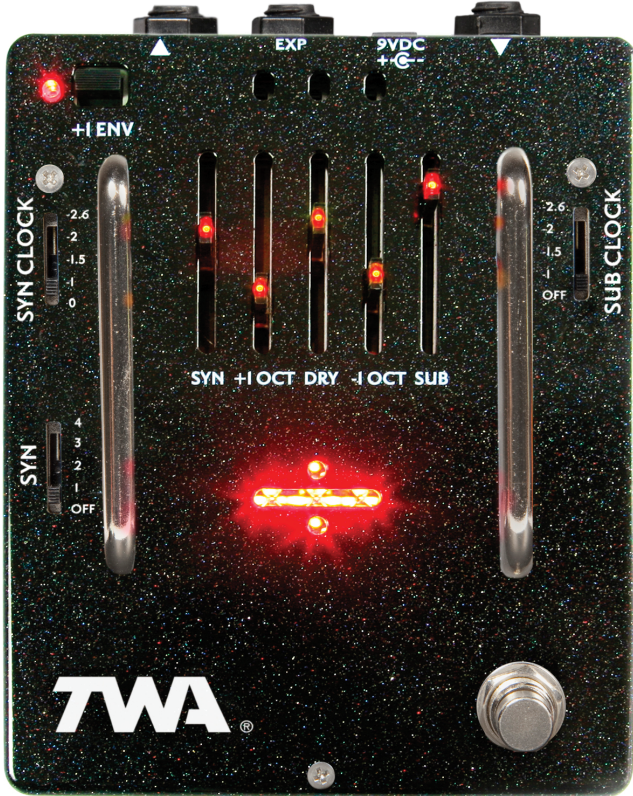


# TWA<sup>®</sup>



## GD-02 GREAT DIVIDE

multi-voice synth octaver

IN-FLIGHT MANUAL

**TWA**  
**GD-02 GREAT DIVIDE®**  
**MULTI-VOICE SYNTH OCTAVER**

Thank you for purchasing the **TWA GREAT DIVIDE®!**

The **GREAT DIVIDE®** combines classic analog octave division with proprietary Synth technology to create one of the best-sounding, most versatile octave units ever made.

The **GREAT DIVIDE®** features five independent voices that can be continuously blended for a limitless array of sounds—from classic “stompbox” octave division, to multi-layered, supersonic Synth mayhem!

For even MORE tonal options, patch in an external pedal via the TRS effects loop and control it with the **GREAT DIVIDE®!**

The **GREAT DIVIDE®** uses TWA’s proprietary **S3™** “Shortest Send Switching”—a form of relay-based True Bypass that provides the most transparent bypass sound available and automatically reverts to bypass if power is lost.

The **GREAT DIVIDE®** runs off external 9vdc. Due to high current draw, there is no battery option. The recommended power supply is the **POWER-ALL® ECO-DAPTER®**—however, it can also be powered by most regulated after-market multi-pedal power supplies with 9vdc, 300mA minimum, and tip-negative.

The **GREAT DIVIDE®** is covered by a 3 year parts and labor warranty.

For more information and to register your warranty,  
please visit our website:

**WWW.TOTALLYWYCKEDAUDIO.COM/WARRANTY**

The **GREAT DIVIDE®** is made in the USA.

For more info on **TOTALLY WYCKED AUDIO** products,  
please visit our website:

**WWW.TOTALLYWYCKEDAUDIO.COM**

**CAUTION:** When properly understood and used accordingly, the **GREAT DIVIDE**<sup>®</sup> is a VERY powerful tool for musical expression. However, when misunderstood and used *improperly* it can be an erratic, noise-belching behemoth that can destroy pedals, amps, and speakers with equal aplomb and utter lack of mercy.

To avoid damaging your gear, we HIGHLY recommend you read through this manual at least once to familiarize yourself with the **GD**'s controls and how they function and interact with one another. In addition, please follow the start-up procedure listed below to ensure that you do not damage your gear with the excessive sound levels that the **GREAT DIVIDE**<sup>®</sup> can create.

## PLAYING THROUGH THE GREAT DIVIDE:

The **GREAT DIVIDE**® circuitry and the resulting audio voices are 100% analog. As such, there are certain limitations to the note tracking capabilities of the pedal.

First off, all the lower octaves voices are monophonic—meaning, they track ONE note at a time. If you are looking for polyphonic octave division, then this is not your pedal.

