Setup with a Fractal Audio Axe-Fx III

The Mastermind GT supports the Axe-Fx III processor, which expands on the previous models with many more effect blocks, named scenes and effect block channels.

Connections

There are two methods you can use for connecting your Axe-Fx III.

Two MIDI cables – Use two standard 5-pin MIDI cables. One connects from the Mastermind GT's MIDI Out jack to the Axe-Fx's MIDI Input. The other connects the Mastermind GT's Remote In jack to the Axe-Fx's MIDI output.

Even though the connectors on the Mastermind GT are 7-pin MIDI connectors, a 5-pin cable will work fine. Just make sure the gap in the pins is facing upward when you plug it in.

With this option, you should power the Mastermind GT normally – with its included power supply.

Phantom Power Adapter – you can also phantom power the Mastermind GT. This allows you to keep the power supply backstage in a rack, with only one MIDI cable going to the GT. We sell a phantom power adapter box, part number PPA-DIN7F-2, which is a small box that goes between the Mastermind GT and Axe-Fx III. It combines the MIDI connections from the Axe-Fx III and power from the GT's AC adapter into a single 7-pin MIDI connection that goes to the Mastermind GT.
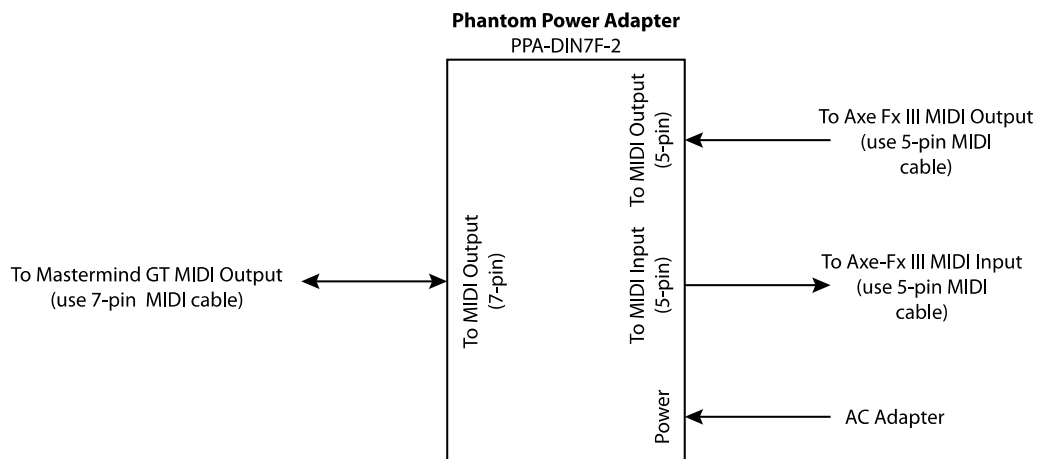
There is also a third-party option - Best-tronics (www.btpa.com) sells an all-in-one cable that performs the same function as the phantom power box.

Settings

There are a few important settings that need to be made on the Axe-Fx III. Go into setup on the Axe-Fx III, and use the "down" button to move down to the MIDI/Remote option, then press Select. Make the following changes:

1. Set **MIDI Channel** to 1
2. Set **Program Change** to On
3. Set **Send Realtime Sysex** to On

Setup on the Mastermind GT requires only a few steps:

1. In Mastermind GT setup, select **Edit Devices**.

2. Select a device slot. If you're starting with a Mastermind GT that's in the factory state, select the "Effect Gizmo" slot and you can overwrite it. If you also have an Effect Gizmo, you can leave the "Effect Gizmo" entry and instead select one of the empty slots.
3. Press the **Type** button, then select **Fractal Audio**. Next, select **Axe-Fx III**.
4. Press the **Set Default Buttons** button and press **1**. This sets up button page 1 with a default set of buttons that control the Axe-Fx III.
5. Press the **Set Default Pedals** button. This sets up the GT's expression pedals to control the Axe-Fx. There's a little more expression pedal setup required on the Axe-Fx, which is described in the next subsection.
6. Optional: Use the **Get Preset Names** feature to read the preset names from the Axe-Fx. This process is described in the [Reading Preset Names with Scenes](#) section.
7. Exit setup mode.

