



Binary Mod Owner's Manual

HOTONE
DESIGN INSPIRATION

Welcome

Congratulations on your new Hotone Binary pedal! You have just added some serious power to your pedalboard.

The Binary series lets loose versatile pro effects in compact cases. A dual-DSP powered platform and CDCM modeling system ensure a realistic playing experience, dual-footswitch design and variable I/Os make it easy to use, and an OLED screen offers clear, detailed display.

Binary Mod is a CDCM-based multi modulation effects pedal with stereo I/O and expression pedal support, delivering precise classic modulation pedal sounds along with new and inspiring Hotone original modulation effects.

Features

- ✦ Grown out of next-gen XTOMP technology
- ✦ Compact, easy-to-use dual footswitch modulation pedal with tap tempo
- ✦ Advanced CDCM modeling system ensures realistic playing experience
- ✦ Dual DSP-powered platform ensures high sound quality
- ✦ 24-bit A/D/A conversion, up to 110dB S/N ratio
- ✦ 24 high quality modulation effects including CDCM-based classics and Hotone originals
- ✦ Tap Tempo function with Tap Divide
- ✦ Stereo I/Os
- ✦ EXP jack for expression pedal control
- ✦ USB jack for firmware upgrading, loading/managing effects with free PC/Mac software
- ✦ 10 Presets (2 banks x 5 patches)
- ✦ Built-in OLED screen with clear display
- ✦ 5 transparent knobs with LEDs
- ✦ 9V DC power supply