However, depending on playing style and harmonic content of the input signal, the **GD**'s detectors can be fooled a little—some two-note stops WILL be tracked with interesting results (e.g. a fifth low-string pair of A on the low-E and E on the A-string on guitar). Some crazy effects can be made on high note pairs like 3rds, etc. as well. By blending the various voices of the **GD** you can create the illusion of polyphony in very unique and interesting ways.

Pure sine input waveforms will be tracked flawlessly, so one could take a simple wave form as input and create very interesting new voices—Remixers and Loopers take heed!!!

The **GD** circuitry tracks the incoming audio and subdivides the waveforms to create lower notes at varying octaves. That being said, sloppy playing will create erratic note tracking while clean and precise playing will yield superior note tracking. Higher notes will track better than lower ones, so playing below the 5th fret or higher on guitar and 10th fret or higher on bass is recommended (but not required).

You can improve tracking by playing on the neck pickup and rolling down your Tone control. Another method to improve tracking would be to place a compressor in front of the **GD**'s input.

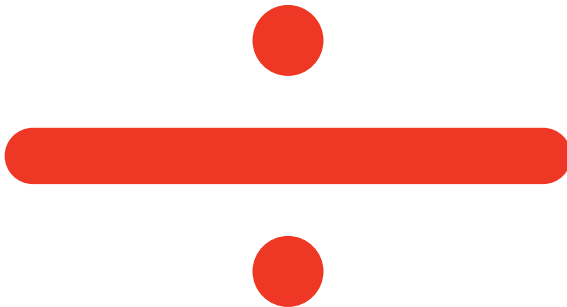
The **SYB** and **SUB** voices are created through the use of multiple gain stages that are setup in very unique ways. Because of their inherent architecture, these voices may have a tendency at certain settings to “run on” after notes are played. With careful playing technique and proper muting, this issue can be controlled and even used to create new and interesting effects.

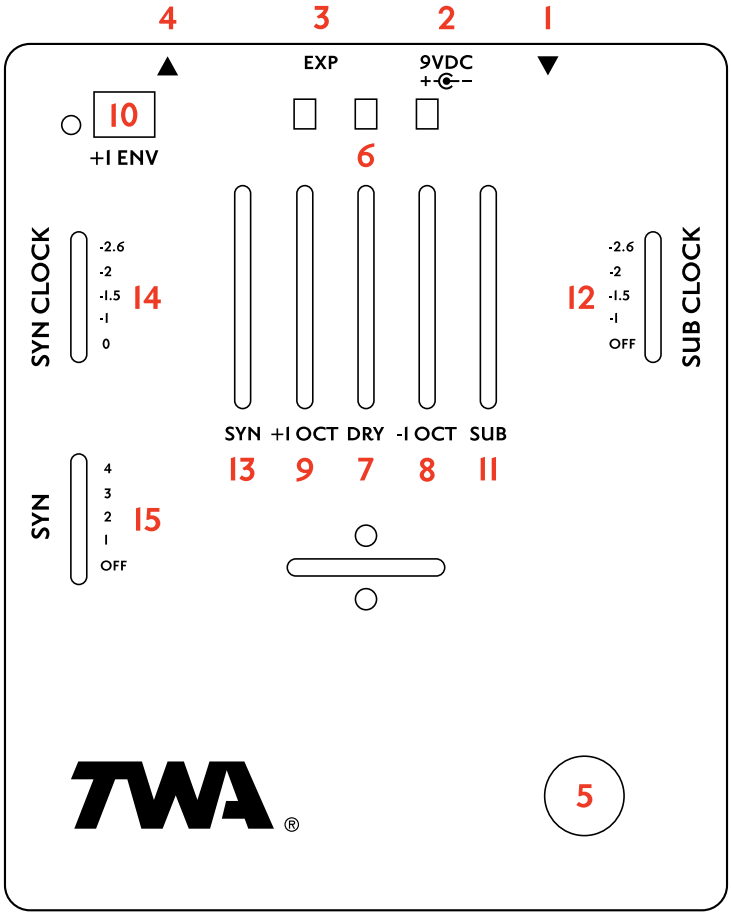
The **+I OCT** voice is actually a form of distortion that creates an upper octave harmonic to the note being played—As such it has the ability to track polyphonically in certain situations. Note that certain intervals will create ring modulation effects and additional harmonics, which may be desirable in some instances. Also note that the **+I OCT** voice can generate a fair degree of noise, depending on the settings of the internal trim pots.



