

FANTOM-G MICRO MANUAL



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Contents

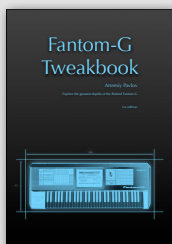
Learning resources	4
Just got my Fantom-G, now what?	5
Internal structure of the Fantom-G	6
Setup and expansions	7
Storage and sample RAM	7
System update	7
USB interface setup	8
Working with samples	9
Setting up external input	9
Sampling	10
Resampling	11
Importing audio files	11
Calculating loop tempo	13
Using samples in a sample set	14
Using samples in a patch	15
Recording	17
Recording a MIDI track	17
Recording an audio track	18
Song arrangement	19
Export whole song as audio	21
Arpeggiator and rhythms	23
Creating a rhythm pattern set	23
Creating an arpeggiator pattern	24
Working with effects	25
Applying effects to sample sets	25

Applying effects to external input	26
Data management	28
Project folder structure	28
Migrating data to a USB drive	28
Copying system settings	29
Copying sounds between projects	29
Metronome adjustment	30
Troubleshooting	31
Noise in imported samples	31
Data backup	31
Safe boot mode	31
Factory reset	32
Hardware check	32

Learning resources

[Roland Clan Library](#) ►

Make sure to visit the Fantom-G page at the Roland Clan website for other important tutorials



[Fantom-G Tweakbook](#) ►

An absolutely must-have book for learning sound design and music production with Fantom-G

[Sinevibes Roland school](#) ►

Artemiy Pavlov offers personal training courses for Fantom-G musicians who want to understand all the technologies on an intuitive level and start creating their very own, original sounds and music



[Fantom-G video collection](#) ►

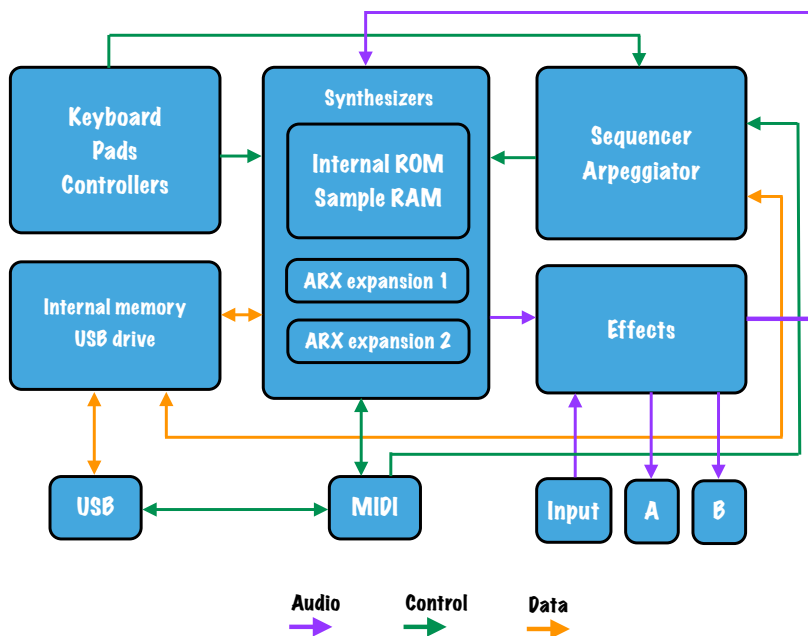
The most important video tutorials gathered in one place

Just got my Fantom-G, now what?

- 1 Check your operating system version and make sure to upgrade to the latest release.
- 2 Perform the factory reset procedure.
- 3 Get yourself a USB flash drive.
- 4 If you plan working with samples, buy a sample RAM expansion.
- 5 Install the Fantom-G USB driver on your computer.
- 6 Install the Fantom-G Editor software on your computer.
- 7 Register at the [Fantom-G forum](#).
- 8 Read this micro manual :-)

Internal structure of the Fantom-G

Working with your instrument will be much easier to you if you study how it's different building blocks and inputs/outputs are connected together. The internal structure of the Fantom-G is presented on the diagram below.



