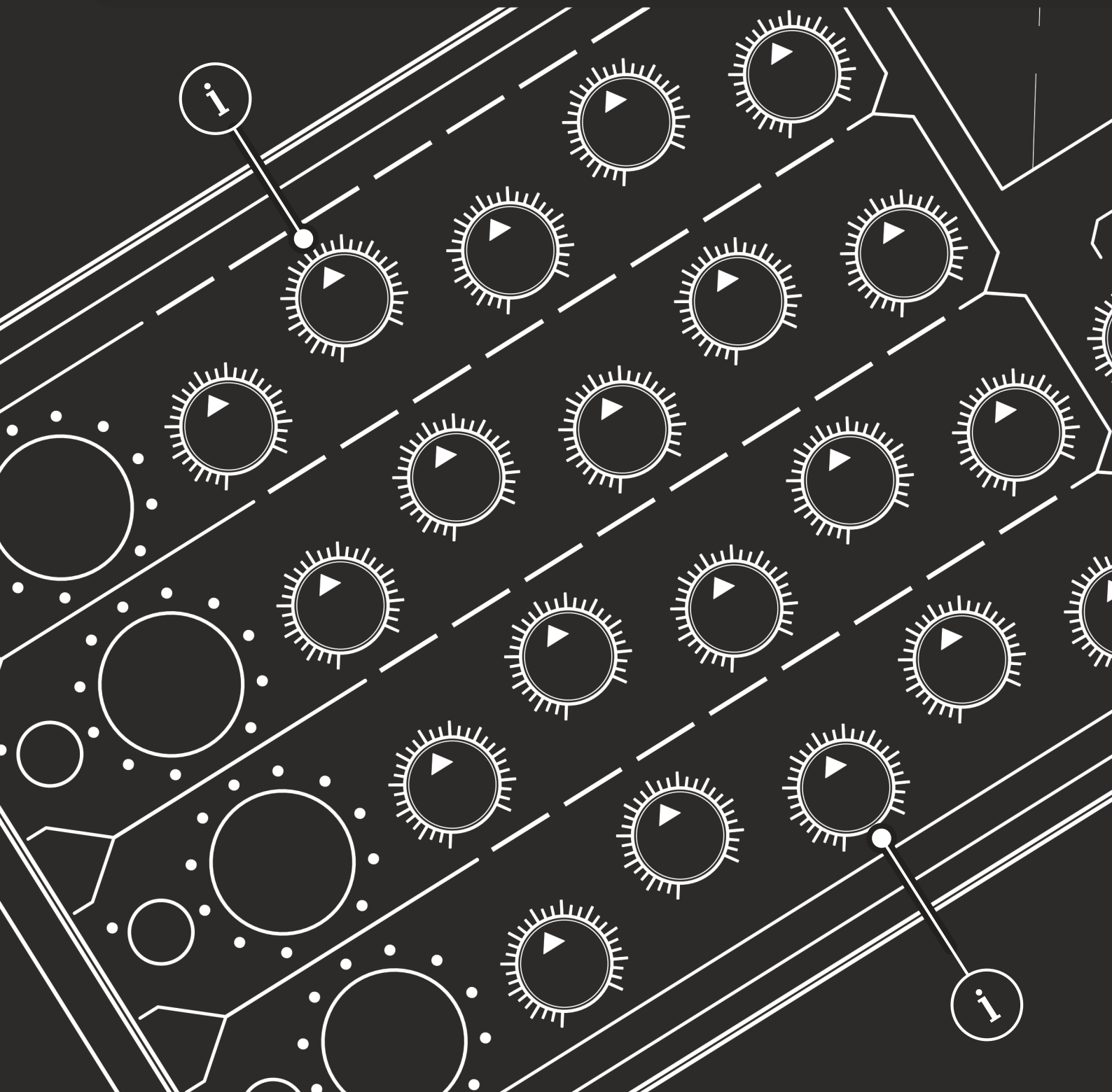


The GODFATHER

A Guidebook

A Notebook

A Reference Book



SYNTHDAWG
PRODUCER GUIDES

An official reference for enjoy
electronics' GodFather multi
channel audio processor

OS
2.01a

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Overview

Based in Calitri, Italy, Enjoy Electronics are passionate about music technology. The GodFather is the second device they have released and is described as a multichannel audio processor. It was launched after a successful crowdfunding project in the summer of 2022. The GodFather features four audio channels and can operate as a traditional 4 Channel mixer. However it is much more than just a mixer as each channel contains saturation, filter and compressor. The central features are the multiple delay models and reverb. Controls handle the amount on a per channel basis. Offset separates the left and right channels in a ping-pong style while a traditional delay line controls the typical parameters of time and feedback. An additional double pulse delay, equipped with its own filter adds unique features into the delay signal path doubling up on the audio. The GodFather is supplied out of the box in the

stylish and practical desktop enclosure along with wooden end panels and the slick illuminated logo. It is equally at home when installed into a Eurorack modular system where power is supplied within the module rack. The patch bay interfaces between a variety of desktop or modular gear both for audio and controls. The GodFather is an inspiring device with many powerful and innovative features for both live performances and studio applications. This book serves as a reference, a guidebook and a notebook. By using it in editable applications you can add your own notes and comments and build a useful informative and personal document. The book design allows space for this in the wide margins or free pages. The GodFather Notebook is intended to expand and extend beyond the official instruction manual and not necessarily replace it. Hopefully something that becomes a trusted companion to use alongside The GodFather.

1 Overview

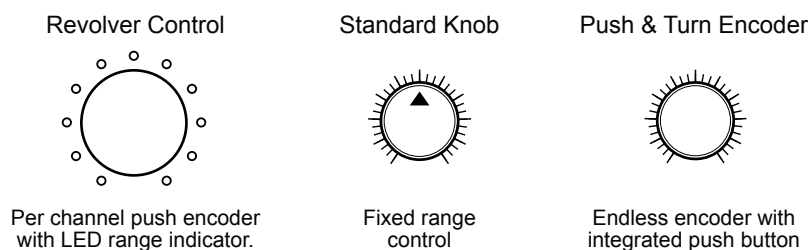
1.1 How to Use This Notebook

This book combines a formal reference with your own notes and comments, bringing together a detailed guide, user templates and tips alongside a record of your own comments which can be captured in the wide margins or blank pages allocated for note taking.

The style and sections are laid out with walkthroughs, step by step guides and illustrations in order to cover multiple learning styles.

(Knob)

Represents one of the 35 rotary knobs. There are 2 types. The standard rotary knob which operates over a defined range e.g. 0-100%. Secondly the endless push encoder which adjusts a parameter value as well as having a push control. These are labelled differently on the front panel. Each channel has a 'Revolver' push encoder that offers multi-functional options and as default controls the channel volume level. Example (Offset).



[Button]

Square parentheses contain functions that are selectable by a specifically defined hardware button and typically with other controls. These will be accompanied by the command. Example Hold [Gain].

[Button] + (Knob)

Instructions which require two function selections simultaneously are shown with a + symbol between each button. Example [Shift] + [Off]

'Channel 1'

Commands and selections within menus will be shown within text marks to indicate the target selection or key parameter described. Example 'THR'.

Modulation

The Modulation symbol will indicate a parameter that can be set as a destination for the LFO modulation. Also these can be configured to controlled by the respective channel CV input. **MOD** 

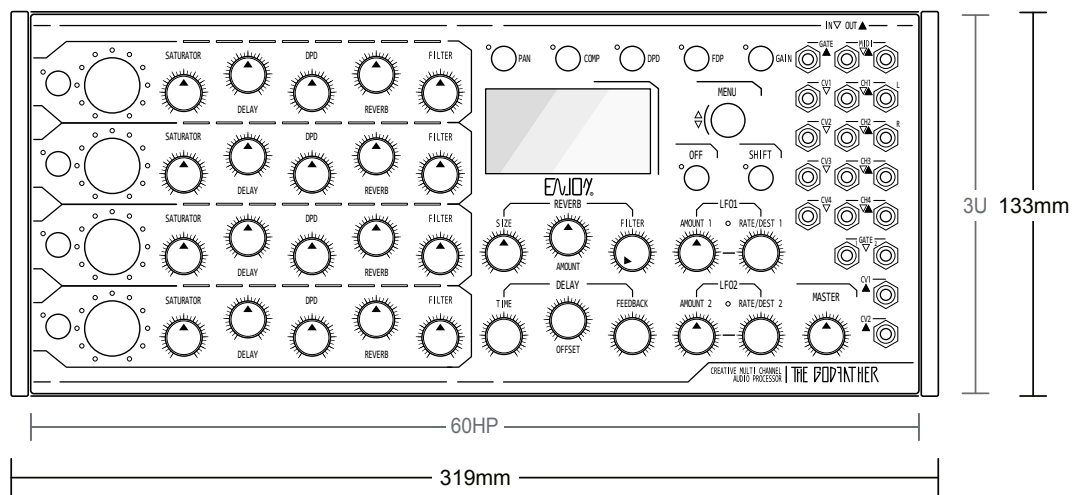
NOTES

Your Notes Can be written here Here

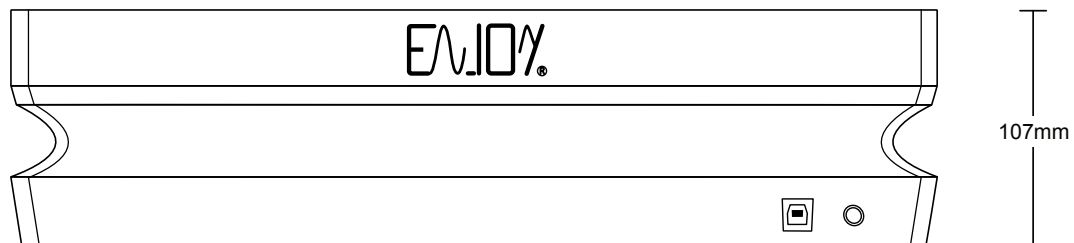
1.2 Hardware Overview

The GodFather can be used straight out of the box as a desktop device mounted within its own dedicated case and stylish wooden side panels. Also the module can be removed from its enclosure and mounted and powered within a Eurorack modular system.

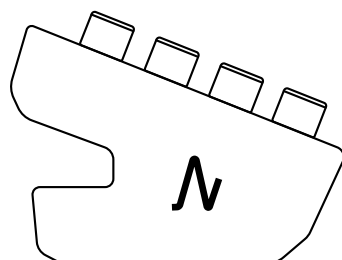
Front / Top Panel



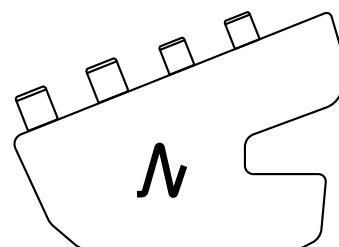
Rear / Back Panel



Left Edge



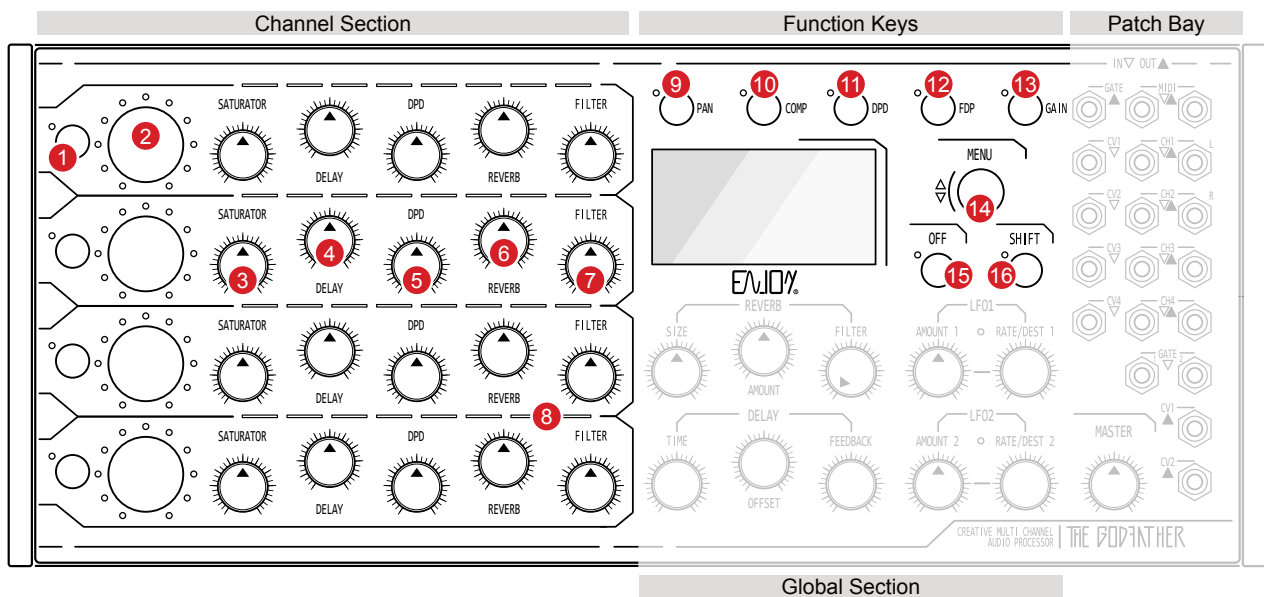
Right Edge



50mm

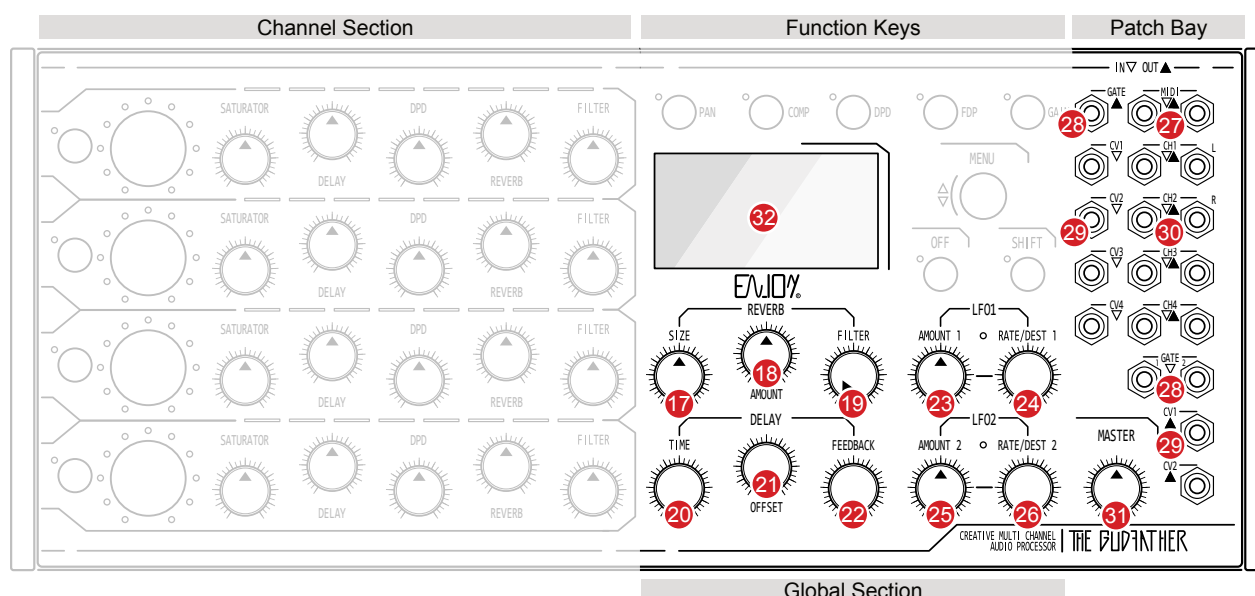
The GodFather side panels include an Enjoy Electronics logo which is illuminated when powered up.

1 Overview



- | | |
|---|--|
| <p>1 Trigger Key [Trigger]
Channel specific button for triggering the delay working mode.</p> <p>2 • Main Channel Control (Revolver)
Channel specific multi function control. Default control is channel volume / level.</p> <p>3 Saturator (Saturator)
Adjust the channel specific saturation amount of the in line effect.</p> <p>4 Delay (Delay)
Channel specific effect level. Amount of audio sent to the global delay effect.</p> <p>5 DPD (DPD)
Channel specific effect level. Amount of audio sent to the double pulse delay effect.</p> <p>6 Reverb (Reverb)
Channel specific effect send. Amount of audio sent to the global reverb effect.</p> <p>7 Filter (Filter)
Bi-directional, channel specific control of the hi-cut or low-cut filter cutoff.</p> <p>8 Channel LED Bar
LED bar graph indicator for selected parameter values, levels and adjustments.</p> | <p>9 Pan [Pan] including Width
The pan and width menu for each of the four channels, adjusted along with the revolver.</p> <p>10 Comp [Comp]
The channel compressor options and menu. Each channel has a dedicated compressor.</p> <p>11 DPD [DPD]
Double pulse delay settings for each of the four channels. Adjust with the channel revolver.</p> <p>12 FPD [FPD]
Dedicated filter for the double pulse delay. Adjust with the channel revolver.</p> <p>13 Gain [Gain] including EQ
Audio input gain and EQ adjustment per channel. Adjust with the channel revolver.</p> <p>14 • Menu (Menu)
Push Encoder for accessing and setting global 'commander' area options</p> <p>15 Off [Off]
Multi functional command button. Back up in menu's, mute channels and bypass with shift.</p> <p>16 Shift [Shift]
Used in conjunction with other functions to access secondary or alternate options.</p> |
|---|--|

- Dot represents endless push encoders. Other controls are standard rotary potentiometers or push buttons



- 17** Size (Size)
Global reverb option that represents the room size and length of reverberations.
- 18** Amount (Rev Amount)
Reverb effect output level. Adjust the amount of reverb effect returned to the mix.
- 19** Filter (Rev Filter)
Reverb specific hi-pass filter with a high and automated resonance curve adjustment.
- 20** • Time (Time)
Global delay time adjustment. Divisions with respect to global tempo.
- 21** • Offset (Offset)
Left and Right channel offset of audio signals. Independent to the delay effect.
- 22** • Feedback (Feedback)
Global delay output audio feedback to input. Generates number of delay repeats.
- 23** Amount 1 (LFO1 Amount)
Adjusts the intensity level of the low frequency oscillator 1 modulation applied to a destination.
- 24** • Rate / Dest 1 (LFO1 Rate/Dest)
Selects the speed and destination for the low frequency oscillator 1 modulation.
- 25** Amount 2 (LFO2 Amount)
Adjusts the intensity level of the low frequency oscillator 2 modulation applied to a destination.
- 26** • Rate / Dest 2 (LFO2 Rate/Dest)
Selects the speed and destination for the low frequency oscillator 2 modulation.
- 27** MIDI
MIDI input and output connectors for the supplied Type A - Mini Jack to 5 Pin Adapter.
- 28** Gate In/Out
Gate inputs x2 and output x1 connections, typically used with external clocks.
- 29** CV In/Out
Control Voltage Inputs x4 and outputs x2 typically used for external modulation control.
- 30** Audio In/Out
Four audio inputs and outputs for external gear. Ch 1&2 Out by default Left / Right out.
- 30** Master Volume (Master)
Main volume level output of all 4 summed audio channels.
- 32** OLED Display
Parameter display. Automatically shows any adjusted value or selected menu options.

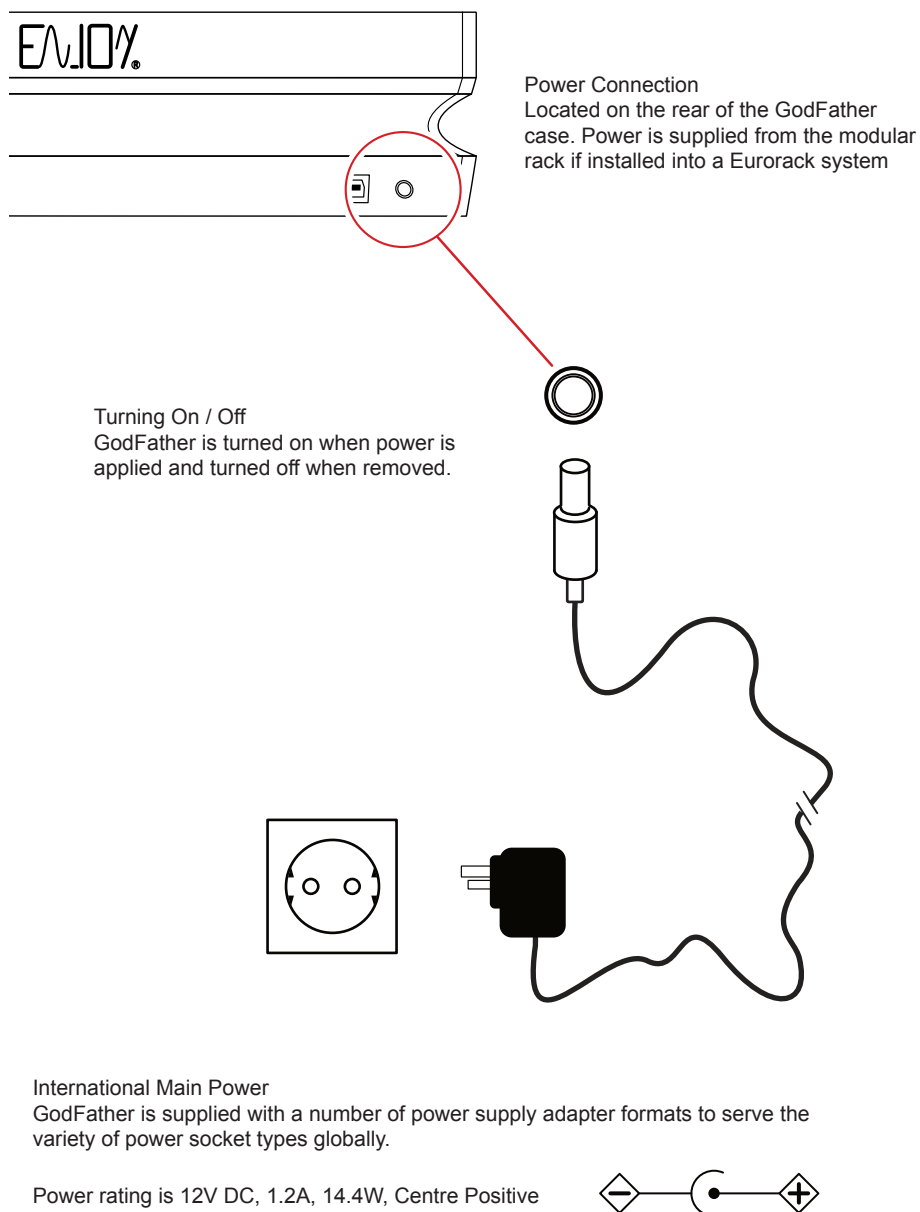
- Dot represents endless push encoders. Other controls are standard rotary potentiometers or push buttons

1 Overview

1.3 Power Up

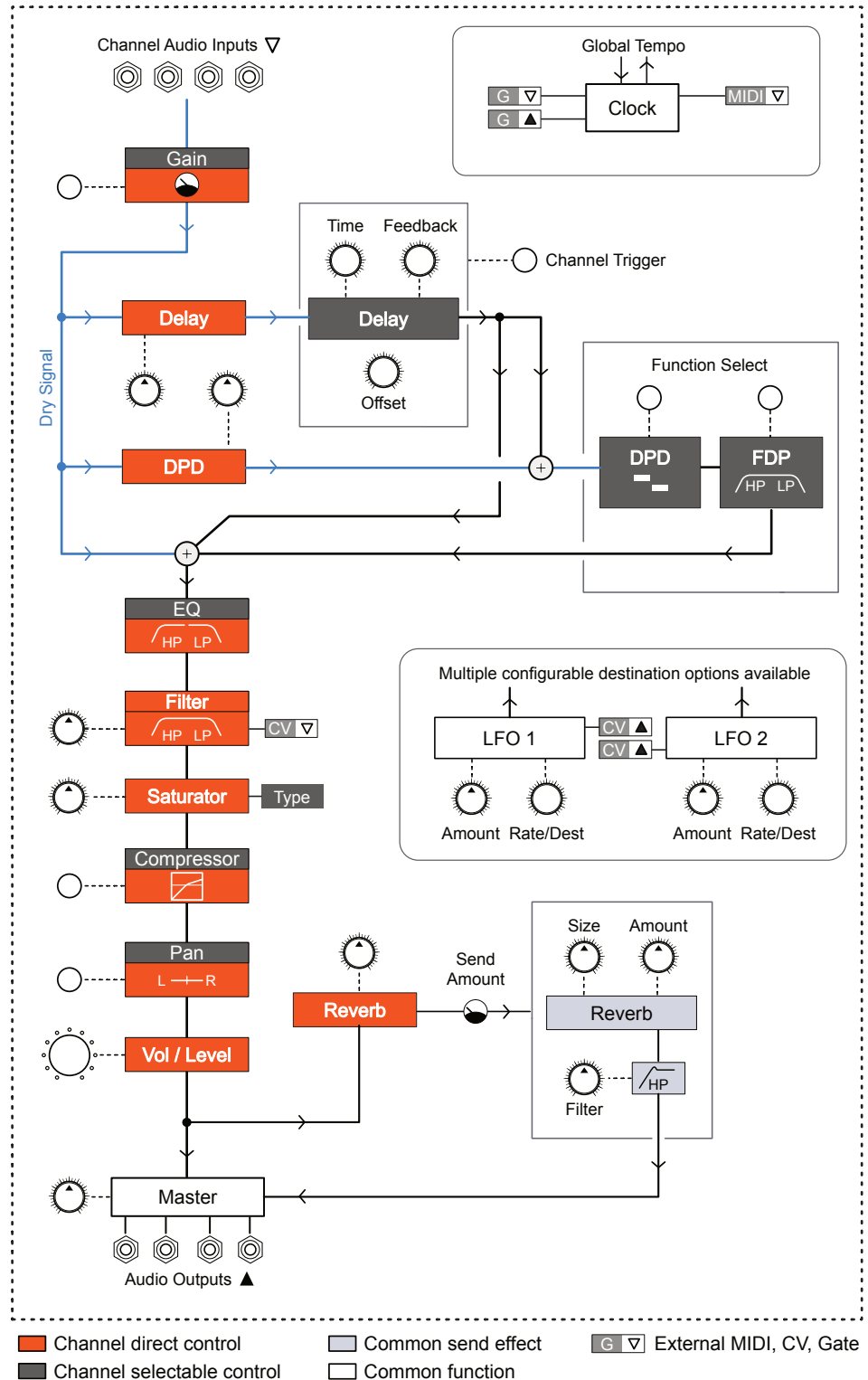
The GodFather has no power on / off switch. The device starts up when the power supply is connected. Equally removing the power connector or turning off the power supply mains will turn the GodFather off.

Ensure all external connections such as audio inputs, CV inputs and gates are connected first, and the devices powered on before turning on The GodFather.



1.4 Architecture

The diagram below is an illustration and does not aim to be an exact schematic of GodFather's inner workings. Use purely as a guide.



Audio Routing

The GodFather has four audio inputs and 4 audio outputs located in the left side patch bay. These are 3.5mm mono mini jacks. The inputs would typically interface with other audio gear such as a synth, drum machine or Eurorack audio module. The gain can be attenuated or boosted to ensure a good input level. Incoming audio can then be mixed, effects and modulation applied and audio processed. This can be used in a live performance environment, just like using a musical instrument or in a desktop studio setup as part of a music production process. The outputs and inputs are not configured in a single channel in to out correlation. The four outputs by default are configured as Ch1 Left side and Ch2 Right side stereo output. The outputs Ch3 and Ch4 would then replicate Ch1 and Ch2. This notebook will assume this default configuration within the text and diagrams unless detailed otherwise. Each channel's

volume level is adjusted using the specific revolver encoder and entire summed audio level is controlled by the Master output knob. The channels can also be individually muted and the entire module effects and processing can be bypassed. The mixing function also includes a stereo pan for each channel which can set both the pan position of the audio within the stereo field but also the stereo width of the panorama. It should be noted that the normal user interface behaviour is to automatically display the relevant page with its values while the parameter control is adjusted. The displayed page times out and reverts to the 'home' page when the adjustment is stopped. The visual feedback is not only reliant upon the display screen as each channel is also represented by an 8 step LED bar graph. The colours and style will represent the parameter affected and will give a visual feedback on the audio state during any parameter changes.

2 Audio Routing

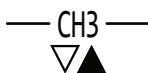
2.1 Introduction to the Patch Bay

The patch bay is where audio, control voltages and gates are routed into GodFather and also output. The CV and Gate form control functions. Audio can be channelled through the 4 mono inputs. By default the audio output utilises Ch 1 & 2 for Left & Right, while Ch 3 & 4 replicates this output. All Patch bay connections accommodate 3.5mm Mini Jacks.

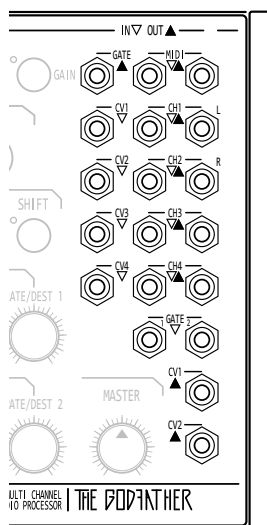
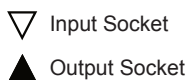
Patch Bay Conventions

Located at the right side of the GodFather front panel. The inputs and outputs are labelled by function and the input / output tag.

Function Name Label



Input / Output Tag



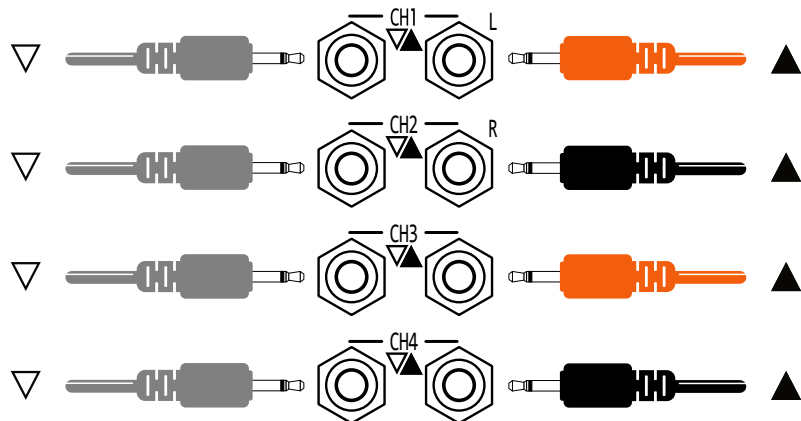
Patch Bay Functions

Function	In / Out	Number	Range	Description
MIDI	Input	x1	MIDI	MIDI Input connection for the Type 'A', Jack to 5 Pin DIN adapter *.
MIDI	Output	x1	MIDI	MIDI Output connection for the Type 'A', Jack to 5 Pin DIN adapter *.
Gate	Input	x2	0V to +5V Tolerant to 10V	Used for external clock input control of GodFather's global tempo.
Gate	Output	x1	0V to +5V	Control of an external clock from the global tempo. Configure in the 'Sync' menu.
CV	Input	x4	-10V to +10V	Control input for the low pass & high pass filter cutoff. Configure in 'Sync' settings.
CV	Output	x2	0V to +5V	Outputs the LFO 1 & 2 control to the respective CV outputs 1 & 2.
Audio	Input	x4	10V Peak to Peak	Four audio inputs representing each of the four audio channels
Audio	Output	x4	10V Peak to Peak	Four outputs, by default 1 & 2 is Left & Right and outputs 3 & 4 replicate 1 & 2.

* The GodFather is supplied with two Type 'A' MIDI Adapters.

2.2 Audio Inputs & Outputs

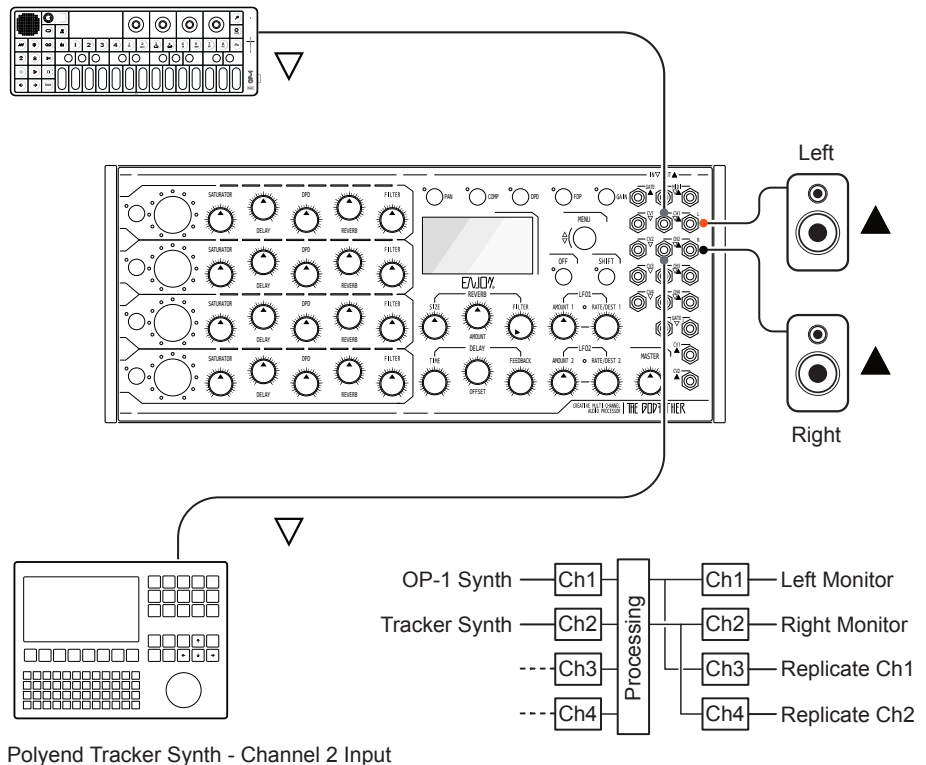
The audio inputs and outputs are channeled through the patch bay. These are 3.5mm Mini Jacks and typically Mono TR connections. The default configuration is output 1 & 2 to provide Left / Right channels.