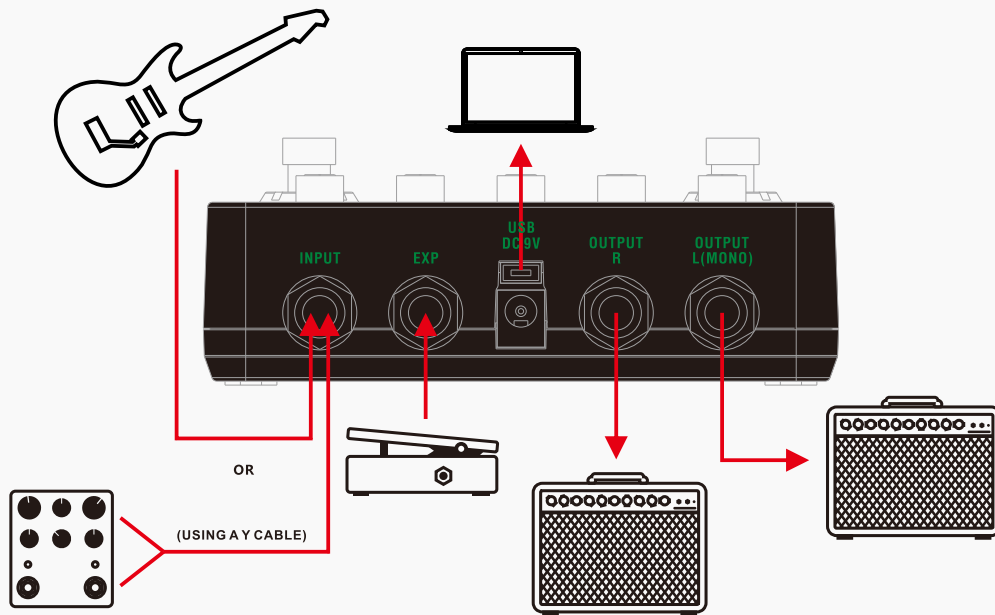
Panel Introduction

1. ON/OFF: For switching the unit on/off. The LEDs under the upper 5 knobs indicate effect on/off status.
2. PATCH/TAP: Tap for selecting forward patches in current bank, hold for engaging/disengaging tap tempo mode.
3. +/- buttons: For selecting effects and adjusting parameters.
4. GLOBAL: For setting expression pedal, input mode, and other parameters.
5. SAVE/EXIT button: For saving or canceling parameter changes.
6. OLED screen: Shows bank/patch numbers, setting values and other operation info.
7. E.LEVEL: Controls effect output level (varies with effects).
- 8-9. A/B: Control detailed effect character (varies with effects).
10. DEPTH: Controls effect depth (varies with effects).
11. RATE: Controls the effect speed (varies with effects). In Tap Tempo mode, use RATE knob to set a Tap Tempo subdivision*, and the RATE LED will keep flashing.
12. INPUT: 1/4" (6.35mm) stereo jack, for plugging in instruments or other effects.
A Y cable is needed when connecting to stereo pedal outputs.
13. EXP: 1/4" (6.35mm) TRS jack, for connecting an expression pedal.
The expression pedal should have a TRS cable attached to it.
We recommend using a Hotone Soul Press (switched to EXP mode) for expression control.
- 14-15. OUTPUT (L & R): 1/4" (6.35mm) mono jacks, for connecting to amps or other effects.
16. USB jack: Mini USB jack, for effects editing, firmware updates, and factory reset.
17. DC 9V: Plug in your power supply here (DC 9V, center negative).

*Requires firmware v1.1.2 or later



Connections



Note: TURN ON FIRST, TURN OFF LAST. Always turn down the volume knob on your amp before plugging or unplugging power jacks, cables, etc.

Display

Plugging in your power supply will turn on the device. The main display will come up as shown below:



- 1 - Current bank/patch number
- 2 - Shows the expression pedal controlled parameter
- 3 - Indicates the effect model you're using in current patch

Select a Patch/Bank

Tap the PATCH footswitch once to switch to the next patch. Tap it repeatedly to cycle through patches of the current bank in the order 1, 2, 3, 4, 5, then 1.



Tap the two footswitches at the same time to switch to the next bank. Tap them repeatedly to cycle through banks in the order A, B, then A.



Tap Tempo

Hold the PATCH/TAP footswitch to engage Tap Tempo mode when the effect is on. Then tap the PATCH/TAP footswitch to set a tempo speed. In this mode, the LED under the RATE knob will pulse to indicate the effect rate you set. Hold the PATCH/TAP footswitch again to disengage. In Tap Tempo mode, turn the RATE knob (or any related knobs) to set a proper tap tempo subdivision shown as below:

SUBDIVISION	DIVIDE RATIO	DISPLAY
Whole Note	4	1
Half Note	2	1/2
Dotted Half Note	3	1/2D
Half Note Triplet	4/3	1/2T
Quarter Note (no division)	1/1	1/4
Dotted Quarter Note	3/2	1/4D
Quarter Note Triplet	2/3	1/4T
8th Note	1/2	1/8
Dotted 8th Note	3/4	1/8D
8th Note Triplet	1/3	1/8T
16th Note	1/4	1/16

- Note: 1. The default division is Quarter Note (1/4, no division). Disengaging Tap Tempo function will reset the subdivision to default.
2. Tap Tempo subdivision function requires firmware v1.1.2 or later.*

Global

Press the GLOBAL button repeatedly to cycle through input mode, expression pedal settings and firmware version info:



Use the +/- buttons to set the parameters, press the SAVE/EXIT button (or wait for 5 seconds without any operation) to confirm settings and exit to the main display.

Note: 1. There is no parameter in firmware info display.

2. To check firmware version on your Binary Mod, you need to update to firmware v1.1.1 or later.

Edit

1. Adjust the parameters

Use the onboard knobs to adjust the effect parameters. The screen display will be shown as below when adjusting:



1 - Current parameter value you're adjusting (shown: rate)

2 - Saved parameter value in the current patch (PREV. = Previous value)

2. Select a different effect

Use the +/- button to change to another effect:



The inverted bank/patch number indicates that the current patch has been edited.

Edit

3. Set the expression pedal

If you have an expression pedal, you can control an effect parameter in real time.

In main display, press the GLOBAL button twice to edit control target:



EXP PEDAL
TARGET:
RATE

Use the +/- buttons to select a target among E.LEVEL, A, B, DEPTH, RATE.

Note: If you change to another patch before saving your edits, all your changes will be lost. Save the patches to keep your changes.

Save

Hold the SAVE/EXIT button to activate save function. The screen will be shown as below:



Use the +/- buttons to choose a location. Tap the SAVE/EXIT button to confirm saving.

