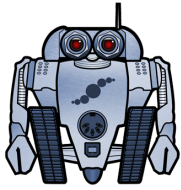




## FRACTAL-BOT MIDI UTILITY MANUAL & HELP



Fractal-Bot was created to provide a lightweight, easy-to-use utility for owners of Fractal Audio Systems Products. It has a simple interface with no hidden settings, and built-in “how-to” instructions provide guidance while you work.

Fractal-Bot can send firmware updates, and send or receive backup banks, and individual Axe-Fx II presets or cabs (original or UltraRes™). It supports the Axe-Fx II and MFC-101.

As of version 2.0, Fractal-Bot offers full support for the Axe-Fx II XL. Presets or banks created on the Axe-Fx Mark II can in fact be transmitted to an XL with no issues. Presets created on an XL can be transmitted to a Mark II, but presets created on an XL can be sent to a Mark II but ToneMatch data will not be translated correctly.

### What is Firmware? Why do I need to update?

Firmware is simply semi-permanent software. Programmed into chips, it “runs” like an operating system to enable your Fractal Audio Systems devices to function. Like software, it is tracked using version numbers: 1.0, 2.0, etc. Every Axe-Fx II and MFC-101 sold by Fractal Audio is shipped with the latest version pre-installed.

The firmware in our products is upgradeable, and we are dedicated to continual improvement. The free updates we release several times per year are highly anticipated by our customers. They enjoy the new amps, cabs, effects and features, upgrade sound capabilities, bug fixes, and more. We recommend that you keep the firmware in your products up to date as new updates are released.

The latest firmware can be found on our web site at <http://fractalaudio.com/support.php>

Firmware is packaged in a zip archive and needs to be “extracted” before using. The zip file may contain various documents in addition to the actual firmware, which is a “SysEx” or .syx file. Do not double-click the .syx file; Fractal-Bot will prompt you for its location when it is needed.

**Please read the RELEASE NOTES included in the firmware zip archive.** These let you know what’s new and alert you to anything you may need to be aware of when updating to the new version.

### Hardware and Connections



Before using Fractal-Bot you’ll need to get set up. If you are working with an Axe-Fx II, please



make sure it is connected to your computer via a USB cable and that you have installed the latest Axe-Fx II driver for your OS, available from [the support page of our web site](#). The driver is packaged with installation instructions.

When using Fractal-Bot with an MFC-101, it must be connected to your computer via either a 3<sup>rd</sup> party MIDI interface, (which will require a driver installation as directed by the manufacturer) or via 5-pin MIDI to your Axe-Fx II, which requires a special “USB Adapter Mode” setting (see p. 3 for details).

### Installing Fractal-Bot

Download, extract, and install Fractal-Bot from our web site at <http://fractalaudio.com/fractal-bot.php>

Fractal-Bot is packaged in a **zip archive** which may contain various documents besides the program installer.

*Minimum requirements for OS X: 10.7.4 or newer*

*Minimum requirements for Windows: XP or newer*

Once installed, the program will appear in your Applications (OS X) or the Start Menu (Windows).

Fractal-Bot’s version number is shown in the programs lower right corner. You can check for a new version by visiting the [download page](#) on our web site.

## Using Fractal-Bot to SEND files to your Axe-Fx or MFC-101

Fractal-Bot can be used to send files to your Axe-Fx II or MFC-101. This allows you to transmit firmware updates, restore backups, and install presets or user cabs (standard or UltraRes™).

Additional cabs are available at <http://shop.fractalaudio.com>

Launch Fractal-Bot, ensure that the **SEND** tab is selected, and follow the instructions on the screen:

**1**

**READY:** Select a Device to Update—either the desired type of Axe-Fx II or the MFC-101. If you've selected the Axe-Fx II, Fractal-Bot will automatically detect input and output ports. For the MFC-101, select only the MIDI Output port connected to your MFC-101. You should not need to adjust the MIDI Buffer Delay unless directed to do so by our support team.