## OPERATING THE GREAT DIVIDE:

- Before making any connections, set all faders to their lowest position and make sure **SUB** and **SYN** are set to OFF.
- Make the appropriate power and audio connections.
- Engage the footswitch—the red “division symbol” **LED** array will light when the circuit is engaged.
- Turn on/off desired voices and adjust appropriate faders to the desired output levels.
- **DESTROY THE GALAXY!**





## FRONT PANEL CONTROLS

1. **INPUT** – 1/4” unbalanced audio. Connect input signal here.
2. **DC IN** – Connect to tip-negative 9VDC regulated power source via a 5.5mm O.D. tip-negative male barrel plug with a minimum of 300mA of current available.  
(**PA-9 POWER-ALL**® **ECO-DAPTER**® recommended)
3. **EXP IN** – The **EXP** jack on the **GD-02** is a send/return effects loop in a TRS configuration that allows you to insert an external device into the **GD** signal path and control it via the bypass switch. We recommend using the Hosa STP-201 cable to make this connection.

You can connect an Expression Pedal such as the Boss EV-5 to this jack and use it to control the overall output volume of the **Great Divide**®—this is useful for creating “synth pads” by using the treadle to swell in notes after their initial attack. We recommend using the **TWA Side Step**® for additional controls and effects.

A Momentary Switch may also be inserted into this jack to create a mute/kill switch that will zero the output level of the **GD** when the switch is depressed.

4. **OUTPUT** – 1/4” unbalanced audio. Connect to amplifier, recording equipment, or other effects.
5. **BYPASS SWITCH** – Engages or disengages the effect. The **GREAT DIVIDE**® features **TWA**’s proprietary **S3**™ “Shortest Send Switching”—a form of True Bypass that uses an electronic relay combined with a mechanical switch.

**S3**™ switching assures that the input signal travels the absolute shortest distance between input and output jacks, guaranteeing the most transparent bypass tone available.

In the event of a power loss, **S3**™ switching automatically reverts to bypass mode, saving the user from embarrassing “dead air” and the need to figure out which pedal must be switched off to regain signal flow.

6. **VOICE OFF SWITCHES** – Shut off **+I OCT**, **DRY**, and **-I OCT** voices (left to right, respectively).
7. **DRY FADER** – Controls the output level of **DRY** signal. Center detent position is slightly above unity gain. This can be adjusted via the internal **SUM** trim.
8. **-I OCT FADER** – Controls the output level of **-I OCT** voice. Center detent position is slightly above unity gain. This can be adjusted via the internal **SUM** trim.
9. **+I OCT FADER** – Controls the output level of **+I OCT** voice. Center detent position is around unity gain. This can be adjusted via the **SUM** trim and other internal trimmers relating to the **+I** voice.

(Note: The **LED** on this fader will flicker dependent on the input signal and the settings on the internal **ENV** trims.)

10. **+I OCT ENV SWITCH** – Engages the envelope setting, adding additional modulation and resonance to the **+I OCT** voice and creating a swelling, filtering effect similar to a Synthesizer VCF. This setting may be adjusted via internal trims related to the **+I OCT** voice.
11. **SUB FADER** – Controls the output level of the **SUB** voice. Output at center detent position will vary depending on which voice is selected for **SUB**. This can be adjusted via the **SUM** trim and other internal trimmers relating to the **SUB** voice.
12. **SUB Clock** – Selects interval of Octave Division for the **SUB** voice.

Select from the following:

- 1 (1 Octave Down)
- 1.5 (1 Octave plus a 5th Down)
- 2 (2 Octaves Down)
- 2.6 (2 Octaves plus a 6th Down)

13. **SYN FADER** – Controls the output level of **SYN** voice. Output at center detent position will vary depending on which voice and clock is selected for **SYN**.

(Note: The **LED** on this fader will flicker dependent on the input signal and the settings on the internal **ENV** trims.)

14. **SYN CLOCK** – Selects interval of Octave Division for the **SYN** voice.