Example: Typical Audio Configuration.

Based on the GodFather default audio input and output configuration settings.

TE OP-1F Synth - Channel 1 Input



Polyend Tracker Synth - Channel 2 Input

2 Audio Routing

2.3 Introducing the Channel LED Bars

Each channel has a multi functional LED indicator bar. This will represent the state or value of various parameters depending on the context of operation and parameter being adjusted.

LED Bar Graph

Located above each channel strip, the LED Bar will display the value and colours based on the parameter or mode selected.

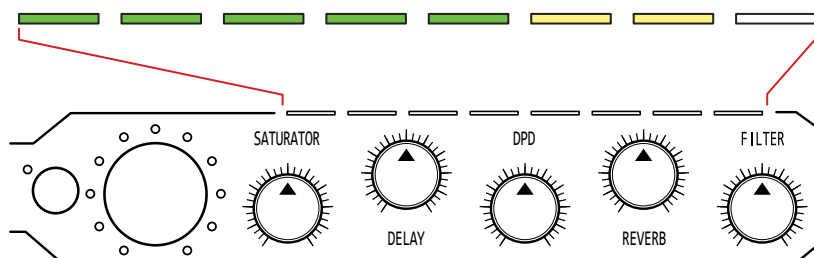
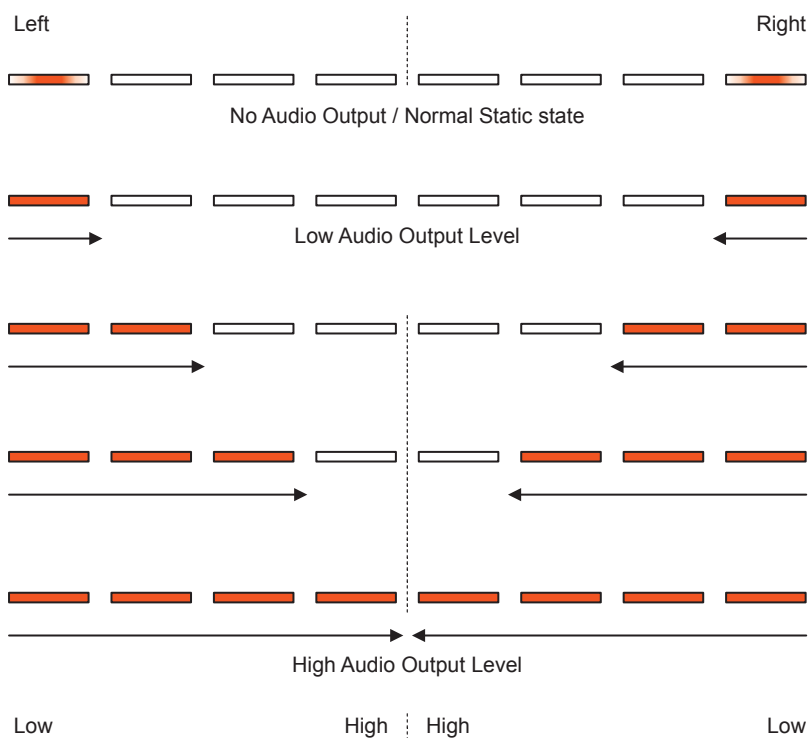


Illustration above shows the LED's for the audio input while adjusting the channel gain.

Default Indication

The default LED Bar indicator shows the left and right output level. This state is when no other functions are selected. Each channel is represented by 4 Orange LED's left to centre for the left output and right to centre for the right audio output.



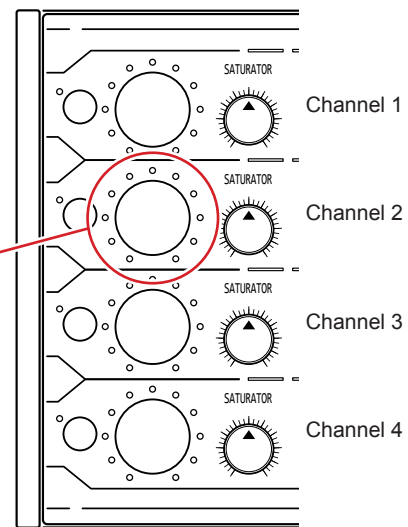
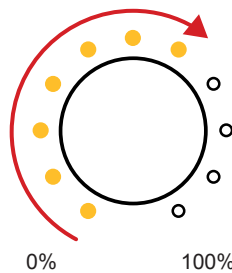
2.4 Channel Level & Input Gain

A variety of devices can be connected to the audio inputs, typically directly from line level or modular gear. Some devices may need additional hardware, for example a guitar or microphone preamp. The audio input gain can be adjusted to ensure an appropriate level while also managing the signal to noise ratio effectively. Start with a low to medium channel volume then adjust the channel specific gain to get a good input level.

Channel Volume Level

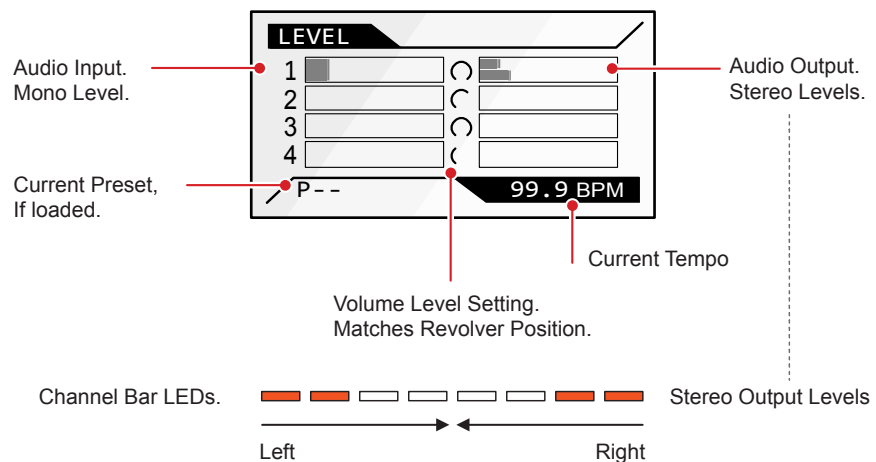
Revolver Volume Control

By default the revolver push encoder will adjust the volume level of the specific channel. The encoder is rotated and the rotary LEDs indicate the volume level state.



Volume Control Display

The 4 channel levels plus the real time audio levels will be displayed automatically while the physical adjustment is being made. The Volume / Level display is also the default 'home' page for GodFather. The page will automatically revert to the 'home' view when adjustment is complete, this is generic GodFather user interface behaviour. Global tempo also displayed.



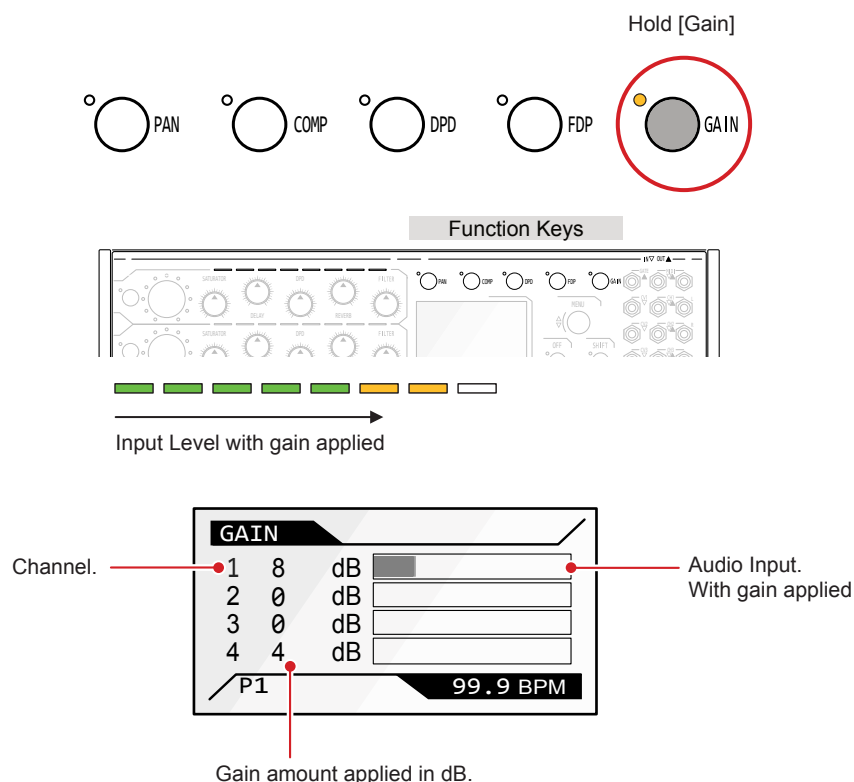
MOD

The channel volume can be modulated globally from the LFO and CV Functions.

2 Audio Routing

Input Gain Setting

The gain setting is accessible by holding the [Gain] function button. This must be held while adjusting the revolver. Aim for a strong audio signal with minimal noise.



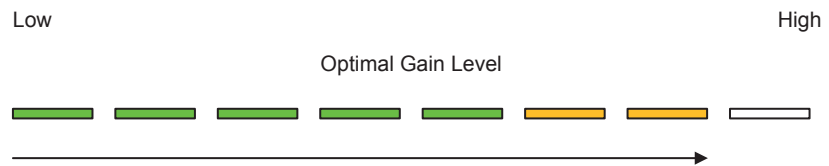
SETTING THE INPUT GAIN

1. Ensure an audio device i.e. Synth is connected to the desired input channel and is playing audio.
2. Turn (Revolver) for the desired channel to adjust the volume level to approximately 30-50% level. This will allow adjustment range up and down for the level once the gain has been set.
3. Hold [Gain] + Turn (Revolver) for the channel to adjust. The gain button LED will illuminate while held. Adjust the dB level to ensure a good signal is heard. As a guide a high green, peaking at the Orange coloured channel LED bar is a good gain level. Sustained red should be avoided although short peaks are ok. Full range is -10dB to +25dB.
4. Release all buttons when a desired level has been set. Use the (Revolver) to control subsequent channel levels. The display will revert to the 'home' page.

Optimal Gain Settings

Setting gain should also be in conjunction with setting the external device output level. This should be set to an appropriate level first.

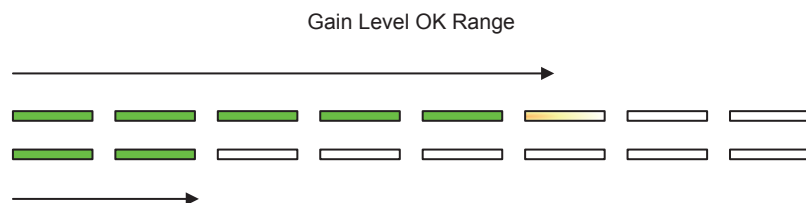
Channel LED Bar Indicator



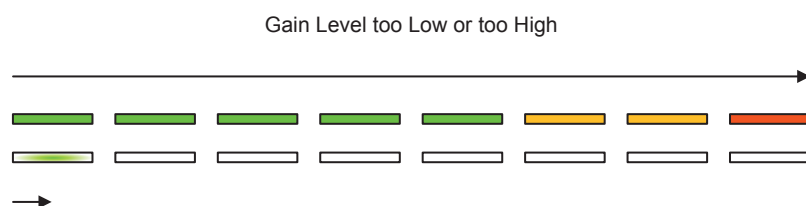
Peaking at green or orange LED's. Ideal for general and sustained levels.



Peaking at red LED's is ok with short peaks when not sustained i.e. Kicks, Snares



A mid range setting should be ok in most applications. Pay attention to noise level.

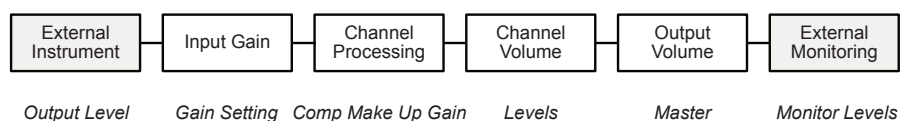


Sustained red or low green may not get good effect application or good mix balance.

Gain Staging

Gain staging considers all end to end settings including external gear, not just one point of adjustment to ensure optimum levels with minimal noise.

Example



2 Audio Routing

2.5 Linking Channels

While the default state is to route 4 independent mono channels through the four tracks, the option to link channels to create a stereo pair is also possible. Channel 1 and 2 can be linked together as a stereo pair and channel 3 and 4 can be linked as a stereo pair. This is performed in the settings menu.

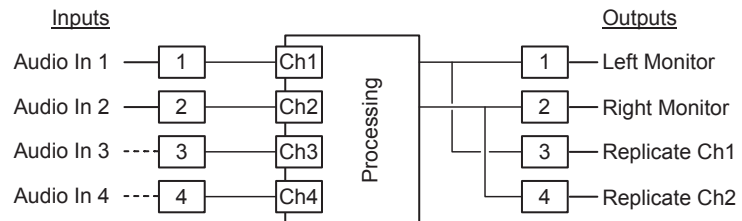
SETTING THE STEREO INPUT PAIR

1. Press (Menu) to open the menu options
2. Turn (Menu) to highlight the 'Settings' option. The sub menu of settings will be displayed in the right side column of the screen. Press (Menu) when 'Settings' is highlighted.
3. The options available are called 'Link 1-2' to link channels 1 and 2 and 'Link 3-4' to link channels 3 and 4. Tag one of these options by turning (Menu) to navigate, then Press (Menu) to select once the flashing cursor tag is aligned to the option.
4. The option to set two channels to a stereo pair or individual inputs for channels is possible. Set the option to 'Yes' or 'No' by turning (Menu).
 - Yes: Links and operates the two audio input channels. The selected channel pair will operate as a left / right stereo.
 - No: Operates channels as independent inputs. This is default.
5. When 'Link 1-2' is On, the stereo channel is controlled by Channel 1 controls. When 'Link 3-4' is On, the stereo channel is controlled by Channel 3 controls. Panning operates as balance.
6. Pressing 'Off' will backup and exit the menu.

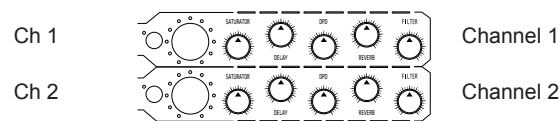
MENU	SETTINGS
SYNC	LINK 1-2 N
MIDI	LINK 3-4 N
CV IN	CATCH ON
PRESET	V-DISP N
SETTINGS	CV VOLT 10
SOUND	
UPDATES	

The option to operate with channels 1 + 2 in stereo and 3 + 4 in stereo or as default individual mono channels can be configured.

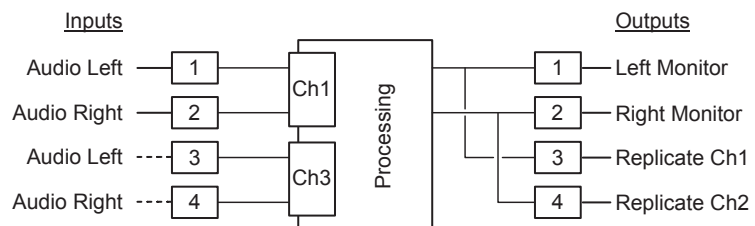
Independent Channels - Default



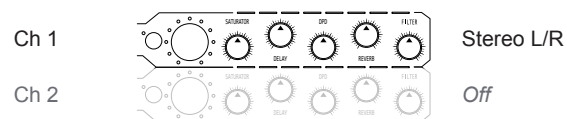
The standard, default configuration will operate channel 1 and channel 2 individually using the independent channel strip parameters. Each channel can be controlled with the level, saturation, delay etc.



Stereo Channels 1 & 2 / 3 & 4



Example: The linked configuration will operate channel 1 and channel 2 as a stereo L/R pair with common channel strip parameters. Channel 1 will be the control channel. Channel 1 will therefore control the level, saturation, delay etc of both inputs as a common function. Channel 2 parameters have no effect. Same principles apply for channel 3 and channel 4.



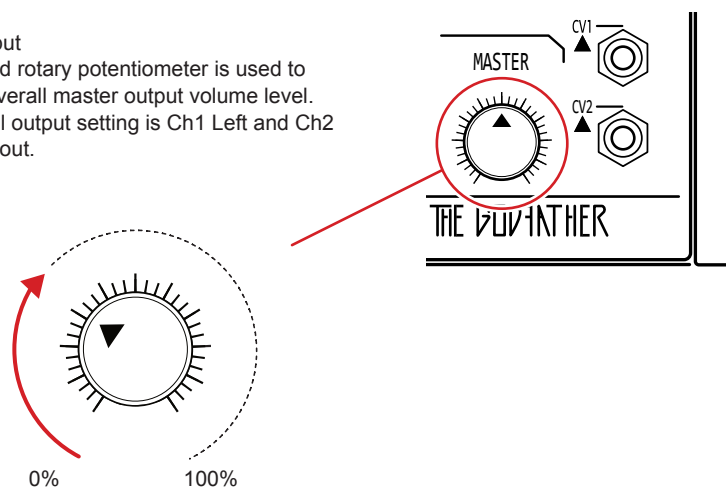
2 Audio Routing

2.6 Master Output

While each channel has its own volume level control to allow channel mixing, The GodFather also has a master output level control. This is the main output level control and will adjust the entire audio out. Start with a low level when setting up monitors and input gear to avoid an overly loud output. There is no value for master output displayed on the screen but the channel audio 'home' page remains on show.

Master Output

The standard rotary potentiometer is used to adjust the overall master output volume level. The physical output setting is Ch1 Left and Ch2 Right audio out.

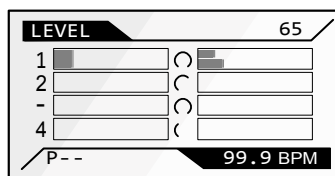


SETTING THE MASTER OUTPUT LEVEL

1. Turn (Master) to adjust the overall output volume level up or down.
2. Ensure all channels are set to the appropriate levels and all channel functions i.e. compressor to the desired settings.
3. Iterate between channels and master to develop a well balanced mix.

Volume Level Display.

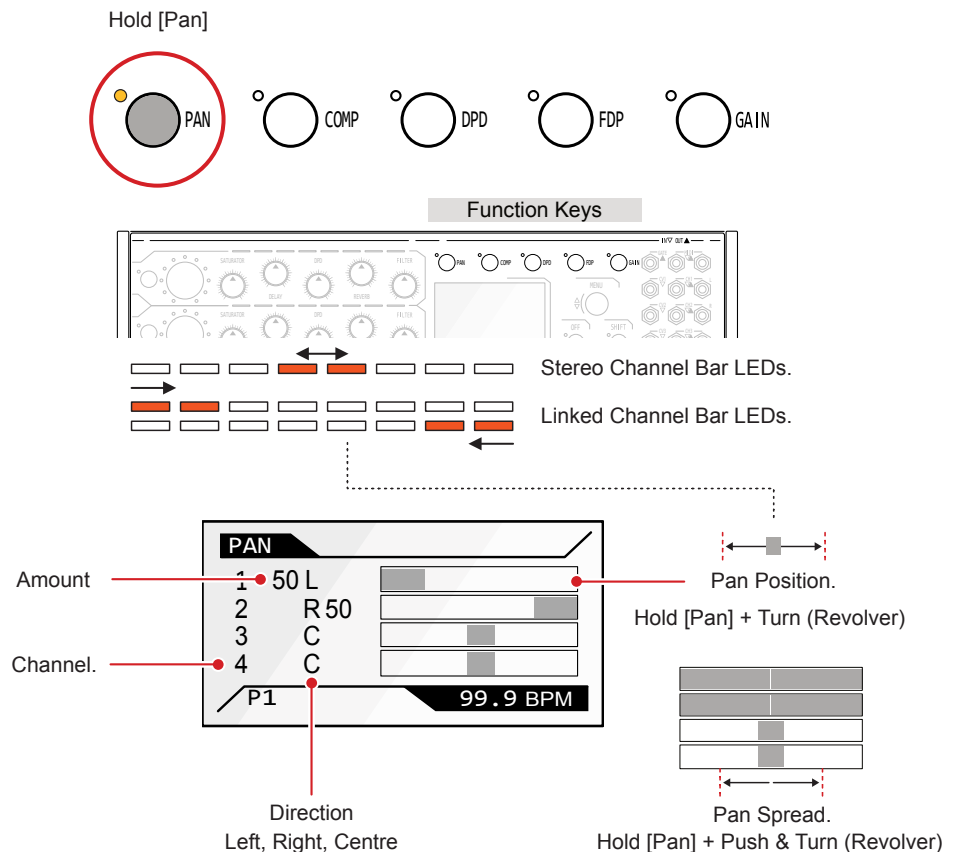
The option to display the main volume level on the display header is enabled by setting the global 'V-Disp' option to 'Y', Yes. This setting is found in the global menu under the settings option. If set to 'N', No, then there will be no numerical level displayed. V-Disp or Value Display also affects the presentation of other parameter pages and whether the value is shown or not.



The 'Master Volume can be modulated globally from the LFO and CV Functions.

2.7 Pan Stereo Width

While each channel has the option to adjust the stereo position and width of the processed audio. The control will adjust from a pure monophonic signal to maximising the spread left and right in the stereo panorama.



SETTING THE PAN POSITION AND SPREAD

1. It is advised to adjust pan by ear as well as the visual indicator.
2. Hold [Pan] + Turn (Revolver) for the channel to adjust. The pan function button LED will illuminate while held. Adjust the position left, right or centre. The direction, amount and position are shown while the pan is adjusted on the display and also with two LED's on the channel LED bar graph. Range is -50 to C to +50 or R/L for linked channels.
3. Hold [Pan] + Press & Turn (Revolver) to adjust the width of the stereo spread. The display will show the spread instead of the position.
4. Release all buttons when a desired position has been set. The display will revert to the 'home' page.

MOD The Pan can be modulated globally from the LFO1 Functions.

2 Audio Routing

2.8 Muting Audio Channels

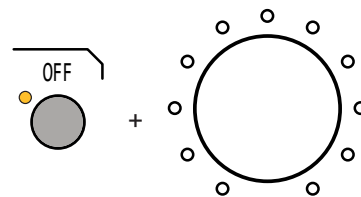
Each channel has a mute option. This will mute the audio output so the input audio will be visually represented on the relevant pages but audio output will be silent and not be heard. Unmuting follows the same process.

Muting a Channel

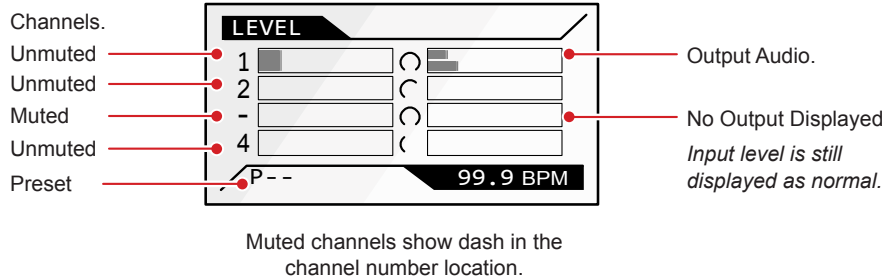
Each channel can be muted, silencing the output audio. Input is visually displayed but cannot be heard. All Revolver LED's and the channel LED Bar will be unlit when muted.



Mute: Hold [Off] + Press (Revolver)



Unmute: Hold [Off] + Press (Revolver)



MUTING A CHANNEL

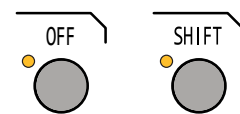
1. Hold [Off] + Press (Revolver) to mute the selected track.
2. A muted track will display:-
 - A dash in the channel location and no output value. When active / unmuted this shows channel number.
 - The channel revolver rotary LED's will be off. When unmuted and active this shows the volume level by the LED state.
 - The channel LED bar graph indicator will be off. When unmuted and active this will show the LED's representing the parameter state or will illuminate the end two LED's dimly.
 - The audio output bar graph will be off. The input audio is displayed as normal.
3. Hold [Off] + Press (Revolver) to unmute the selected muted track.

2.9 Bypassing All Audio Processing

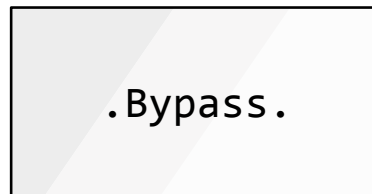
A global bypass option allows the removal of all audio processing. Effectively this simply delivers the input audio to the output. Useful for checking the raw input audio signals or if the effects get too crazy. When GodFather is in bypass mode MIDI CC values of potentiometers are still sent out on the selected output MIDI Channel.

Bypassing The GodFather
Hold Shift then press Off, in this specific button order to bypass the GodFather processing and effects. Press again to resume processing. All channel LED's will be off and the display will indicate 'Bypass'.

Bypass On: Hold [Shift] + Press [Off]



Bypass Off: Hold [Shift] + Press [Off]



Bypass message is displayed while
ever the state is active

■ BYPASSING GODFATHER

1. Hold [Shift] + Press [Off] to bypass all effect and audio processing. Ensure buttons are held/pressed together.
2. A bypass message is displayed and all channel LED's will be off.
3. Hold [Shift] + Press [Off] when bypass is on to return to normal mode and restore all effect and audio processing.

The GodFather can be configured to send all current CC values out on the MIDI channel when bypass is pressed. This is called MIDI Snapshots and is useful to send the current state to a DAW or to transfer settings between GodFather devices. This is set in the MIDI settings under the MIDI-SNAP option.

2 Audio Routing

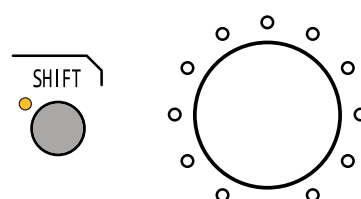
2.10 Routing Channels to Preview

The normal state is that output channels 1 & 2 will output a summed mix of the left and right stereo signal. This is automatically replicated by default at channel 3 & 4. However inputs can be individually selected and directly routed to channels 3 & 4. Muted tracks will still be audible when routed to Ch3 & Ch4 when set this way. This offers the benefit of previewing individual channels or to create a specific headphone mix.

Routing a Channel to 3/4

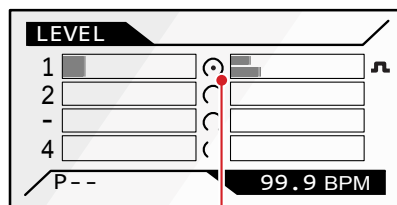
Each channel can be routed manually and directly to channels 3 & 4. The 'home' display will show a dot and when holding [Shift] the Channel will show '>' for routed channels.

Route: Hold [Shift] + Press (Revolver)



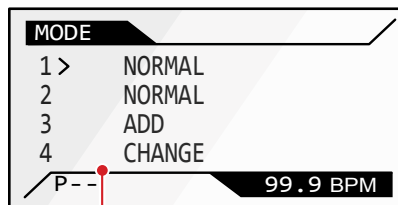
Disconnect: Hold [Shift] + Press (Revolver)

Home / Mixer Page. Shows dot in the centre of the encoder setting. Muted channels will be audible on 3/4.



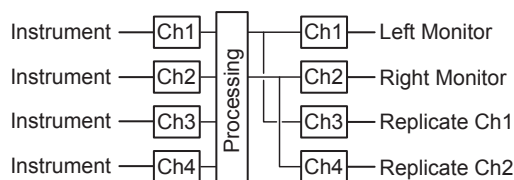
Routed Channels
Routed to 3/4 shown with a • dot and the routing symbol.

Working Mode Page will show > next to channel. To access working mode hold the shift button.



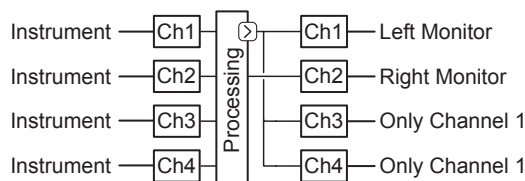
Tagged > channels
routed to 3/4

Default / No Manual Routing



Preview Routing Example

Only manually routed channels to Ch3 & Ch4. Muted channels are audible at 3 & 4.



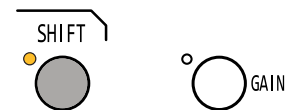
2.11 Channel EQ Shape Function

The Channel EQ operates over 2-Bands. A High Pass Filter attenuates frequencies below 1kHz adjustable down to the default 5Hz. The Low Pass Filter attenuates frequencies above 5.3kHz and is adjustable up to the default 20kHz. This can be set as a fixed EQ for each channel.

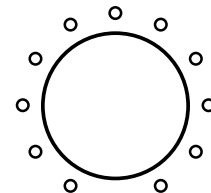
Selecting the EQ

Select the EQ page covering all channel settings using shift and gain. Unlike other functions the page locks on and remains on display to aid adjustments. Press gain to exit.

EQ Page: Hold [Shift] + Press [Gain]



With the EQ page open the 2 band filters can be adjusted. Turn (Revolver) to adjust the high pass filter setting and Press & Turn (Revolver) to adjust the low pass frequency setting.



Press any function button to exit

Per Channel

High Pass
5Hz - 1kHz

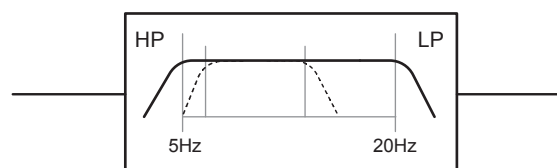
Turn channel
revolver knob

EQ SHAPE			HIGH PASS	
1	HP:	5	LP:	20000
2	HP:	5	LP:	20000
3	HP:	5	LP:	20000
4	HP:	5	LP:	20000
P --			99.9 BPM	

Low Pass

5.3kHz to 20kHz

Push + Turn channel
revolver knob



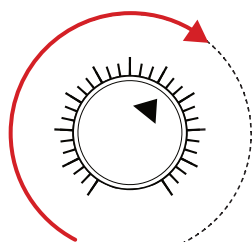
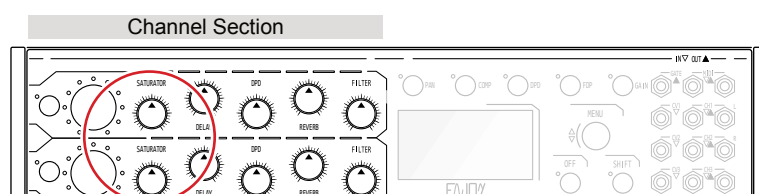
SETTING THE CHANNEL EQ SHAPE

1. Hold [Shift] + Press [Gain] to open the EQ page. Page will stay open.
2. To adjust the channel high pass EQ setting, Turn (Revolver) for the respective channel. The display header indicates 'High Pass'.
3. To adjust the channel low pass EQ setting, Press & Turn (Revolver) for the respective channel. The display header will indicate 'Low Pass'.
4. Press or turn any other control to exit.

2 Audio Routing

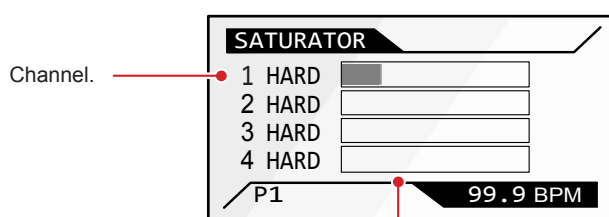
2.12 Saturator

The GodFather has an inline independent saturator effect whose sound can be configured per channel. The principles of saturation are born from the wear and tear and overloading of audio tape or electronic components. This introduces compression and distortion, although in a mild form. While classic distortion can be grungy and heavy, saturation is more subtle adding warmth and thickness to audio sounds. The GodFather Saturator uses wave shaping and operates at dB level to add more punch, dirt and helps develop a warmer sound for the channel.



Saturator

The saturation amount can be adjusted 0% to 100% directly within each track by turning the standard rotary knob. Subtle settings add warmth and increase to introduce more dirt.



Amount of Saturation applied 0-100% as per range marks surrounding the knob

MOD  The saturator can be modulated globally from the LFO and CV Functions.

The saturator sound type can be configured per channel. This setting is found in the main menu, sound sub-menu and offers three saturator options: Hard, Tape or Fold. Each type applies a different character for the channel sound.

CHANGING THE SATURATOR SOUND TYPE

1. Press (Menu) to open the menu options.
2. Turn (Menu) to 'Sound' then press (Menu) to select this sub menu. The Saturator options are found in this menu.
3. Turn (Menu) to highlight the Saturator' option and then Press (Menu) to open the sub-menu options.
4. To set the saturator type for each channel, firstly highlight the channel to edit, then press (Menu).
5. When the channel is selected, push (Menu). The cursor tag will stop flashing. Turn (Menu) again to select the saturator type. Choose between hard, fold and tape.
6. Press (Menu) to confirm. The selected mode will determine the character of the saturator sound for the selected channel.
7. Pushing and turning the respective channel revolver knob will also edit these settings when in this page.
8. Once complete, tap [Off] to backup and exit the menus.

MENU	SATURATOR	
SYNC	CH 1	HARD
MIDI	CH 2	HARD
CV IN	CH 3	TAPE
PRESET	CH 4	FOLD
SETTINGS		
ISOUND	LINK 1-2	Y
UPDATES	LINK 3-4	N

Sound options found in the main menu.

Saturator Type Per Channel.

Options are: Hard, Tape and Fold.
The Hard option is default for all channels.