**2**

**SET:** Press the browse button and select a valid Axe-Fx II or MFC-101 file. For the Axe-Fx II, you can transmit Firmware, Backup Banks (preset or system) and individual Preset or Cab files. For the MFC-101, you can transmit Firmware updates or Backups. Fractal-Bot remembers the most recently used directory.

**3**

**GO!** Press the BEGIN button to start the transmission. Carefully read and follow any onscreen instructions.

*NOTE: When updating an Axe-Fx II that is running firmware version 8.0 or later, you no longer need to place the Axe-Fx II manually into "Firmware Update Mode" as was required in the past.*

## Using Fractal-Bot to RECEIVE files from your Axe-Fx or MFC-101

Besides transmitting firmware or other files, Fractal-Bot can also receive data from your Axe-Fx II or MFC-101, allowing you to create backups files to share online at [Axe-Change](#) or elsewhere.

Launch Fractal-Bot, ensure that the **RECEIVE** tab is selected, and follow the instructions on the screen:

**1**

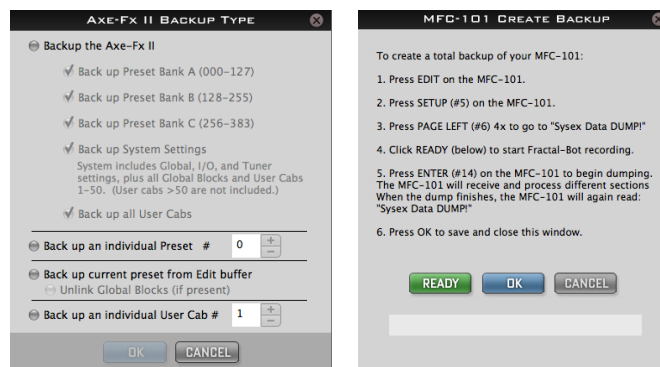
**READY:** Select a Device, the desired type of Axe-Fx II or MFC-101. If you've selected the Axe-Fx II, Fractal-Bot will automatically detect input and output ports. For the MFC-101, select only the MIDI Output port connected to your MFC-101.  
*Note: Every time you change from RECEIVE to SEND, you'll need to re-select MFC MIDI Ports.*

**2**

**SET:** Press the browse button and select a directory where all backups will be stored. Backups will be automatically named and organized inside this directory (see below). Fractal-Bot remembers your backups directory across sessions.

**3**

**GO!** Press the BEGIN button to show the Backup screen for your selected hardware. Carefully read and follow any onscreen instructions before pressing OK.



Fractal-Bot automatically detects the DISPLAY OFFSET setting of your Axe-Fx II to show "correct" preset memory numbers and save you any mental math.

## Fractal-Bot Names and Organizes Backups Automatically

Once you select a backup location in **RECEIVE: STEP 2**, Fractal-Bot automatically names and organizes files. Names include a “timestamp” (yymmdd-hhmmss) and description using the following naming templates. Please note that presets and cabs which contain characters that are “illegal” in your operating system will be renamed with a hyphen substituted for each illegal character ( / \ | " < > ? \* : )

### Backing Up The Axe-Fx

```
/Your/Directory/timestamp-bank-A.syx  
/Your/Directory/timestamp-bank-B.syx  
/Your/Directory/timestamp-bank-C.syx  
/Your/Directory/timestamp-system.syx
```

(ex: ~/Documents/backups/130515-114412-bank-A.syx)

### Backing Up All Cabs

```
/Your/Directory/cabs/cabnumber-cabname.syx
```

(ex: ~/Documents/backups/cabs/52-1x12 Tone Tools r121.syx)

### Backing Up an Individual Preset or Cab

```
/Your/Directory/presets/presetname.syx
```

(ex: ~/Documents/backups/presets/59 Bassguy.syx)

```
/Your/Directory/cabs/cabname.syx
```

(ex: ~/Documents/backups/cabs/4x12 Cali Classic.syx)

In the event of a naming conflict, a number is added to prevent overwriting existing files.

ex: ~/presets/KillaTone.syx and ~/presets/KillaTone (1).syx

**NOTE:** The “Edit Buffer” is temporary memory used to hold the current Axe-Fx preset. When Fractal-Bot is used to RECEIVE the Edit Buffer, it records whatever is in the Axe-Fx at that moment, *including* any unsaved changes.