Select from the following:

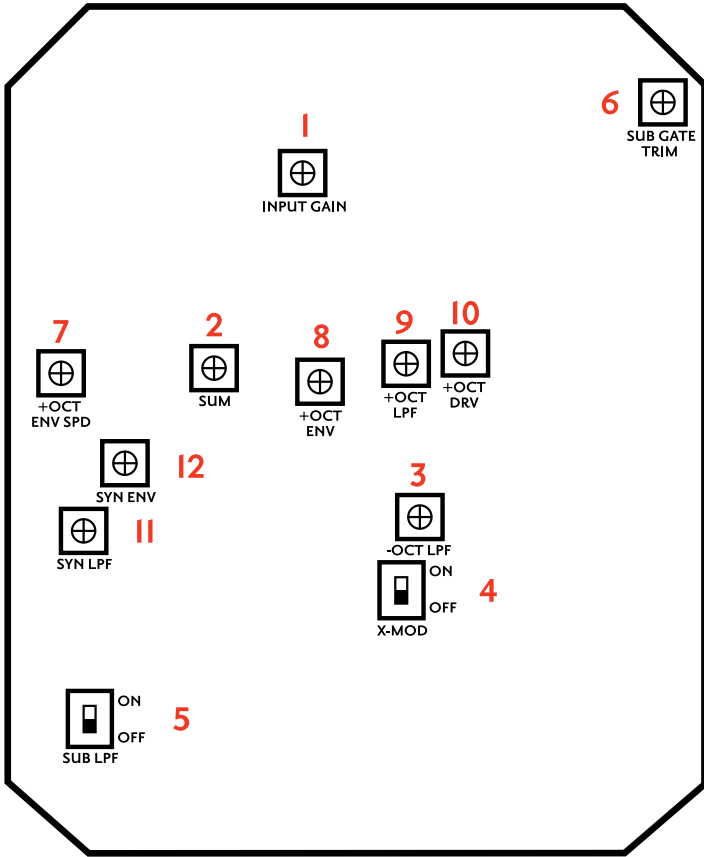
- 0 (Unity)
- 1 (1 Octave Down)
- 1.5 (1 Octave plus a 5th Down)
- 2 (2 Octaves Down)
- 2.6 (2 Octaves plus a 6th Down)

(Note: The **LED** on this fader will flicker dependent on the input signal and the settings on the internal **ENV** trims.)

15. **SYN VOICE** – Selects waveform and tonality for **SYN** voice.

Select from the following:

- OFF** **SYN** voice has *no output*
- 1** *Chopped Saw + Pulse*
- 2** *Saw + Pulse*
- 3** *Square* (dependent on purity of source) –  
(Note: This setting is not controlled by the position of the **SYN CLOCK** switch, and it will ALWAYS output a unity interval.)
- 4** *Modulated Square* (modulated by Division set on **SYN CLOCK**.)



## INTERNAL CONTROLS

**CAUTION:** Internal trim pots are delicate electronic components and are not designed for constant adjustment. To assure the maximum lifespan of the GD's internal trimmers, please make adjustments to these controls cautiously and sparingly.

1. **INPUT GAIN** – Basically a preamp to adjust the level of the Input signal before it hits the **GD** circuitry. High settings can yield input distortion, which may be desirable in some instances.

(Note: High settings can negatively affect tracking by producing distorted harmonics.)

2. **SUM** – Controls overall output level of ALL **GD** voices.

**WARNING:**

The **GD** is capable of EXTREME, speaker-and amp-destroying output levels. Adjust this trimmer SLOWLY and with extreme caution.

Unity gain is somewhere between 8-9 o'clock.

3. **-I OCT LPF** – Controls the tonality of the **-I OCT**. Turn clockwise for a brighter, more aggressive tone.
4. **X-MOD -1/4"** When set to **ON**, it modulates the **-I OCT** voice via the **SUB Clock** voice.

Example: With the **SUB Clock** set to **-1.5** and the **X-MOD** switch **ON**, the **-I OCT** will have a new, more aggressive tone with over & undertones of **-1.5** added into it. This setting is typically used with the **SUB** fader set to zero.

5. **SUB LPF** – Shuts off the **LPF** on the **SUB** voice, passing completely unfiltered, square-wave clock. This setting is great for raw, fat analog Synth sounds.
6. **SUB GATE TRIM** – Due to the nature of its circuitry, the **SUB** voice can have a run-on “chatter” when there is low or no input signal. The **SUB GATE** controls this and can also be used to swell in the attack of the **SUB** voice for interesting effects. Adjust to taste.
7. **+I ENV SPEED** – When **ENV** on front panel is **ON**, this trim controls how long the release of the envelope is, once the note goes below a preset threshold.



8. **+I OCT ENV** – When **ENV** on front panel is ON, this trim adjusts how close to self-oscillation the **+I OCT** sound will go. All the way up will create harmonic oscillation / resonance on notes, which may be desirable in some instances.
9. **+I OCT LPF** – Controls tonality of **+I OCT**. Turn clockwise for brighter, more aggressive tone.
10. **+I OCT DRY** – Controls how hard the audio hits the **+I OCT** circuit. At high settings the sound can get messy and erratic, which may be desirable in some instances.
11. **SYN LPF** – Controls tonality of **SYN** voice. Turn clockwise for brighter, more aggressive tone.
12. **SYN ENV** – Controls volume swell on note attack of **SYN** voice. Turn clockwise for longer attack time.