There are three types of signals that the Fantom-G's various components exchange between themselves and with the externally connected gear:

- ▶ The actual sound (audio) which you hear.
- ▶ Control information, such as notes from the keyboard.
- ▶ Data such as patches, song files and sample files.

Setup and expansions

Storage and sample RAM

There are two types of memory within Fantom-G:

- ▶ *Flash RAM* which is used for storing data.
- ▶ *Sample RAM* for recording and playback of audio.

If you want to work with multiple projects, you need to increase the storage memory. As additional storage, Fantom-G uses conventional USB drives, such as ones manufactured by the likes of SanDisk, Kingston, Transcend, Apacer, etc. with a maximum official size of 8 GB. Insert the drive in the USB memory slot on the back of the instrument, and make sure to format it before use.

If you also plan to work with samples and recording audio, you need to expand the sample RAM. This can be done with a PC133 DIMM type memory module with a size of up to 1 GB. It must be 3.3 V, non-EEC and non-buffered. This module is installed inside the Fantom-G, on the board which is accessed by unscrewing the small rectangular lid at the bottom of the instrument.

System update

Before you start working with your Fantom-G, make sure you have the latest system version installed. Information about the latest update is available at the [Roland.com website](http://Roland.com) and at Roland Clan.

Please note that all updates are full, not incremental, so you can upgrade to the latest version regardless of your current version. Full instruction are available within the download.

USB interface setup

The Fantom-G can work as an audio and MIDI interface with your computer, opening many great possibilities and often eliminating the need for additional gear. To use this functionality, you need to install the Fantom-G USB driver on your computer, and it will appear as both MIDI input/output and 24 bit 44.1 kHz audio input/output in all applications that support them.

USB MIDI from Fantom-G to computer:

- ▶ On the Fantom-G, switch to one of the SINGLE, LIVE or STUDIO modes, and select the *External* part group. This gives you access to the external MIDI parts which now send data via USB.
- ▶ On your computer, in your DAW's MIDI track or standalone virtual instrument, select Fantom-G as the MIDI input.

USB MIDI from computer to Fantom-G:

- ▶ On your computer, in your DAW's MIDI track, select Fantom-G as the MIDI output.

USB audio from Fantom-G to computer:

- ▶ On your computer, in your DAW's audio track, select Fantom-G as the audio input.

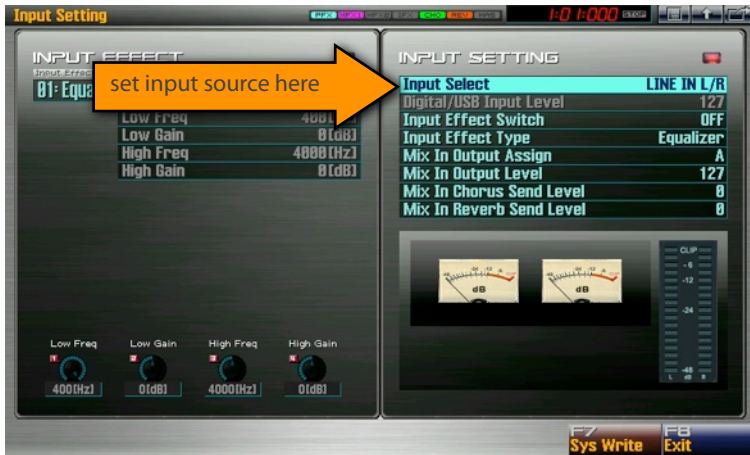
USB audio from computer to Fantom-G:

- ▶ On your computer, in your system settings, or in a specific audio application, select Fantom-G as the default audio output.
- ▶ On the Fantom-G, press **MIX IN**.
- ▶ Then hold down **SHIFT** and press **MIX IN** again, set *Input Select* to **USB AUDIO**. Adjust the input level to 40-60.

Working with samples

Setting up external input

- ▶ Plug your source into either LINE or MIC/GUITAR input and set the respective input level knob at the back to a medium position. You can also route a signal from your computer via USB audio.
- ▶ Press **MIX IN** to activate the input.
- ▶ Hold down **SHIFT** and press **MIX IN** to get to the input settings screen.