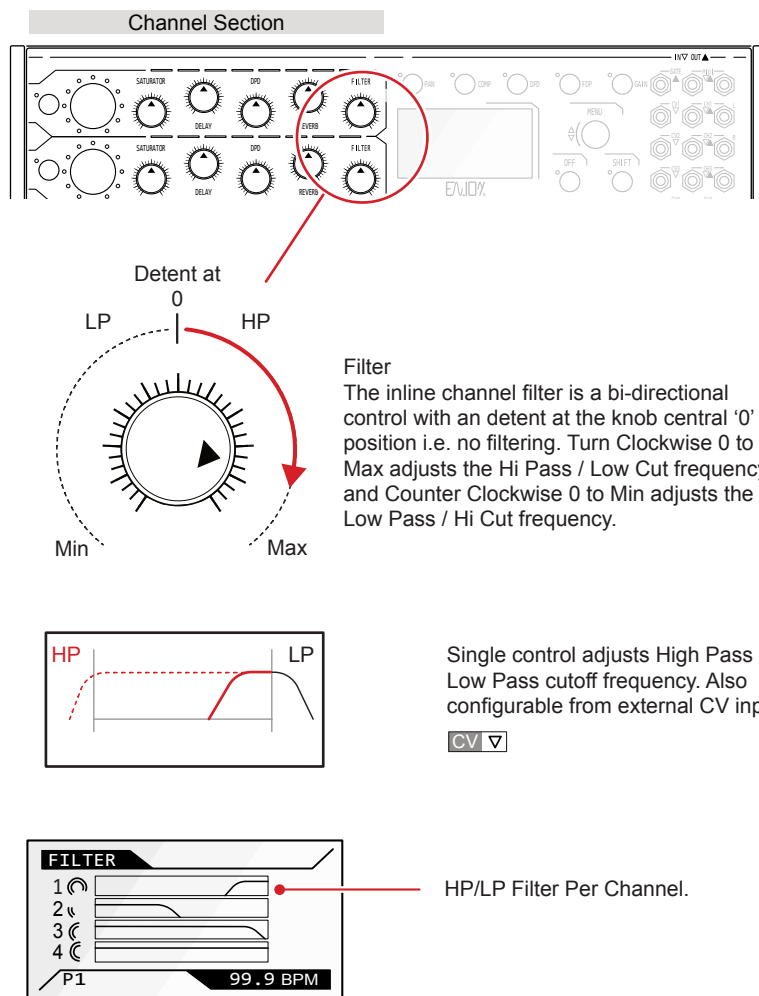
The channel links 1-2, 3-4 status is shown as a visible indicator in this page. These can be edited in the 'Settings' sub-menu.

Warning: Take care when changing the saturator types while playing as the volume level may be affected. It is advised to use a lower volume when changing the saturation sound types.

2 Audio Routing

2.13 Channel Filter Function

The channel filter operates with an integrates high pass filter to cut low frequencies or as a low pass filter to cut high frequencies. This is a useful feature when sweeping filters for live improvisation and performances as well as for shaping the sound tone.



NOTES

SETTING THE CHANNEL FILTER

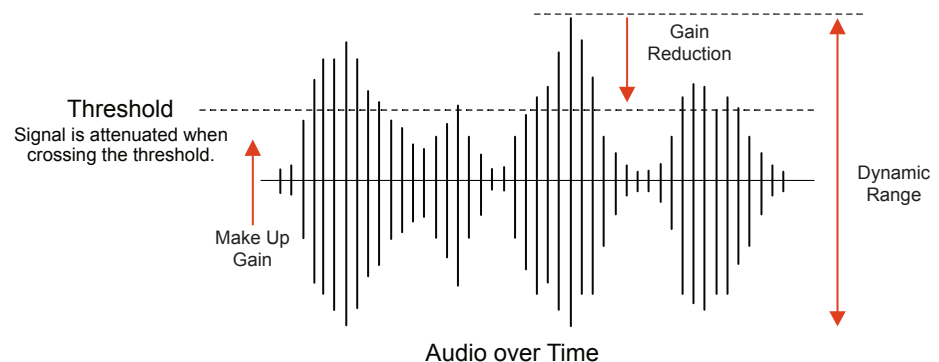
1. Turn (Filter) clockwise from the central detent 0 position towards the maximum position to adjust the high pass filter cutoff level. Use the control knob to make filter sweeps.
2. Turn (Filter) counter-clockwise from the central detent 0 position towards the minimum point to adjust the low pass filter cutoff level. Use the control knob to make filter sweeps.

2.14 Channel Compressor

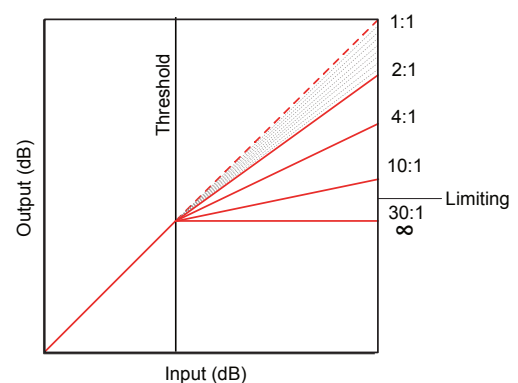
Each of The GodFather's four channels has a fully functional compressor including a sidechain option. A compressor is used both creatively and as an audio dynamics tool typically to tame errant peaks in audio, add punch and to increase perceived loudness. There are no direct channel controls and all of the settings are accessed using the function button which does not need to be held as this switches to lock the compressor page on / off.

How does a compressor work?

Think of a compressor as an automated volume control. Generally a compressor will reduce any audio peaks that exceed a specified threshold and therefore create headroom space which allows make up gain to increase the overall level. The amount of attenuation applied is based on the ratio between the audio above the threshold and the attenuation applied. A 2:1 ratio (gentle) attenuates the signal to 1dB above the threshold for each 2dB that exceeds the threshold. With a 4:1 ratio (medium), if the signal exceeds by 8dB then reduction will be down to 2dB above threshold. 20:1 ratio (strong) would be considered limiting. A sidechain will use an alternate audio signal to trigger compression.

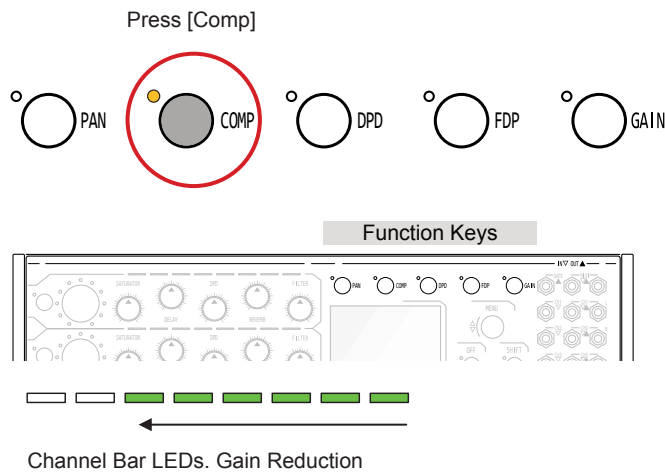


Ratio in GodFather
The range available starts at a ratio of 1.1, 1.2 etc up to 2, then in full unit increments from 2 to 30. A Ratio of 2 is the default value. Consider a ratio above 20:1 as limiting.



2 Audio Routing

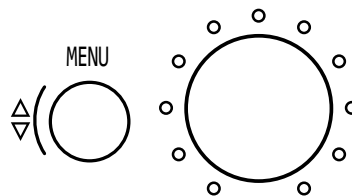
There are no direct channel controls in the GodFather channel strip for the compressor and all of the settings are accessed using the function button. The function button does not need to be held as pressing it once will open the page and pressing again will close the page.



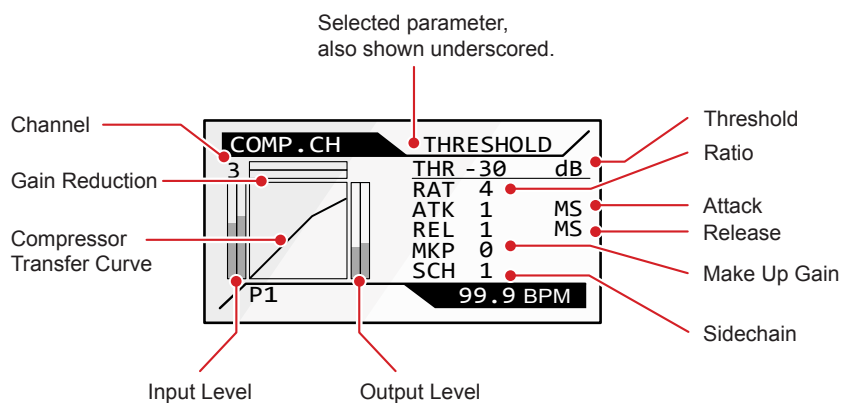
Compressor Controls

Once the compressor page is open, navigate the option selection by Turning (Menu). To adjust the in focus / selected parameter, turn the (Revolver) for the channel to set.

Turn (Menu) to select options.



Turn (Revolver) to adjust the parameter value for the respective channel to control.



As a guide or as a starting point the following process can be used to apply the compressor within a track. Throughout this process the respective revolver adjustment will determine the channel of the compressor affected. The channel number is located in the top left of the compressor page.

SETTING UP THE CHANNEL COMPRESSOR

1. Press [Comp] function button. The Compressor page will open and the parameters presented. For set up purposes consider a threshold set at 0 as effectively turning the compressor off. Selecting any other function will close the page.
2. Play the device which generates the audio input for the specific channel to edit. Example, channel 1 input of a synth.
3. The audio input to the compressor is shown on the compressor left side stereo bar graph. This is affected by the incoming audio level and input gain. The right side stereo bar graph displays the output audio from the channel strip processing including the compressor.
4. Turn (Menu) to underline 'THR'. This will select the threshold, as displayed in the display header. Turn (Revolver) to set the respective channels threshold value. Start with small increments until gain reduction just starts to attenuate the audio peaks. Adjust again later in the process if required.
 - The audible affect may appear to reduce the audio volume level and sound less punchy. This is less pronounced if the MKP parameter is set to AUTO.
 - The visual affect will show a lower output level as the gain reduction will start to kick in, animated in the top bar and also displayed on the channel LED bar graph. The transfer curve will adjust along with the parameter setting.
5. Turn (Menu) to underline 'RAT'. This will select the ratio, as displayed in the header. Turn (Revolver) to set the respective channel ratio value. Start with small settings e.g. 2, and adjust further through the process.
 - The audible affect may appear to reduce the audio volume level and sound less punchy with higher settings. This is less pronounced if MKP is AUTO.
 - The visual affect will show a lower output level as the gain reduction will increase, animated in the top bar and channel LED bar. The transfer curve will adjust along with the parameter setting.

2 Audio Routing

6. Set the behaviour of the compressor dynamic response by adjusting the attack time and release time. Turn (Menu) to underline 'ATK' for Attack and 'REL' for Release. Turn (Revolver) to set the time for each channel for the parameter selected. Adjust these iteratively by ear.
 - The audible affect may appear to increase the audio volume level and sound more punchy. This is dependant on the audio type and effects applied. Plucky signals and percussion as opposed to synth pad and drones will operate differently.
 - The visual affect will show the gain reduction as more or less responsive as the times are adjusted.
7. Iterate through steps 4,5 and 6 to tweak and adjust. The desired outcome will be based on many factors including the audio input, effects, interaction of other parameters and the compressor settings. Therefore working back and forth incrementally is a standard process when setting up a compressor.
8. Try working with manual make up gain. The default is for the make up gain to be set to 0. Also the 'AUTO' option is where the gain is affected automatically based on the compressor settings. Auto may be a good place to start. Turn (Menu) to underline 'MKP'. This will select the make up gain, as displayed in the heading. Turn (Revolver) to set the channel make up gain value. Try steps 4,5 & 6 with this set to a 0 or AUTO value. Then incrementally add gain as the sound takes shape.

Compressor Parameters

Function	Label	Range	Description
Threshold	THR	0 to -80 dB	Compressor threshold in dB. Sets level at which point gain reduction is applied to the peaks
Ratio	RAT	1.1 to 1.9, 2 to 30	Compressor ratio setting. Sets amount of gain reduction when the audio exceeds the threshold.
Attack	ATK	1 mS to 1 Sec	Attack time in seconds of when the compression kicks in.
Release	REL	1 mS to 1 Sec	Release time in seconds of when the compression drops out.
Make Up Gain	MKP	Auto, 0 to 10	Gain increase applied to the overall signal after the compressor makes headroom. Increases overall loudness. Auto will automatically compensate by adding gain based on the threshold and ratio.
Sidechain	SCH	1, 2, 3, 4	Selects the channel audio to trigger compression as an alternative to the current default channel.

Sidechain

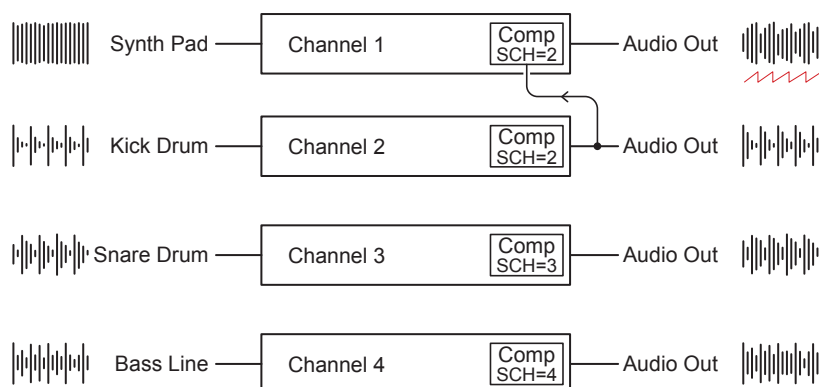
Sidechain's are normally used as a creative option to create space in a mix for example to 'duck' the audio of a synth to allow a kick track to push through the mix. This is how the classic pumping sound is produced in tracks. Sidechain's can also be used as a production tool when mixing.

SETTING UP THE COMPRESSOR SIDECHAIN

1. Press [Comp] function button. The Compressor page will open and the parameters presented.
2. Play the device which generates the audio input for the channels both to apply the sidechain and also the sidechain source channel. Example, channel 1 input of a synth and channel 2 sidechain from the kick.
3. On the main channel set the compressor 'SCH' to the source channel. Example set channel 1 compressor with an 'SCH' sidechain to 2.
4. Adjust the compressor parameters to suit the application. The source channel should trigger the gain reduction ducking of the audio for the main channel.

Sidechain Example

Channel 1 uses Channel 2 as the compressor trigger by setting SC to 2. All channels with compression and make up gain applied.



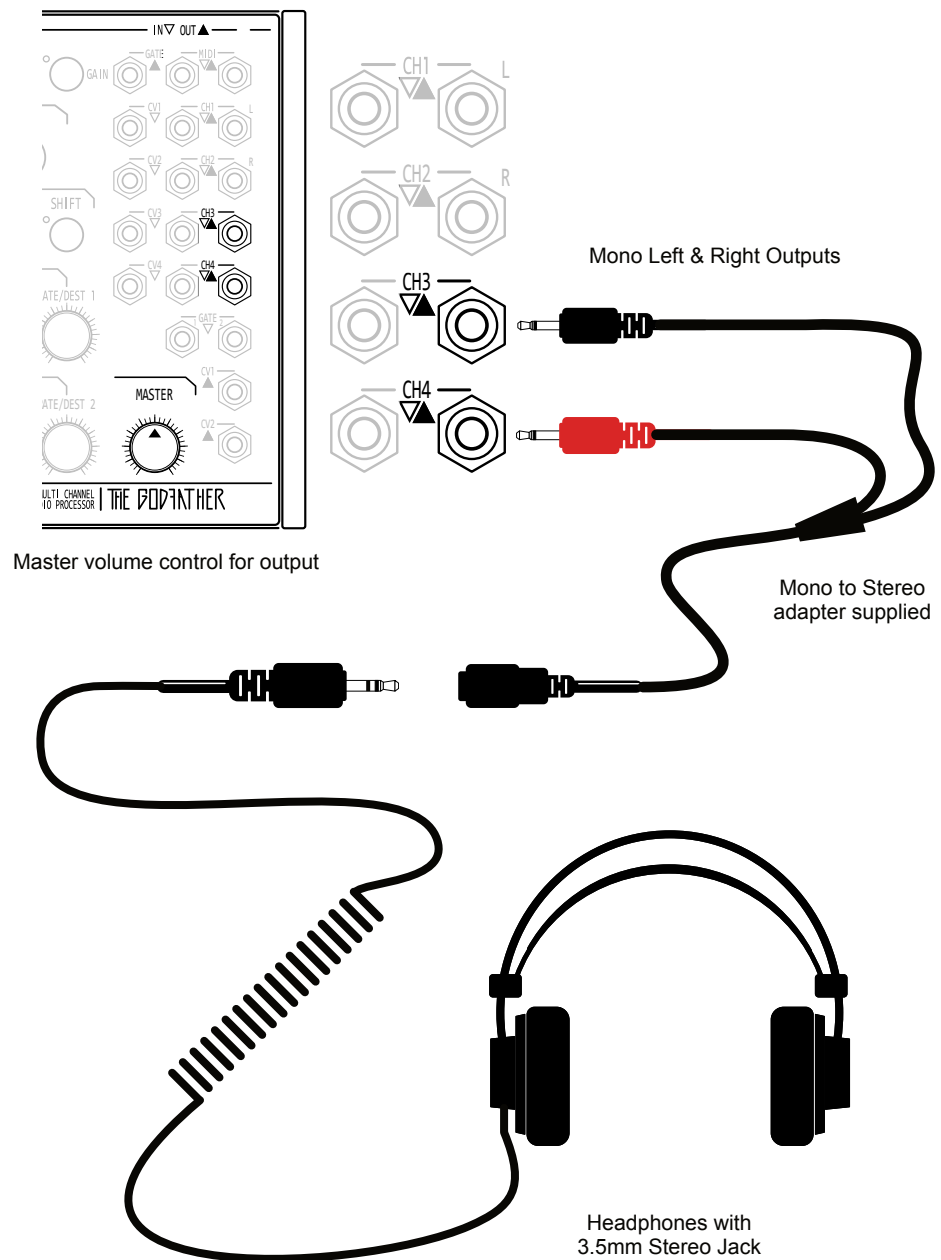
2 Audio Routing

Other Notes on the Compressor

- Press (Revolver) when in the compressor page to switch channels. This selects the channel page for the compressor without affecting any parameter values.
- Default compressor settings are:
 - THR Threshold: 0 - Compressor Off
 - RAT Ratio: 2
 - ATK Attack Time: 1
 - REL Release Time: 1
 - MKP Make Up Gain: 0
- SCH Sidechain X, Where X is the channel number for the current, same channel. Channel 1 = 1, Channel 2 = 2 and so forth.

2.15 Using Headphones

The GodFather is supplied with a splitter cable which is used for connecting the left and right outputs to a stereo 3.5mm headphone socket. This allows headphone output to be used with the device. Using channel 3 & 4 will replicate 1 & 2 but also will allow preview selection of channels.



2 Audio Routing

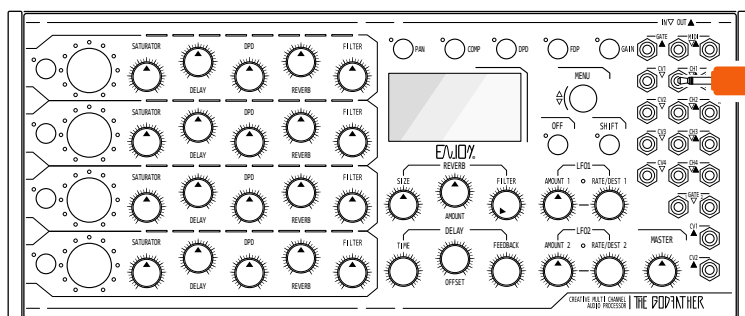
2.16 Audio Interfacing Examples

The GodFather can interface with desktop, modular, tablet, PC or Mac devices. The audio levels may determine the performance but there are some typical configurations that operate together well.

Moog Desktop

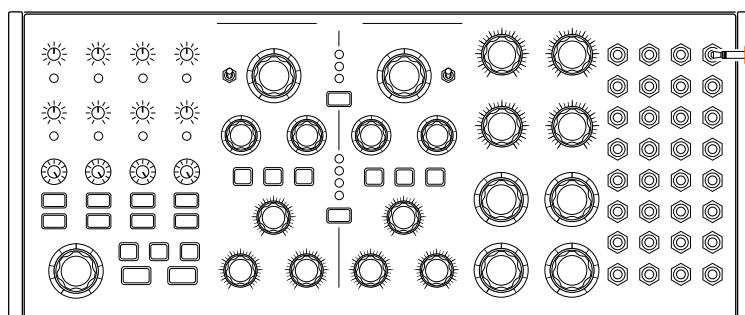
The Moog desktop collection which includes the Mother-32, Subharmonic and DFAM match the same form factor as The GodFather. In fact Enjoy electronics also produce a dedicated N-Rack 5 Unit, 60HP frame that is compatible with mounting multiple Moog and semi-modular devices along with The GodFather module.

The GodFather



Moog connected to a mono input. 4 Inputs are available for devices.

Subharmonic

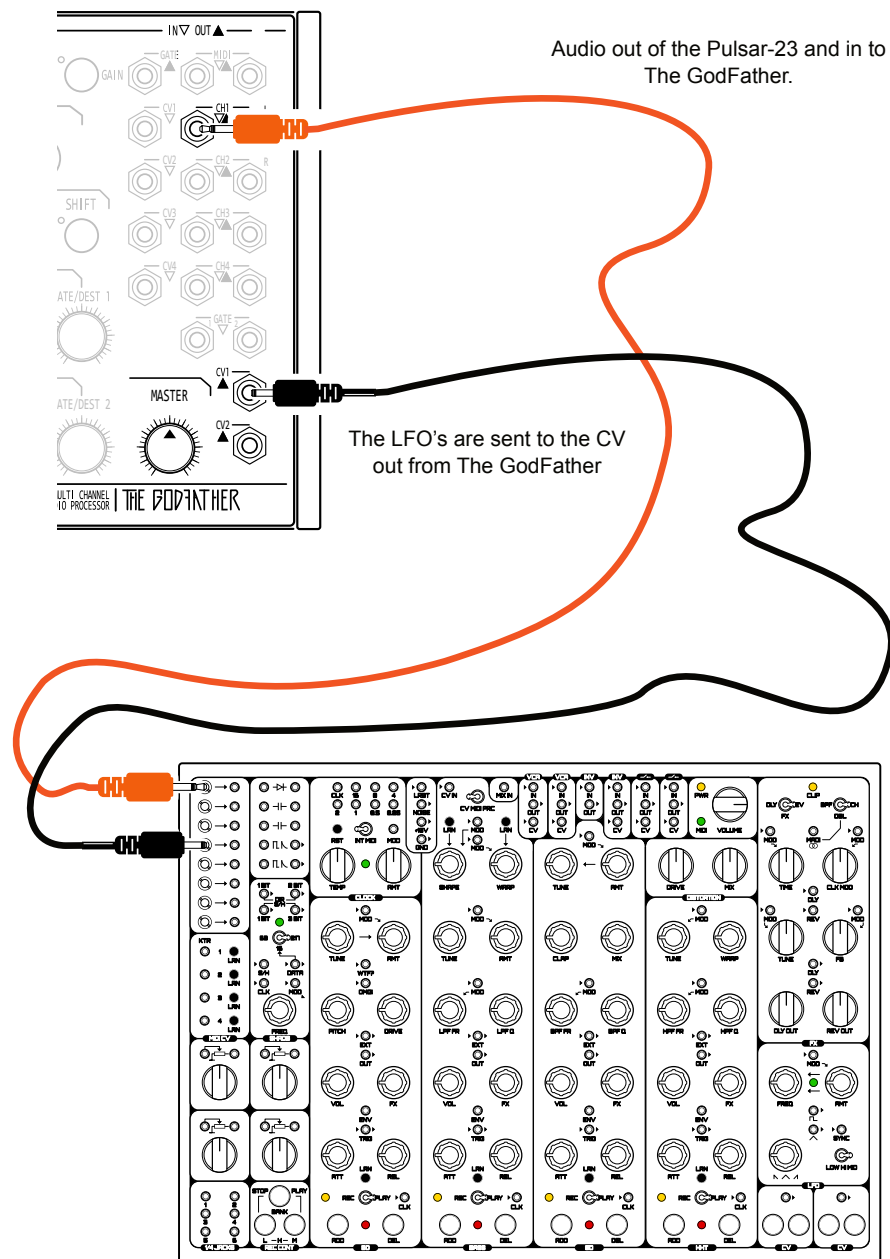


The Moog has a VCA Output in the patch bay that delivers audio out at eurorack levels and is therefore directly compatible with The GodFather. The voltage range is 10V p-p audio.

The GodFather has 4 audio inputs so multiple devices can be connected

Soma Pulsar-23

Soma Pulsar-23 is a semi-modular analog drum machine. Not only can the audio be fed to The GodFather, but also modulation to / from the Pulsar-23 can be connected for CV control.



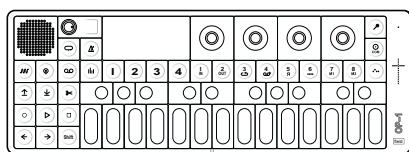
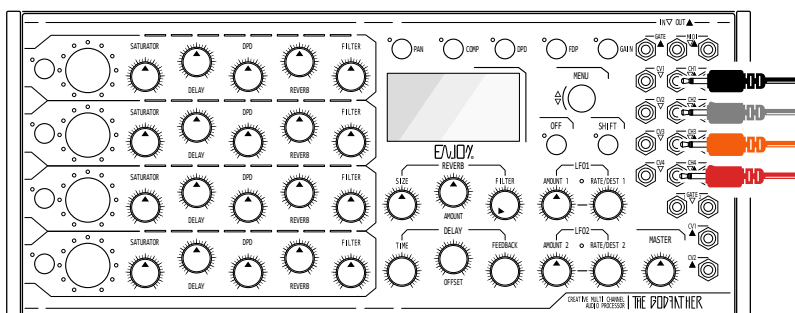
The Pulsar-23 has a patch bay which converts 3.5mm patch cable jacks to alligator clip style pins. The LFO from The GodFather can be patched in and then patched on the Pulsar-23 to various functions. Audio patched out.

2 Audio Routing

Multiple Audio Device Inputs

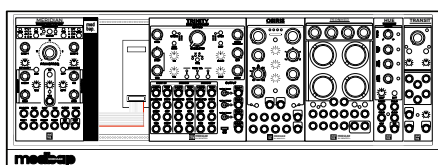
Multiple audio devices can be sent to the 4 Audio inputs of The GodFather. Gain staging is important when using external gear but even more so when using multiple audio devices which may have different audio level characteristics. The Input Gain should be adjusted for each.

The GodFather



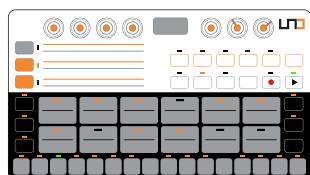
OP-1 Field

Direct 3.5mm Out from the Teenage Engineering OP-1 Field and into The GodFather. OP-1 is stereo out but will be mono input.



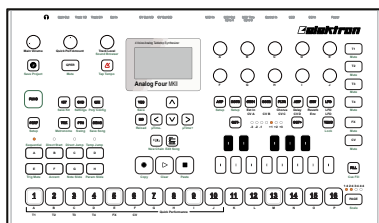
Eurorack Modules

Modbus Modular Osiris wavetable synth and trinity drum modules mixed in the rack with Transit module and output patched to The GodFather audio input.



UNO Drum Machine

The IK Multimedia UNO Drum synth has a single stereo 3.5mm output. This can be connected as a channel to The GodFather.



Analog Four Synth

The Elektron Analog Four has multiple 6.3mm audio outputs, one for each track and also for left/right. So individual tracks can be connected to The GodFather audio ins. A 6.3mm to 3.5mm cable would be needed per signal.

Delay & Reverb

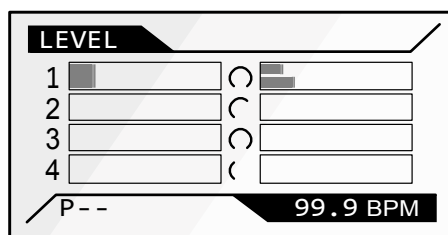
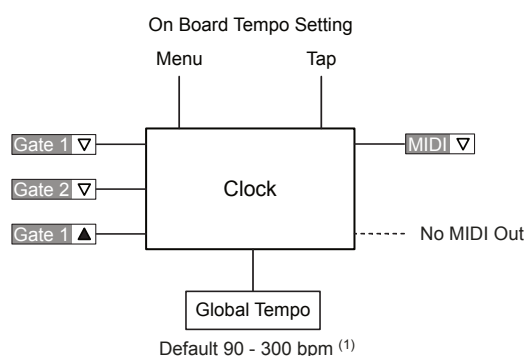
While the four channel mixer and inline effect capabilities are excellent, the real heart of The GodFather is the multiple delay sections along with the reverb. These effects are available per channel but operate more like return effects. This means that the audio is processed in the channel and routed through the delay and DPD. The amount of delay and DPD applied is controllable directly in each channel. A common reverb exists. The amount of audio sent from each channel is controlled in the channel strip section with the reverb control. Within the common reverb effect two core parameters sets the generic effect behaviour, the size, which emulates the physical space and amount of reverberation returned. The reverb effect also has a dedicated filter. The delay is a more complex function. Think of 3 delay related models integrated into the unit and available per channel. Firstly a more traditional delay model operates with audio in

the channel processed with a delay time and feedback. Time represents the delay intervals while feedback is the amount of output audio fed back into the delay line. The second model is the offset. While this control is located in the delay section, it operates independently from the traditional delay. In simple terms this separates the left and right signal and introduces a delay between the two. Finally a less familiar model is the DPD, double pulse delay, a function which introduces two more delay repeat lines into the overall main delay. The DPD function is also equipped with its own high pass and low pass filter section. These functions offer a wealth of creative options. The most basic of beats, sequences or loops can be transformed into expansive melodic structures and progressions. The power of The GodFather is realised fully with the delay and reverb. Try using these in live scenarios or with improvised performances as an instrument rather than as an effect.

3 Delay & Reverb

3.1 Global Tempo

The GodFather is a multi-channel audio processor consisting of a number of time based effects especially the reverb and delay. These are reliant on the global tempo setting for appropriate operation and for synchronisation. Global tempo is set by default using the onboard clock but can be controlled by an external clock.

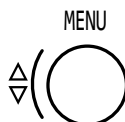


Tempo Beats per Minute displayed on most parameter pages.

Manual Tempo Adjustment

On the 'Home' mixer page, and any page displaying the tempo bpm will allow manual adjustment. The (Menu) control is used to adjust BPM. Use with shift for fine adjustments.

Tempo: Turn (Menu) on 'Home' Page



Tempo Fine: Hold [Shift] + Turn (Menu)

(1) The default tempo when initially starting up the GodFather is 120BPM and a 90-300 BPM range. A lower value can be set in the range to 45 in the Sync settings. A lower range will mean that the time division of 2 is not available in the delay. Tempo may be changed manually or may be changed by an externally connected source which may override manual settings.

Note that the Global Tempo BPM manual adjustment may be affected by the sync settings and externally connected devices. The options are located in the Menu > Sync settings.

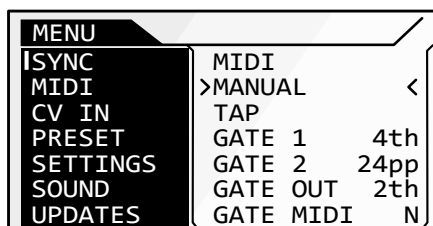
MANUALLY ADJUSTING THE GLOBAL TEMPO

1. Ensure the mixer page is displayed. This is the default 'home' page. If not in view tap [Off] to backup within the menu and or from within another parameter page.
2. Turn (Menu). This will adjust the global tempo in 1 bpm increments up or down. Default range is 90 - 300 BPM.
3. Hold [Shift] + Turn (Menu). This will adjust the global tempo in finer 0.1 bpm increments up or down.
4. The 'home' display page will show the current BPM value.

MANUALLY SETTING A GLOBAL TAP TEMPO

1. The Global Tempo BPM can only be manually tap adjusted if set to Tap in the sync menu. External options may override the manual setting if the clock is received by The GodFather clock. Press (Menu) to open the config options and Turn (Menu) to navigate sub-menus.
2. Select 'Sync' and Press (Menu) to open the menu options.
3. Turn (Menu) to move the indicator dot tag alongside the 'Tap' option.
4. Press [Off] several times to return to the default 'home' mixer page.
5. Tap the [Off] button a minimum of 5 times. The rate that the button is tapped will determine the tempo set. Default range is 90 - 300 BPM.
6. The 'home' display page will show the current BPM value.

Sync Menu



3 Delay & Reverb

The ability to set a lower starting point for the tempo range is possible. The options are located in the Menu > Sync settings. Also it is important to note that when using the 45 bpm lower range limit the time divisions will start at 1 instead of 2.

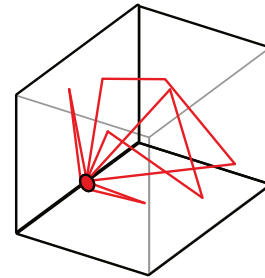
CHANGING THE LOWER TEMPO RANGE

1. The tempo range by default is 90-300 bpm, but an alternative range of 45-300 bpm is possible. Press (Menu) to open the config options and Turn (Menu) to navigate sub-menus.
2. Select 'Sync' and Press (Menu) to open the sub-menu options.
3. Turn (Menu) to navigate to tag the 'BPM Min 90' option. This is found on the sync page 2/2.
4. Press (Menu) to select the 'BPM Min 90' option.
5. Turn (Menu) to change the value to 45. The BPM range will now operate at 45 - 300 BPM. The available Delay Time divisions also will start at 1 when set to 45 and will have the time options starting at 2 when set to 90.
6. Exit the menu by pressing [Off] several times.
7. Follow the same process steps 1-5 to change 'BPM Min 45' back to 90 if necessary.