Expression Pedal Setup

Following the previous steps sets up the GT's expression pedals to send the correct CC numbers. Some more setup on the Axe-Fx is required.

In the Axe-Fx's setup menu, go to MIDI/Remote and select the External page. Set External Control 1 to CC11, External Control 2 to CC12, External Control 3 to CC13 and External Control 4 to CC14.

To assign an expression pedal to an effect parameter, edit the effect in the Axe-Fx. Select the parameter you want the expression pedal to control and press the Modifier knob on the Axe-Fx. Set Source to "External Control 1" to assign it to the first expression pedal, "External Control 2" to assign it to the second expression pedal, etc. For a more detailed description, please refer to the "MODIFIER TUTORIAL: WAH PEDAL" section in the Axe-Fx III manual.

Usage

Once it's set up, you'll see a standard configuration of preset buttons, bank buttons, and IA buttons. The preset and bank buttons will work in one of two ways:

> ### Standard method:
> Pressing the green preset buttons will select Axe-Fx presets. If you used the **Get Preset Names** option, the buttons will display the Axe-Fx preset names. Otherwise, the buttons will be numbered: Preset 1, Preset 2, etc. Pressing the Bank Up or Bank Down buttons will move you through the banks of Axe-Fx presets. If your preset buttons are currently showing presets 1 through 5, pressing Bank Up will change the presets to display presets 6 through 10. Pressing Bank Up again will shift up to the next bank of presets and pressing Bank Down will shift down one bank. The combination of bank and preset buttons allows you to access every preset on the Axe-Fx.

> ### If you followed the instructions in the [Using the Create Songs Option](#) section:
> The current preset name and current scene name are displayed in the main display. The green preset buttons show all of the scenes that you've defined in the current preset. Pressing a green button selects a scene. Pressing Bank Up or Bank Down allows you to move through the list of Axe-Fx presets and select them. As you move through the list of presets, the green buttons will update to display the scenes available for the current preset.

The blue buttons are IA (Instant Access) buttons. These control individual effect blocks in the current preset. If an IA button is not lit, that means that the effect block is not available in the current preset. If the IA button is blue, the effect is available in the current preset but is not currently turned on. If the IA button is aqua or light blue, then the effect is currently turned on. Any of the IA buttons that are lit can be pressed to turn the associated effect on or off, just like an effect pedal.

The second line in these IA buttons indicates which channel is active. Most effect blocks have four channels and each can have different settings for its effect parameters. Holding one of these IA buttons for 2 seconds pops up a menu that allows you to select one of the four available channels.

<u>IA Mode</u>
The white IA Mode button switches the preset and bank buttons to their secondary functions. When using an Axe-Fx III, the preset buttons become Scene select buttons, and will display scene names if you have run Get Preset Names (otherwise, they'll display scene numbers). The Bank and Page/IA Store buttons will change to additional effect block buttons.

<u>Poll State</u>

The Axe-Fx III is the first device to support the **Poll State** option. This option, found in **Edit Devices**, tells the Mastermind to continuously check the Axe-Fx's state and update itself based on any changes. For example, if you enable an effect block or change its channel using the Axe-Fx front panel controls, the Mastermind's button(s) will update accordingly. This will synchronize effect bypass, effect channels and scenes.

Also, if **Ignore Incoming PCs** is not turned on, preset changes on the Axe-Fx will be reflected on the Mastermind. When a new preset is selected on the Axe-Fx, the Mastermind will change to whatever preset on the Mastermind is set up to recall that Axe-Fx preset. If more than one Mastermind preset is set up to recall that Axe-Fx preset, the lowest numbered Mastermind preset will be selected.