- ▶ Set *Input Select* to either *LINE*, *MIC*, *GUITAR* or *USB AUDIO* depending on what you have plugged in.
- ▶ Make a sound with your external source and adjust the level via the back panel knob or *Digital/USB Input Level* if needed.

Sampling

With the sampling function of the Fantom-G, it is possible to record virtually any external sound and then use it in a patch, rhythm kit or sample set. It can be a guitar, a microphone, another synthesizer, rhythm machine, your iPod or pretty much anything else. To record an external sound source, follow these steps:

- ▶ Set up the external input according to the instructions above.
- ▶ Press **SAMPLING** and choose **F1 Sampling**.
- ▶ Set the **Stereo Switch** to either *MONO* or *STEREO* depending on the sound source you have plugged in.
- ▶ Start recording by pressing **F8 Start**.



- ▶ Play the desired sound or phrase with your external source.
- ▶ When the sound you wanted to record ends, press **F8 Stop**.
- ▶ Press **WRITE** and save your new sample.

Resampling

In the same way as for external sound source, you can sample any internal sound that is being generated by the Fantom-G's synthesizer. This procedure is called "resampling" and is performed in a few easy steps:

- ▶ Select the sound you want to resample.
- ▶ Press **SAMPLING** and choose **F2 Resampling**.
- ▶ Set the **Stereo Switch** to either *MONO* or *STEREO* depending on the sound you want to record.
- ▶ Play the sound loudly and make sure you do not see the level meters get to the *CLIP* (overload) indicator. If needed, reduce the sound's volume level in the part mixer.
- ▶ Start recording by pressing **F8 Start**.
- ▶ Play your sound as you like.
- ▶ When the sound you wanted to record ends, press **F8 Stop**.
- ▶ Press **WRITE** and save your new sample.

Resampling is a very important technique in creative sound design, when you put the same sound through the synthesizer and effects multiple times to create something entirely different.

Importing audio files

You can import audio samples into your Fantom-G and use them in patches, sample sets, rhythm kits and even directly insert them into audio tracks. The files must be in uncompressed WAV or AIFF format, stereo or mono, 16 bit 44.1 kHz. The procedure for importing samples is below:

- ▶ Connect the Fantom-G to your computer with a USB cable.

- ▶ On the Fantom-G, press **MENU**, then **F4 USB Storage** and choose the area where your project resides (internal or USB drive).
- ▶ You will now see a new removable drive on your computer, which represents the corresponding storage area on the Fantom-G.
- ▶ Double-click this drive to open it.
- ▶ Create a folder named *IMPORT* and copy your audio files into it (note that all files must reside in the root of this folder, without any subfolders).
- ▶ Eject the removable drive using it's icon.
- ▶ Exit the USB storage mode on the Fantom-G.
- ▶ Press **MENU** and **F4 Audio Import**.
- ▶ Mark the files you want to import (by default, all files are marked for import) and press **F8 Import Audio**.



- ▶ The samples will be imported into the sample RAM and will show up in the sample list.

- ▶ Then you need to actually save these samples to the storage memory. To do this, mark them, press **WRITE** twice and confirm by pressing **F7 OK**.



- ▶ Now the samples have been imported into the project and you can delete them from the *IMPORT* folder.

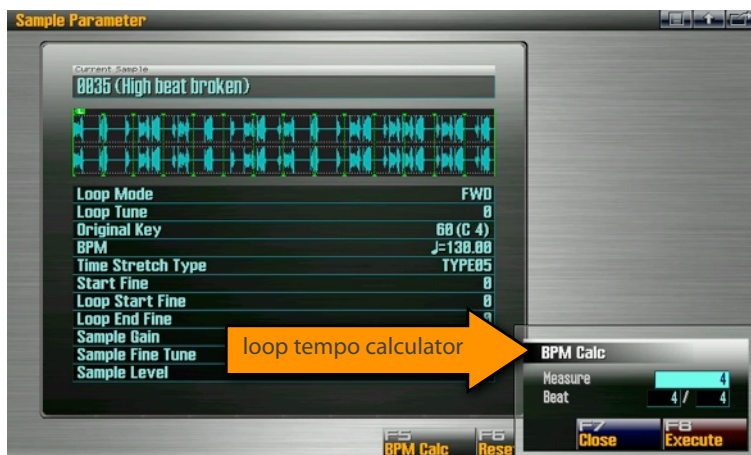
Please note that you can't simply put the files into the SMPL subfolder of your project, they need to go through the import procedure to get converted to the Fantom-G format.