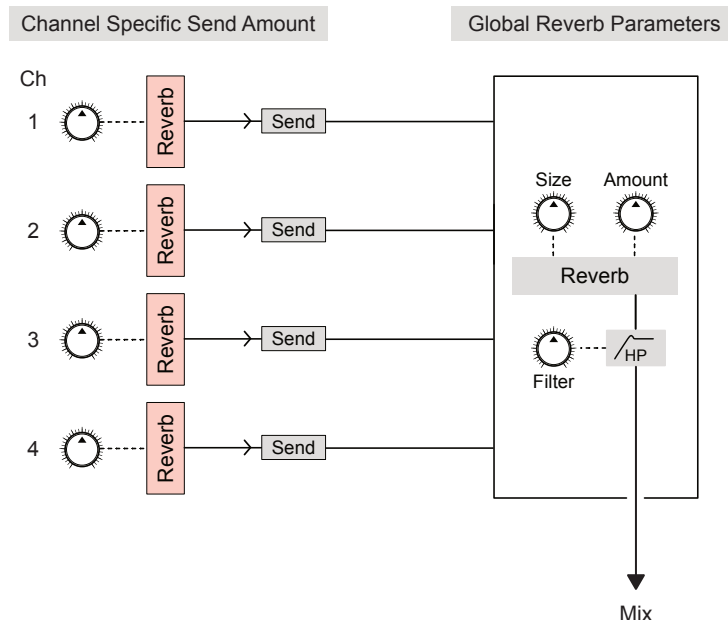
3.2 Reverb Overview

A reverb effect emulates the current space and how the sound behaves as it reflects and is absorbed. Larger, hard walled rooms will offer more expansive reverberations than a small, softer furnished room. There have been many classic reverb models using mechanical springs and plates each giving a unique character.

The sound will represent the room or space in which it is generated and location of listener. Reflections will also be heard, at different times from that of the direct audio when bouncing within the room. They also may be absorbed by walls and furnishings. These things contribute to the character and type of a sound.



The GodFather has a reverb send option for each channel. The send amount can be adjusted from each channel strip control knob. Additionally the global reverb settings are controlled and applied generically and will use the same parameter settings for all channels globally.



Low frequency ranges have a tendency to be the region where muddiness occurs. This is a problem that may be increased by introducing a reverb and extra reverberations in the lower ranges. It is normally good practice therefore to filter the reverb affected audio in the lower ranges. The GodFather has an integrated High Pass Filter to perform this task. This is located in the global reverb section.

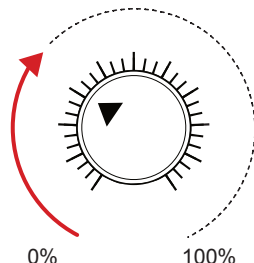
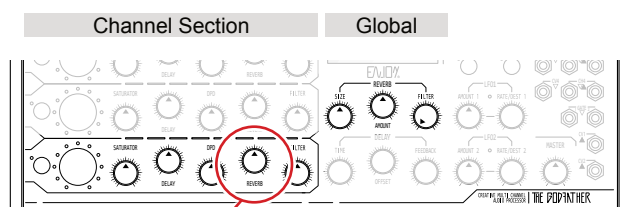
3 Delay & Reverb

3.3 Reverb Effect

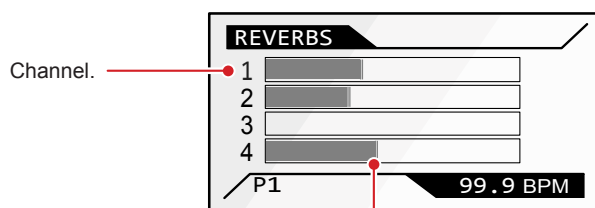
The GodFather reverb is a simple effect but can create beautiful soundscapes or add subtle warmth to an audio sound through any or all of its four channels.

Channel Send Amount

Each channel strip has a send control knob. This sets the amount of audio sent to the global reverb effect from the defined channel.



Channel Reverb Send Amount
The amount of audio sent to the global reverb effect with a standard range knob. The applied effect will also depend on the reverb section settings. Amount is displayed when adjusted.

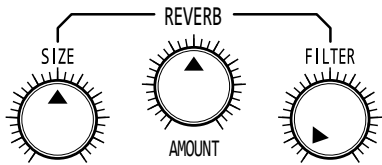


MOD The reverb can be modulated globally from the LFO and CV Functions.

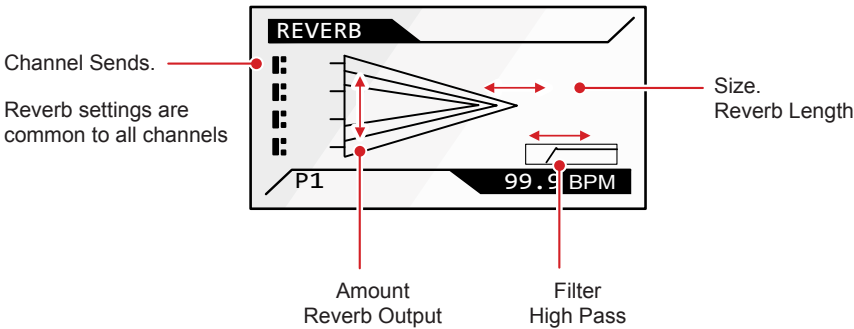
Global Reverb Parameters

The global reverb section contains the main reverb engine and its parameters. This is a singular common effect receiving audio from each channel's reverb send and applying the same global settings to all. It is not possible to apply unique reverb settings from the global parameters to each channel individually.

Global Reverb
Three parameters can be applied and set up from within the global reverb engine. These are applied to all channel audio sends.



Reverb engine settings are graphically rather than numerically represented



Global Reverb Parameters

Function	Range (1)	Recommended Starting value (1)	Description
Size	0-100%	50%	Size emulates the room space and will determine how long the reverberations will run and fade out.
Amount	0-100%	50%	Amount controls the output from the reverb engine. This is the reverberated audio output signal.
Filter	0-100%	0%	Filter is a High Pass filter which enables cuts to the low end of the frequency bands.

(1) Ranges are nominal in the global reverb function and are represented visually rather than numerically on the display page. The knobs have 0-100% ranged labels. These are used for reference in the table above.

3 Delay & Reverb

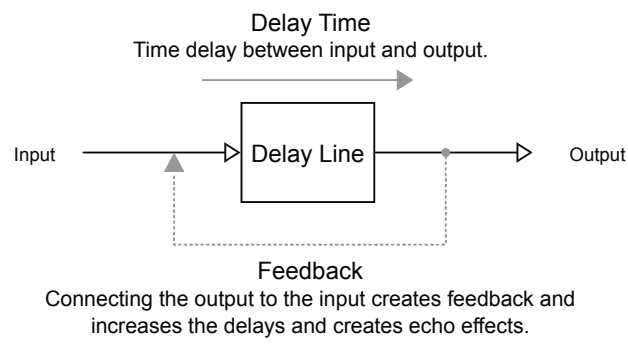
SETTING UP THE REVERB SENDS

1. Start by setting the Global Reverb engine. Good starting parameters are; Size, 50%; Amount, 50%; Filter, 0%. A setting of 0% on the Amount parameter will effectively turn the reverb off, this also may appear to be the case if the filter is set to 100% which effectively filters out all reverberated audio.
2. Set the Channel Send reverb to 0%, fully counterclockwise. At 0%, none of the channel audio is sent to the global reverb.
3. While playing audio for each of the channels, Turn (Reverb) knob for the respective channel to send audio and add reverb. It is good practice to start low and listen carefully per iteration.
4. Also iterate up or down the amount and size in the global engine. The Filter adjustment can be made if muddiness or lack of clarity in the bottom end bass ranges to cut the reverberations, not all audio, in the lower end of the frequency range.
5. Further iterations of both the channel send and the global reverb parameters can be performed to achieve a desired result.
6. Note that changing the global settings will affect all channel send audio.

The GodFather is as much a performance device as it is a desktop effect. Reverb is a function that can introduce variation and interest into a mix when improvising in a jamming session or during a live performance.

3.4 Delay Function Overview

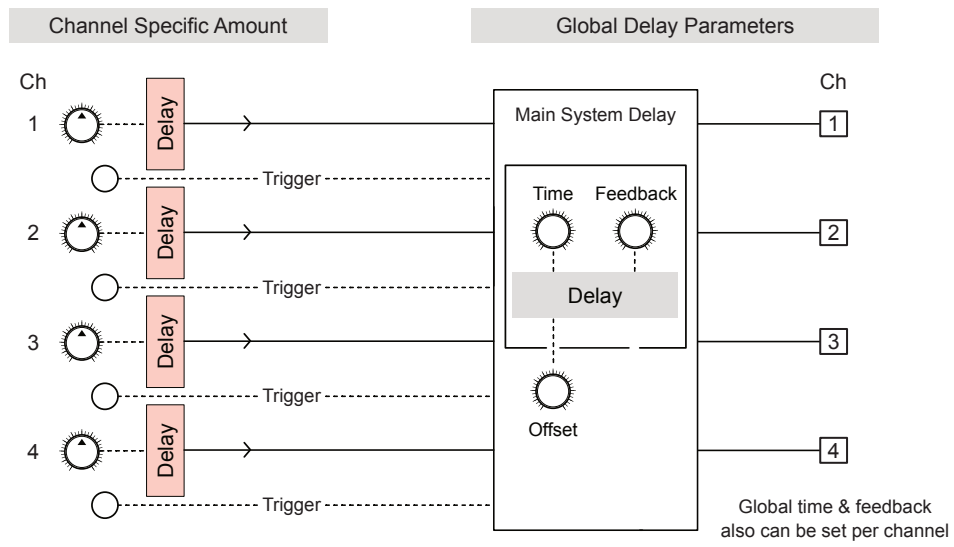
A delay effect adds interest and fills space in an audio mix. A number of classic delay types exist with different features and characteristics and include tape, ping pong, echo to name a few. A delay effect delays audio between the output and input and when the output is fed back, can create melodic repetitions of the audio.



The GodFather has a number of delay functions for each channel which collectively form a unique and creative delay effect platform. It makes it easier to explain these as 3 discrete delay elements in the overall device.

Delay time & feedback

The generic delay follows classic delay principles. This is the first delay in line and the amount of effect applied is controlled directly per channel. The global delay engine time and feedback are controlled centrally for the channels. Trigger can be used to control the delay routing behaviour.

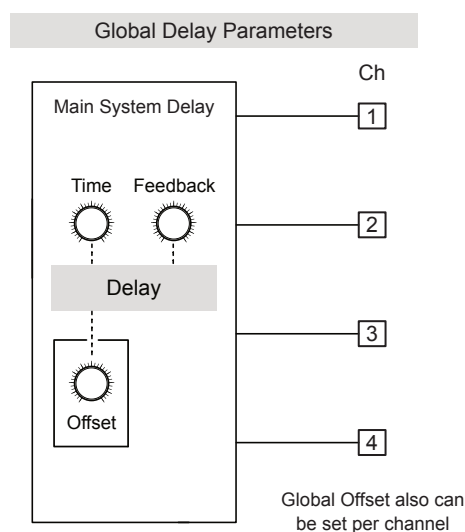


3 Delay & Reverb

Delay Offset.

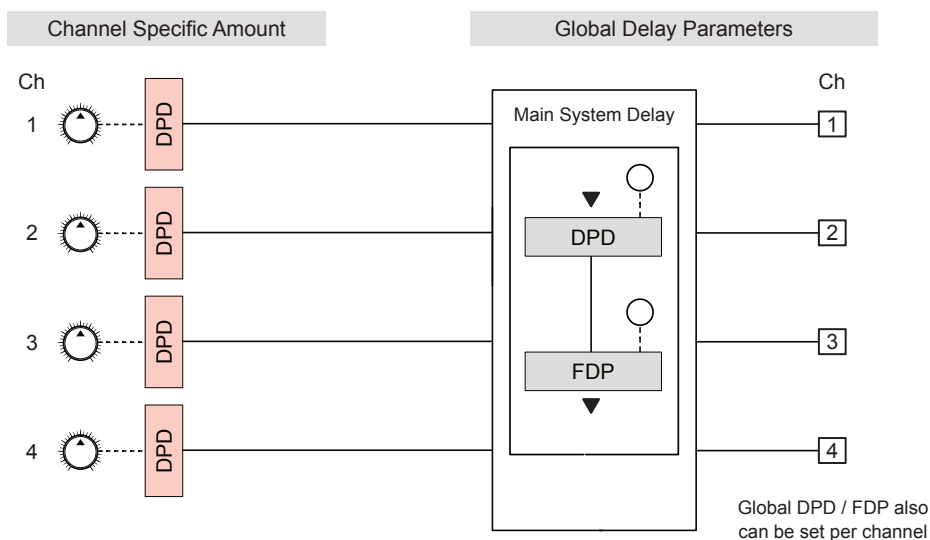
While technically still part of the delay function, the Offset parameter operates in a somewhat independent way and is not affected by the channel delay parameter. Offset applies a delay time between the right and left audio signals across all channels.

Offset operates independently of the channel delay amount functions.



Double Pulse Delay

The DPD is the second delay and introduces an additional two repeat lines per channel into the main delay line. A dedicated FDP, Filter section is also included.



NOTES

3.5 Delay Effect

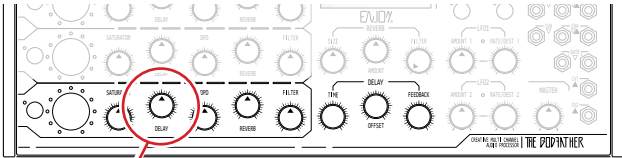
The first GodFather delay function is based in classic principles for processing delayed audio through any or all of its four channels.

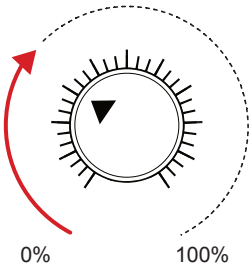
Channel Effect Level Amount

Each channel strip has an amount control knob. This sets the amount of delay applied to the channel audio from the global delay effect.

Channel Section

Global

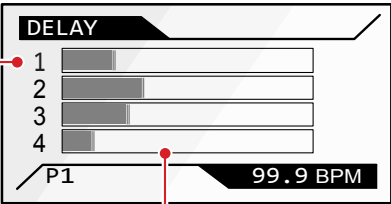




Channel Delay Amount

The amount of delay applied and returned from the global delay effect with a standard range knob. The applied effect will also depend on the delay section settings. Amount is displayed when adjusted.

Channel.



Amount of Delay Applied.
Represented with knob range

MOD  The delay can be modulated globally from the LFO and CV Functions.

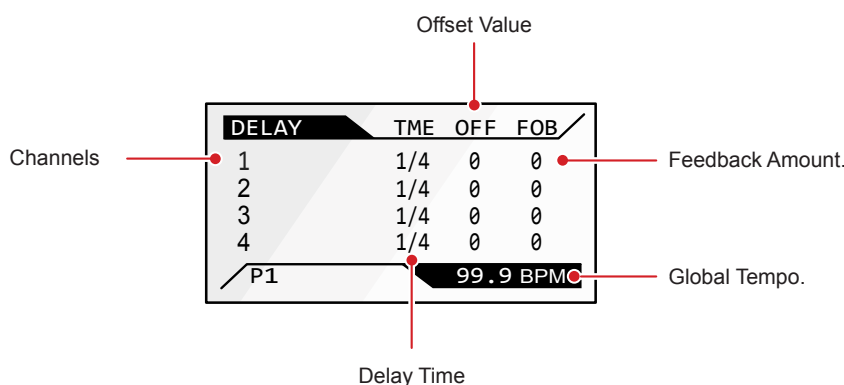
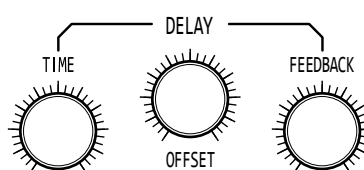
3 Delay & Reverb

Global Delay Parameters

The global delay section contains the main delay engine and its parameters. This is a common effect which controls each channel's delay and can apply the same global settings to all. It is also possible to apply unique delay settings from the global parameters to each channel individually. The offset function, while part of the delay section is independent of the channel delay amount control.

Global Delay Section

Parameters are adjustable with the push encoders and can be applied and set up from within the global delay engine. Time and feedback are applied to all channel audio. Press time to reset feedback loops.



Global Delay Parameters

Function	Range	Description
Time	2 1. 1t 1 1/2. 1/2t 1/2 1/4. 1/4t 1/4 1/8. 1/8t 1/8 1/16. 1/16t 1/16	Delay time division synchronised to the global tempo. Also press to release a feedback loop, sets feedback to 0 when pressed. Turn to control all channels simultaneously ⁽¹⁾ . Time 2 is only available when low range is set to 90bpm.
Feedback	0-100	Amount of output fed back into the input to generate repeats. A setting of 100 gives an infinite delay feedback. Turn to control all channels simultaneously ⁽¹⁾ .
Offset	0-7	Time delay between right and left. Independent of the channel amount. Turn to adjust all channels ⁽¹⁾ .

(1) Standard behaviour is for all channel settings to be adjusted collectively when turning the global delay knobs. Hold (Revolver) for one or more selected channels and turn the global delay section encoder to set the channel specific delay setting.

Time Division

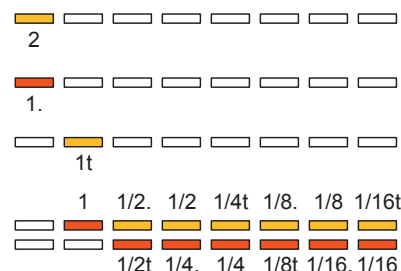
The delay time division is referenced to the global tempo setting. Time can be set globally or per channel. The Channel LED Bar will also indicate the setting for the channel.

DELAY	TME	OFF	FOB
1	1/4	0	0
2	1/4	0	0
3	1/4	0	0
4	1/4	0	0
P1	99.9 BPM		

Channel Bar LEDs.

The channel will display the specific time 'TME' setting while adjusting the (Time) knob with an individual LED location coloured orange or red.

Only 1 LED will be lit to represent the time setting for the channel.



Feedback

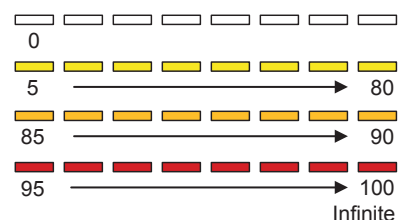
The delay feedback ranges from 0 to 100, stepped in units of 5 and where 100 is infinite. This can be set globally or per channel. The Channel LED Bar will also indicate the setting for the channel.

DELAY	TME	OFF	FOB
1	1/4	0	0
2	1/4	0	0
3	1/4	0	0
4	1/4	0	0
P1	99.9 BPM		

Channel Bar LEDs.

The channel will display the specific feedback 'FOB' setting while adjusting the (Feedback) knob. Each channel's LED bar will also represent the feedback.

Reset infinite feedback loops by pressing (Time) knob.



Offset

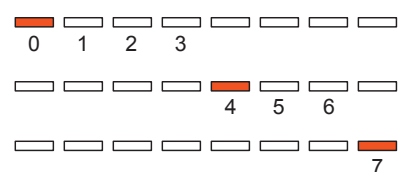
The delay offset ranges from 0 to 7. This is the time delay between right and left channel. This can be set globally or per channel. The Channel LED Bar will also indicate the setting for the channel.

DELAY	TME	OFF	FOB
1	1/4	0	0
2	1/4	0	0
3	1/4	0	0
4	1/4	0	0
P1	99.9 BPM		

Channel Bar LEDs.

The channel will display the specific offset 'OFF' setting while adjusting the (Offset) knob.

Only 1 LED will be lit to represent the offset setting for the channel.



3 Delay & Reverb

The global delay section contains the Time, Feedback and Offset. All can be changed globally, all channels together or by individual channel. The channel audio is sent to the time and feedback adjusted delay engine.

SETTING UP THE DELAY

1. Start by setting the global delay engine. Good starting parameters are; Time, 1/4; Feedback, 25. These can be adjusted later.
2. Set the channel amount delay to 0%, fully counterclockwise. At 0% no delay is applied to the channel audio from the global delay, however the offset setting will still affect the signal. A channel amount set at 0% effectively turns delay off but not the delay offset.
3. While playing audio for each of the channels, Turn (Delay) knob for the respective channel to adjust the delay applied to the audio. It is good practice to start low and listen carefully per iteration.
4. To set the global / channel parameters:-
 - Turn (Time) knob to change the time division for all channels simultaneously. All parameter values will adjust relatively to their original starting value.
 - Hold (Revolver) for the desired channel(s) and Turn (Time) knob to change the time division for only the selected channels. The selected parameter values will adjust relatively to their original starting value.
 - Turn (Feedback) knob to change the feedback amount for all channels simultaneously. All parameter values will adjust relatively to their original starting value. Value of 100 creates an infinite loop.
 - Hold (Revolver) for the desired channel(s) and Turn (Feedback) knob to change the amount for only the selected channels. The selected parameter values will adjust relatively to their original starting value. Value of 100 creates an infinite loop
5. The screen display will show the setting values while adjusting and the channel LED bar will also reflect the settings made while adjusting.
6. To release all channel feedback loops for example to reset an infinite 100%, press (Time) encoder. Hold (Revolver) + Press (Time) to reset individual channels. The feedback will be set while the encoder is pressed to 0. The prior value is restored when (Time) is released

The channel audio is routed to the delay engine. Offset operates independently of the delay amount value. Offset shifts the phase of the left and right signal to create panoramic and ping-pong delay styles. Only one offset control exists, located in the delay section and which can adjust channel or global offsets.

SETTING UP THE DELAY OFFSET

1. Play audio through the channels to edit. Note that the channel delay amount does not affect the offset. Offset settings will be applied and audible even with an amount level set to 0.
2. To set the global parameters:-
 - Turn (Offset) knob to change the offset value for all channels simultaneously. All parameter values will adjust relatively to their original starting value.
 - Hold (Revolver) for the desired channel(s) and Turn (Offset) knob to change the offset value for only the selected channels. The selected parameter values will adjust relatively to their original starting value.
3. An offset value will separate the synchronisation of the left and right audio, shifting the phase and creating a time delay between the two. When offset is at '0' the audio will operate as normal, try settings of 4 or 8 and try creating a classic ping pong style.
4. The screen display will show the setting values while adjusting and the channel LED bar will also reflect the settings made while adjusting.

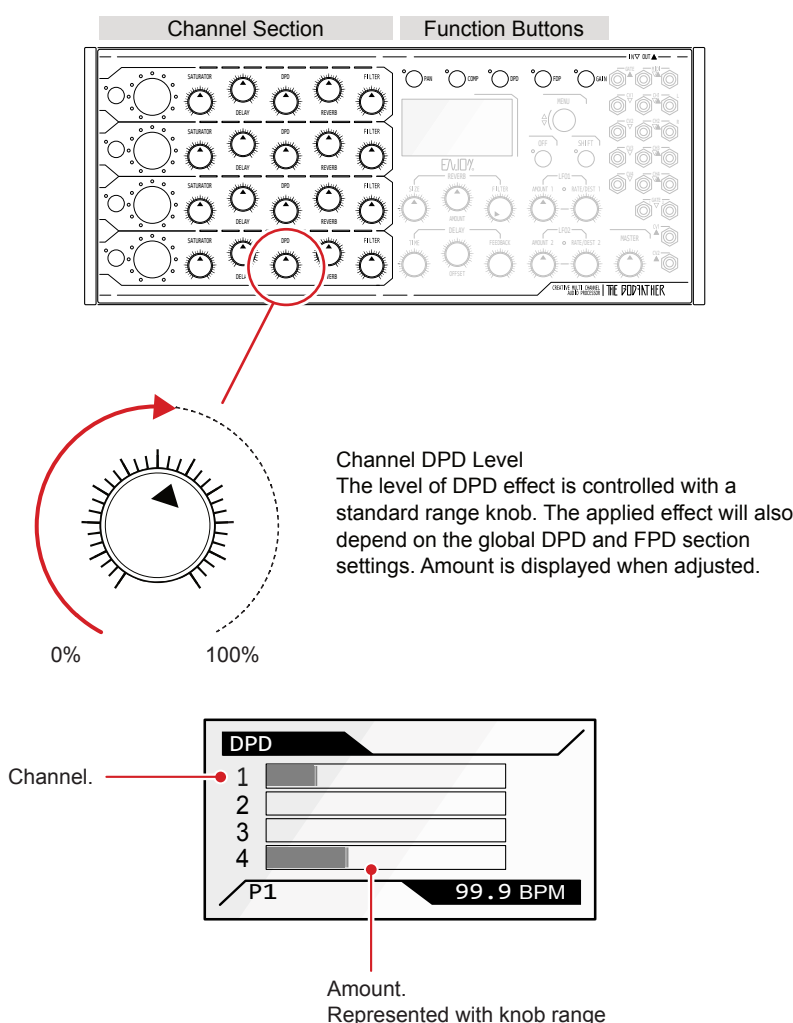
3 Delay & Reverb

3.6 Double Pulse Delay Effect

The DPD or Double Pulse Delay is unique to The GodFather and introduces an additional function into the main delay line. Repeats are controlled by the time parameter in the main delay but the main feedback is passed into, but not controlled by the DPD. This delay operates by setting the delay level for each channel but does not have an immediately accessible control section. Instead the DPD is accessed along with its complimentary filter section, FDP using the function buttons.

Channel DPD Level

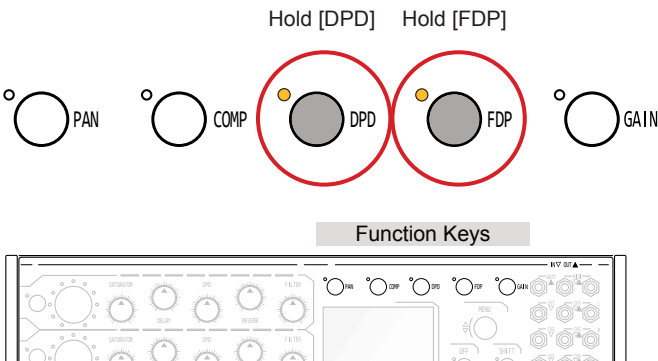
Each channel strip has a DPD level control knob. This is the only DPD dedicated knob and adjusts only the DPD audio level.



MOD  The DPD can be modulated globally from the LFO and CV Functions.

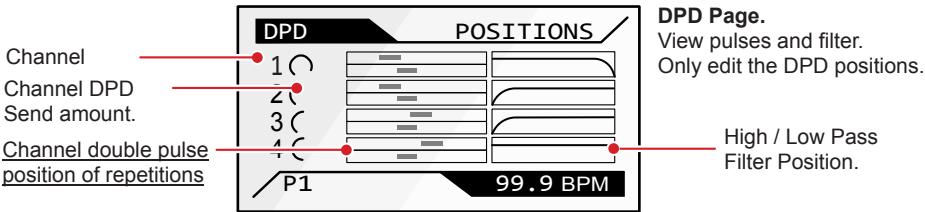
Global DPD & FDP Parameters

The global DPD section contains the double pulse delay engine which adds another two repeat lines for each channel into the main delay line repeats. The DPD is set for each channel and operates in conjunction with its partner, the FDP function. FDP is the Double Pulse Filter. The position of the relative pulses and the filter is displayed in both pages. However DPD page is used to edit the pulse positions while the FDP page is used to adjust the filters.



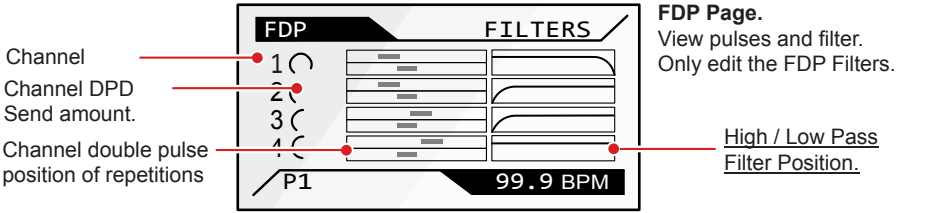
DPD Section

The double pulse delay positions are adjustable for each channel. The [DPD] option controls the position of the two repeat lines, adjusted when Holding [DPD] + Turning (Revolver) for the specific channel. The filter is displayed but cannot be adjusted from this page.



FDP Section

The double pulse delay filters are adjustable for each channel. The page visualisation is exactly the same as DPD but only the filter can be adjusted from this page. The [FDP] option controls the High / Low Pass filter position when Holding [FDP] + Turning (Revolver) for the specific channel.



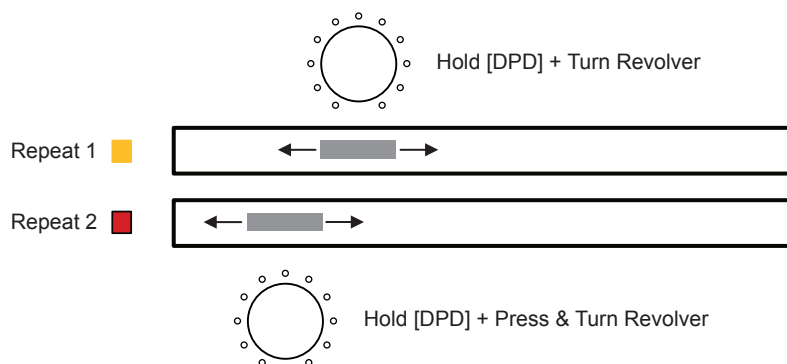
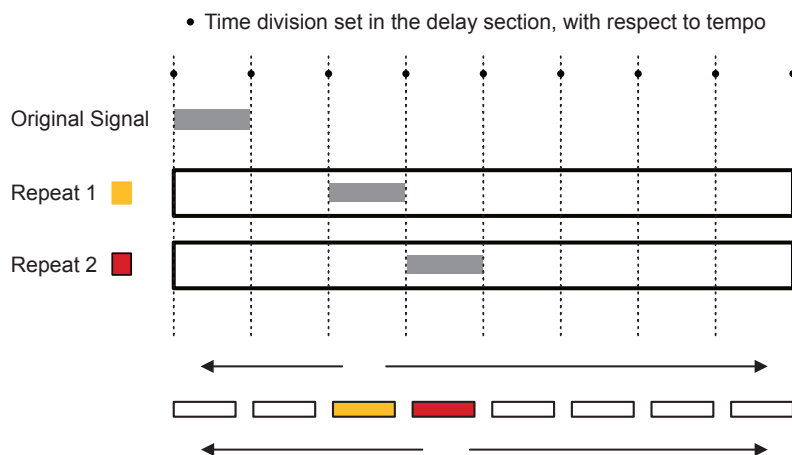
3 Delay & Reverb

Operating the DPD & FDP Functions

Each channel has a dedicated double pulse delay and an associated filter control. DPD controls the dual repeat position of the delay and the FDP controls the combined high pass or low pass filter cutoff position. The channel bar LED's also give an indication of the current status of the parameters while adjusting the DPD and FDP controls respectively.

DPD Double Pulse Delay Repeats

In the default state the original pulse will be followed by the repeat 1 and then repeat 2. The timing of repeats is based on the delay time division which is set in the delay section and is synchronised with the global tempo. There are 8 available positions of repeat 1 and repeat 2. Hold [DPD] and Turn (Revolver) to adjust the first repeat and Press & Turn (Revolver) to adjust the second repeat. The revolver represents the channel to adjust.



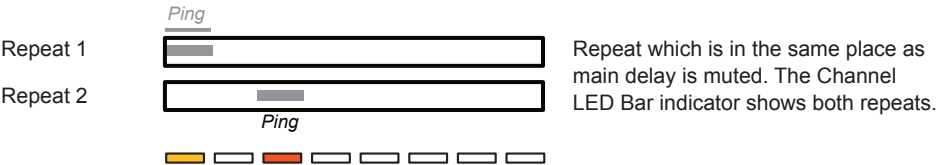
■ A single, yellow Channel LED Bar will indicate repeat 1 and 2 are in the same position.

Examples of General DPD Behaviour

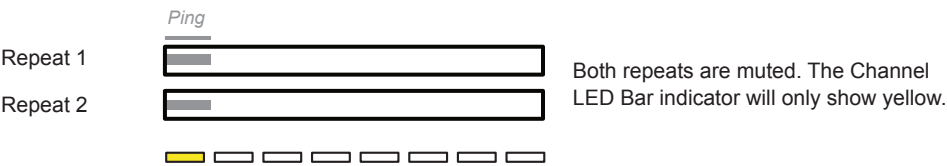
Repeat 1 & 2 in the same position on the same channel.



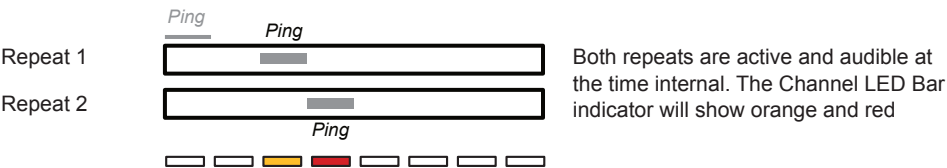
Repeat in the same position as the original.



Repeat 1 & 2 in position '0' on the same channel.



Repeat 1 & 2 in the default position on the same channel.

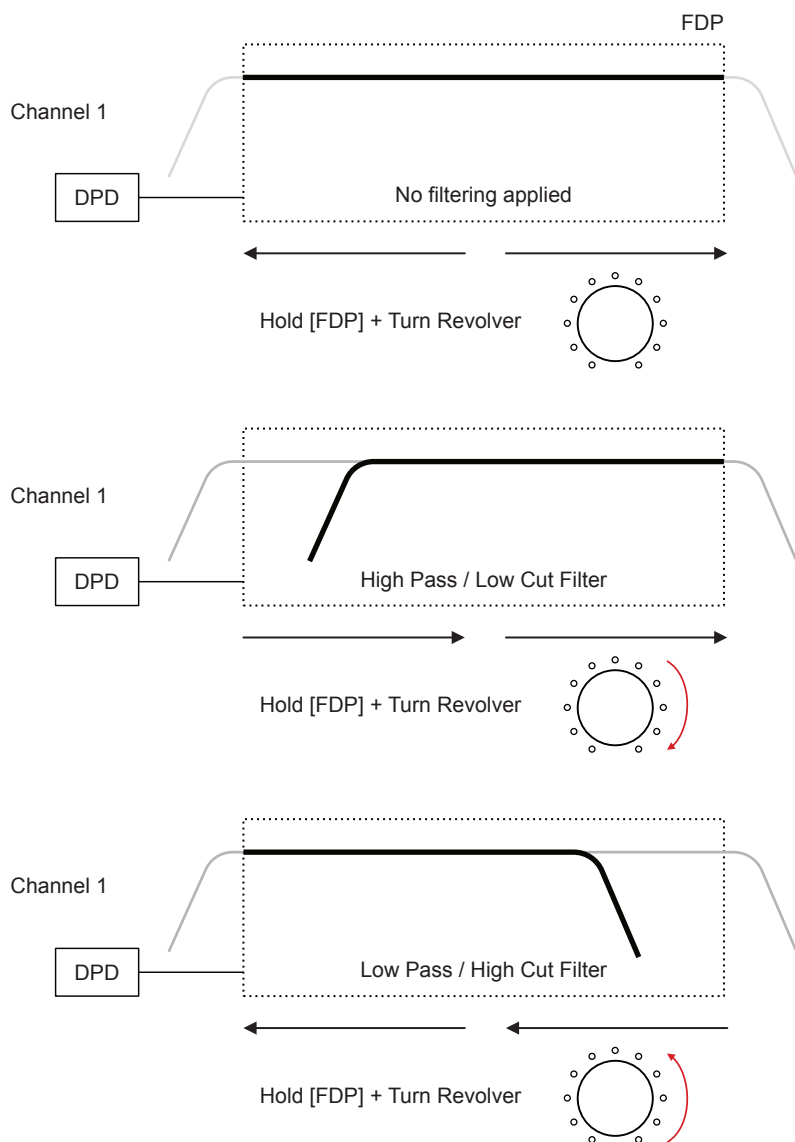


The main delay and the DPD operate together. This means that the time divisions applied in the main delay are reflected in the DPD intervals. The main delay develops feedback repetitions only. The dry signal is fed into the DPD engine along with the main delay feedback but there is no dedicated feedback regulated in the DPD.

