

air Xpand!²

User Guide

Manual Version 1.0

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Introduction

Xpand!2 is a virtual workstation synthesizer featuring a broad range of sound generation possibilities including multi-sampled instruments as well as FM, wavetable, and virtual analog synthesis. Xpand!2 is an VST plug-in, originally part of the AIR Creative Collection of plug-ins.

System Requirements and Product Support

For complete system requirements, compatibility information, and product registration, visit the AIR website: airmusictech.com.

For additional support, visit airmusictech.com/support.

Installation

Windows®

1. Double-click the **.exe** installer file you downloaded.
2. Follow the on-screen instructions.

Note: Xpand!2 uses PACE copy protection, so it will install the PACE InterLok driver on your system if you do not already have it. As most audio software uses PACE copy protection, though, this is probably already installed on your system.

Mac® OS X®

1. Double-click the **.pkg** installer file you downloaded.
2. Follow the on-screen instructions.

Quick Start

Getting started with Xpand!2 is easy, especially if you are already familiar with virtual instruments in your digital audio workstation (DAW).

To load Xpand!2 on a track in your DAW, create a new stereo **MIDI** or **Instrument** track (i.e., not a track you would use to record audio) in your session, and add Xpand!2 to that track.

Important:

- If needed, record-enable the track to allow you to use a MIDI controller to play Xpand!2.
- The first time you use Xpand!2, you may need to show your DAW where it (and its content) is located on your computer's hard disk.

We highly recommend reading the **Operation** chapter of this guide to learn more and get the most out of Xpand!2.

Operation

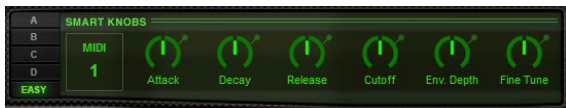


Xpand!2 is multi-timbral. It provides four synthesizer slots, each with individual MIDI channel, Mix, Arpeggiator, Modulation and Effects settings. A slot can hold one of 1200 synthesizer presets, called **Parts**.

The settings of all four slots and their respective Parts can be saved as a single **Patch** (another name for the plug-in settings). Xpand!2 comes with a set of over 2300 Patches, created by renowned sound designers. Browse through these Patches to get an impression of the versatility of Xpand!2.

Global Controls

Smart Knobs



The upper section of Xpand!2 provides 6 controls called **Smart Knobs**. These are intended for adapting a preset Part or Patch to your session in terms of feel, timbre, envelope, and other settings.

The Smart Knobs are intelligently pre-assigned to important parameters by professional sound designers to make working with Xpand!2 as easy as possible.

The Part selector switches (**A**, **B**, **C**, or **D**) give access to the Smart Knob parameters for the selected part.

The **Easy** button switches the Smart Knobs to Easy mode. In Easy mode, the Smart Knobs can address a group of Parts that are all assigned to a single MIDI channel. Specify the chosen MIDI channel in the pop-up menu that appears to the right of the part selectors.

The assigned parameter is displayed in a light green field below each knob.

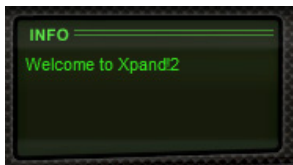
Level Control (Master Volume)



The Xpand!2 **Level** control affects the master volume level for the Xpand!2 plug-in.

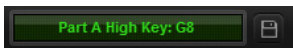
The level meter to the right of the **Level** knob shows the overall output level.

Info Display

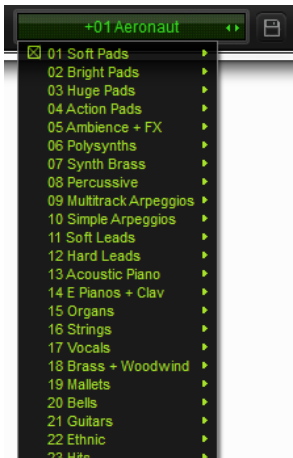


The **Info Display** is a context-sensitive text display. When you select a Patch or Part, it displays descriptive text about the selected item.

Smart Display / Preset Browser



At the bottom of the Xpand!2 plug-in window, the **Smart Display** shows the setting of the currently selected control.



When not showing the setting of the currently selected control, this display will act as a **Preset Browser**, where you can view the name or save the current Preset as well as load other Presets. A Preset contains the Patch selections and other settings for all four Parts and both FX modules.

To save a Preset, click the **Save** (disk) icon. In the window that appears, select the location and enter a name for the file (.tfx), and then click the **Save** button.

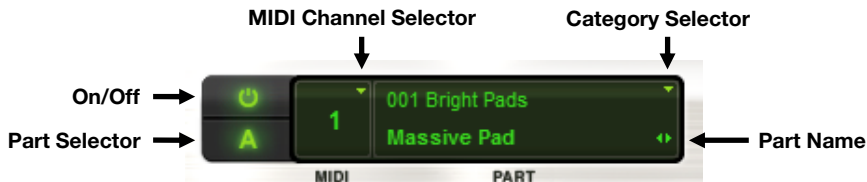
To load a preset, click the center of this **Preset Browser** and select a Preset from the drop-down menu that appears.