Calculating loop tempo

If you imported a loop which you want to automatically synchronize to the Fantom-G's tempo, you need to first make a few settings:

- ▶ Select your sample in the sample list, then press **F8 Sample Edit** and **F2 Param**.
- ▶ Set *Loop Mode* to *FWD*.

- ▶ Press **F5 BPM Calc** and set the number of measures and time signature of the loop. Press **F8 Execute** and the tempo of this loop will be calculated automatically.



- ▶ Next press **F6 Reset Grid** and **F7 OK** to put the sync markers according to the calculated tempo.
- ▶ Press **F8 Exit** to exit the sample parameter screen.
- ▶ Press **WRITE** twice and re-save the sample.

Now, when you use this loop in a patch, sample set or audio track, it can sync to the Fantom-G's tempo clock.

Using samples in a sample set

The easiest way to make use of samples is creating a sample set. Each sample set consists of up to 16 samples, and you can define parameters such as pitch, level and pan per sample. To create a sample set, follow these steps:

- ▶ Press **F1 Patch List**, then **F5 Sample Set**.

- ▶ Locate a free or unneeded sample set. In latter case, also press **F4 Util Menu** and initialize this sample set.
- ▶ Press the **PATCH** button in the **LIST/EDIT** group to enter the sample set editor.
- ▶ The 16 samples of the sample set are laid out on the A3-D5 keys, pressing a key in this range allows you to make settings for it.
- ▶ For the key you've selected, highlight the wave parameter, press **ENTER** and choose the desired sample from the list.



- ▶ If you want the sample to play completely without having to hold the key, switch to **F6 Pro Edit** and set *Trigger Mode* to *DRUM* instead of *GATE*.
- ▶ Repeat the previous two steps for other samples that you want to assign to this sample set.
- ▶ Press **WRITE** twice, assign a name to your sample set and save it by pressing **F8 Execute**.

Using samples in a patch

If you want to lay out a sample chromatically on the keyboard, you need to create a new patch and assign it as a waveform using the following steps:

- ▶ Press **F1 Patch List**, then **F3 Patch**.
- ▶ Locate a free or unneeded patch in the user bank. In latter case, also press **F4 Util Menu** and initialize this patch.
- ▶ Press **F6 Pro Edit**, and switch to the *Wave* screen using the **F1/F2** buttons.



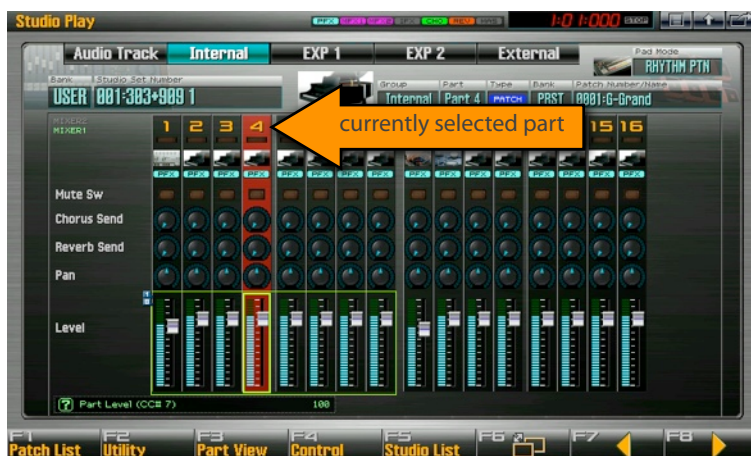
- ▶ Using the cursor buttons, highlight the *Wave Bank* parameter and set it to *SMPL*.
- ▶ Highlight the *Wave Number L* parameter, press **ENTER** and choose the desired sample from the list. If this is a stereo sample, press **F3 Set Stereo**.
- ▶ Press **WRITE** twice, assign a name to your patch and save it by pressing **F8 Execute**.