3 Delay & Reverb

FDP Filter - Double Pulse Delay

Each channel's double pulse delay also has a dedicated filter. This is accessed using the [FDP] button and displays the same page as the DPD. However this page allows the adjustment of either the high pass or low pass filter cutoff. A filter is a welcome addition to the delay engine as it allows the removal of any errant high or low frequencies and helps manage the overall tone.



Only one filter type can be applied per channel. So either high pass or low pass but not both at the same time on the same channel. When adjusting FDP Filters, the channel revolver and channel strip LEDs will be shown unlit.

SETTING UP THE DOUBLE PULSE DELAY

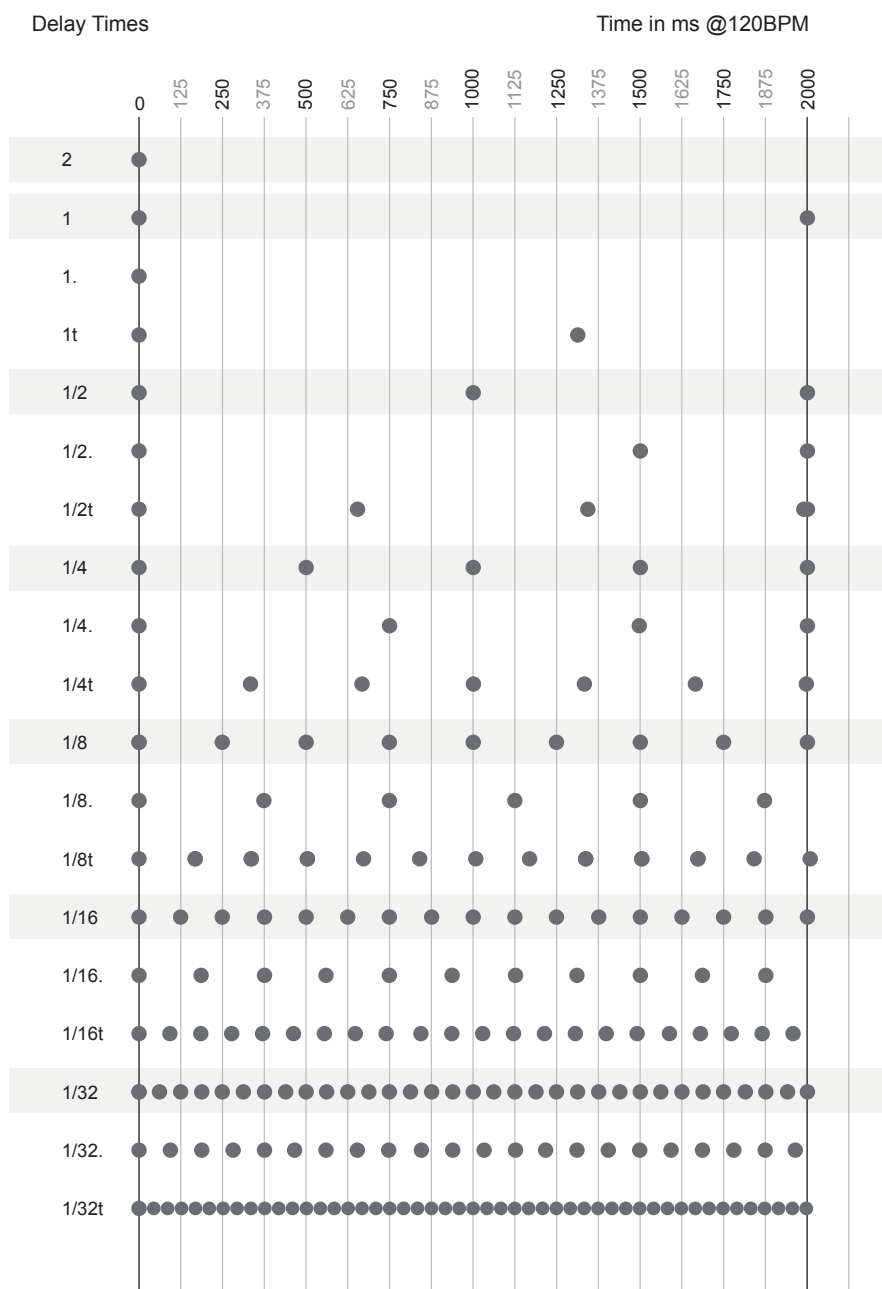
1. Start by setting the channel DPD level. Good starting is 50%. A setting of 0% will mute the delay. This only applies to the DPD delay volume.
2. To set the DPD Repeats:-
 - Hold [DPD] + Turn (Revolver). This will adjust repeat 1 shown in the upper bar to one of the 8 available time divisions. The revolver chosen will represent the channel to adjust.
 - Hold [DPD] + Push & Turn (Revolver). This will adjust repeat 2 shown in the lower bar to one of the 8 available time divisions. The revolver chosen will represent the channel to adjust.
3. The channel LED bar will also show the repeat position while the DPD button is held. Repeat 1, upper bar is indicated by an orange coloured LED and repeat 2, lower bar by a red LED. If the positions are equal, a single LED is displayed in yellow.
4. The main delay time division will apply also to the division of the DPD repeats. Also the main delay feedback is also applied.
5. Iterate settings until a pattern or the rhythm desired is achieved.
6. Hold [FDP] and Turn (Revolver) for the specific channel. Clockwise will adjust the high pass and counterclockwise will adjust the low pass filter cutoff. This can be used to help clean the audio signal, affect the tone and help balance the tone and sound of the delays within an overall mix. The filter only applies to the DPD repetitions.
7. Once complete the (DPD) channel level can be adjusted to mix the DPD delay alongside any other delays and channels.

3 Delay & Reverb

3.7 Delay Time Divisions

There are a range of time division which can be used and it is worth taking a little time to demonstrate typical delay timing for the available options. Example below is based on 120BPM with associated delay times.

Delay Time Division Chart

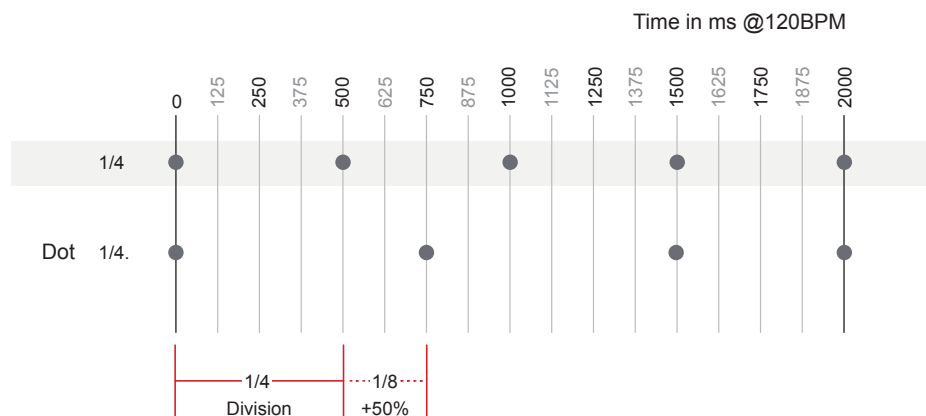


The division starting at 2 is available by default, but not when the BPM range is set to start at 45bpm.

NOTES

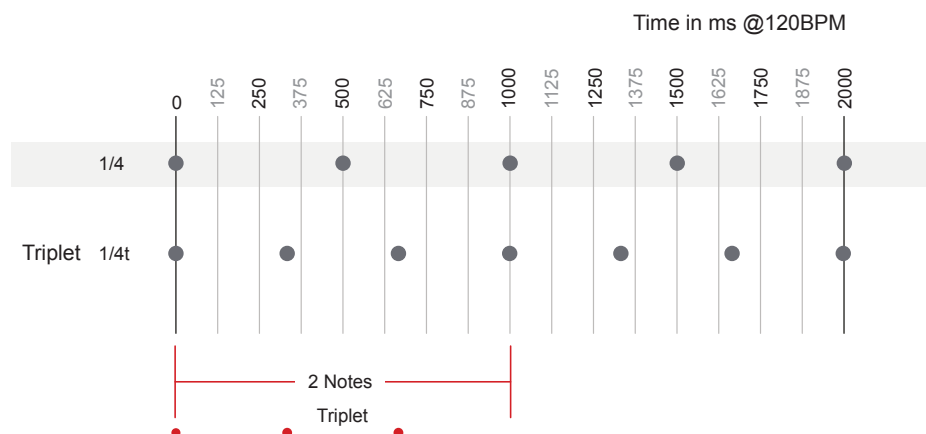
Dotted Note Values

A dotted value extends a note division or in this case the delay time division by 50% of its original value. For example a quarter division dotted is extended by 50% of a quarter i.e. increased in duration by $\frac{1}{8}^{\text{th}}$.



Triplet Note Values

A triplet will divide 3 notes, evenly spaced over the time period of 2. This retains the same rhythmic value for all notes. In this example delays are referred by the division.



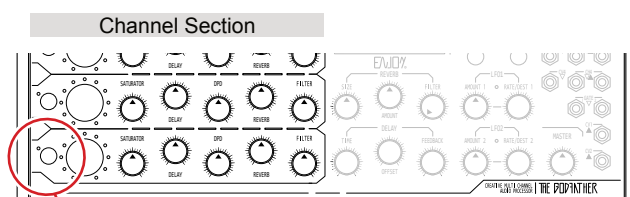
Examples given using $\frac{1}{4}$ divisions at 120BPM timings

3 Delay & Reverb

3.8 Working Mode Summary

Another unique delay feature in The GodFather is the working modes. The working modes control the input routing behaviour to the delay line for each channel. This can be initiated per channel using the dedicated trigger button and configured with the shift and trigger button combo.

NOTES

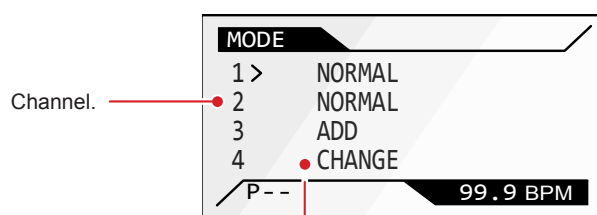


Trigger

The trigger button for each channel activates the working mode behaviour of the input to the channel delay line. The trigger LED is normally illuminated, the colour indicates the current mode.

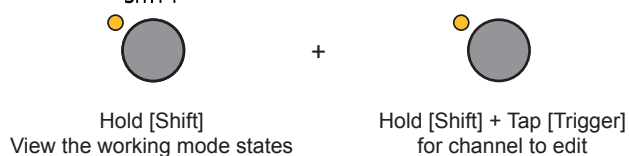
Working Mode States per Channel

Red LED	Orange LED	Blue LED	Green LED
Mode Triggered	Normal Mode	Add Mode	Change Mode
Trig held	Default mode state when the trigger button is not held		



Working Mode.
Assigned per Channel

SHIFT



Working Mode Summary

Each channel can operate with its own working mode. When triggered the audio input to the delay is controlled. Each mode determines how this control operates. While at first look this appears to be a configuration topic, it is actually an advanced and extremely creative function. The delay parameter settings are applied when the delay is active, the mode sets how audio is routed into the delay line while the trigger button being is held.

Working Modes

Mode	Trigger Button State	LED	Description
Normal	Not Pressed	Orange	Audio is fed into, and through the delay line function by default which operates as normal with all parameters such as time, feedback etc fully operational and applied to the audio.
	Held	Red	Audio is muted at the delay line input for the duration of the trigger being held. Original audio is still heard but no delay is applied to any subsequent audio while trigger is held.
Add	Not Pressed	Blue	Audio is muted through the delay line function. Original audio is still heard but no delay is applied. Any audio repetitions already in the delay line will still be heard over their duration.
	Held	Red	The current audio is captured and fed through the delay line function for the duration of the trigger being held. New audio is added to any existing repetitions within the delay line. Ideal for capturing and layering audio snapshots into the delay line.
Change	Not Pressed	Green	Audio is muted through the delay line function. Original audio is still heard but no delay is applied. Any audio repetitions already in the delay line will still be heard over their duration.
	Held	Red	The current audio is captured and fed through the delay line, replacing any existing repetitions for the duration of the trigger being held. Alternative option for on-the-fly capturing of audio snapshot variations into the delay line.

Triggering the mode when no signal is present offers an interesting and creative way to cancel any loops or to create sound gaps in the audio. Try tapping in change mode to experiment with audio loop patterns.

The mode trigger can also be activated using the LFO's. This will trigger / activate the working mode automatically. The 'Mode' LFO destination is a global parameter meaning that all the channels will be affected, cyclically triggering each channel from the LFO source.

3 Delay & Reverb

3.9 Working Mode Applications

Working mode should not be overlooked when considering live improvisations or desktop creativity with sound design and production. As a more in depth guide some basic creative examples are provided to get things started with the working modes and triggers.

BASIC USE OF WORKING MODES

1. The currently active working mode per channel is displayed on the trigger button LED's by default and no button is pressed or LFO is assigned. Holding [Shift] will also display the modes for each channel.
2. To set the mode, Hold [Shift] + Press [Trigger] for the channel to edit. Each press of [Trigger] will cycle through the modes. The trigger button LED will indicate the state:-
 - Orange, Normal Mode. Named in the mode page as 'Normal'.
 - Blue, Add Mode. Named in the mode page as 'Add'.
 - Green, Change Mode. Named in the mode page as 'Change'.
3. The mode can be activated once set by pressing [Trigger] alone. Hold the button to initiate the mode selected and activate the behaviour in feeding audio into the delay.
4. The trigger button LED is lit red when triggered by holding the button or when triggered automatically through any assigned LFO.
5. Releasing the [Trigger] button will revert to the default state for the channel and working mode selected. The trigger LED, when released will reflect this mode.

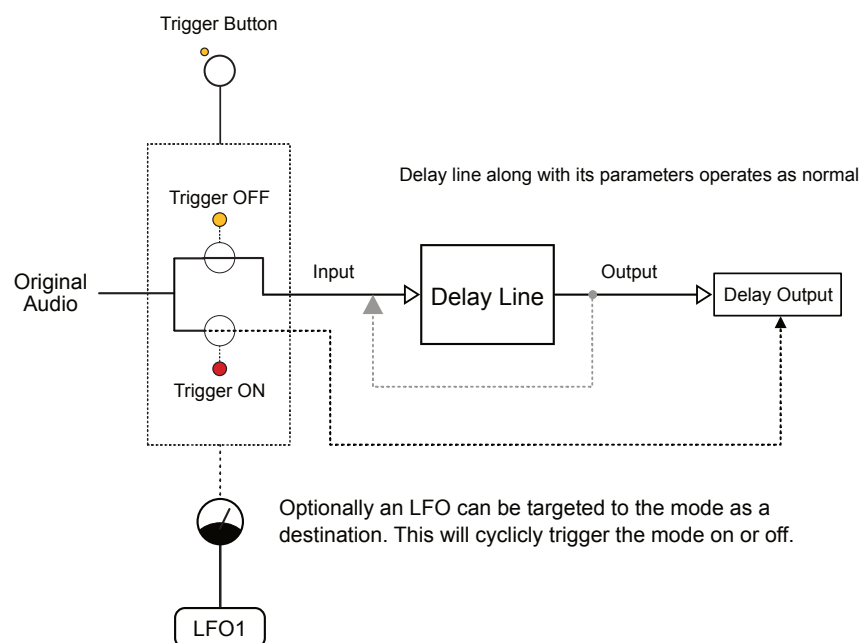


The 'Mode' can be modulated globally from the LFO and CV Functions.

Normal Mode

Normal mode operates in a typical delay style. The delay is constantly active and audio applied based on the normal delay, time and feedback parameters. The trigger will mute any audio entering the delay line function while ever the button is pressed.

Normal Working Mode Channel



Example: LFO to trigger modes.

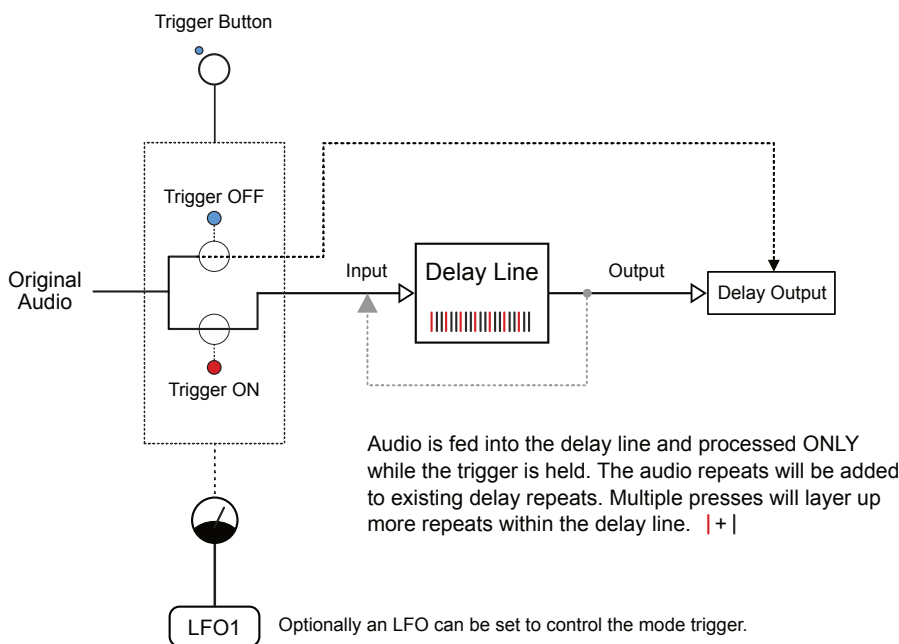
The delay operates as normal in 'Normal' working mode. However try connecting the LFO which will drop the delay out by triggering the working mode function on/off at intervals set by the LFO time. If both the delay time and LFO are synchronised to the global tempo some interesting melodic patterns can be created, adding space to breath or adding more melodic structures. Try adjusting the times between delay and LFO to set them apart.

3 Delay & Reverb

Add Mode

Add mode operates with the default audio muted at the input to the delay. This means while operating generally no audio will be fed to the delay line for processing. When the trigger is activated, audio is fed into the delay for the duration of the active trigger, adding to the existing repeats.

Add Working Mode Channel



Building layered patterns manually.

The delay line is not fed with audio in 'Add' working mode when in the default state. Audio is only fed to the delay line input when the trigger is activated. The audio repeats generated will be added to the existing delay repeats. Consider this layering of snippets of delay audio to build intricate structures. With a low/mid feedback setting, try tapping the button several times to capture multiple repeat snapshots. Building on the existing repeats in the delay line.

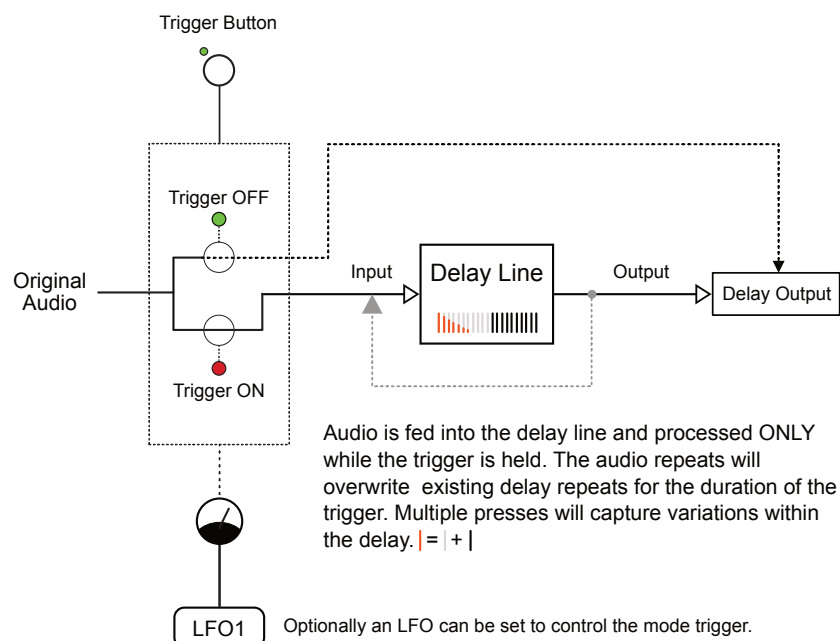
Creative structures with infinite loops.

Setting the feedback value to 100% effectively creates an infinite loop. The delay line repeats will basically continue forever with audio captured and played in a looped sample. Ensure a continuous evolving pad or drone instrument is input to the respective channel. Tapping the trigger button will capture elements of the audio and add repeats into the delay line. Tap in a rhythmic style to build layers of continuous looped soundscapes and ambient structures. Remember that the duration of the button being held determines the range of audio overlaid in the delay line. Reduce feedback to fade out or press (Time).

Change Mode

Change mode operates very similar to Add but will replace rather than add to the repeat audio in the delay line. The default audio is muted at the input to the delay so while operating generally no audio will be fed to the delay line. When the trigger is activated, audio is fed into the delay line overwriting the existing repeats for the duration of the active trigger.

Change Working Mode Channel



Creative structures with infinite loops.

Setting the feedback value to 100% effectively creates an infinite loop. The delay line repeats will basically continue forever with audio captured and played in a looped sample. Ensure a continuous melodic sequence is input to the respective channel. Tapping the trigger button will capture elements of the audio and generate repeats into the delay line. This will overwrite existing audio so timing of the button press is what captures the pattern. The duration the button is held determines the range of audio in the delay line. Once audio is captured adjust various settings such as the delay time and add other effects like reverb.

Clearing the delay line.

Ensure no sound is input to the channel. With silence on the input hold the trigger. The delay line is emptied of any repetitions and cleared. This will allow more experimentation and exploration starting with a blank delay canvas. Pressing (Time) also clears the feedback. Try pressing multiple times, consecutively to include sound holes into the pattern loop.

LFO Modulation

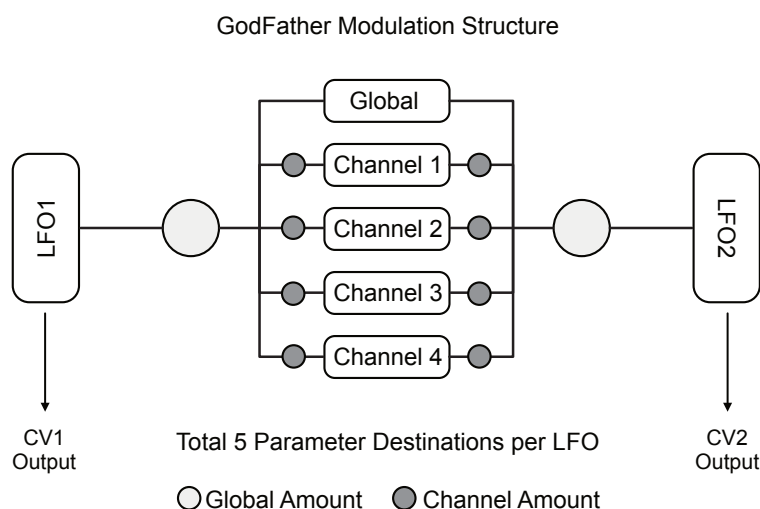
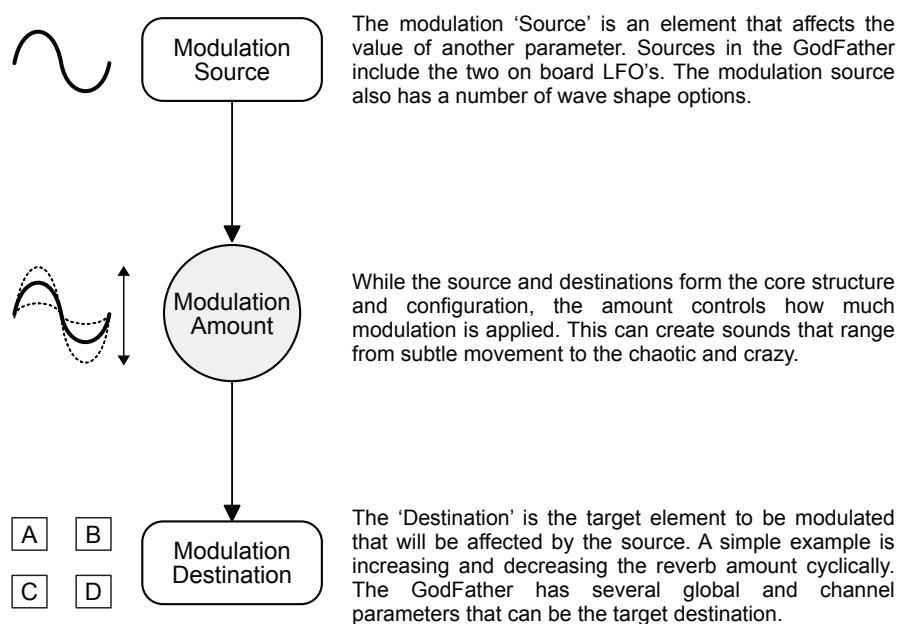
A Low Frequency Oscillator or LFO is a function used as a source of modulation for other parameters adding movement and variation to an audio mix. Normally an oscillator would be considered as a sound source but an LFO typically operates below audible frequency ranges and is therefore designed principally to act as a modulator rather than a sound generator. The GodFather has two independent LFOs, each with a number of onboard destinations that can be modulated. The LFO's can modulate multiple parameters where each one can send modulation to one global destination as well as one channel parameter destination simultaneously. An example is to modulate the reverb amount as a destination target from one of the LFO's. The two LFO's operate independently although LFO1 can be synchronised to LFO2. Each has the option to change the oscillator wave shape, set the

amount of modulation generated, the speed of the modulation and the destination. The rate which controls speed can be synchronised or run free also with the option to manually reset the phase / start. While most applications will control onboard functions, both of the LFO's also send outputs to external gear using the control voltage outputs. LFO1 sends to CV1 and LFO2 sends to CV2 outputs located within the patch bay. This is useful for example patching from CV out to the CV in for example to control the filter cutoff of an external module. Modulation adds more creative options into The GodFather and emphasises its use as a creative instrument. Rather than set and forget, the ability to manipulate and change parameters automatically with the LFO's and manually on the fly inspires a new avenue to music making.

4 LFO Modulation

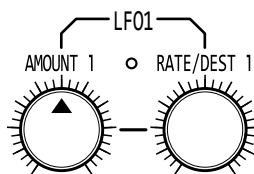
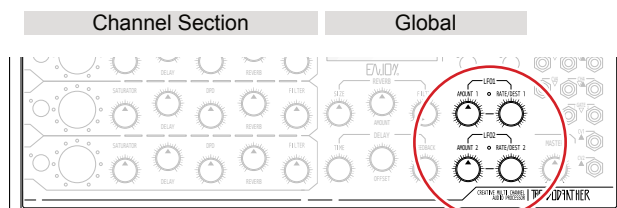
4.1 Introduction to Modulation

Modulation is the process of manipulating a parameter to add movement, and character. An LFO is a Low Frequency Oscillator that generally doesn't generate sound in the audible spectrum but is used to affect another parameter adding interest and variation. The GodFather has two assignable LFO's used for modulating onboard and external parameters.



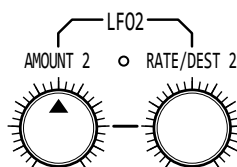
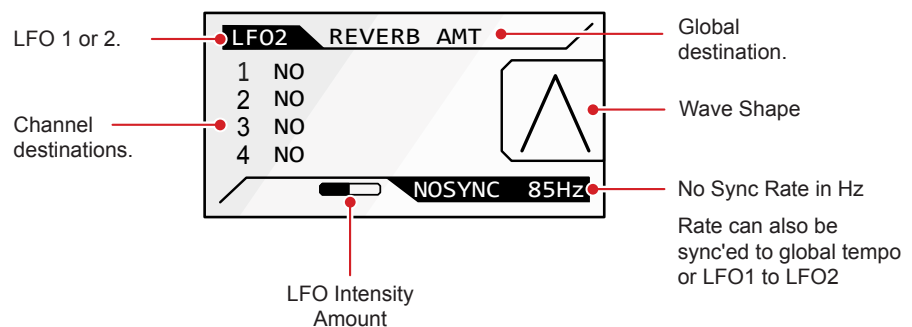
4.2 LFO Section

The GodFather has two LFO's located in the global section. Both LFO1 and LFO2 operate in virtually the same way. Some minor differences between the two LFO's exist but the activity of setting up parameters follows the same process. The shape, rate, amount and destination can be set for each from within the LFO section.



LFO's
Each of the 2 LFO's operate in the same way. Each has an amount knob and an endless push encoder for setting both rate and destination as well as the wave shape when using shift. LFO Page appears when adjusting a parameter.

The LFO LED will reflect the LFO activity and behaviour. Brightness represents amplitude of the LFO based on intensity amount and flash speed is based on the rate.



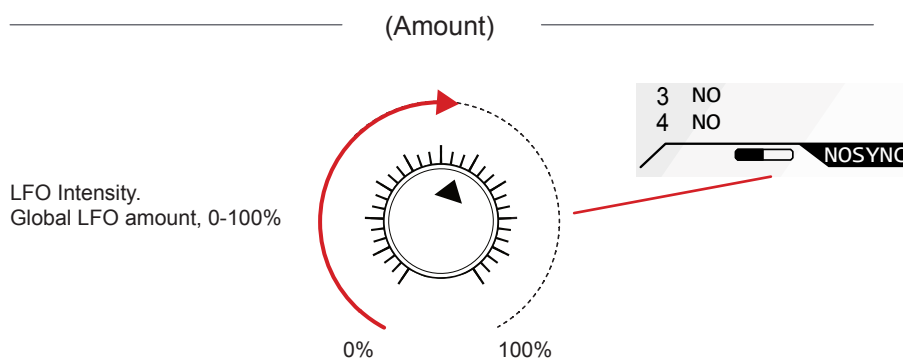
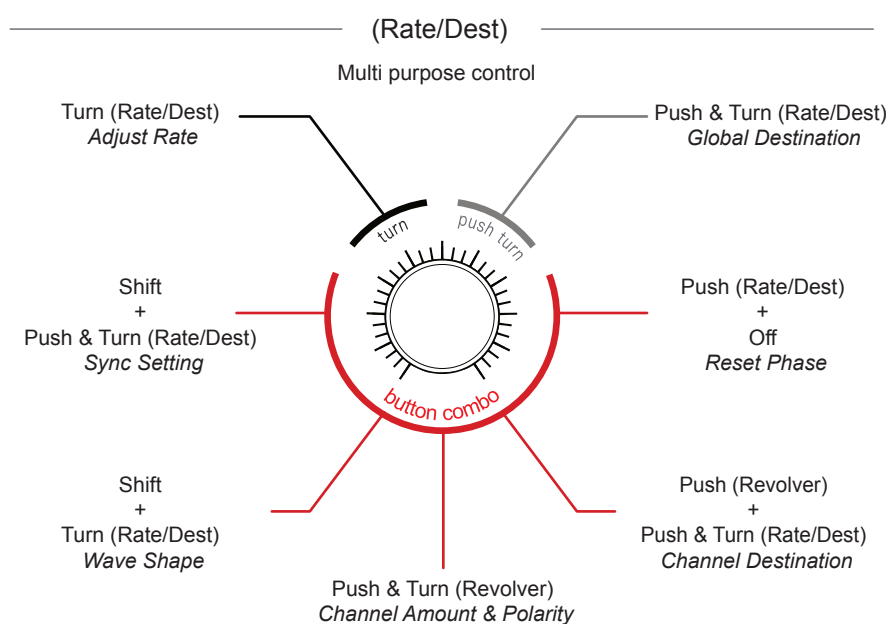
LFO1 vs LFO2 Differences

Each of the 2 LFO's operate practically in the same way other than the following key routing differences:-

- LFO1 also controls output CV1
- LFO2 also controls output CV2
- LFO1 can sync to LFO2

4 LFO Modulation

While there are only two control knobs in the LFO section, there are multiple functions which can be controlled, especially from the (Rate/Dest) endless push encoder. The amount is the LFO intensity, which is a generic parameter that operates at the LFO level. Channels can be adjusted individually for the amount and polarity of control.