To quickly select the previous or next Preset, click the Previous/Next Preset buttons (◀ or ▶).

Part Controls

Each Part has a set of controls that address loading Parts, the Part's place in the mix, and its MIDI channel.

To the right of those controls, there is a display that can show three sets of Patch Edit parameters, including advanced MIDI settings, Arpeggiator controls, and Modulation controls.



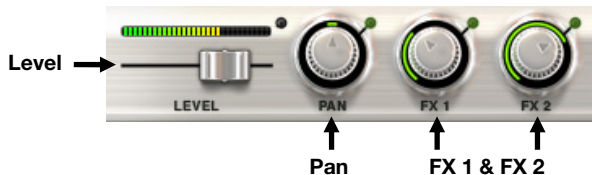
On/Off: Activate or deactivate the Part by clicking its **On/Off** button. When the Part is activated the Part character in its center is lit.

Part Selector: Click the **Part Selector** to select the Part, so that its Smart Knobs are displayed.

MIDI Channel Selector: To choose the MIDI channel that the current part responds to, click the **MIDI Channel Selector** and select the channel from the pop-up menu.

Category Selector: To view Parts organized by categories, click the **Category Selector**.

Part Name: To load a Part into the slot, click the **Part Name** field and select a Part from the pop-up menu. You can also click the left or right arrows (◀ ▶) to select the previous or next part immediately without opening the menu.



Level: Move the slider to set the Part volume level, increasing volume to the right and decreasing to the left. The meter above shows the slot's audio output.

Pan (Panning): Move to the right or left to set the Part's position in the stereo field.

FX1 & FX2: The **FX 1** and **FX 2** knobs control the current Part's send amount to the effects processors **FX 1** and **FX 2**.

FX Parameter Controls

Xpand!2 provides two FX (effects) engines. Send controls for each Part are located on the **Mix** and **FX** pages.



On/Off: Click the **FX1** and **FX2** buttons to activate or deactivate the effects. The effects are activated when the buttons are lit.

Type: Click the FX **Type** display to select an effect from the pop-up menu.

FX1 and FX2 Parameters: Edit the selected effect by adjusting the available FX parameter knobs. The available parameter knobs vary depending on the type of effect selected.

To FX1 (FX2 Send to FX1): This control lets you send a percentage of the FX2 output signal into FX1, instead of directly to the output. At **0%**, no signal is sent to FX1. At **100%**, all of the FX2 output signal is sent to FX1. This is useful for cascading a delay effect into a reverb for a more ambient effect, for example.

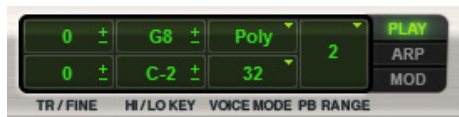
Patch Edit Controls

The Patch Edit parameter buttons provide access to additional sets of controls where you can edit the current patch in more detail. Click one of the three following buttons so that it is lit to edit its associated parameters:

- **Play:** Mixer, Panning, FX Sends, MIDI
- **Arp:** Arpeggiator Settings
- **Mod:** Modulation Settings

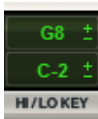
Play Controls

The **Play** controls let you set basic parameters for the current part, including pitch transposition, keyboard splits, voicing behavior, and pitch bend range.



Tr/Fine: The **Tr/Fine** (Transpose/Fine Tune) section includes two different controls for transposing incoming MIDI notes. The **Semitone** control (the upper control) transposes incoming notes up or down in semitones. For finer control, use the **Cents** control (the lower control), which transposes notes up or down in cents.

Click the control and drag up or down to increase or decrease its value.



Hi/Lo Key: Use the **Hi/Lo Key** controls to assign Parts to different keyboard ranges. This can be useful for splitting your keyboard across different Parts. For example, Part A holding a bass sound could be assigned **C-1** to **B2** and Part 2 your synth lead assigned **C3** to **G8**.

To define the key range for the current Part, right-click the **Upper/Lower** key range limit control and choose **Learn**, then press the appropriate key on your MIDI keyboard.

To adjust the key range for the current Part, click the **Upper/Lower** key range limit control and drag up or down to increase or decrease its value.



Voice Mode: The **Voice Mode** section controls the voice behavior of each Part. The **Mono/Poly** selector (the upper control) chooses between **Monophonic** (one note playable at a time) and **Polyphonic** (more than one note playable at a time) modes.

The lower control's function is different in each mode. In **Mono** mode, it selects the key priority (**Last, First, High, Low**), which defines which note is played when more than one note is played at once. In **Poly** mode, it selects how many notes of polyphony are available (**1-64**).

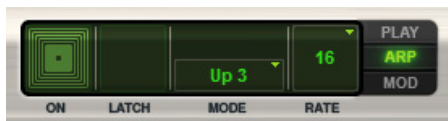


PB Range: Use the **PB Range** control to select how many semitones the given Part can be bent up or down by pitch bend controller data.

Arp Controls

The **arpeggiator** automatically triggers the notes that are played simultaneously in pre-defined rhythmic and melodic patterns. Each Part has its own Arpeggiator.