When you use Fractal-Bot to “Back Up Current Preset from the Edit Buffer” you have the option to “Unlink Global Blocks if present” in the current preset before saving the file. Use this option when you want to share a preset containing Global Blocks with other Axe-Fx owners (via Axe-Change, for instance). For more on Global Blocks, see the Axe-Fx II manual.

### Backing Up the MFC-101

```
/Your/Directory/MFC/timestamp-mfc-backup.syx
```

(ex: ~/Documents/MFC/224615-mfc-backup.syx)

## OPTIONAL: Using the Axe-Fx II as a MIDI Interface

Axe-Fx II owners have the option of using the Axe-Fx II as a MIDI Interface to transmit MFC-101 updates or receive MFC-101 backups. Using the Axe-Fx II in this way requires that you have the **Axe-Fx II USB driver** for your operating system installed, and that you make two **temporary setting changes** to the Axe-Fx II.

### 1. Confirm that the Axe-Fx II driver is installed on your computer

Ensure that your Axe-Fx II is connected to your computer via a USB cable and that you have installed the latest Axe-Fx II driver for your OS, available from [the support page of our web site](#). The driver is packaged with installation instructions.

You can test whether the Axe-Fx II driver is working by momentarily selecting “Axe-Fx II” for the first dropdown under Fractal-Bot Step 1. If three green checkmarks appear, the driver is working! (Remember to change this back if you intend to connect Fractal-Bot to your MFC-101!)

### 2. Configure your Axe-Fx II as a MIDI Interface

On your Axe-Fx, press the I/O button, PAGE to “MIDI”, and make the following settings:

- a. Change USB ADAPTER MODE to “ON”.
- b. Change SEND REALTIME SYSEX to “NONE”.

Please remember to revert these settings to their previous values when the update is complete. The default for USB ADAPTER MODE is “OFF”, and the default for SEND REALTIME SYSEX is “ALL”.



It is **NOT POSSIBLE** to power the MFC via 7-pin phantom power during data transfers. Instead, please connect the supplied MFC-101 AC Adapter directly to its power input jack.



It is **NOT POSSIBLE** for the computer to reach the MFC-101 over Axe-Fx II Ethernet/EtherCon. You **MUST** use a MIDI Cable to connect the Axe-Fx II MIDI OUT to the MFC-101 MIDI IN.

### 3. To SEND to the MFC-101, connect Axe-FX II MIDI OUT to MFC-101 MIDI IN. To RECEIVE from the MFC-101, connect MFC-101 MIDI OUT to Axe-Fx II MIDI IN.



To avoid the risk of MIDI Loops, please do not connect both IN-to-OUT and OUT-to-IN while using the Axe-Fx II, MFC-101, and Fractal-Bot at the same time.

## OPTIONAL: Powering the MFC-101 via Ethernet/EtherCon



Under normal circumstances you should use the provided MFC-101 AC Adapter connected directly to the unit’s power jack when performing a firmware update or when creating/restoring a backup. If this isn’t possible, however, Ethernet/EtherCon can in fact be used to provide power while a standard MIDI cable sends or receives MFC-101 data.

***WARNING!** Use the Axe-Fx power switch to toggle MFC-101 power when required, rather than disconnecting the Ethernet/EtherCon cable. As stated in the MFC-101 manual, the Axe-Fx II must be powered OFF whenever you connect or disconnect the MFC-101. Carelessly “pulling the CAT5” to power cycle the MFC-101 can result in “tell-tale” damage to your Axe-Fx II, the repair of which is not covered under warranty.*

When transmitting firmware or a backup to the MFC-101 the sequence of events must be as follows.