Recording

Recording a MIDI track

The fastest way to start creating a song on the Fantom-G is to use the 16 internal parts in studio mode which by default are automatically set to be recorded into the first 16 MIDI tracks in the sequencer.

- ▶ Press the **STUDIO** mode button. You will see the main studio mixer where you can switch between the 16 internal parts with the left and right cursor buttons.



- ▶ Select a part and assign a patch to it from **F1 Patch List**.
- ▶ Press the **SONG** button, this gets you to the main sequencer screen. You can choose a track to record to manually, but otherwise the Fantom-G will select the same one as the part number you've chosen in the previous step.
- ▶ Press **REC** and the recording standby window appears. Here you can optionally set a recording loop (default is 4 bars) and

switch on automatic recording quantize (timing correction, default is 16th notes).

- ▶ Press **PLAY**, the recording will start after the countdown and you can play your part in.
- ▶ When done, press **STOP**. You will now be asked if you want to keep what you've recorded, press **F7 OK** to assign your recording to a track.
- ▶ Repeat the steps above for other parts you want to record.

When done, don't forget to press **WRITE** and save your newly-created song.

Recording an audio track

- ▶ Set up the external input according to the instructions in **Setting up external input**.
- ▶ Switch to **SONG**, and choose one of the audio tracks to record into.
- ▶ Press **REC** and then **PLAY** to start recording, and record your sound or performance.



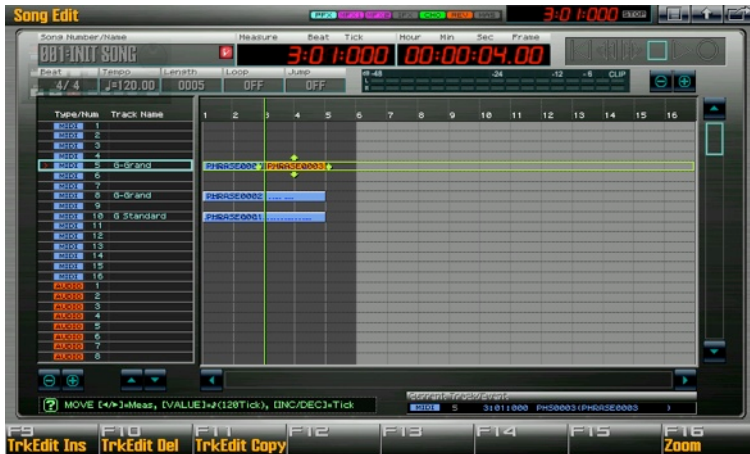
- ▶ When done, press **STOP** and if you're satisfied with this take, confirm in the pop-up dialog by pressing **F7 OK** - the recording will now be assigned to the audio track.

Depending on your recording setup, sometimes you may notice slight delay of the audio track relatively to other tracks, or redundant tail that prevents the audio phrase from being repeated in proper sync with the timeline. You can fix these problems by adjusting the start and end points of the recording:

- ▶ Press **SONG**, then **F8 Song Edit** and highlight the audio recording you want to edit.
- ▶ Press **F4 Edit**.
- ▶ Increase the *Sample Start Point* value so that there is no gap in the beginning of the sample.
- ▶ Decrease the *Sample End Point* value so that there is no unwanted empty space at the end of the sample.
- ▶ If you wish, you can also use the *Trim* operation from the *Modify* menu (with the *OverWrite* switch on) to permanently remove the redundant regions from the sample file so it takes up less memory.

Song arrangement

Arranging your recordings into a full composition comes down to operating the MIDI and audio phrases graphically on the Fantom-G's screen. Press the **F8 Song Edit** button while in the song play mode and then select the target MIDI (*blue*) or audio (*red*) phrase using the cursor buttons or the mouse. Now you can perform one of the four most common operations:



- ▶ Move by holding down the **SHIFT** button and pressing one of the cursor buttons or dragging a phrase with the mouse. You can move both to the left or right as well as up or down (to a different track).
- ▶ Copy by pressing **F3 Copy**. Another instance of the selected phrase will be placed after it.
- ▶ Erase by pressing **F2 Delete**.
- ▶ You can also modify what is recorded in the highlighted phrase by pressing **F4 Edit** - this leads you to either the MIDI sequence editor or audio sample editor, depending on what type of a phrase you've selected.
- ▶ You can create a duplicate of a MIDI phrase by going to **F1 Phrase List**, duplicating it using the option in **F3 Util Menu** and then inserting the copy of the phrase using **F1 Insert** while in song edit mode. This allows you to create a variation of the phrase without changing the original.