Some Parts, such as Action Pads and Loops, automatically switch on the Arpeggiator as it forms an integral part of their sound.



On: Click this button to activate or deactivate the Arpeggiator. The Arpeggiator will trigger the input notes in the selected pattern as long as the notes are held. When the Arpeggiator is activated the button is lit.

Latch: Click the **Latch** button to activate Latch mode playback. In this mode, the Part's Arpeggiator will continue to play after releasing keys until playback is stopped. Released keys are only removed from the arpeggio when new keys are pressed. When Latch mode is activated, the button is lit.

When the Arpeggiator is switched on, the Sustain pedal acts as a temporary Latch switch, overriding the displayed setting.

Mode: Click the **Mode** display to select an Arpeggiator mode from the appearing pop-up menu. An Arpeggiator Mode is a pre-defined rhythmic pattern that the Arpeggiator uses to trigger held notes.

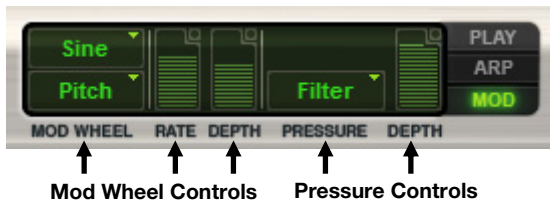
Rate: Click the **Rate** display to select the Arpeggiator's Rate (or speed) from the list. For example, **1** stands for a whole note and **32** stands for a 32nd note. Dotted and triplet timing are indicated by an asterisk (*) or **T**, respectively.

Mod Controls

The **Mod** (modulation) controls let you easily create sophisticated modulation settings for shaping a Part. Modulation wheel and pressure (aftertouch) can be used as modulation sources.

Normally, the modulation wheel provides a periodically repeating modulation such as vibrato, and aftertouch provides a static offset to the selected destination such as volume or filter swells.

Many Xpand!2 Patches and Parts have pre-assigned settings for modulation wheel and aftertouch. With the following controls you can adapt them or create your own.



Mod Wheel Controls

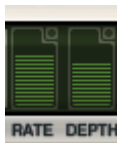


Mod Wheel Shape: Click the **Shape** button (the upper Mod Wheel button) to select the waveform shape for the modulation from the pop-up menu—an LFO waveform used to modulate the selected destination. For most waveforms there is a choice of a freely adjustable and a tempo-synchronized setting (Sync), except for **Const** and **Random**. If the pop-up is set to **Const** the movements of the modulation wheel will directly modulate the destination without a time varying waveform.

Mod Wheel Destination: Click the **Destination** button (the lower Mod Wheel button) to select a destination for the modulation from the pop-up menu.

The following destinations for mod wheel action are provided:

- **Pitch:** Affects the Part's pitch.
- **Wave:** Changes the sound in different ways, depending on the selected Part. For example, shaping waveforms, FM modulation depth, sample start point offset, detuning.
- **Filter:** Affects the Part's filter cutoff frequency.
- **Volume:** Affects the Part's volume level.
- **Pan:** Affects the Part's position in the stereo field.



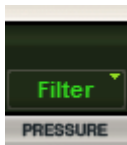
Rate: Move this knob to set the speed or rate of the modulation wheel's modulation. When using a synchronized shape (such as **Saw Sync**), the Rate control sets the speed in fixed, tempo synchronized steps. When using other shapes (such as **Sine**, **Tri**, and **Saw**), the LFO speed is freely adjustable.

Depth: This knob sets the strength or amount of how much the signal is affected by the modulation. Depth is a bipolar control, which means that it can be set to positive or negative values. For example, with the modulation wheel's shape set to **Const** and destination to **Pan**, moving the mod wheel up makes the signal go to the left (negative Depth value) or the right (positive Depth value).

Pressure Controls

Many MIDI keyboards provide pressure (also called *aftertouch*) to generate a MIDI control signal which depends on how hard you press down held keys after the initial Note On message.

You can use this control signal to modulate a number of useful controls.



Pressure Destination: Select a destination for the modulation using pressure (aftertouch) from the pop-up menu.

The following destinations for pressure action are provided:

- **Pitch:** Affects the Part's pitch.
- **Wave:** Changes the sound in different ways, depending on the selected Part. For example, shaping waveforms, FM modulation depth, sample start point offset, detuning.
- **Filter:** Affects the Part's filter cutoff frequency.
- **Volume:** Affects the Part's volume level.



Depth: This knob sets how much the signal is affected by the pressure control signal. **Depth** is a bipolar control, which means that it can be set to positive and negative values. For example, with destination set to **Filter**, applying aftertouch increases (positive Depth value) or decreases (negative Depth value) the filter cutoff frequency.

Assigning MIDI Controllers to Xpand!2 Controls

In addition to pre-assigned MIDI controllers (such as Sustain Pedal and Volume), you can assign MIDI controllers to parameters within Xpand!2 for automation or real-time control from a MIDI keyboard or control surface.

Please see your DAW's reference manual or other documentation to learn how to do this.

Appendix

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