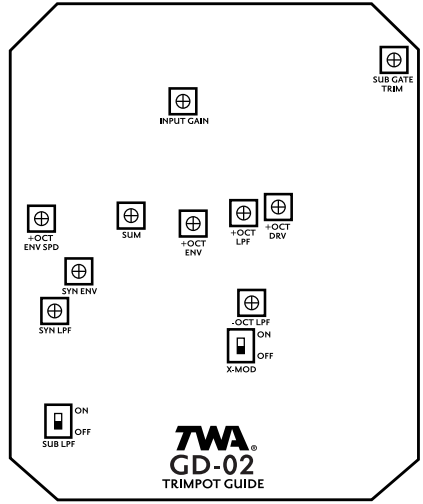
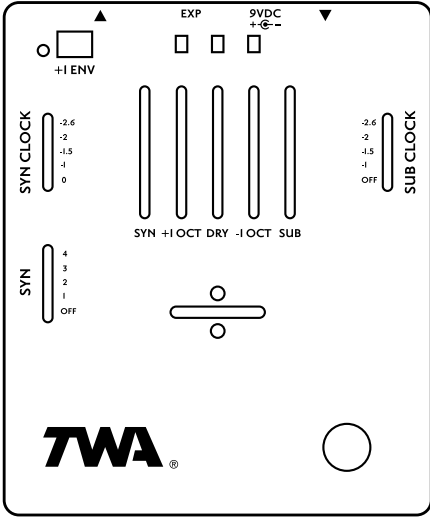
(Note: Much like the “key click” on monophonic keyboard or Hammond, the attack will not fade in slowly unless the previous note is released first. In other words: The level of the note being played must be below the predetermined threshold of this control.)

**THAT’S IT!!!**

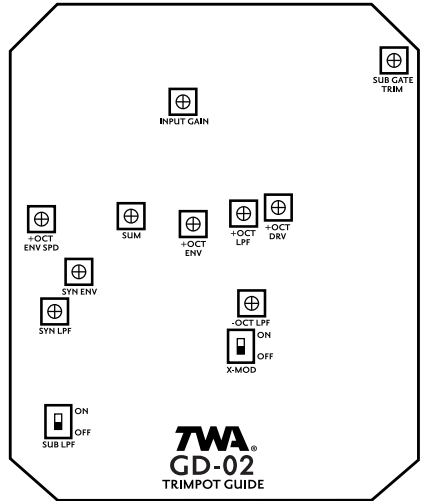
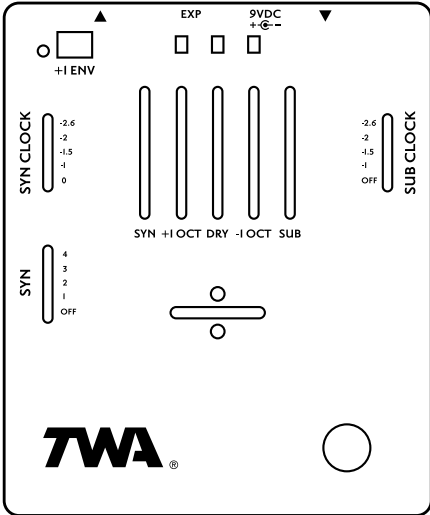
Rock this monster *hard...*

Questions, Comments, Criticisms—

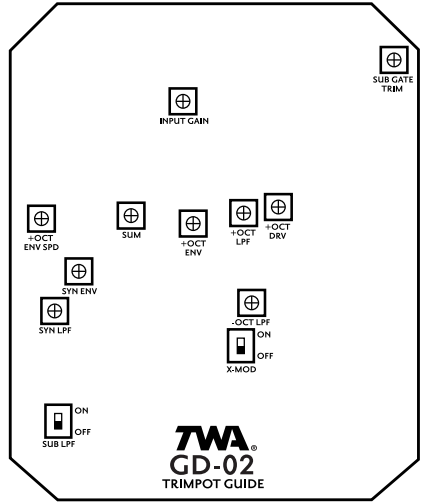
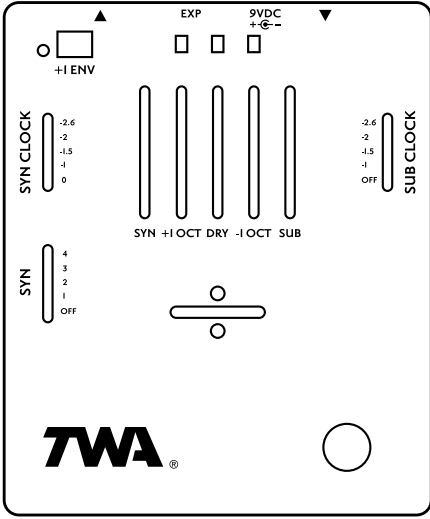
[info@godlyke.com](mailto:info@godlyke.com)