Export whole song as audio

Right within the Fantom-G, you can record your song into an audio file, and use it for publishing on the Internet, burning a CD or further processing on your computer. Please note that without expanded sample RAM and USB flash drive, there may be not sufficient space for you to record and export your song.

- ▶ Load the song that you want to export.
- ▶ Press **SAMPLING** and choose **F2 Resampling**.
- ▶ Play the loudest portion of your song and make sure you do not see the level meters get to the CLIP (overload) indicator.



- ▶ Start recording by pressing **F7 Start**.
- ▶ Don't forget to rewind your song to the start, and press **PLAY** to start the playback of your song.
- ▶ When the song ends, press **F7 Stop**.
- ▶ Press **WRITE** and save your recording. Remember the number under which the file was saved.

- ▶ To transfer the audio file to your computer, press MENU, then **F4 USB Storage** and select the area where your project resides.
- ▶ When the Fantom-G will appear as an external drive on your computer, double-click to open it and then locate your project.
- ▶ Inside that project, in the *SMPL* folder, you will find your audio file under the number you saved it (e.g. *0054.wav* or *0054.aif*).

Arpeggiator and rhythms

Creating a rhythm pattern set

One of the pad modes on the Fantom-G allows you to play back sequencer phrases in a rhythm machine style, transitioning seamlessly from one beat variation to another. Follow these steps to create your own rhythm pattern set:

- ▶ Record the desired rhythm variations into different sequencer phrases, making sure that there are no empty measures at the start and end of them.
- ▶ Press **PAD MODE** and then pad 6 **RHYTHM**.
- ▶ Press **PAD SETTING** and you will see a screen that shows you which phrase is assigned to each pad.
- ▶ Select the pads you can press **ENTER** on the phrase field to choose one from the phrase list.



Now you can play your rhythm patterns from the pads. Don't forget that since these are MIDI phrases, not audio, you can change the rhythm kit anytime.

Creating an arpeggiator pattern

The Fantom-G allows you to convert any sequencer phrase into a custom arpeggiator pattern, and thus play it in any key from the keyboard. To do this, follow these steps:

- ▶ Go to **SONG** mode, press **F3 Phrase List** and choose an empty phrase.
- ▶ Record the desired musical pattern into a this phrase, making sure that there are no empty measures at the start and end of it.
- ▶ Press **F4 Edit**, then **F4 Microscope** and make sure that the very first note in this phrase is the root note of your pattern (to move the root note to the very start, you can highlight it and use the **F3 Move** command with a destination of 1-01-000).
- ▶ Hold down **SHIFT** and press **ARPEGGIO**.
- ▶ Press **F1 Import Arpeggio** and choose your recorded pattern in the phrase list.
- ▶ If needed, specify a name for the new arpeggio pattern.
- ▶ Make the desired adjustments for parameters such as *Accent*, *Shuffle* and *Octave Range*, and save your custom arpeggio style by pressing **F8 Arpeggio Write**.

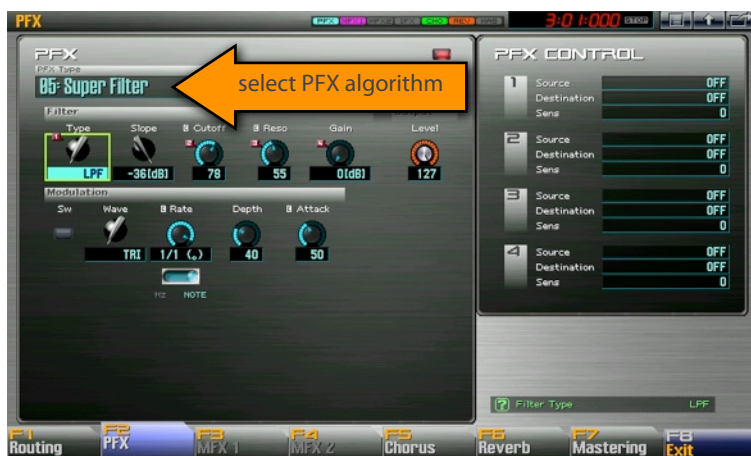
Now you can switch on **ARPEGGIO** and play it from the keyboard with any sound. Remember that if you record one part with an arpeggiator into the sequencer, you can also record other parts with other arpeggiator patterns.

