td>
</tr>
<tr>
<td>Trigger Offset</td>
<td>-100.0 – +100.0 ms</td>
<td>0.0 ms</td>
</tr>
<tr>
<td>Attack</td>
<td>0–100%</td>
<td>5%</td>
</tr>
<tr>
<td>Hold</td>
<td>0–100%</td>
<td>10%</td>
</tr>
<tr>
<td>Release</td>
<td>0–100%</td>
<td>60%</td>
</tr>
</tbody>
</table>

AIR Transient
This effect is used to enhance or soften the Attack and Release phases of audio material.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attack</td>
<td>-100 – 0 – +100%</td>
<td>0%</td>
</tr>
<tr>
<td>Attack Shape</td>
<td>0–100%</td>
<td>50%</td>
</tr>
<tr>
<td>Sustain</td>
<td>-100 – 0 – +100%</td>
<td>0%</td>
</tr>
<tr>
<td>Output</td>
<td>-20.0 – +20.0 dB</td>
<td>0.0 dB</td>
</tr>
<tr>
<td>Limit</td>
<td>Off, On</td>
<td>On</td>
</tr>
</tbody>
</table>

AIR Tube Drive
This effect is designed to reproduce the sound of an overdriven tube amplifier.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive</td>
<td>0–100%</td>
<td>0%</td>
</tr>
<tr>
<td>Headroom</td>
<td>-30.0 – 0.0 dB</td>
<td>-15.0 dB</td>
</tr>
<tr>
<td>Saturation</td>
<td>0–100%</td>
<td>50%</td>
</tr>
<tr>
<td>Output</td>
<td>-20.0 – +20.0 dB</td>
<td>0.0 dB</td>
</tr>
</tbody>
</table>

Clip Program Improvements
Internal Clip Program architecture has been significantly improved, allowing you to play up to 16 clip programs at the same time. Clips will continue to play when changing tracks or sequences, allowing you to seamlessly integrate them into live performance.
FLAC and OGG Support

You can now load and export FLAC and OGG files with MPC.

Mother Ducker

You can now apply sidechain ducking effects in MPC using the new Mother Ducker and Mother Ducker Input insert effects.

**Mother Ducker**
Add this effect as an insert to the track you want to have the ducking effect applied to. Use the meters to monitor the level from your trigger input and tweak the Threshold and Ratio parameters to adjust the amount of ducking. The Attack and Release parameters can be used to sculpt the envelope of the gain reduction to achieve exactly the pumping effect you are after. Mother Ducker has eight internal buses so you can set up multiple channel strips with ducking effects from different sources.

**Parameter** | **Value Range** | **Default Value**
--- | --- | ---
Ratio | 1.00:1 – 60.00:1 | 6.00:1
Knee | 0.000 – 6.000 dB | 0.000 dB
Attack | 1.0 – 1000.0 ms | 10.0 ms
Release | 1.0 – 1000.0 ms | 100.0 ms
Threshold | -100.000 – 0.000 dB | -6.021 dB
Gain | -100.000 – +12.000 dB | -0.000 dB
Auto Gain | On, Off | On
From | Bus 1–8 | Bus 1

**Mother Ducker Input**
Add this effect as an insert to the track you want to use as a trigger input, such as a kick drum track.

**Parameter** | **Value Range** | **Default Value**
--- | --- | ---
To | Bus 1–8 | Bus 1

Next Sequence Mode

Next Sequence Mode now remembers the next sequence change when switching to another mode.

Additional Transport Controls

You can now hold Shift and press Stop to return the playhead to the beginning of the timeline.
Updates in MPC 2.5

New Features

Browser Audition Warp and Sync

In the Browser, you can now audition samples that have an MPC-embedded tempo in sync with the project tempo.

1. Open the Browser by doing either of the following:
   - Click the menu icon (≡), then select View > Browser.
   - Click the hard-drive icon in the lower-right corner.

2. Click the sync icon to toggle sync on and off. When enabled, samples will be auditioned at the beginning of the next bar of the sequence when playback is active.
   Click the warp icon to toggle warp on and off. When enabled, samples with an embedded tempo will be warped to the project tempo.

3. Select a sample, loop, program or project to preview, then tap the Play button to audition. If Auto Audition is turned on, samples will audition when selected.
Updates in MPC 2.6

New Features

Ableton Live Set Export

You can now export the current MPC sequence as an Ableton Live Set (.ALS) file.

To Ableton Live Set export window, click the menu icon (≡), go to File > Export and then click As Ableton Live Set….

Use the Export MIDI As settings to choose how MIDI tracks and clips are exported, either as Audio files or MIDI files. When using Plugin, Drum or Keygroup programs, you can render clips as Audio to preserve the sound of the instruments, or render clips as MIDI data.

Check the Include Track Volume/Pan Settings box to include these settings in the export.

Check the Bypass Track Effects Plugins box to not include track effects plugins in the export.

Use the Audio Tail field to set the amount, in seconds, of extra time added to the end of the resulting audio files.

Use the Bit Depth field to set the bit depth to 8, 16 or 24.

Use the Sample Rate field to set the sample rate to 44.1, 48, 88.2 or 96 kHz. In most cases, we recommend selecting 44.1 kHz.