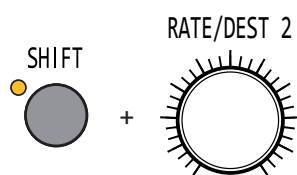
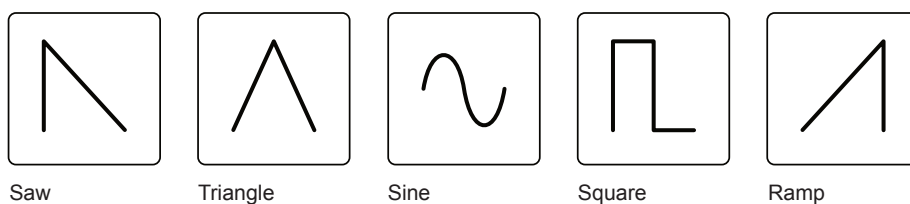


Amount

The amount knob controls the global intensity of the modulation. This will directly and singularly affect the global parameter destinations and will also affect the channel modulation levels in conjunction with the channel specific amount level and polarity setting.

4.3 Wave Shapes

The GodFather has five available shapes that can be applied in the oscillator wave. These will create the movement characteristics of the modulation of the defined destination. The oscillator will cycle the wave continuously at the speed defined by rate and can optionally be synchronised with the global tempo.



Wave Shape

The wave shape can be selected for each of the LFO Oscillators from the 5 available models. These are saw, triangle, sine, square and ramp.

Hold [Shift] + Turn (Rate/Dest)

Rate/Dest 1 or Rate/Dest 2 for the respective LFO to change.

SETTING THE LFO SHAPE

1. Hold [Shift] + Turn (Rate/Dest 1) to select a wave shape from the five available shapes for LFO1.
2. Hold [Shift] + Turn (Rate/Dest 2) to select the wave shape from the five available shapes for LFO2.
3. Release the controls and the shape will be applied to the oscillator as the source for modulation.
4. Try applying different shapes to the defined destination to explore possibilities. Ensure amount is set correctly and a destination assigned in order to hear its effect.

4 LFO Modulation

4.4 Destination

The GodFather has multiple destinations that can be targeted for each LFO, with a maximum of 5 assigned simultaneously. Each LFO can be assigned to one global parameter and to one channel parameter in each of the four channels. This is a maximum allowable configuration and it is not necessary to assign all 5 LFO destination slots, some can remain off.

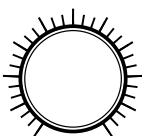
LFO Destinations

LFO1 Global	LFO1 Channel	LFO2 Global	LFO2 Channel
No None	No None	No None	No None
Reverb Amt Reverb Amount	Level Channel Volume Level	Reverb Amt Reverb Amount	Level Channel Volume Level
Reverb Filter Reverb Filter	Saturator Saturator Amount	Reverb Filter Reverb Filter	Saturator Saturator Amount
Master Volume Master Level	Delay Delay Amount	Master Volume Master Level	Delay Delay Amount
Mode Working Mode ⁽¹⁾	DPD DPD Level	Mode Working Mode ⁽¹⁾	DPD DPD Level
<i>Also output at CV1</i>	Reverb Reverb Send Amount	<i>Also output at CV2</i>	Reverb Reverb Send Amount
	F-LP Filter low pass cutoff		F-LP Filter low pass cutoff
	F-HP Filter high pass cutoff		F-HP Filter high pass cutoff
	Pan Panorama L - C - R		

(1) the modulation for working mode will automatically trigger each channel cyclically based on the LFO configuration such as rate, shape etc.

All LFO destinations can also be modulated by CV. Use the CV inputs in the patch bay to connect a modulation source. Set up the destination in the menu options under CV.

RATE/DEST 2



Destination

The destination can be global and / or channel specific parameters. Up to 5 parameters can be assigned.

Push & Turn (Rate/Dest) - Global Parameter

Hold (Revolver) + Push & Turn (Rate/Dest) - Channel

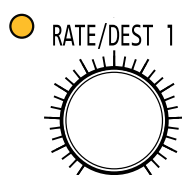
Rate/Dest 1 or Rate/Dest 2 for the respective LFO to change.

SETTING THE LFO DESTINATION

1. Press & Turn (Rate/Dest 1) to select a destination parameter from the global options for LFO1. Use (Rate/Dest 2) to apply for LFO2.
2. Hold (Revolver) + Press & Turn (Rate/Dest 1) to select a destination parameter from the selected channel options for LFO1. Use (Rate/Dest 2) to apply to LFO2.
3. Destination is applied when the buttons are released.

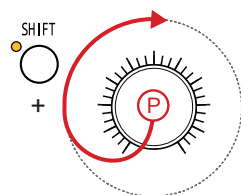
4.5 Rate

The rate determines the speed of the LFO and is set in Hz, cycle per second. The LFO's can operate as free running when 'No Sync' is set or by synchronising to the global tempo when 'Sync' is set. The multiplier is also assigned for synchronised settings. LFO1 can also be synchronised to LFO2. The rate parameter shares the rate/destination function knob.



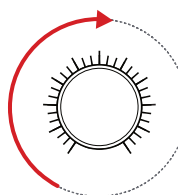
Rate
The rate is adjusted in Hz when set to 'No Sync'. This is free running based on the defined speed. When set to 'Sync' the rate operates as a multiplier of the global tempo. LFO1 can also be set to synchronise to the rate of LFO2. The rate/dest knob LED will illuminate bright or dim based on the intensity amount and its speed reflecting the rate.

[Shift] + Press & Turn (Rate/Dest)



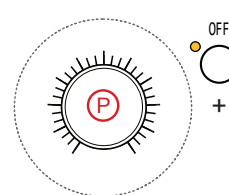
Select synchronisation modes and options

Turn (Rate/Dest)



Adjust rate in Hz if no sync or divisions if sync

Press (Rate/Dest) + [Off]



Reset phase of LFO

No Sync	Rate in Frequency Options 0.2Hz - 0.9Hz, 1Hz-100Hz	Reset
Sync	Rate in Division Options ⁽¹⁾ 2 1. 1t 1 1/2. 1/2t 1/2 1/4. 1/4t 1/4 1/8. 1/8t 1/8 1/16. 1/16t 1/16	Reset
LFO2 LFO1 only. Option to sync LFO1 to LFO2 rate.	LFO1 displays -- LFO2 rate adjustable	Reset

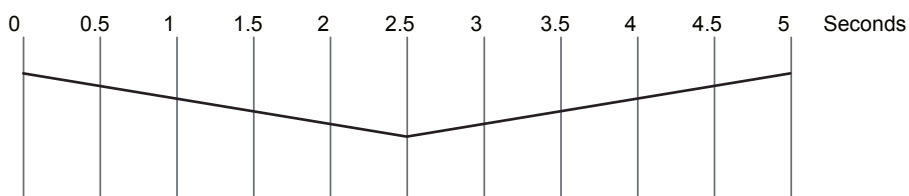
(1) Brief notes on rate intervals described as note intervals.

Dotted Note Value: Indicated by a dot '.' after the note increases its duration by 50% of its original duration. Triplets: Triplets 't' plays 3 notes across the duration of 2 at the original value.

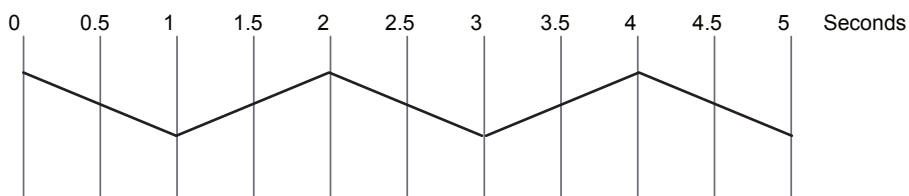
4 LFO Modulation

Examples of rate and synchronisation.

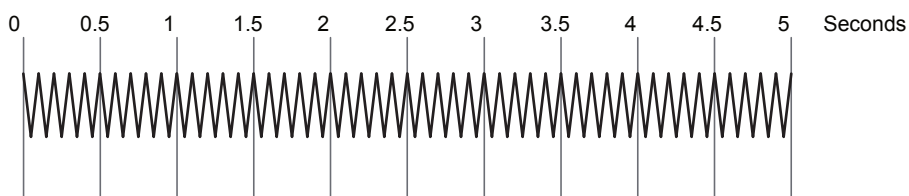
No Sync, Rate 0.2Hz, Triangle Shape



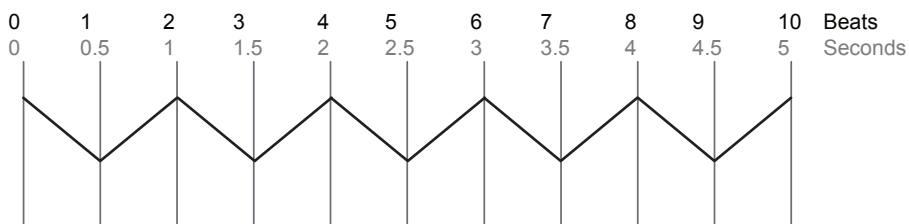
No Sync, Rate 0.5Hz, Triangle Shape



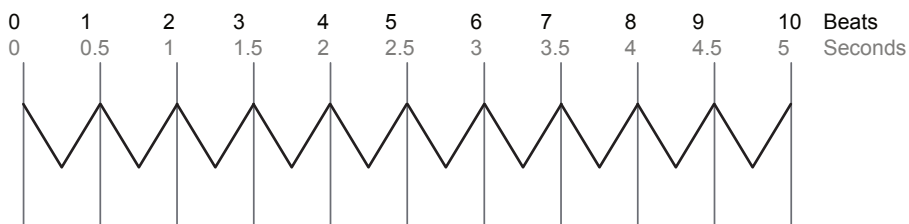
No Sync, Rate 10Hz, Triangle Shape



Sync, Global Tempo 120 BPM, Rate 1, Triangle Shape



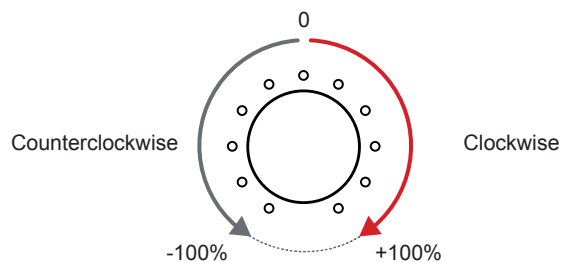
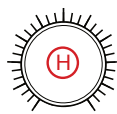
Sync, Global Tempo 120 BPM, Rate 1/4, Triangle Shape



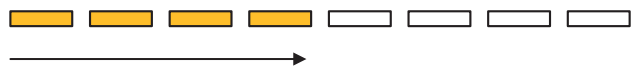
4.6 Channel Amount & Polarity

The (Amount) knob for each LFO controls the global intensity of modulation from the respective LFO. This will apply the modulation intensity to the global destinations and also each of the channel destinations. In addition, each channel modulation amount can be set and adjusted in conjunction with the global amount. The channel polarity can also be set.

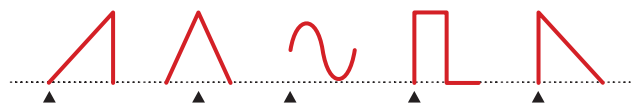
Hold (Rate/Dest) + Turn (Revolver)



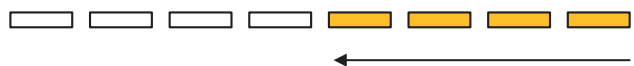
Clockwise
0 to +100% Amount



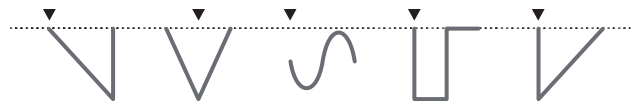
Positive modulation is shown left to right on the LED bar when the LFO page is on display, i.e. hold (Rate/Dest).



Counterclockwise
0 to +100% Amount



Negative modulation is shown right to left on the LED bar when the LFO page is on display, i.e. hold (Rate/Dest).



LFO1 & LFO2
Channel Bar Colours



LFO1 is orange LED Colour, LFO2 is Red LED Colour.
Press both (Rate/Dest) Knobs to view both LFO's simultaneously.

Phase Reset ▲▼

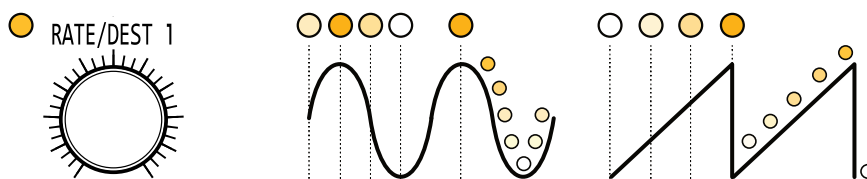
The wave cycle phase can be reset to its phase start point by holding (Rate/Dest) of one or both LFO's + Press [Off].

4 LFO Modulation

The channel LED Bars will display the amplitude, polarity and intensity while the LFO page is displayed. The rate / destination section LED's for each LFO are displayed permanently. The LED for the (Rate/Dest) will pulse in time with the respective LFO cycle rate.

Rate / Dest LED

The rate/dest knob LED will illuminate bright or dim based on the intensity amount through the wave shape cycle. The speed will reflect the rate. This is displayed constantly for each LFO.



SETTING THE LFO GLOBAL AND CHANNEL AMOUNT

1. Turn (Amount) for the respective LFO. On a range between 0-100 the global intensity is adjusted. This will be displayed in the lower left of the LFO page which appears while editing. This is applied to global destinations and channel destinations.
2. In addition to the global amount, a dedicated amount and polarity can be applied to each channel. To adjust the channel amount;-
 - Hold (Rate/Dest) + Turn (Revolver). This will adjust both the amount applied and the polarity. The revolver adjusted is respective to the channel amounts to adjust.
 - Hold (Rate/Dest) + Turn (Revolver) Clockwise to apply a modulation amount to operate in a positive direction. The Channel LED Bar will show the modulation left to right. LFO1 LED Bar is orange, LFO2 LED Bar is Red.
 - Hold (Rate/Dest) + Turn (Revolver) Counterclockwise to apply a modulation amount to operate in a negative direction. The Channel LED Bar will show the modulation right to left. LFO1 LED Bar is orange, LFO2 LED Bar is Red.
 - The channel modulation activity will be displayed while the LFO page is active.
3. The LED bar indicators can display both LFO1 orange and LFO red at the same time by pushing both (Rate/Dest) knobs simultaneously.

4.7 Quick Guide for Setting an LFO

The process for setting the LFO's to modulate internal parameters is applied in the same way for both LFO's.

SETTING UP AN LFO

1. Identify the parameters(s) to modulate. It is possible to set one global parameter and one channel parameter per channel.
 - Press & Turn (Rate/Dest) to select a destination parameter from the global options for the selected LFO.
 - Hold (Revolver) + Press & Turn (Rate/Dest) to select a destination parameter from the chosen channel for the selected LFO.
2. Set the amount of modulation intensity to apply.
 - Turn (Amount) for the LFO source. A good starting point is 60. This can be adjusted and tuned further later. This affects the global amount for both global and channel destinations.
 - Hold (Rate/Dest) + Turn (Revolver). This sets the amount for positive modulation clockwise or negative modulation counterclockwise. This sets the channel amount only.
3. At this point modulation should be active from the LFO to the target destination. This may be audible. The rate of modulation is adjusted by turning (Rate/Dest) for the LFO to adjust. By default this is a free running speed, but can be changed to sync to global tempo by Pressing [Shift] + Press & Turn (Rate/Dest). LFO 1 can also be set to synchronise to LFO2. Vary the rate to get the necessary speed desired.
4. The modulation behaviour will now be reflected in the audio. For example modulating the reverb amount will be heard on the reverb effect. The behaviour can be changed with the wave shape. Different shapes will change the sound evolution. Hold [Shift] + Turn (Rate/Dest) for the LFO to change. Triangle, Sine, Pulse and Ramp are available.
5. Iterate through these steps to develop the modulation further or add more destination parameters to the project. A total of 5 destinations is possible from each LFO.

External Control

The GodFather patch bay allows interfacing with a variety of other gear. Firstly, The GodFather supports MIDI, a common, classic interface standard for audio gear. MIDI stands for Musical Instrument Digital Interface and operates to a defined set of standards. This can be connected generally using USB, 5 Pin DIN or in the case of The GodFather, using a 3.5mm connection. This interfaces to 5 Pin DIN using a Type 'A' adapter which is supplied in the box. A MIDI input and output connection is available via the 3.5mm sockets. In The GodFather the control of parameters is the most important feature along with sending or receiving an external clock to determine the tempo. Continuous Control Change messages, also called CC are communicated over MIDI and can adjust and set parameter values between devices. A set of CC target parameters within The GodFather is pre-defined and allows other gear to be matched

up to control The GodFather values. The other primary means of control between gear is the CV and Gate options. This is typically used in Eurorack modular gear but is increasingly being adopted in desktop and hybrid setups. Where MIDI used a digital communication protocol, CV is an analog model and uses voltage levels as the control. CV or Control Voltages normally use a control value over a defined range. For example 0-10V representing 0-100%. Gates represent on/off signals while still using a voltage level to determine each state. Gates are typically used here for clock pulses. The GodFather has 2 Gate outputs and 1 Gate input. There are also 4 CV Inputs as well as 2 CV Outputs. All connections use mono TR 3.5mm mini jack patch cables, a collection of which are supplied with the device.

5 External Control

5.1 Patch Bay Controls

The patch bay has 11 input / output 3.5mm control sockets. There are 2 Gate Ins, 1 Gate Out, 4 CV Ins and 2 CV Outs plus a MIDI input and an output. The GodFather is supplied with 2x MIDI Type 'A' Adapters plus 4 patch cables.

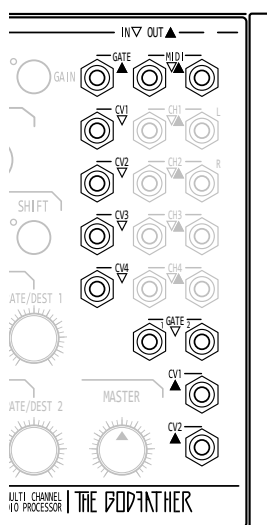
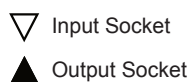
Patch Bay Conventions

Located at the right side of the GodFather front panel. The inputs and outputs are labelled by function and the input / output tag.

Function Name Label



Input / Output Tag



Patch cables are Mono TS - Tip / Sleeve, 3.5mm Mini Jacks.



MIDI Type 'A', 3.5mm to MIDI 5 Pin Adapter.



There are several MIDI to 3.5mm adapter standards. Enjoy Electronics uses Type 'A' for The GodFather. Other manufacturers who use type 'A' include; Korg, Make Noise, Akai, IK Multimedia, Critter & Guitari Organelle M, Elektron Model Samples (config), TE OP-Z & Pocket Mod, Empress Effects Zoia, Torso Electronics T-1, Moog Subharmonic.

5.2 Gates & Clocks

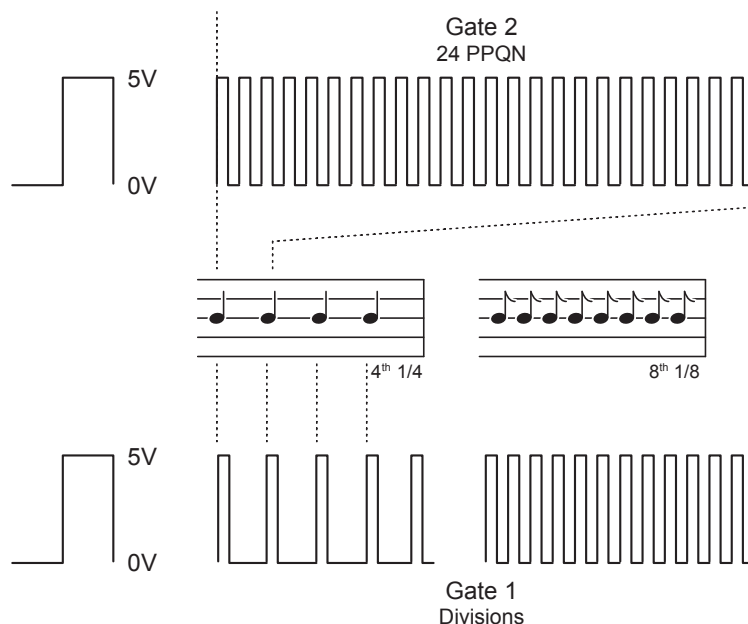
Gates receive or send a short on / off pulse and are generally used with The GodFather as clock control to synchronise timing between devices. Clocks can also be communicated over MIDI. The GodFather averages gate pulses received to establish the global tempo.

Gate Functions

Function	In / Out	Range	Description
Gate 1	Input	0V to +5V Tolerant to 10V	External clock input. Control of GodFather's global tempo. Divisions available are 1th, 2th, 4th, 8th, 16th. Configured in the 'Sync' menu.
Gate 2	Input	0V to +5V Tolerant to 10V	External clock input. Control of GodFather's global tempo. Uses a fixed 24 PPQN format.
Gate	Output	0V to +5V	Control of an external clock from the global tempo. Uses division format 1/2, 1th, 2th, 4th, 8th. Configure in the 'Sync' menu.

Gate 2 Input - 24PPQN Format

PPQN or Pulses Per Quarter Note transmits or receives a series of pulses based on the quarter note divisions. This is a common format found in Eurorack modular devices and the standard for MIDI. The GodFather is fixed at 24PPQN for Gate 2 input recognising a rising edge. Some may have for example a 48PPQN which would affect The GodFather tempo. Ideally match the PPQN to The GodFather 24PPQN as defined for Gate 2 inputs.



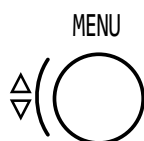
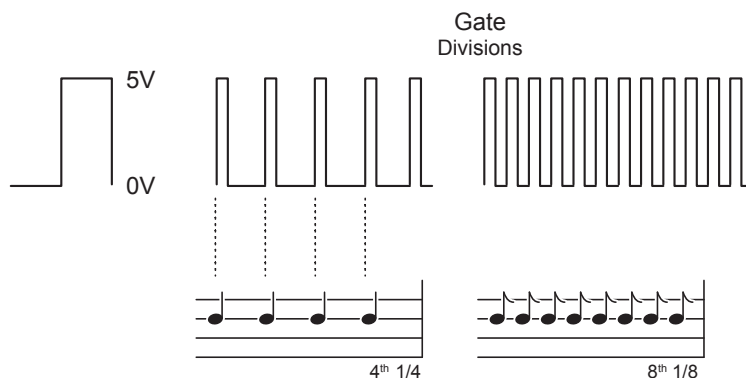
Gate 1 Input - Tap Division Format

The alternate option for clocks is the tap division format. This will receive pulses based on note division intervals. The settings available are; 1th Notes, 2th half notes, 4th quarter notes default; 8th eighth notes and 16th sixteenth notes divisions. The format can be changed in The GodFather menu under the 'Sync' options.

5 External Control

Gate Output - Tap Division Format

The options for clock outputs are the tap division format. This will send pulses based on note division intervals. The settings available are; 1/2, 1st note, 2th half notes; 4th quarter notes default; 8th eight note divisions. The format can be changed in The GodFather menu under the 'Sync' options.

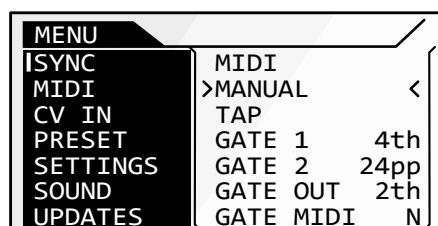


MENU

Menu - Sync Options

The gate settings are found in the menu under 'Sync'. This would allow selection of the gate used for input and also the division settings for gate 1 input and gate output.

Sync Options.



Main Menu

Press (Menu)
to open menu options. The cursor tag flashes when navigating and is static while editing an option.

Turn (Menu)
to cycle through Sync, MIDI, CV In etc

Highlight 'Sync' & Press (Menu) to
switch to the left side sub-menu options.

Gate Input & Output Settings

Turn (Menu)
to select through the sync options.
Selected item shown between '> <'.

Press (Menu)
to select the option to edit.
Once selected, Turn (Menu) to adjust.

Press [Off]
to backup up and exit the menu.

SETTING UP AN EXTERNAL CLOCK INPUT

1. Identify the format of the clock transmitted from the external device that will be connected to The GodFather. Lets assume this is 24PPQN for example purposes.
2. Connect the output from the external device to The GodFather gate input using a standard mono patch cable. In this case use Gate 2 as the input which is compatible with 24PPQN.
3. Check the input 'Sync' Settings.
 - Press (Menu) to open the menu options.
 - The main menu has Sync plus a number of other sub-menu options. Turn (Menu) to highlight 'Sync' then press (Menu) to select this sub menu.
 - Turn (Menu) until the selection cursor tag is located alongside 'Gate 2' with the 24ppqn format. Tap (Menu) to select.
 - Once the option is selected, press [Off] to back up and out of the sub-menu's and back to the default 'home' page.
4. The clock sent will be received and the average applied to the global tempo within The GodFather. Adjust the external clock typically by adjusting its tempo to view The GodFather global tempo synchronised changes.
5. Incoming MIDI data is indicated with a flashing LED near the jack. If the tempo synchronisation is not evident, try checking:-
 - Ensure the external device is sending a clock. Devices set to receive clock may not then send a clock out.
 - Check the integrity and type of the patch cable, typically mono TS.
 - Check the PPQN format on the source device. If there are discrepancies in the tempo value for example multiples or divisions on The GoFather, check the PPQN is 24. Try doubling or halving clock values on the source device.
 - The external device does not have to be a dedicated clock. Any function that sends pulses to the gates should work. It is a case of ensuring the rate applied matches 24PPQN.
 - Check that The GodFather 'Sync' settings is set appropriately to receive a clock on the connected input.

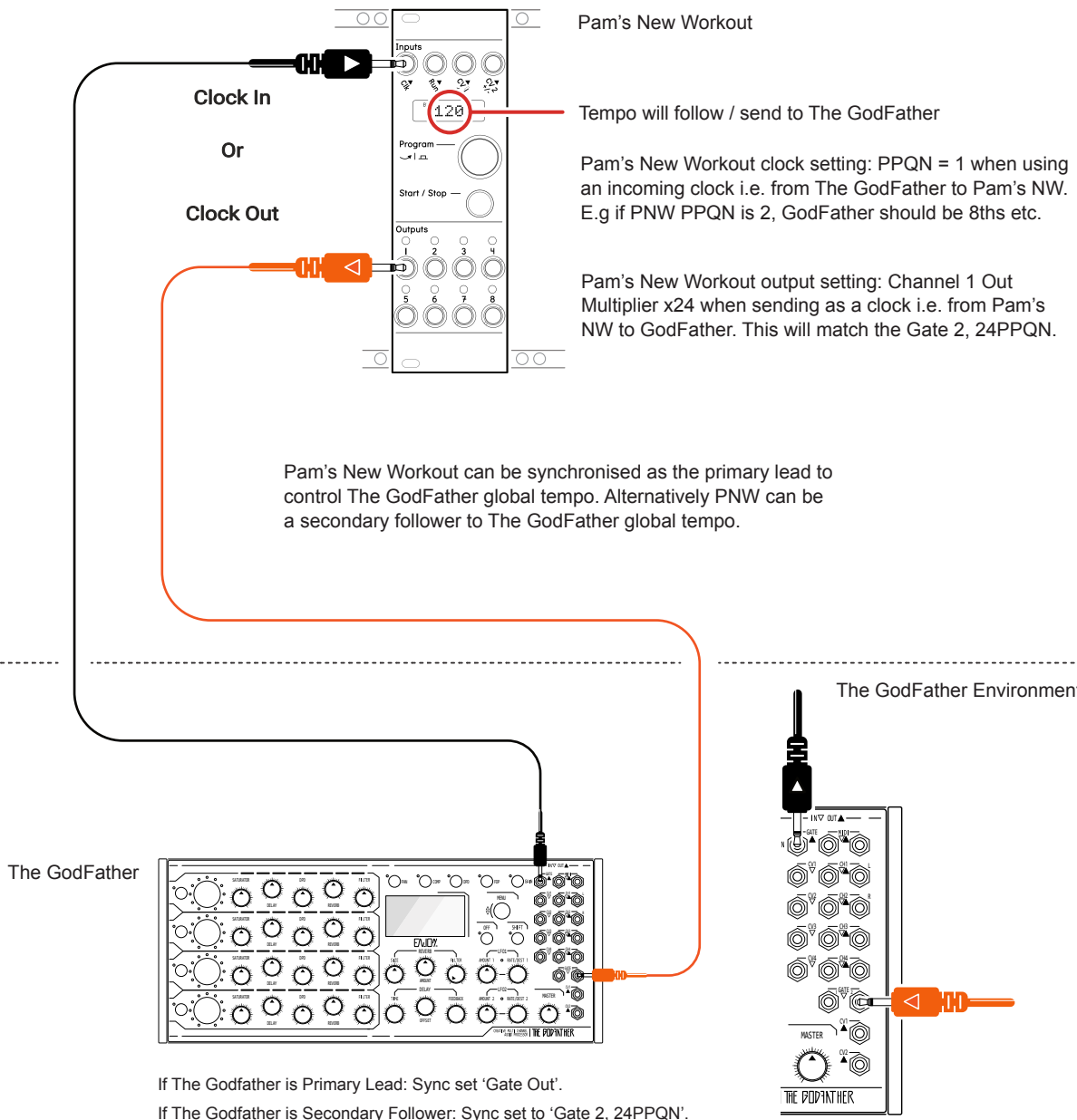
5 External Control

SENDING A CLOCK OUTPUT TO AN EXTERNAL DEVICE

1. Identify the format of the clock transmitted to the external device that will be connected to The GodFather. Lets assume this needs 4th pulses for example purposes.
2. Connect from The GodFather gate output to the external device using a standard mono patch cable.
3. Check the output 'Sync' Settings.
 - Press (Menu) to open the menu options.
 - The main menu has Sync, MIDI and CV sub-menu options. Turn (Menu) to 'Sync' then press (Menu) to select this sub menu.
 - Turn (Menu) until the selection 'dot' is located alongside 'Gate Out'. Note that this is on Sync Page 2 so scroll to access.
 - Press (Menu) to edit the 'Gate Out' options.
 - Turn (Menu) to select '4th' from the options. This can be adjusted by trial and error to check the response of connected the device if the exact value is not known up front.
 - Press (Menu) to confirm selection.
 - Once the option is selected, press [Off] to back up and out of the sub-menu's and back to the default 'home' page.
4. The global clock will be sent and received by the external device, which should set its tempo to match The GodFather. Adjusting global tempo should be reflected on the external device.
5. If the tempo synchronisation is not evident, try checking:-
 - Ensure the external device is set to receive an external clock. Devices set to send a clock may not then receive a clock in.
 - Check the integrity of the patch cable and ensure this is the correct type of cable, typically mono TS.
 - Check the division. This would be reflected in multiples or divisions out of sync with The GodFather. Try changing the value.
 - Check that The GodFather 'Sync' settings is set appropriately to send a clock on the connected gate output.

Example Configuration: The GodFather with ALM Pam's New Workout - Eurorack Module.

Eurorack + PNW Environment



----- If The GodFather is the primary clock, any connected devices, i.e PNW will be synchronised. -----

5 External Control

5.3 CV Control

The patch bay has 6 CV connections, 4 Ins and 2 Outs. CV or Control Voltage is used to change or modulate parameter values from one device to another. This is a common method used in Eurorack modular. Each CV input can be configured to modulate a GodFather parameter. The parameter destinations are the same as for the LFO.

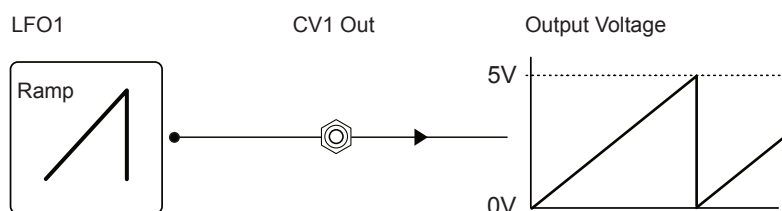
CV Functions

Function	In / Out	Range	Description
CV 1	Input	-10V to +10V	The input controls the selected destination parameter for channel 1. This is configured in the 'CV In' section of the main menu.
CV 2	Input	-10V to +10V	The input controls the selected destination parameter for channel 2. This is configured in the 'CV In' section of the main menu.
CV 3	Input	-10V to +10V	The input controls the selected destination parameter for channel 3. This is configured in the 'CV In' section of the main menu.
CV 4	Input	-10V to +10V	The input controls the selected destination parameter for channel 4. This is configured in the 'CV In' section of the main menu.
CV 1	Output	0V to +5V	Replicates the LFO 1 value and shape at the CV output 1 over the 5V range.
CV 2	Output	0V to +5V	Replicates the LFO 2 value and shape at the CV output 2 over the 5V range.

CV Output

The CV output is generated from each LFO, following the LFO1 and LFO2 value at the CV1 and CV2 output respectively. This allows modulation of external gear from The GodFather and synchronised with any other of the LFO assigned on-board destinations. The source of modulation is not configurable and is fixed to the defined LFO as the source.

LFO as CV Out Example

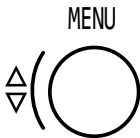


Assigned LFO will automatically be routed to the CV out as well as the assigned on board destination

CV Input

The CV input accepts a range of -10V to +10V however the device sending a CV may use other voltage ranges. A set of destination parameters are available and each input can be assigned to one parameter for its respective channel. CV1 controls Channel 1 and so forth. The setup is configured in the main menu 'CV In' section. The examples shown here refer to the filter as a destination. The GodFather LEDs or displays do not animate to show CV control changes.

Configuring the CV Modulation Destination



Menu - CV In Options
The CV settings are found in the menu under 'CV In'. This would allow selection of the parameter to modulate for each channel. CV input controls are aligned by default to the respective channel. CV 1 will control Channel 1 parameters, CV2 - Channel 2 and so forth.

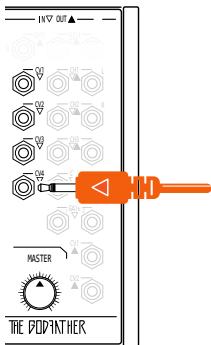
Press (Menu)
to open menu options

Turn (Menu)
to cycle through Sync, MIDI, CV Options
Select 'CV In' & Press (Menu)

CV In Menu.