Working with effects

Applying effects to sample sets

Once you have created a new sample set, you can add spice to it by processing it with one of the PFX algorithms.

- ▶ By default, all samples in the sample set are routed to the PFX processor. If you want some of them to remain unprocessed, press **PATCH** in the LIST/EDIT group, and set the output destination to *DRY* for these samples.
- ▶ Press **EFFECTS, F2 PFX** and turn on the processor on by activating the red switch on top of it's interface window.

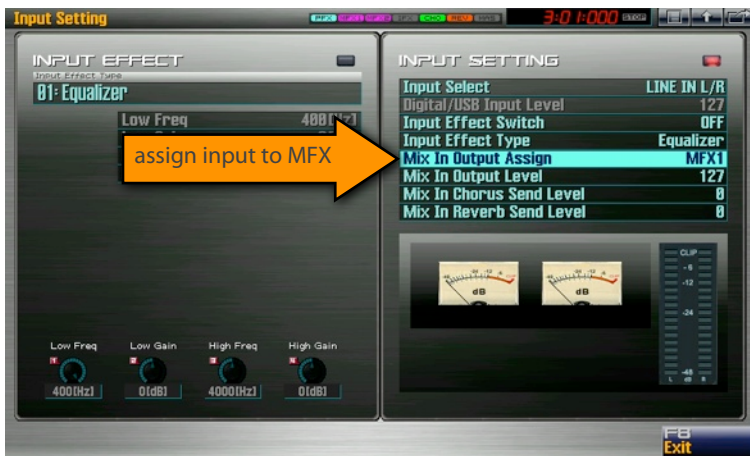


- ▶ Now choose the desired MFX algorithm type: you can do it by pressing **ENTER** on the type selector and pick it from the lists that pops up on the screen.

Applying effects to external input

With the Fantom-G's audio input, not only you can feed in and record an external sound source, but you can also put it through one of the MFX processors. There are many wonderful possibilities opening with this functionality - from DJ-style filtering, guitar distortion to robotizing your voice and much more. To route your external instrument through an MFX processor, follow these steps:

- ▶ Set up your external sound source according to the instructions in the **Setting up external input** article.
- ▶ In the **MIX IN** settings screen, set *Mix In Output Assign* to either MFX1 or MFX2.



- ▶ Press **EFFECTS** and then **F3 MFX 1** or **F4 MFX 2** depending on the MFX processor you have assigned, and turn on the processor by activating the red switch on top of it's interface window.
- ▶ Finally, choose the desired MFX algorithm type: you can do it by pressing **ENTER** on the type selector and pick it from the lists that pops up on the screen.

- ▶ Now play your external instrument or sound source and adjust the MFX parameters to obtain the desired effect.

Data management

Project folder structure

Each Fantom-G project holds your whole working environment, including user patches and sets, samples, songs, phrases, as well as system settings. All of this data is stored in subfolders of the project, which are described below.

My Masterpiece.prj

- ▶ *SEQ*
 - ▶ *ARP* arpeggiator patterns
 - ▶ *PHS* sequencer phrases
 - ▶ *RHY* rhythm pattern sets
 - ▶ *RPS* RPS pattern sets
 - ▶ *SMF* MIDI files for import
 - ▶ *SNG* sequencer song files
- ▶ *SMPL* samples
- ▶ *SND*
 - ▶ *FANGSND.SVD* user sound bank
 - ▶ *FANGSYS.SVD* system settings

Migrating data to a USB drive

If you started creating something without getting a USB drive, you likely have some data in the Fantom-G's internal flash RAM. To transfer your existing project from the internal memory to the USB drive, follow these steps:

- ▶ Press **MENU**, select **F1 Project**.
- ▶ Choose "Save As Project" in the project menu.