<u>Tuner</u>
The **Tuner** button turns on the Axe-Fx's built-in tuner and displays the tuner status on the Mastermind GT's main display. The tuner will remain on until the **Tuner** button is turned off or you select a different preset.

<u>Tempo</u>
The **Tempo** button allows you to tap out a tempo for time-based effects on the Axe-Fx. The settings in the current Axe-Fx preset determine which effects follow this tempo. Once it's been tapped, the Tempo button will flash at the current tempo.

Troubleshooting

If the Mastermind GT and Axe-Fx don't appear to be communicating, there are a number of things you should check:

1. Check the MIDI cables and how they're connected. This is the most common cause of problems. Make sure your cables are good – try other cables if you have them.
2. If you're using a phantom power box, make sure that **MIDI Bidir** (bidirectional MIDI) is turned on in MIDI Settings.
3. Make sure that the Axe-Fx's MIDI channel is set to the same MIDI channel as the Axe-Fx entry in the Mastermind GT's device settings. By default, these are both set to channel 1, but either could have been changed to something else.
4. In the Axe-Fx's MIDI/Remote settings page, make sure that settings are set as described earlier in this section.

Technical Details

Axe-Fx III support works differently than other devices. The Axe-Fx III is actually being controlled by Sysex messages sent from the GT. However, the GT is really designed to work with CCs - the built-in device database only uses CC numbers, for example. What's worse, the Axe-Fx III ships without any CC numbers predefined at all. Using CCs would require you to go in and manually set all of the CC numbers in the Axe-Fx to match the ones defined in the GT.

To get around this, we use fake CC numbers, which are translated by the software into Sysex messages behind the scenes. This allows you to continue using the typical Assign CCs and Set Default Buttons features in the GT without so much configuration needed on the Axe-Fx. A side effect of this is that the bypass and channel CC number settings on the Axe-Fx III are completely ignored – you have to use the CC numbers as defined in the Mastermind.

<u>CC Values</u>

CC values are also a bit different than normal. In addition to the standard value 0 for bypass and value 127 for active, there are values that select the effect channel:
Value 0: Bypass effect block
Value 1: Select channel A
Value 2: Select channel B
Value 3: Select channel C
Value 4: Select channel D
Value 5: Select channel E
Value 6: Select channel F
Value 127: Enable effect block

This allows us to use one CC number that can select either effect state or effect channel.

If you look at the default button settings, you can see examples of how all of this works. Each IA button uses the 0 and 127 values to turn an effect block on and off, and the hold function uses values 1-4 to select effect channel.

<u>Get Preset Names with Scenes</u>

Running the **Get Preset Names** process with **Get Scenes** turned on will retrieve preset names from the Axe-Fx and will also read the scene names from each preset. Scene names are stored in each GT preset, and they can be edited in the **Edit Preset** / **Scene Names** menu. These scene names will automatically be displayed in any Scene buttons you have defined, and also in the lower row of the main screen if **Scene Names** is turned on.

<u>Get Preset Names with Scenes and Create Songs</u>

When you run **Get Preset Names** and have both **Get Scenes** and **Create Songs** turned on, the following things will happen:

- The GT will switch into song and setlist mode
- Each selected Axe-Fx preset name will be written to a GT song
- Scenes within each Axe-Fx preset will have their names written into GT presets. (This can be anywhere from 1 to 8 scenes per Axe-Fx preset, which you can choose using the **Scenes / Song** parameter)
- Each GT preset will be assigned to the appropriate GT song
- Each GT preset will be set to select the correct Axe-Fx preset and scene
- The current scene number will be stored in each GT preset. Because each preset selects a single scene, only one scene name is stored per preset

So, in the end you get one GT song for each Axe-Fx preset, and one GT preset for each Axe-Fx scene. Pressing a GT preset button will select a scene, pressing Bank Up or Bank Down selects an Axe-Fx preset.