MENU	CH IN	
SYNC	CH 1	--
MIDI	CH 2	--
CV IN	CH 3	LEVEL
PRESET	CH 4	F-LP
SETTINGS		
SOUND	LINK 1-2	N
UPDATES	LINK 3-4	N

CV 1
CV 2
CV 3
CV 4



Turn (Menu)
to select a channel to edit.

Tap (Menu)
to enter edit mode. The cursor tags flash. The option can be edited.

Turn (Menu)
to choose a destination parameter option to assign to the CV input for the channel being edited.

Ensure a device to send and control the parameter is connected to the correct CV input

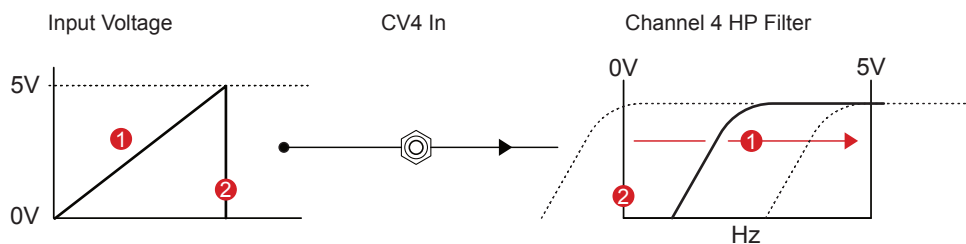
5 External Control

Examples: Controlling the Filter

High Pass Filter

The CV input can control the high pass element of the channel filter. This requires setting up in the main menu 'CV In' section with F-HP as the destination. These are set per channel. The CV will operate similar to the channel strip filter knob but only over the range defined and visual CV control is not displayed on the user interface.

High Pass Channel 4 Example

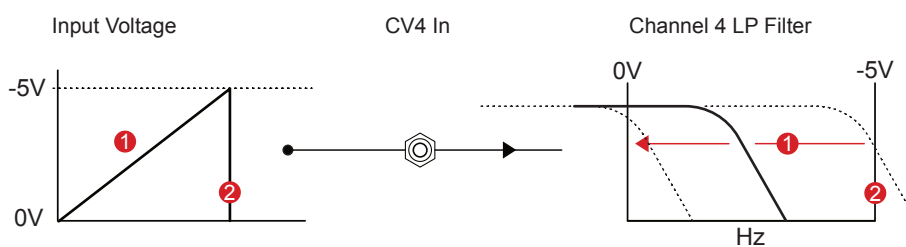


The 0V position will be the starting point with no filter applied and the low cut will be applied and increased as the voltage increases.

Low Pass Filter

The CV input can control the low pass element of the channel filter. This requires setting up in the main menu 'CV In' section with F-LP as the destination. These are set per channel. The CV will operate similar to the channel strip filter knob but only over the range defined.

Low Pass Channel 4 Example

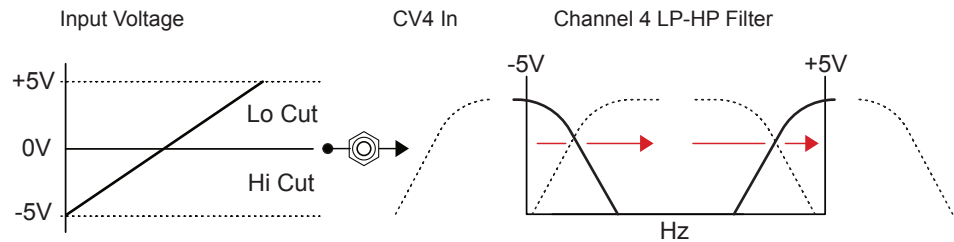


The 0V position will be the starting point with no filter applied and the High cut will be applied and increased as the voltage increases.

High to Low Pass Filter

The CV input can control the high pass to low pass elements of the channel filter. This requires setting up in the main menu 'CV In' section with F-HP-LP as the destination. These are set per channel. The CV will operate similar to the channel strip filter knob but only over the range defined.

High to Low Pass Channel 4 Example



The 0V position will be the starting point with no filter applied and the high pass will be applied and increased as the voltage increases to then turn into a low pass filter.

SETTING THE CV INPUT CONTROL FOR FILTERS

1. Connect to The GodFather a CV control from another device. This could be an external LFO, Function generator or sequencer. The connection input refers to Channels i.e. CV1 is Channel 1, CV2 is Channel 2 and so forth.
2. The CV inputs control the designated parameter on each channel or can be set to '--' for Off. These can be configured for each channel in the CV In Menu.
 - Press (Menu) to open the menu options.
 - Turn (Menu) to 'CV In' then press (Menu) to select this sub menu. Parameters for CV In appear on the right.
 - To set the filter mode per channel, Tap (Menu) to choose the option to edit and Turn (Menu) to change the setting. For example, Channel 1 to change from Off, to F-HP, F-LP or F-HP-LP.
3. Press [Off] to backup and exit the sub-menus.
4. Send a CV signal to the relevant channel. This will modulate the destination parameter, for example the filter cutoff over the range.

5 External Control

5.4 MIDI Definitions

In order to clarify some of the terminology and technology around the MIDI in general a summary of key definitions is provided. Some specific comments on The GodFather which uses a TRS to Type A MIDI Adapter also provided.

5 PIN MIDI



5 PIN to TRS Type 'A'



MIDI DIN 24

This is often found for MIDI Out and Thru and enables syncing of classic devices. This uses 0v & 5v messages as sync signals at 24 pulses per quarter note (PPQN).

MIDI DIN 48

This is often found for MIDI Out and Thru and enables syncing of classic devices. This uses 0v & 5v messages as sync signals at 48 pulses per quarter note (PPQN).

MIDI

Musical Instrument Digital Interface. A protocol for communicating between electronic musical gear. Never connect MIDI gear to incompatible DIN signals.

MIDI CC

MIDI Continuous Control Change messages are used to communicate across MIDI with values of 0-127. Control Changes (CC) affect parameter values and can be used to control The GodFather parameters.

MSB & LSB

Most Significant Byte and Least Significant Byte. MSB provides the 128 data resolution which is ok for most MIDI applications. More advanced devices use MSB and LSB values increasing resolution to 16,384 steps.

MIDI STANDARDS

While there are MIDI standards defined, many synth developers interpret this in slightly different ways. Its always worth reviewing the documentation with each to fully understand each device level implementation.

NRPN

Non-Registered Parameter Number is part of the MIDI standard. CC and NRPN are technically very similar but NRPN is less well defined in the standards. NRPN uses more data and can give better control. Not relevant to The GodFather,

SYSEX

System Exclusive. This is an expansion of the normal MIDI communications set up and is typically used for transferring data such as back ups, presets and firmware updates to and from devices. The GodFather uses a web based tool for updates.

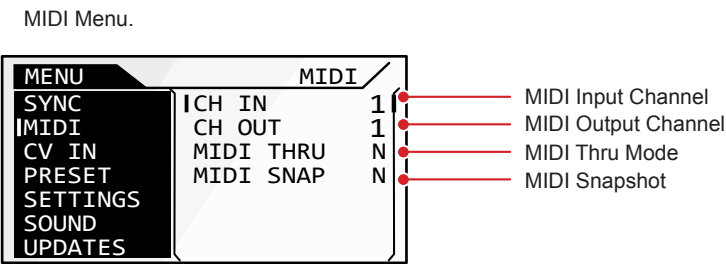
SDS

Sample Dump Standard. This is an older transfer protocol used for transferring data to and from devices. This is rarely seen nowadays. Not relevant to The Godfather.

The term 'primary lead' will refer, in this guide to a device that has the main control responsibility. For example, one which controls the clock and is the central lead. A device which will be controlled by, and will follow the primary lead device and which will be subservient by responding to the main control messages will be called a 'secondary follower'. It is typical for The GodFather to be a secondary follower to a main control in a setup.

5.5 MIDI Menu Options

The main options includes a MIDI menu that allows several MIDI parameters to be configured. These include MIDI input and output channels, MIDI Thru mode and MIDI Snapshots. The menu is opened by pressing (MENU) with MIDI tagged, then editing the right window options.



MIDI Menu

Function	Range	Description
CH IN	1-16	Sets the MIDI channel that an external device will communicate to The GodFather on the patch bay TRS input.
CH OUT	1-16	Sets the MIDI channel that The GodFather will communicate on the patch bay TRS output.
MIDI THRU	On/Off	On - Sets the MIDI output to act as MIDI Thru. Off - The MIDI Output operates as a dedicated output. MIDI Thru will transmit and replicate any incoming MIDI CC data to the output.
MIDI SNAP	On/Off	Snapshot. On - When bypass is pressed all MIDI CC values are transmitted out. Useful to capture the settings in a DAW or copying between GodFather devices. Off - CC is not transmitted when bypass is pressed.

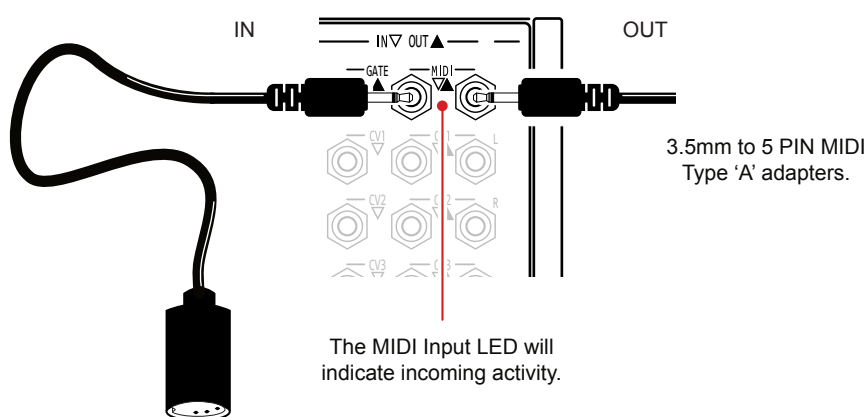
5 External Control

5.6 MIDI Connections

The GodFather uses a Type 'A' MIDI adapter that connects the 3.5mm patch bay TRS jack to a traditional 5 Pin DIN style socket. 2x Adapters are supplied. A standard MIDI cable can then be used to connect to other gear.

NOTES

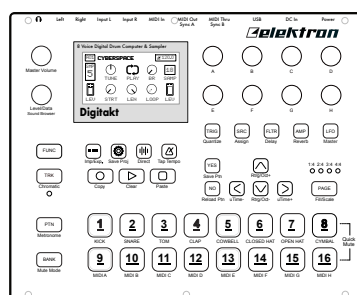
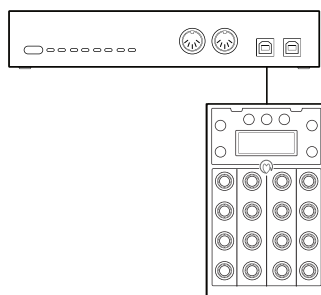
1x MIDI In and 1x MIDI Out Connection



It is also possible to use a standard stereo TRS to TRS cable when connecting MIDI TRS devices as long as they both operate on the same standard. For example Type A.

Standard 5 PIN MIDI Cable

MIDI to USB interface can be used to connect USB MIDI



Interface with a 5 PIN MIDI cable to other external gear, for example Elektron Digitakt.

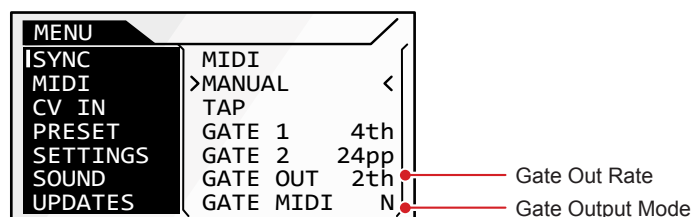
Linking MIDI Clock to Gate Out

It is possible to link the Gate Out to an incoming MIDI clock signal or link the Gate Out to the Internal Clock. This is configured in the Sync options, found in the main settings.

LINKING THE MIDI INPUT CLOCK TO THE GATE OUT

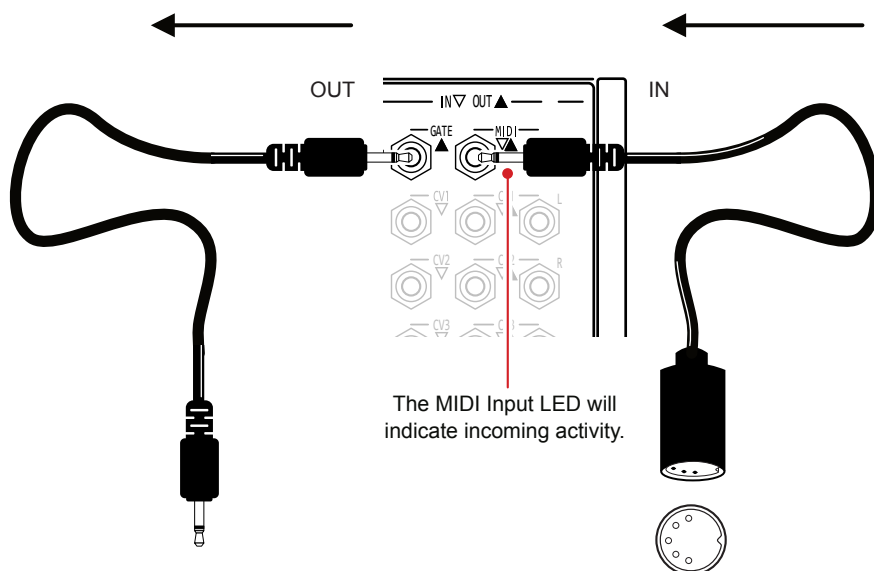
1. Ensure a MIDI Input is connected and clock is received.
2. Connect a device which will be the receiver of the clock, for example a eurorack module. Connect to the 'Gate' output connection located in the the GodFather patch bay.
3. Tap (Menu) to open the main menu.
4. Tag the navigation cursor to the 'Sync' by turning (Menu), then tap to open the sync options.
5. Turn (Menu) to navigate in the right side sync options window. A flashing cursors navigates selection and tapping (Menu) will switch to edit mode and a solid cursor. Choose the 'Gate MIDI' option and tap (Menu) to edit..
6. Once the option is selected, then Turn (Menu) to set to 'Yes' or 'No'.
 - Gate -> MIDI = Y. Gate Out Clock is perfectly synced and in phase with MIDI Clock IN. When the MIDI Clock IN stops, Gate Out stops sending clock signals. Also tag to set the 'Sync' option to 'MIDI' .
 - Gate MIDI = N. Gate Out generates a clock signal based on the internal BPM setting. Also tag to set the 'Sync' option to 'Manual'.
7. The Gate Out setting may also need to be adjusted to ensure the BPM is synchronised at the same rate by the receiving device.
8. Tap [Off] to backup and exit any option or menu.

Sync Menu.



5 External Control

Ensure the MIDI Input is setup and connected properly before setting the gate out settings. The MIDI or Internal clock can be set to transmit to the gate output.



The MIDI Clock will be used as the primary clock and will be sent out of the Gate output when 'Gate->MIDI' is set to 'Y', Yes.

The externally connected MIDI Device clock will be detected by GodFather when set to MIDI.

MENU		
ISYNC	>MIDI	<
MIDI	MANUAL	
CV IN	TAP	
PRESET	GATE 1	4th
SETTINGS	GATE 2	24pp
SOUND	GATE OUT	2th
UPDATES	GATE->MIDI	Y

If the Sync is set to 'Manual' and 'Gate MIDI' is 'N', No, the internal BPM of the Godfather is used to synchronise the gate output clock.

MENU		
ISYNC	MIDI	
MIDI	>MANUAL	<
CV IN	TAP	
PRESET	GATE 1	4th
SETTINGS	GATE 2	24pp
SOUND	GATE OUT	2th
UPDATES	GATE MIDI	N

5.7 MIDI Control Change

Continuous Control Change messages, also called CC allows a range of values to be communicated between devices in order to adjust specific parameter values. For example to change The GodFather filter cutoff from an external device.

The CC numbers apply to both incoming or outgoing CC messages unless stated in the description. CC Messages are still sent out when GodFather is in Bypass Mode. MIDI Snapshot mode, set in the MIDI settings can transmit all CC messages when bypass is pressed.

Channel 1 - MIDI CC Configuration

Function	Parameter	CC No.	Range	Description
Channel 1	Saturator	3	0-127	Channel strip saturation amount.
Channel 1	Delay Amount	4	0-127	Channel strip delay amount.
Channel 1	DPD Level	5	0-127	Channel strip double pulse delay amount.
Channel 1	Reverb Send	6	0-127	Channel strip reverb send amount.
Channel 1	Filter	7	0-127	0-63 is Low Pass cutoff control, 65-127 is High Pass cutoff control. 64 is no filter applied.
Channel 1	Trigger 1	32	0-1	Trigger button for channel 1 working mode.
Channel 1	Volume Level	70	0-100	Channel strip volume level amount.
Channel 1	Pan	74	0-127	0-63 is Left side, 65-127 is Right side. 64 is centre position.
Channel 1	Width	78	0-100	Stereo width setting. 0 is widest.
Channel 1	DPD Line 1	82	0-127	Set the position of the double pulse delay 1. Pos 0 = 0-16, 1 = 17-33, 2 = 34-49, 3 = 50-66, 4 = 67-83, 5 = 84-99, 6, 100-116, 7 = 117-127.
Channel 1	DPD Line 2	86	0-127	Set the position of the double pulse delay 1. Pos 0 = 0-16, 1 = 17-33, 2 = 34-49, 3 = 50-66, 4 = 67-83, 5 = 84-99, 6, 100-116, 7 = 117-127.
Channel 1	Delay Time	90	0-127	MIDI In Only. Time division for channel.
Channel 1	Delay Offset	94	0-127	MIDI In Only. Offset for channel.
Channel 1	Delay Feedback	98	0-127	MIDI In Only. Feedback for channel.
Channel 1	FDP Filter	104	0-20	Filter cutoff. 0-10 Low Pass Cutoff, 11-20 High Pass Cutoff. 11 No filtering.

5 External Control

Channel 2 - MIDI CC Configuration

Function	Parameter	CC No.	Range	Description
Channel 2	Saturator	8	0-127	Channel strip saturation amount.
Channel 2	Delay Amount	9	0-127	Channel strip delay amount.
Channel 2	DPD Level	10	0-127	Channel strip double pulse delay amount.
Channel 2	Reverb Send	11	0-127	Channel strip reverb send amount.
Channel 2	Filter	12	0-127	0-63 is Low Pass cutoff control, 65-127 is High Pass cutoff control. 64 is no filter applied.
Channel 2	Trigger 2	33	0-1	Trigger button for channel 2 working mode.
Channel 2	Volume Level	71	0-100	Channel strip volume level amount.
Channel 2	Pan	75	0-127	0-63 is Left side, 65-127 is Right side. 64 is centre position.
Channel 2	Width	79	0-100	Stereo width setting. 0 is widest.
Channel 2	DPD Line 1	83	0-127	Set the position of the double pulse delay 1. Pos 0 = 0-16, 1 = 17-33, 2 = 34-49, 3 = 50-66, 4 = 67-83, 5 = 84-99, 6, 100-116, 7 = 117-127.
Channel 2	DPD Line 2	87	0-127	Set the position of the double pulse delay 1. Pos 0 = 0-16, 1 = 17-33, 2 = 34-49, 3 = 50-66, 4 = 67-83, 5 = 84-99, 6, 100-116, 7 = 117-127.
Channel 2	Delay Time	91	0-127	MIDI In Only. Time division for channel.
Channel 2	Delay Offset	95	0-127	MIDI In Only. Offset for channel.
Channel 2	Delay Feedback	99	0-127	MIDI In Only. Feedback for channel.
Channel 2	FDP Filter	105	0-20	Filter cutoff. 0-10 Low Pass Cutoff, 11-20 High Pass Cutoff. 11 No filtering.

Channel 3 - MIDI CC Configuration

Function	Parameter	CC No.	Range	Description
Channel 3	Saturator	13	0-127	Channel strip saturation amount.
Channel 3	Delay Amount	14	0-127	Channel strip delay amount.
Channel 3	DPD Level	15	0-127	Channel strip double pulse delay amount.
Channel 3	Reverb Send	16	0-127	Channel strip reverb send amount.
Channel 3	Filter	17	0-127	0-63 is Low Pass cutoff control, 65-127 is High Pass cutoff control. 64 is no filter applied.
Channel 3	Trigger 3	34	0-1	Trigger button for channel 3 working mode.
Channel 3	Volume Level	72	0-100	Channel strip volume level amount.
Channel 3	Pan	76	0-127	0-63 is Left side, 65-127 is Right side. 64 is centre position.
Channel 3	Width	80	0-100	Stereo width setting. 0 is widest.
Channel 3	DPD Line 1	84	0-127	Set the position of the double pulse delay 1. Pos 0 = 0-16, 1 = 17-33, 2 = 34-49, 3 = 50-66, 4 = 67-83, 5 = 84-99, 6, 100-116, 7 = 117-127.
Channel 3	DPD Line 2	88	0-127	Set the position of the double pulse delay 1. Pos 0 = 0-16, 1 = 17-33, 2 = 34-49, 3 = 50-66, 4 = 67-83, 5 = 84-99, 6, 100-116, 7 = 117-127.
Channel 3	Delay Time	92	0-127	MIDI In Only. Time division for channel.
Channel 3	Delay Offset	96	0-127	MIDI In Only. Offset for channel.
Channel 3	Delay Feedback	100	0-127	MIDI In Only. Feedback for channel.
Channel 3	FDP Filter	106	0-20	Filter cutoff. 0-10 Low Pass Cutoff, 11-20 High Pass Cutoff. 11 No filtering.

5 External Control

Channel 4 - MIDI CC Configuration

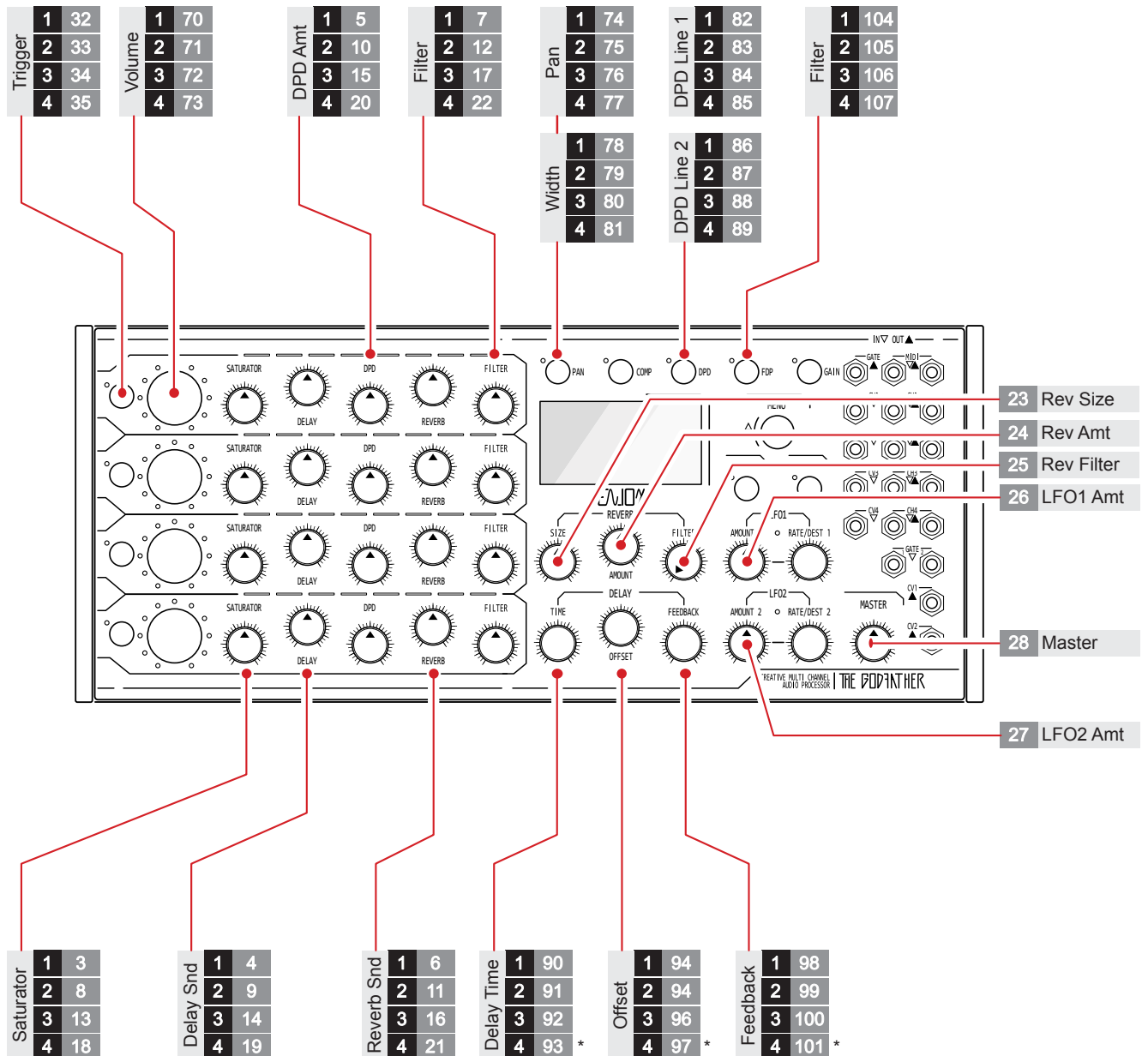
Function	Parameter	CC No.	Range	Description
Channel 4	Saturator	18	0-127	Channel strip saturation amount.
Channel 4	Delay Amount	19	0-127	Channel strip delay amount.
Channel 4	DPD Level	20	0-127	Channel strip double pulse delay amount.
Channel 4	Reverb Send	21	0-127	Channel strip reverb send amount.
Channel 4	Filter	22	0-127	0-63 is Low Pass cutoff control, 65-127 is High Pass cutoff control. 64 is no filter applied.
Channel 4	Trigger 4	35	0-1	Trigger button for channel 4 working mode.
Channel 4	Volume Level	73	0-100	Channel strip volume level amount.
Channel 4	Pan	77	0-127	0-63 is Left side, 65-127 is Right side. 64 is centre position.
Channel 4	Width	81	0-100	Stereo width setting. 0 is widest.
Channel 4	DPD Line 1	85	0-127	Set the position of the double pulse delay 1. Pos 0 = 0-16, 1 = 17-33, 2 = 34-49, 3 = 50-66, 4 = 67-83, 5 = 84-99, 6, 100-116, 7 = 117-127.
Channel 4	DPD Line 2	89	0-127	Set the position of the double pulse delay 1. Pos 0 = 0-16, 1 = 17-33, 2 = 34-49, 3 = 50-66, 4 = 67-83, 5 = 84-99, 6, 100-116, 7 = 117-127.
Channel 4	Delay Time	93	0-127	MIDI In Only. Time division for channel.
Channel 4	Delay Offset	97	0-127	MIDI In Only. Offset for channel.
Channel 4	Delay Feedback	101	0-127	MIDI In Only. Feedback for channel.
Channel 4	FDP Filter	107	0-20	Filter cutoff. 0-10 Low Pass Cutoff, 11-20 High Pass Cutoff. 11 No filtering.

Global Parameters - MIDI CC Configuration

Function	Parameter	CC No.	Range	Description
Reverb	Size	23	0-127	Global reverb size.
Reverb	Amount	24	0-127	Global reverb amount.
Reverb	Filter	25	0-127	Global reverb high pass filter.
LFO 1	Amount	26	0-127	Low Frequency Oscillator source amount
LFO 2	Amount	27	0-127	Low Frequency Oscillator source amount
Master	Master	28	0-127	Master output volume level.

Continuous Control Change Numbers Quick Reference

These represent the CC numbers used for controlling The GodFather parameters from incoming MIDI. Most of the same controls will also output on the MIDI output channel.



* For CC Out only the global changes will be output on CC 93, 97 and 101

4 Channel **100** CC Number Trigger Parameter

5 External Control

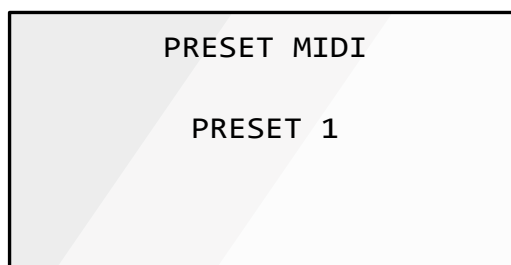
5.8 MIDI Program Change

Program Change messages, also called PC allows the current preset to be changed on the GodFather remotely. An external MIDI controller or DAW can be used to load presets from the available slots. A message is displayed when an external message is received.

Ensure messages are sent from the external device on the MIDI input channel set on the GodFather.

SETTING THE PC INPUT FOR PRESET SELECTION

1. Connect to The GodFather a PC control from another device. The Program Change message would typically be sent from a connected DAW or a MIDI controller.
2. Set the MIDI incoming channel on the GodFather to the same channel as the transmitting device or vice versa.
3. Send a PC Message to trigger the selection and loading of the preset. PC Message 1 will select Preset 1, PC 1 will select Preset 2 and so on. The bank or sub bank can remain null or 0.
4. Each time a MIDI PC message is received:-
 - The MIDI activity Input LED will flash.
 - The display screen will show a temporary message of which preset is selected. Empty slots will also be indicated if selected.
 - The preset will be loaded.



MIDI PC Configuration

Function	Description	PC No.
Preset 1	Select and load preset.	1
Preset 2	Select and load preset.	2
Preset 3	Select and load preset.	3
Preset 4	Select and load preset.	4
Preset 5	Select and load preset.	5
Preset 6	Select and load preset.	6
Preset 7	Select and load preset.	7
Preset 8	Select and load preset.	8
Preset 9	Select and load preset.	9
Preset 10	Select and load preset.	10
Preset 11	Select and load preset.	11
Preset 12	Select and load preset.	12
Preset 13	Select and load preset.	13
Preset 14	Select and load preset.	14
Preset 15	Select and load preset.	15
Preset 16	Select and load preset.	16
Preset 17	Select and load preset.	17
Preset 18	Select and load preset.	18
Preset 19	Select and load preset.	19
Preset 20	Select and load preset.	20

Note that the exact alignment of the PC messages between gear will depend on both devices. It is not unusual for an offset when using program change messaging so for example a PC 5 changes Preset 6 etc. Ensure this is taken into account when configuring the gear to work together to refer to each manufacturers documentation.

System

This section of the notebook can be a catch all for anything not included elsewhere. The general system functions are covered, firmware updates and general housekeeping. Also some generic commands. We strongly suggest not to skip this section in thinking its less relevant. It makes sense to at least know whats covered in this section even though most topics will be used infrequently. There are also of course some useful instructions. The GodFather can also be used as Eurorack hosted module. The details of extracting from the desktop enclosure and installing into a Eurorack system are also covered. It also makes sense to include some blank templates diagrams of the front panel. These can be printed or duplicated to help capture notes and settings of your own configurations. Up to 20 Presets can be saved and loaded. Finally, a Synthdawg notebook would not be complete without a quick reference. The GodFather is a

tactile, hands on device but having a quick reference of the button and knob combos is also useful. This is the final section of The GodFather notebook. We hope the experience has been a good one and the details have been helpful in working with the device. Enjoy Electronics are committed to developing the features and performance and it is intended that this notebook will develop too and be a useful companion to The GodFather. Whether used side by side with the unit or to a dip in and out as a reference there will always be some benefits in keeping it close by on the phone or tablet. Now on to the musical journey that will be more inspired and creative with The Godfather in the setup than not. Enjoy!

6 System

6.1 Saving / Loading the Preset Settings

The GodFather has the ability to save and load presets to/from its on board memory. The last used settings will be automatically recalled on power up. The current preset is displayed bottom left on some screens. Up to 20 presets are available.

SAVING A PRESET

1. Ensure the parameters are set to the values to store.
2. Press (Menu) to open the settings options. Turn (Menu) to locate the 'PRESET' option and Press (Menu) to select.
3. Turn (Menu) left / counter clockwise to navigate through the available slots to save to. For example, 'NEW 1'.
4. Press (Menu) to save the current settings to the selected slot.
5. In the save preset list, the preset will be renamed as 'BUSY x' for example NEW 1 will become BUSY 1. However in the load preset list this will be named 'PRESET 1' in the load menu.
6. Note that the preset labelled 'PANEL' will correspond to the current position of the front panel potentiometers.
7. To back up and out of the preset menu manually, Press [Off].

Press (Menu) to open options, Turn (Menu) to choose preset and tap (Menu)



In the right side preset menu, Turn (Menu) to choose and option and tap (Menu) to select.

MENU	PRESET-SAVE	
SYNC	IPANEL	
MIDI	BUSY	1
CV IN	BUSY	2
IPRESET	NEW	3
SETTINGS	NEW	4
SOUND	NEW	5
UPDATES	NEW	6

MENU	PRESET-RECALL	
SYNC	IPANEL	
MIDI	PRESET	1
CV IN	PRESET	2
IPRESET	EMPTY	3
SETTINGS	EMPTY	4
SOUND	EMPTY	5
UPDATES	EMPTY	6

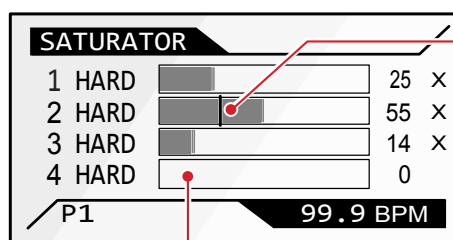
Presets when loaded will apply the state of the settings previously saved to the device. The default behaviour is that once a preset is loaded, any parameter changes will update the value immediately the knob is turned. An alternate control knob behaviour will operate to a 'catch' pick up mode. This means that the physical knob position will only change the parameter value once it crosses and picks up from the current preset position, at which point the physical knob will control the value.

LOADING A PRESET

1. Press (Menu) to open the settings options. Turn (Menu) to locate the 'PRESET' option and Press (Menu) to select.
2. Turn (Menu) right / clockwise to navigate through the preset slots to load from. For example, 'PRESET 1'. Empty slots will be labelled.
3. Press (Menu) to load the settings from the selected slot.
4. The GodFather will restore the preset settings and the preset menu will exit back to the main screen.