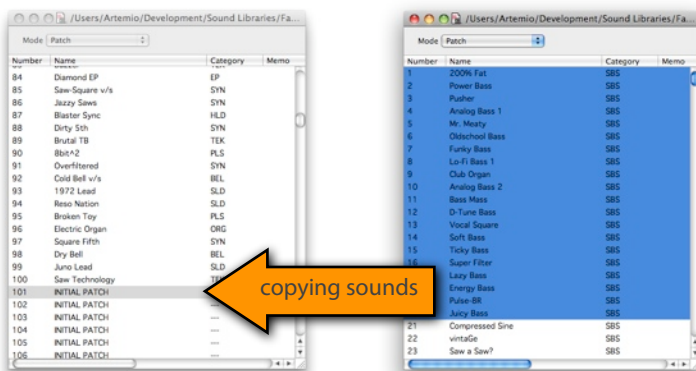
- ▶ Select **F2 USB drive** as your destination.
- ▶ Confirm and wait for the save operation to complete.

Copying system settings

System settings (such as boot preferences, custom controller setups, etc.) in the Fantom-G are individual for each project, allowing you to save and recall different setups. If you want to transfer system settings from one project to another, you can simply copy the *fangsys.svd* file from one project to another. This file is located in the SND subfolder of the project.

Copying sounds between projects

Patches, live sets, studio sets, rhythm kits and sample sets reside in the FANG.SVD file of the project and can be copied to another project using the Fantom-G Librarian software on your computer. To do this, open the FANS.SVD files from both source and target projects using the Fantom-G Librarian, select the type of data you want to copy and copy it using the copy/insert/replace operations in the "Edit" menu, then save the target FANS.SVD file when done.



Please note that if the patches, rhythm kits or sample sets that you're copying are based on samples, these sample files must be copied manually from source to target project. Be warned that this may not be possible if the target project already contains samples in the same locations.

Metronome adjustment

The Fantom-G allows you to adjust the metronome level and even change it's sound. To do this, you need to press **MENU**, choose *System* and scroll to the *Metronome* screen, where you will find the Type and Level parameters.

Troubleshooting

Noise in imported samples

If some of the samples that you imported from your computer have strange noise or produce only noise, you must check their format using a software sample editor. The format of the samples must be 16 bit and 44.1 kHz sample rate. If needed, convert (re-save) the samples with such parameters.

Data backup

It is highly recommended that you back up your data whenever you make any significant changes to it or create something new. One day, this may even save you months or years of precious work. To back up your data, simply copy all of the projects from the Fantom-G's internal memory and USB drive to your computer's hard drive. For extra safety, back it up on an external hard drive or on a network storage such as iDisk.

Safe boot mode

If the project in internal memory contains corrupt data that prevents Fantom-G from starting up, you can boot it in "safe" mode, during which it will skip loading the last selected project. This feature is also useful when you want to bypass loading the previously loaded project or quickly create a clean project.

- ▶ While the Fantom-G is powered off, press and hold the **EXIT** button.
- ▶ Turn the power switch on.

- ▶ When the Fantom-G completes the startup, release the **EXIT** button.

Factory reset

In case if you experience loss of data or strange behavior of the instrument, it is highly recommended that you perform the factory reset procedure, which formats the internal memory. Before you do this, make sure to back up all of your data. Note that with a factory reset, the Fantom-G operating system version doesn't change.

- ▶ Press **MENU**.
- ▶ With the value dial, highlight *Factory Reset*.
- ▶ Press **F8 Execute** and confirm by pressing **F7 OK**.
- ▶ When you see the procedure complete, power off your Fantom-G and then turn it back on.

Hardware check

If neither a factory reset, nor reinstalling the operating system help a certain issue, such as loading or saving large amounts of data, you should remove the USB drive, DIMM module and ARX expansion boards. Then, one by one, re-insert them into the Fantom-G, fixing them more firmly, and booting the Fantom-G to find if one of them caused problems.