Click Export to enter the Save screen where you can select a name and location to save your export.

Click Close to cancel and return to the previous screen.

Erase Parameters

From the Erase window, you can now erase selected automation parameters.

1. While the sequence is stopped, click the menu icon (≡) and go to Edit > Sequence and click Erase. Alternatively, right-click the Sequence field in the Inspector and click Erase.
2. Click Automation to select it.
3. By default, the Parameter field is set to All. Click this field to display a list of all parameters that have been automated on the current track.
4. Select the parameter you would like to erase, and then click Do It to erase the automation.
Workflow Enhancements

In the Edit > Sequence > Copy Sequence and Copy Track windows, you can now rename the destination sequence or track.

The Keep or Discard window in Sample Record Mode and the Export Loop as Sample window in Looper Mode now have easy-access buttons to Save or Edit the recorded sample or loop.

You can now apply the Timing Correct options to all tracks at the same time by clicking the All Tracks button in the Timing Correct window.

You can now sort FX by Type to quickly access plugins by the following categories: Delay/Reverb, Dynamics, EQ/Filter, Harmonic, Modulation and Vintage Effects.

You can now copy events from individual or multiple pads or notes from the Edit > Sequence > Copy Events window.
New Features

MIDI Improvements

MPC now supports multi-MIDI control, making MPC the ultimate MIDI sequencing studio centerpiece.

Configuring MIDI

To configure the MIDI Inputs and Outputs, go to Preferences > MIDI / Sync.

The Input Ports section displays all available MIDI input ports in a list. Click the port name to rename it to a custom name. This is particularly useful when using multiple devices connected to a single MIDI interface or hub, as you can name the ports according to the devices connected to them. The custom port names will be reflected throughout the software.

Next to each MIDI input port are the Master, Control and Track buttons:

- When Master is enabled, MIDI data from this port will always go to the current track. The MPC Pads are an example of a device that is always Master.
- When Control is enabled, MIDI data from this port will be sent to MIDI Learn.
- When Track is enabled, this MIDI port will appear in the list of available track MIDI Inputs.

The Output Ports section displays all available MIDI output ports in a list. Tap the keyboard icon to rename a port to a custom name.

Next to each MIDI output port are the Sync and Track buttons:

- When Sync is enabled, the MIDI output port will send MIDI sync messages according to the type set in the Preferences menu under MIDI / Sync > Sync Send > Send.
- When Track is enabled, the MIDI output port will appear in the list of available track MIDI Outputs.

Click the X icon next to a port to reset the MIDI port settings. This cannot be undone.

By default, the Track Enable Ports When Discovered option is set to On so that when any MIDI device is plugged in, the Track option is automatically enabled so the ports can be selected as an available MIDI input or output.

MIDI Recording

For recording, MIDI Tracks now have an Input Monitor button with four states:

- Off: The track’s MIDI input is not monitored, and playback of recorded events will be heard. This setting is useful when using keyboards with Local Control active.
- In: The track’s MIDI input is always monitored regardless of the track’s Record Arm state, and playback from recorded events will not be heard.
- Auto: The track’s MIDI input is monitored when the track is record armed, and playback of recorded events will be heard.
- Merge: The track’s MIDI input is always monitored, and playback of recorded events will be heard.
Copy Pads

You can now copy one or more pads from one drum program to another.

**To copy pads**, click the menu icon (≡), select **Edit > Program**, and click **Copy Pads**. Alternatively, right-click a program in the **Project** panel and click **Copy Pad**.

Use the **Copy Type** menu to select the whether you want to copy an individual **Pad**, a **Bank** of pads or a **Range** of pads. Use the fields that appear to select the **Pad**, **From Bank** or **Start/End Pads** that will be copied.

Use the **From Program** menu to select the program from which the pads will be copied.

Use the **To Program** menu to select the program to which the copied pads will be added.

Use the **Pad**, **To Bank** or **Start Pad** where the copied pads will be added starting from.

Click **Apply** to confirm your setting, and then click **Do It** to copy the pads or **Cancel** to return to the previous screen.

Global Timing Correct On/Off

The **Timing Correct** (TC) window now has a convenient **Global Timing Correct** On/Off button.

You can also enable or disable Global Timing Correct by holding **Shift** and tapping the **TC** value at the top of the screen in Main Mode or List Edit Mode.

Retrospective Record

MPC now captures MIDI events in the background, allowing you to recall performances when record was not enabled. After playing some notes, do either of the following to capture the events to the current track:

- Press the Retrospective Record button in the transport section of the Toolbar.
- Click the menu icon (≡), select **Tools**, and click **Retrospective Record**.

Single / Multi Record Arm Behavior

You can now configure the behavior of the Record Arm buttons by adjusting the **Record Arm** setting under **Preferences > Sequencer > Recording**.

- In **Single** mode, selecting a different track will automatically arm that track and disarm all other tracks. This is the default mode and is the same as previous MPC releases. To arm multiple tracks to record in Single mode, hold **Shift** and tap each track’s record button.
- In **Multi** mode, you can tap any track’s record button to add it to the group of armed tracks. This is useful when doing multitrack recording.