Tap either footswitch to cancel saving and go back to edit status.

Input Mode

In main display, press the GLOBAL button once to select an input mode:



Use the +/- buttons to choose from MONO and STEREO. If you choose to use STEREO mode while using mono (L) input, the right output will be MUTED.

This is a global setting (it won't change your patches) and changes will be automatically saved.

Expression Pedal Range and Calibration

In main display, press the GLOBAL button three times/four times to set the minimum/maximum value ranging from 000 to 100:

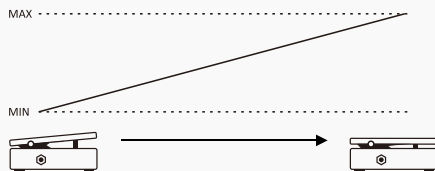


3 times (min value)



4 times (max value)

Parameter value



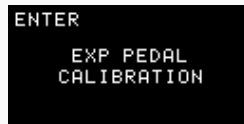
Note: 1. The minimum value cannot be set higher than the maximum value.

2. This is a global setting (it won't change your patches) and changes will be automatically saved.

Expression Pedal Range and Calibration

The expression pedal can be calibrated if necessary. If there does not seem to be much effect even when you press the pedal, or effects change greatly when the pedal only moves slightly, use the following procedure to readjust it. In the main display, press the GLOBAL button five times:

Press + button to activate calibration and then screen displays "HEEL POSITION":



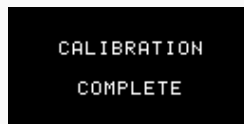
Press the pedal all the way back towards the heel and press + button, and then it displays "TOE POSITION":



Press the pedal all the way forward towards the toe and press + button. After finishing the adjustment, "CALIBRATION COMPLETE" will appear and it will go back to the main display.



If "PLEASE TRY AGAIN" appears, do the calibration from "HEEL POSITION" again:



Effect Models List*

No.	Name	Description	E.LEVEL	A	B	DEPTH	RATE	TAP TARGET
01	Grand Chorus (GRD CHO)	Based on the legendary green ensemble chorus (chorus mode)	E.LEVEL	Low Cut (LO CUT)	High Cut (HI CUT)	DEPTH	RATE	RATE
02	Sky Chorus (SKY CHO)	Based on the Arion SCH-1 Stereo Chorus	E.LEVEL	Low Cut (LO CUT)	High Cut (HI CUT)	DEPTH	RATE	RATE
03	Tiny Chorus (TINY CHO)	Based on Electronic-Harmonix Small Clone	E.LEVEL	Low Cut (LO CUT)	High Cut (HI CUT)	Extra depth on/off selector (DEEP): OFF/ON	RATE	RATE
04	3D Chorus (3D CHO)	Producing a multi-dimensional chorus with independent depth control on left, center and right sound channels	MIX	Left channel depth (DEPTH L)	Center channel depth (DEPTH C)	Right channel depth (DEPTH R)	RATE	RATE
05	Stereo Chorus (ST CHO)	Producing a magical stereo chorus effect with spread control	MIX	Chorus dimension/Spread separation (SPREAD)	TONE	DEPTH	RATE	RATE
06	Bass Chorus (BASS CHO)	Based on world's first bass chorus pedal	E.LEVEL	Low Cut (LO CUT)	High Cut (HI CUT)	DEPTH	RATE	RATE
07	Detune (DE TUNE)	Producing a slightly pitch-shifted signal combines with original signal	DRY	Low Cut (LO CUT)	High Cut (HI CUT)	WET	Detune range (RANGE)	NONE
08	Normal Flanger (NORM FLG)	Producing classic flanging effect	E.LEVEL	Pre Delay (PRE DLY)	Feedback (F. BACK)	DEPTH	RATE	RATE
09	Trem Flanger (TREM FLG)	Producing classic flanging effect combining with tremolo effect	OUTPUT	Tremolo Depth (T. DEPTH)	Tremolo Rate (T. RATE)	Flanger Depth (F. DEPTH)	Flanger Rate (F. RATE)	RATE
10	Bass Flanger (BASS FLG)	Producing flanging effect designed for bass	E.LEVEL	Pre Delay (PRE DLY)	Feedback (F. BACK)	DEPTH	RATE	RATE
11	90 Phaser (90 PHS)	Based on MXR Phase 90	OUTPUT	Low Cut (LO CUT)	High Cut (HI CUT)	DEPTH	RATE	RATE
12	Green Phaser (GRN PHS)	Based on legendary 2-knob green phaser with sharp phasing effect	OUTPUT	Low Cut (LO CUT)	High Cut (HI CUT)	DEPTH	RATE	RATE
13	Pan Phaser (PAN PHS)	Producing a special phaser effect combing smooth tremolo (mono output)/pan(stereo output) variations	OUTPUT	Tremolo/Pan Depth (T. DEPTH)	Tremolo/Pan Rate (T. RATE)	Phaser Depth (P. DEPTH)	Phaser Rate (P. RATE)	RATE
14	Helicopter Tremolo (HELI TREM)	Based on Demeter Tremulator	OUTPUT	Low Cut (LO CUT)	High Cut (HI CUT)	DEPTH	RATE	RATE
15	Opto Tremolo (OPTO TREM)	Simulates classic pulsing tremolo effect on '60s American amps	OUTPUT	Tremolo tone (COLOR)	Waveform bias offset (BIAS)	DEPTH	RATE	RATE
16	Bias Tremolo (BIAS TREM)	Simulates vintage bias tremolo effect on late '50s British amps	OUTPUT	Tremolo tone (COLOR)	Waveform bias offset (BIAS)	DEPTH	RATE	RATE
17	LUSH ROTO	Based on Shin-Ei Uni-Vibe	OUTPUT	Low Cut (LO CUT)	High Cut (HI CUT)	DEPTH	RATE	RATE
18	MINI ROTO	Based on Voodoo Lab Micro Vibe	OUTPUT	Low Cut (LO CUT)	High Cut (HI CUT)	DEPTH	RATE	RATE
19	Grand Vibrato (GRD VIB)	Based on the legendary green ensemble chorus (vibrato mode)	OUTPUT	Low Cut (LO CUT)	High Cut (HI CUT)	DEPTH	RATE	RATE
20	Blue Vibrato (BLUE VIB)	Based on the legendary blue, BBD-based vibrato pedal	OUTPUT	Low Cut (LO CUT)	High Cut (HI CUT)	DEPTH	RATE	RATE
21	TRON WAH	Based on Electronic-Harmonix Q-Tron	SENS	Filter sweeping direction (SWP): DOWN/UP	Enhances low bottom or high overtones (RNG): LO/HI	Filter resonance (PEAK)	How fast the filter goes back to the resting point (DECAY)	NONE
22	AUTO WAH	Fully controllable band pass filter with variable auto wah effects	OUTPUT	Filter range (FREQ)	Filter sharpness (Q)	DEPTH	RATE	RATE
23	RING MOD	Ring modulator with interesting inharmonic, bell-like frequency spectra	MIX	TONE	Modulate frequency range (MODE): LO/HI	Ring mod frequency (FREQ)	Ring mod frequency fine tuning (FINE)	NONE
24	LO FI	Produces bitcrushing/sample reducing effect	MIX	Low Cut (LO CUT)	High Cut (HI CUT)	KRUSH	BIT	NONE

*The Manufacturers and product names mentioned above are trademarks or registered trademarks of their respective owners. The trademarks were used merely to identify the sound character of the products.

Specifications

Numbers of Effects: 24

Numbers of Patches: 10 (2 banks x 5 patches)

Digital Processing: 24-bit A/D/A conversion, 44.1 kHz sample rate

Frequency Response: 20 Hz-20 kHz

S/N Ratio: Up to 110dB

Input Impedance: 1M Ohms

Output Impedance: 100 Ohms

Power Requirement: DC 9V, center negative

Current Consumption: 200mA minimum

Dimensions: 121mm (D) x 72mm (W) x 47mm (H)

Weight: 340g

The contents of this manual are subject to change without notice.