The default mode for catch is 'NO' which operates by immediately changing parameter values when a knob is turned. Catch can be set to 'YES' in the main setting menu, in which case a parameter will change only when the pick up point is crossed by the physical knob position in order for it to control the value. This provides a bumpless control, avoiding jumps in values.

Example of 'Pick Up' Mode behaviour



Actual parameter value as loaded from preset.

Physical knob position when it is adjusted prior to pick up.

X indicates that the pick up point has not been crossed.



No value change when knob is adjusted until pick up point is crossed.



Physical knob takes control over the parameter at the pick up point value when crossed.

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About the 'PANEL' Preset

The PANEL preset can be used to save only the values of the under the hood parameters, i.e. those not represented by a knob with an arrow. These include the Channel Level, Channel Mute, Pan and Stereo Width, Compressor setting, DPD positions, Filter DPD, Gain, EQ shape, Delay Time Offset and Feedback, LFO 1 and 2 Rate/Dest Waveform and Sync settings, Trigger Mode and all menu settings. Values adjusted by the potentiometer knobs are not saved.

The panel knobs retain their current setting, indicated its knob arrow label when using the PANEL preset. In the other non panel presets these knob values are saved and recalled.

When the PANEL preset is recalled, all encoder values and functions controlled by them will be in the position they were saved in the panel slot and all other values will be in the position they are at that moment on the physical potentiometers (knob with arrow).

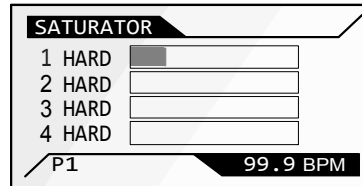
Program Change Messages

Presets can be saved and loaded manually. Also presets can be selected and loaded remotely by use of MIDI program change messages from a connected MIDI controller of DAW. This is explained in the MIDI section.

6.2 Parameter Display Option

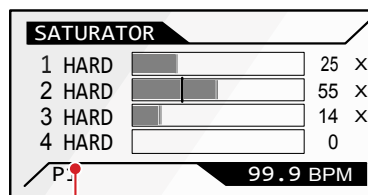
The normal parameter pages are shown with a bar graph representing the value for each channel, for example 4 channels for saturation. These are automatically displayed when a knob is turned.

Example Display Default: V-DISP = NO



It is possible to also display the actual value alongside the bar. This is an optional setting called 'V-Disp' or Value Display and is found in the main menu settings.

Example Display Option: V-DISP = YES



Actual value displayed
as well as bar.

6 System

The behaviour of the screen parameter value display can be changed from the default setting.

SETTING PARAMETER VALUE DISPLAY STYLE

1. Press (Menu) to open the settings options.
2. Turn (Menu) to locate the 'Settings' option and Press (Menu) to select this sub-menu.
3. Turn (Menu) to navigate through the options. Highlight the V-DISP option with the flashing cursor tags.
4. Press (Menu) to select this option to edit. Cursor tags are static.
5. Turn (Menu) to select the option for how the values will be displayed:-
 - V-Disp = Yes - The display will show values and the bar graph.
 - V-Disp = No - The display will show the bar graph value only. This is the default setting of The GodFather.

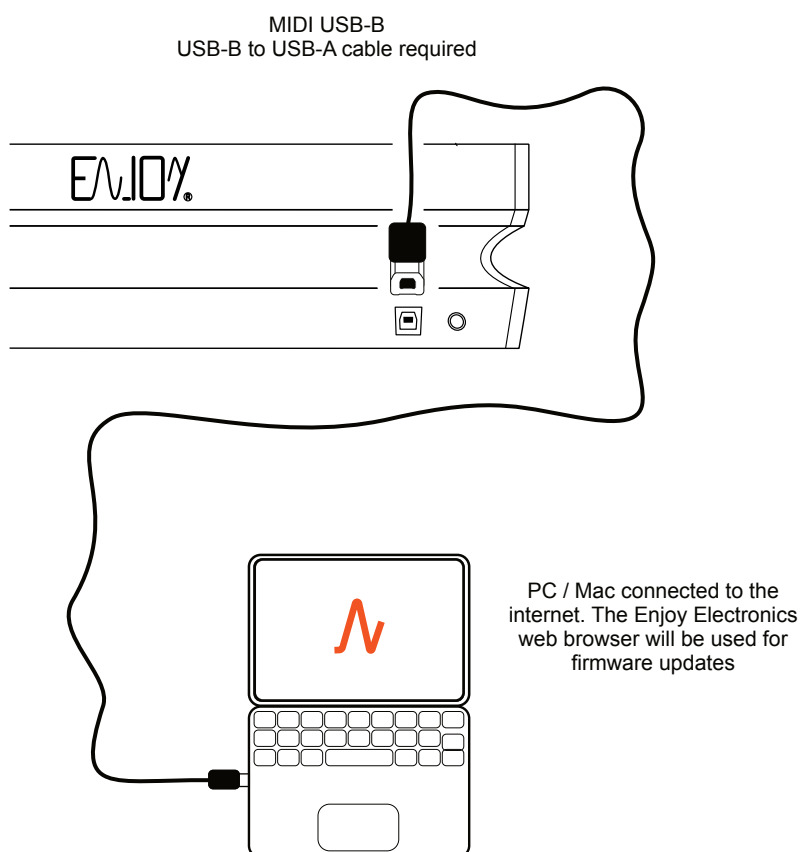
MENU	SETTINGS
SYNC	LINK 1-2 N
MIDI	LINK 3-4 N
CV IN	CATCH ON
PRESET	V-DISP N
SETTINGS	CV VOLT 10
SOUND	
UPDATES	

6.3 Firmware Update

Enjoy Electronics are committed to developing The GodFather which means new features, updates and bug fixes. As such there will be firmware updates released that install these new or beta versions. Enjoy Electronics use an online browser tool to perform update access which is found [here](#). The instructions here are for generic guidance and the exact instructions supplied by Enjoy Electronics should be used for each firmware update released. The start up page will show the current firmware version.

Ensure the browser is the latest Google Chrome version for the best results when using the web tool scripts. Also on Windows PC's ensure the WinUSB driver is up to date.

IMPORTANT: Do not disconnect the device or close Google Chrome until the device has restarted automatically once the installation is complete.



■ UPDATING FIRMWARE

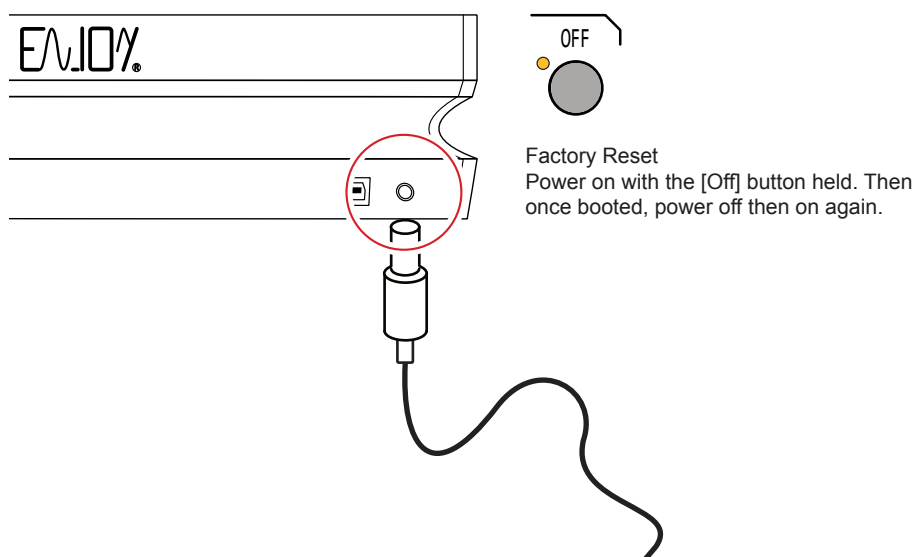
1. Connect the GodFather directly to a PC or Mac using a USB cable. This should be a direct connection and not via a USB hub. The GodFather integral connection is USB Type 'B'.
2. Ensure the PC/ Mac is powered on and has a reliable Internet connection. Also ensure The GodFather is powered up and on.
3. Press (Menu) to open the menu options.
4. Open the web browser tool, from the Enjoy Electronic site.
5. Turn (Menu) to choose 'Software Update'. Press (Menu) to select. A prompt 'This will stop all processes. Press menu to continue' will be displayed.
6. Press (Menu) again to continue update. A pop up message will remind not to power down during update.
7. On the web browser and pop-up pages:-
 - Click the "Connect" button on the web page browser.
 - A pop-up window will appear with the list of devices. Select and highlight the option 'Daisy Bootloader' then Press 'Connect'.
 - To flash the latest version: Press 'PROGRAM' in the programming section of the web browser page.
 - The firmware will be installed on The GodFather.
8. The GodFather will restart with the new firmware.

6.4 Factory Reset

The possibility to reset all parameters and settings to an original 'factory state' is possible. This is a process that is not recommended to use unless problems exist or advised to so when receiving technical support.

FACTORY RESET

1. Power off The GodFather.
2. Hold [Off] button.
3. While holding the off button restore power to the unit.
4. The GodFather will start in a diagnostic mode and reset the parameters to the original factory state. However this is not yet the normal operating mode.
5. Power off The GodFather again.
6. Restore power to The GodFather once more. This will revert to normal operating mode after the factory reset has been performed.



6 System

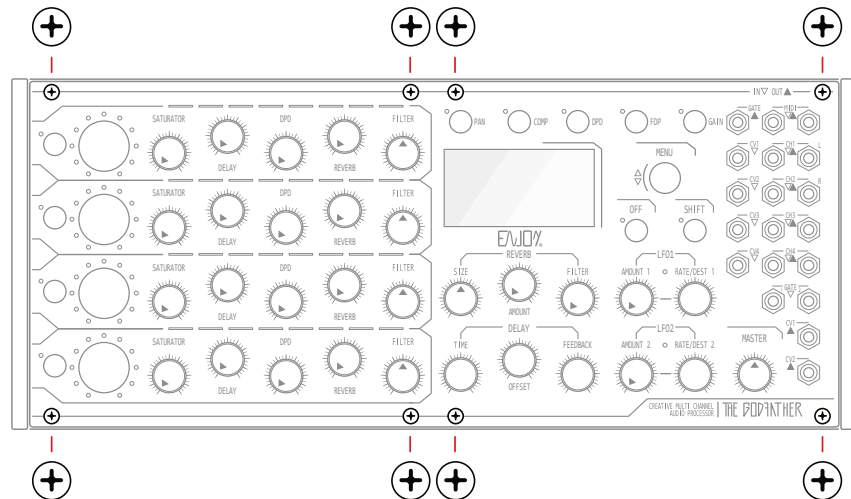
6.5 Eurorack Mounting

The GodFather is delivered in a stylish metal and wooden enclosure, designed to operate as a stand alone desktop device. The option to mount into a modular rack is also possible. The module will also be powered by the rack power supply.

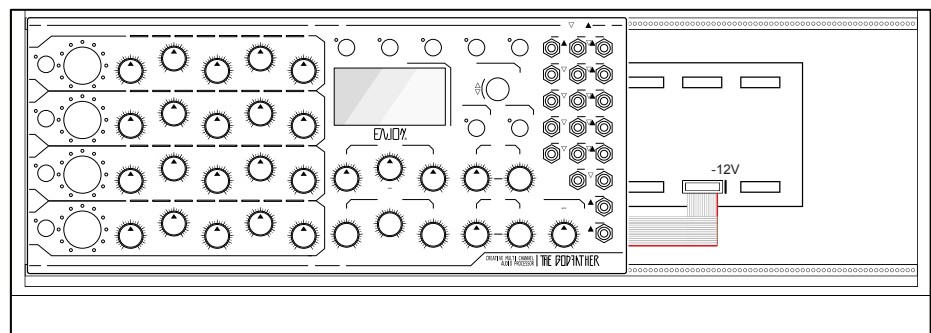
Eurorack Mounting Considerations

- The space required in the rack is 3U and 60HP.
- The rack power will need to supply a minimum of 900mA plus the consumption of any other modules in the rack. This is fed from the +12V power rail.
- The GodFather LEDs consume a large portion of current. To reduce the power consumed by ~350mA, remove jumper J2 on the rear of the unit prior to installation. This will remove the LED functions.
- Always check that the rack power supply has the capacity to power all modules in the rack effectively, i.e. with a rating above the maximum consumption of the collective modules.
- The -12V power rail is not used by The GodFather.
- A 16 Pin Eurorack ribbon cable is required in order to connect The GodFather module into the rack power. This is not supplied with The GodFather so will need to be purchased separately.
- The front panel screws into the desktop case should be retained. These are M3 and can be used to mount the module into the rack.
- Ensure any removal or installation of the module is performed with the power supply to the desktop case or modular rack powered off and disconnected.
- While the mounting and installing of the module into a rack is fairly simple, it is expected that a basic level of technical competence is applied. Any incorrect mounting or connections made leading to damage to the module may invalidate the manufacturers warranty.
- Tools needed. Cross point screw driver.

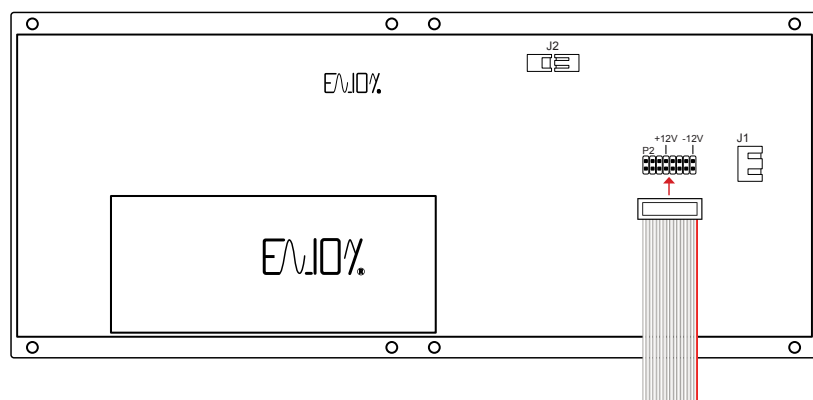
Front Panel - 8 Screws, M3



The GodFather Mounted in Eurorack



The GodFather PCB Rear



The GodFather PCB, P2 Header.
Connect red stripe to the -12V

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The instructions below are a guide only. Refer to the original manufacturers instructions for The GodFather and the rack to ensure proper installation.

■ INSTALLING TO A EURORACK SYSTEM

1. Power off The GodFather and the Eurorack system. Remove any power connections.
2. Use a cross point screwdriver to remove the 8 x M3 screws located in the front panel. Ensure the screws are retained in a safe place.
3. Slowly lift the front panel from the original enclosure. Take care extracting the module as there are two cables attached to the front panel PCB.
4. Disconnect the two cables from the rear of the front panel PCB. One is the USB cable while the other is the power cable.
5. Connect the eurorack power ribbon cable to the rear of The GodFather PCB. This should be connected to the 16 Pin header with the red strip nearest to the -12V supply pins. This is identified on the PCB labels.
6. Connect the Eurorack end of the ribbon cable to the rack enclosure power supply. The red stripe to the -12V indicator.
7. It may be worth checking that the rack powers the module ok at this point, prior to mounting.
8. Position the module into the 60HP slot and fasten with 2 or 3 x M3 screws. Do not over tighten.
9. Power on the rack and check that all is good with the module.
10. Power off and complete the fixings with the other 5 or 6 screws. Once all screws are attached power on the rack.

6.6 Safety Details

As stated by Enjoy electronics, the following safety elements should be considered when using The GodFather.

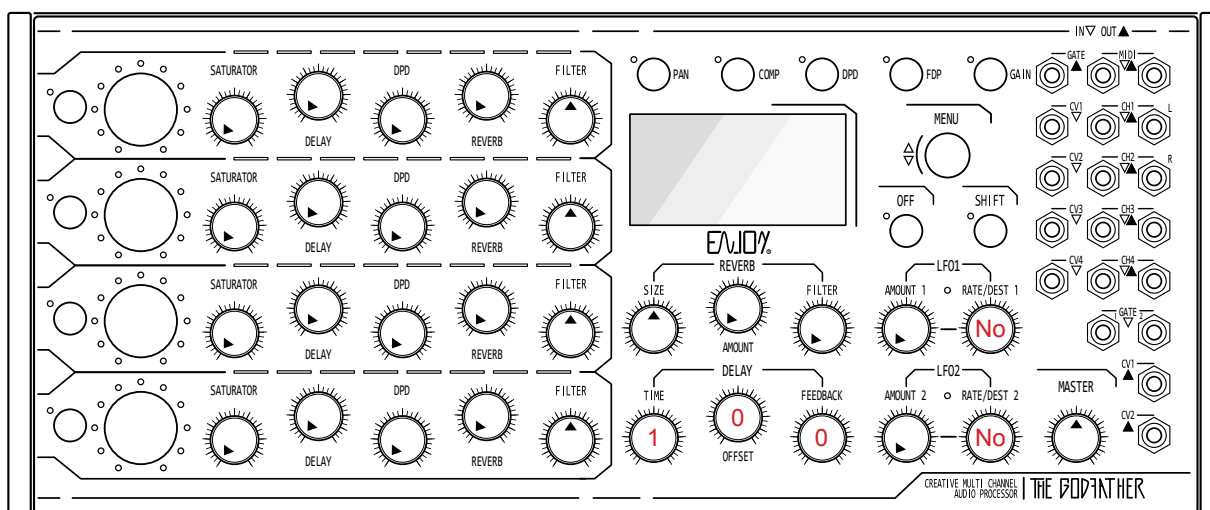
- Read and adhere to the Enjoy Electronics Manual and the instructions for working with The GodFather.
- Pay attention to any warnings.
- Do not use The GodFather or its power supply near water.
- When cleaning, only use a dry cloth. Do not use any cleaning agents, creams or liquids.
- Follow the manufacturers instructions when connecting any other gear and using The GodFather.
- Do not operate near any heat sources. This includes heaters, direct sunlight or close proximity to magnetic devices such as amplifiers.
- Disconnect the power supply when not in use.
- Disconnect the power supply if working within a disrupted power source for example in stormy weather.
- It is not recommended to open the case unless installing as a Eurorack module. When doing so take care that patch cables or any other materials do not fall into the enclosure or come into contact with the power supply.
- Any repairs should be performed by a qualified technician. Contact the manufacturer if any errors or defects occur.
- Do not exert physical pressure to the screen display.
- Enjoy Electronics may invalidate the warranty if incorrect use or damage through abuse or neglect occurs. The manufacturer also takes no responsibility for any lost memory data or settings.
- Pay attention that The GodFather desktop enclosure is mounted on rubber feet. Take care when using on a desk or table to avoid the rubber feet marking the surface.

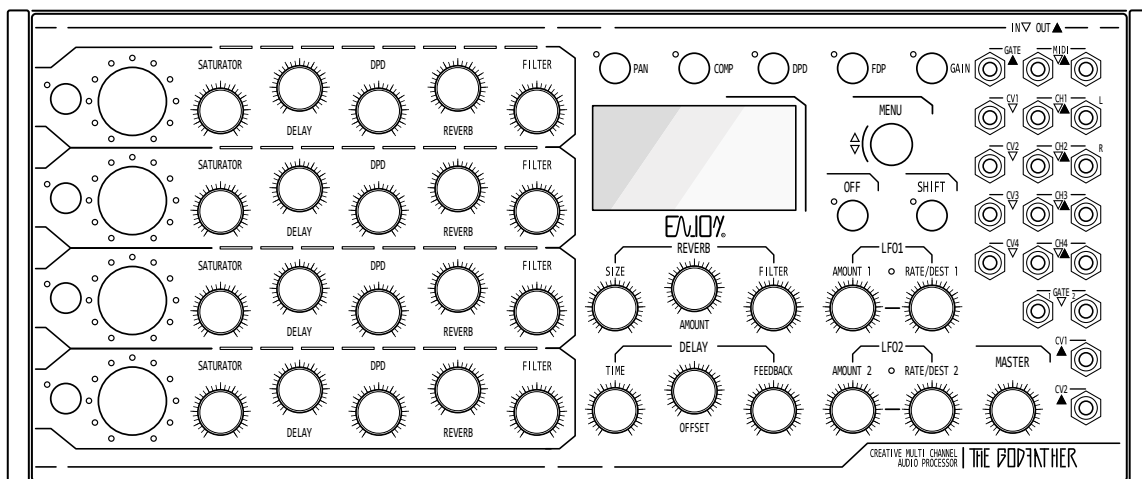
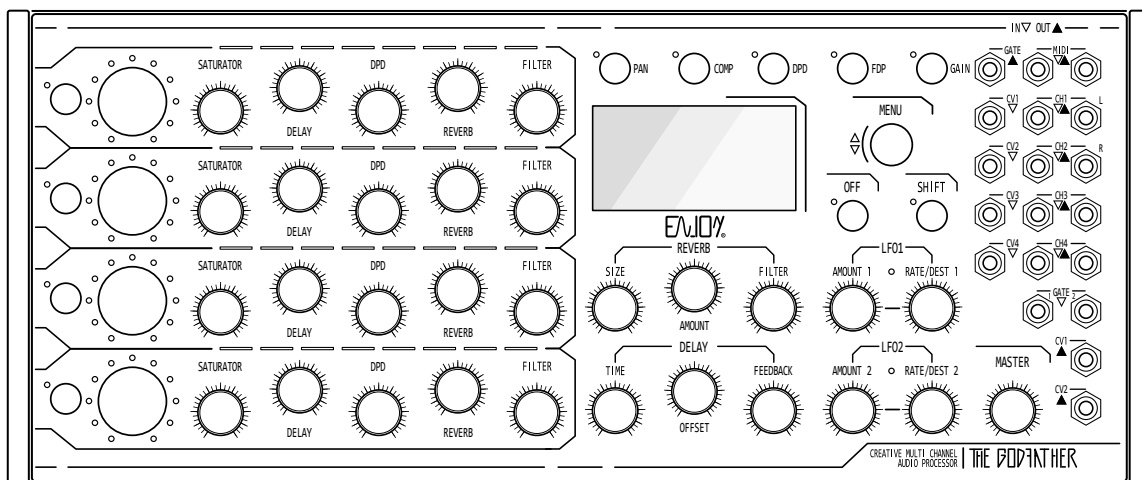
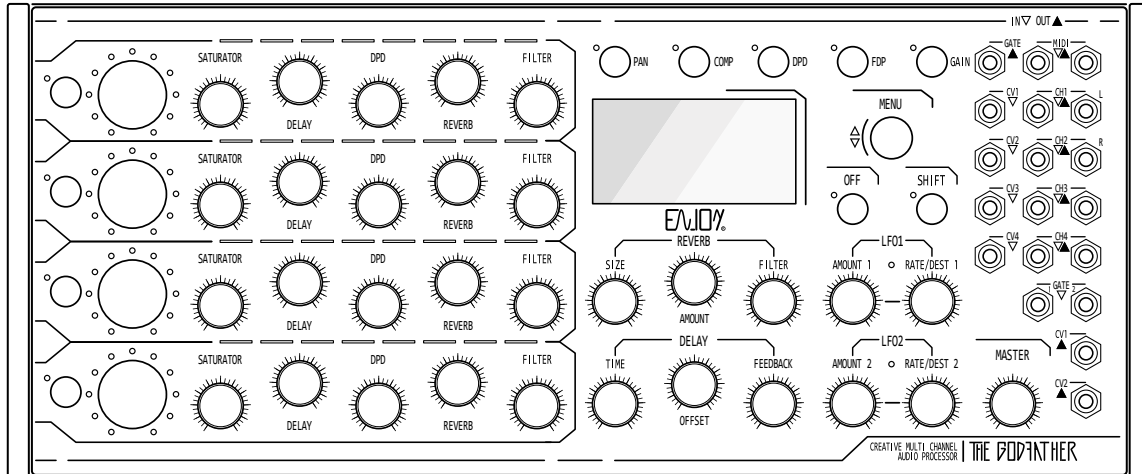
6 System

6.7 Blank Templates

As a reference the following diagram gives an example of a 'blank' template starting point. This will set all effects to a position where nothing is applied. The opportunity starts then build, tweak and adjust from here. An additional 'empty' template is provided in order to use to capture your own settings and comments and record any parameter values.

Base Starting Point - Effects Off





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6.8 Quick Reference

Topic	Action	Command	Description
Global	Master Volume	Turn (Master)	Adjust the master output volume level
Global	Bypass	[Shift] + [Off]	Bypass the audio processing. Audio in to out.
Global	Menu Options	Press (Menu)	Opens the global commander menu options. Turn (Menu) once open to browse options, press to select options.
Global	Route Outputs	[Shift] + Press (Revolver)	Route the selected channel to the output 3 and 4. Used to preview audio to the alternate output pair. Press again to clear.
Global	Tempo	Turn (Menu)	Adjust the global tempo BPM in 1 BPM units.
Global	Tempo - Fine	Press & Turn (Menu)	Adjust the global tempo BPM in 0.1 BPM units.
Channel Control	Volume Level	Turn (Revolver)	The multi-functional revolver encoder operates by default as the channel volume level control.
Channel Control	Mute Volume Level	[Off] + Press (Revolver)	Mute or Unmute the selected channel audio. LED's will be off..
Channel Control	Saturation Amount	Turn (Saturation)	Adjusts the amount of saturation applied for the channel.
Channel Control	Delay Amount	Turn (Delay)	Adjusts the audio amount sent to the delay line for the channel. Processing based on global delay settings.
Channel Control	DPD Amount	Turn (DPD)	Adjusts the amount of the DPD for the channel.
Channel Control	Reverb Amount	Turn (Reverb)	Adjusts the audio amount sent to the reverb for the channel. Processing based on global reverb settings.
Channel Control	High Pass Filter	Turn (Filter) Clockwise	Turning the channel filter clockwise from centre to the right adjust the high pass filter.
Channel Control	Low Pass Filter	Turn (Filter) Counter-Clkw	Turning the channel filter counter-clockwise from centre to the left adjust the low pass filter.
Channel Function	Input Gain	Hold [Gain] + Turn (Revolver)	Adjusts the input gain for any external audio device. The revolver adjusted refers to the input channel to change.
Channel Function	Channel EQ	Hold [Shift] + Press [Gain]	Opens the channel EQ settings. Adjust low band by turning (Revolver) and high band by press & turn (Revolver)
Channel Function	Pan	[Pan] + Turn (Revolver)	Adjust the panning position for the selected channel.
Channel Function	Pan Width	[Pan] + Push & Turn (Revolver)	Adjust the panorama spread / width for the selected channel.
Channel Function	Compressor	[Comp]	Opens compressor page. Use (Menu) to select and edit. Page will remain open once pressed. Press again to close.
Channel Function	Channel DPD	[DPD] + (Revolver)	Open DPD setting per channel. While holding, turn (Revolver) to adjust line 1 and Push & Turn (Revolver) for Line 2.
Channel Function	Channel FDP	[FDP] + (Revolver)	Open DPD Filter per channel. While holding, turn (Revolver) to adjust the filter cutoff for the double pulse delay audio.

Topic	Action	Command	Description
Global Reverb	Reverb Size	Turn (Size)	Adjust the global reverb size to increase reverberations.
Global Reverb	Reverb Amount	Turn (Amount)	Adjust the global reverb output amount.
Global Reverb	Reverb Filter	Turn (Filter)	Adjust the reverb audio filter.
Global Delay	Time - All	Turn (Time)	Adjust the global delay time division for the delay lines. Applies to all delay line repeats.
Global Delay	Time - Channel	Hold (Revolver) + Turn (Time)	Adjust the channel delay time division for the delay lines. Applies to all delay line repeats for the selected channel.
Global Delay	Feedback - All	Turn (Feedback)	Adjust the global delay feedback of output to input for the delay lines. Applies to all delay lines to generate repeats.
Global Delay	Feedback - Channel	Hold (Revolver) + Turn (Feedback)	Adjust the channel delay feedback of output to input for the delay lines. Applies to all delay lines to generate repeats.
Global Delay	Offset - All	Turn (Offset)	Adjust the stereo separation of left and right channels. Independent of the channel delay amount.
Global Delay	Offset - Channel	Hold (Revolver) + Turn (Offset)	Adjust the stereo separation of left and right channels. Independent of the channel delay amount.
Global Delay	Release Feedback	Hold (Time)	The feedback will be cleared when pressing the (Time) knob, ideal for infinite loops. Original values restored when released.
Working Mode	Trigger	Hold [Trigger]	Activate the working mode trigger for the selected channel for the duration of holding the trigger button.
Working Mode	Select Mode	[Shift] + [Trigger]	Select the working mode between 'Normal' - orange, 'Add' - blue and 'Change' - green for the selected channel.
LFO	Amount	Turn (Amount)	Adjust the LFO intensity amount applied at the destination
LFO	Rate	Turn (Rate/Dest)	Adjust the LFO speed either free running or synchronised that is applied at the destination
LFO	Global Destination	Push & Turn (Rate/Dest)	Selects the global destination for the LFO.
LFO	Chan Destination	Hold (Revolver) + Push & Turn (Rate/Dest)	Selects the channel destination for the LFO.
LFO	Wave Shape	[Shift] + Turn (Rate/Dest)	Selects the wave shape for the LFO.
LFO	Sync	[Shift] + Push & Turn (Rate/Dest)	Adjusts the synchronisation for the LFO.
LFO	Channel Amount	Hold (Rate/Dest) + Push & Turn (Revolver)	Adjusts the amount of modulation and polarity for channel.
LFO	Reset Phase	Hold (Rate/Dest) + [Off]	Reset LFO Phase.

6 System

6.9 Warranty

ENJOY LAB devices come with a one year limited warranty (or longer if required by the relevant legislation), starting from the date of the original purchase. Being able to prove the date of the original purchase with an invoice or a receipt is necessary if you require warranty service.

If the machine should need repair during the warranty period no charges will be applied for parts or labor. This warranty is transferable to other owners should the ENJOY LAB devices be resold during the warranty period.

This warranty does not cover :

- damage, deterioration or malfunction resulting from accident, negligence, misuse, abuse, improper installation or operation or failure to follow instructions according to the User Manual for this product;
- any shipment of the product (claims must be presented to the carrier);
- Repair or attempted repair by anyone other than ENJOY LAB or a certified ENJOY LAB repair center.
- any unit which has been altered or on which the serial number has been defaced, modified or removed;
- normal wear and any periodic maintenance;
- deterioration due to perspiration, corrosive atmosphere or other external causes such as extremes in temperature or humidity;
- damages attributable to power line surge or related electrical abnormalities, lightning damage or Acts of God; or
- RFI/EMI (interference/noise) caused by improper grounding or the improper use of either certified or uncertified equipment.
- any other causes determined by ENJOY LAB to be the fault of the user, are not covered by warranty (normal service rates will be applied).

In the event that something is determined to be a manufacturer error or failure due to defective materials, we will repair, return or exchange the item free of charge at our discretion.

WARRANTY SERVICE PROCEDURE FOR DEVICES BOUGHT FROM ENJOY-LAB ONLINE SHOP:

Contact the ENJOY LAB support at info@enjoy-lab.com if you need warranty service. You cannot send a unit unless agreed to by ENJOY LAB. The customer is responsible for shipping charges if the product needs to be shipped to a ENJOY LAB repair center for warranty service. If warranty covers the product, ENJOY LAB will bear the return shipping costs to the customer.

Should the unit be dead on arrival, or if the hardware malfunctions within 14 days of the original purchase date, ENJOY LAB will cover the shipping to a certified ENJOY LAB repair center.

Legal disclaimer

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Changelog

OS Version	Feature Update	Manual Update
1.76		Changelog added (This table) for OS and content updates.
	Saturator Types added. Sound Option for Hard, Tape, Fold, Tube in the Main Menu.	Updated Page 7, Architecture and Page 24-25, Saturator, 1 Page added.
	Improved MIDI Sync precision and speed for smoother performance.	
	Display updates. Potentiometer values are displayed immediately upon adjustment. Offers better level of clarity and detail. The settings menu option enables values to be displayed along with the bar graph. Current Preset number also shown on pages.	Various image updates for screens. Page 106, preset displayed on screens. Page 109-110 added and system sections renumbered. Page 13.
	All MIDI CC Parameters sent out as normal and are now also sent out while in Bypass mode.	Updated Page 21, Bypass and Page 96 CC to clarify MIDI behaviour.
	Presets expanded from a maximum of 10 to 20.	Updated Page 105, intro page comments.
	Preset catch behaviour can be selected when recalling presets. Options to immediately change when turning a knob or to pickup when the knob when turning past the current value.	Updated Page 107, added alternative behaviour descriptions.
	Gate output can be synchronised with the MIDI incoming clock or the internal clock BPM.	Added Pages 94 & 95. Updated images Page 84.
	LFO Option added. Now includes Pan and Width for each channel.	Updated Page 19 & 74. Added LFO Tag. Pan and Width updated in destination table.
	Does not reflect OS changes but some general manual updates for clarity purposes.	Page 72 LFO, Page 83 Sync,
		Updated table of contents, index, cover version and rear OS version
1.77	Added linking of channels to create two stereo channels.	Page 16-17. Updated link of channel instructions
	Expanded presets to 20.	Page 103
	Included DPD filter in CC control	Page 97-101. Added filler CC to tables.
	Only LFO1 can modulate Pan. Removed from LFO2. Width removed from CC control.	Page 19, Page 74
	Gate sync options updated	Page 95
	MIDI Snapshot function added	Page 21, Page 93, Page 97
	Saturator. Removed Tube option.	Page 25
	MIDI Thru. All CC passed to output.	Page 93

OS Version	Feature Update	Manual Update
2.01 a	All new graphics and user interface, New CV Destinations, CV Sync settings.	• Changes and general layout improvements apply to most pages including the new graphics updated to match OS. • LFO Tag for destination parameters replaced with 'MOD' to reflect CV. Pages 2, 13, 18, 24, 44, 49, 54, 64. • Updated CV Sync Settings & Input destinations. Page 83, 88-91 • Mode diagrams updated. Page 65-67. • Preset Menu. Page 106-107.

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