1. Configure the Axe-Fx for use as a MIDI Interface as described above.
2. Prepare the MFC-101 to receive the file
  - a. For FIRMWARE: power on the Axe-Fx II while holding footswitch #1 to boot the MFC-101 into Firmware Update Mode. If you are using the Axe-Fx as a MIDI Interface to transmit the update, you must wait until after the Axe-Fx has fully booted before connecting a cable from its MIDI OUT port to the MIDI IN port of the MFC-101. Otherwise, the Axe-Fx will try to sync and cause “ERROR 18” in the MFC-101.
  - b. For restoring MFC-101 backups, no special restart is required. Simply enter the SYSEX:LOAD screen of the MFC-101 by pressing the following button sequence:  
EDIT → SETUP → PAGE LEFT (#6) 4x → UP → ENTER
3. With the MFC ready to receive firmware or a SysEx dump, launch Fractal-Bot and send the file.

## Cancelling Send or Receive

There may be moments when using Fractal-Bot where you change your mind or realize a mistake and want to stop everything as quickly as possible. First and foremost, do not power off your Axe-Fx while Fractal-Bot is transmitting or receiving. Instead, please use the CANCEL button (or quit Fractal-Bot altogether) to stop the program from sending or receiving data. If you act quickly, you may be in time. There are some limitations as to what can and cannot be stopped, however.

Data that has already been sent to the Axe-Fx cannot be un-sent. Bank Files write individual presets as they progress, so if you were to CANCEL after 50%, you'd find that 64 of 128 presets had already been written into your Axe-Fx II. Individual presets and cabs transmit so quickly that it is unlikely you'd be able to stop them.

During RECEIVE operations; pressing CANCEL cannot remotely abort in-progress transmissions from the Axe-Fx II. You'll need to wait for the dump to run its course before trying again.

Once an Axe-Fx or MFC-101 has fully received a firmware update file, it goes through a brief programming phase. Turning off either unit during this phase can cause serious problems. Let the update continue – and just remember, you can always downgrade!

## Tips & Troubleshooting

**Have questions about firmware updates?** Newer update files come bundled with an “Update Guide” containing useful information. You can also find these guides online at the following address: <http://support.fractalaudio.com/index.php?/Knowledgebase/List/Index/4/firmware-update>

**Is your backup data critical?** Try a “fire drill.” Use the onboard Flash ROM of the Axe-Fx to safely backup your data and then use Fractal-Bot to transmit your backup to verify its integrity.

**Are you getting errors when sending or receiving data with Fractal-Bot?** Believe it or not, an inferior USB cable may be the problem. Rely on high quality cables such as those from <http://www.fractalaudio.com/cables>

Another common cause of trouble is the computer itself. Interference from another USB Device such as an MBOX or certain other audio/MIDI interfaces. Solutions here vary, and range from simply trying a different USB port, to doing a complete manual uninstall of the offending MIDI driver. Installing the latest version of the Axe-Fx II driver may also help. Using a **different USB port** can also be helpful.

If you use Axe-Edit, you may find that a “Fractal Audio” folder already exists inside your DOCUMENTS directory. We suggest creating a new “Fractal-Bot” directory inside of this folder and allowing Fractal-Bot to organize the files it contains.

Fractal-Bot can also be used for “Recovery ROM” firmware installation. Contact <http://support.fractalaudio.com> for details.

## Checking for Updates

Fractal-Bot checks automatically for updates on startup. To check manually, visit our web site.

## Getting Help

If you need help with Fractal-Bot, please contact our support team via <http://support.fractalaudio.com>

Please be sure to include all the information we will need to help you.

1. Details on the computer.
2. Details about how you have things connected.
3. Details on any 3<sup>rd</sup> party devices such as Audio/MIDI Interfaces.
4. Version numbers: Fractal-Bot, computer OS, current/desired FW versions for your Fractal product, etc.
5. Steps required reproduce a given issue.
6. Things you've already tried to fix it.
7. Anything else we might need to know.

Our forum at <http://forum.fractalaudio.com/forum.php> can also be a valuable resource, with members helping members around the clock.