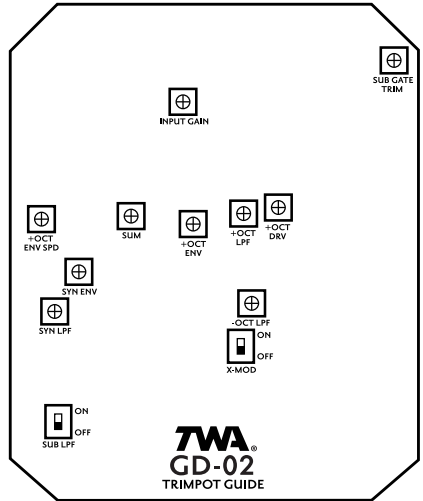
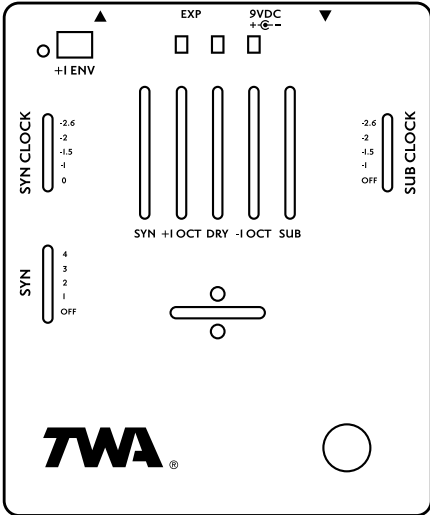
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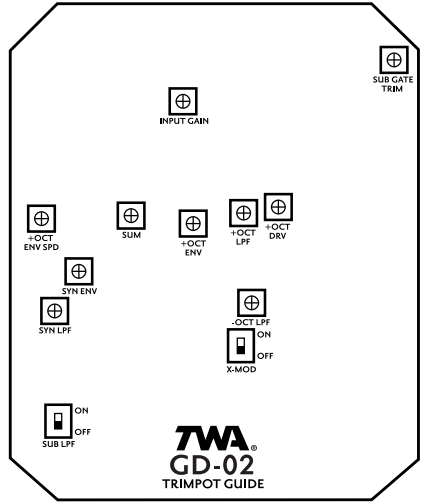
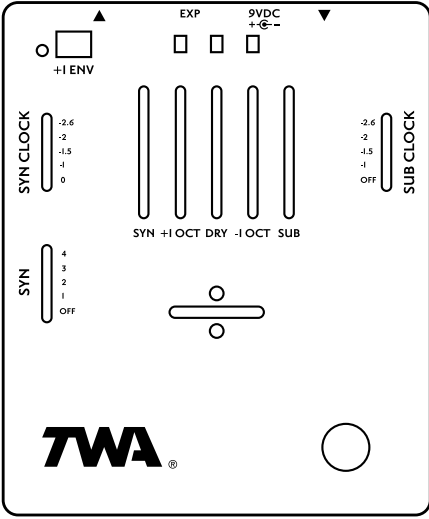
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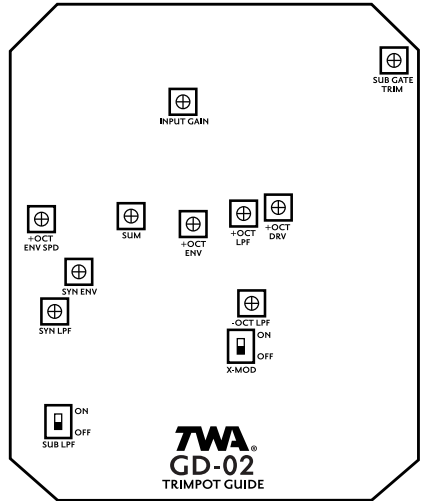
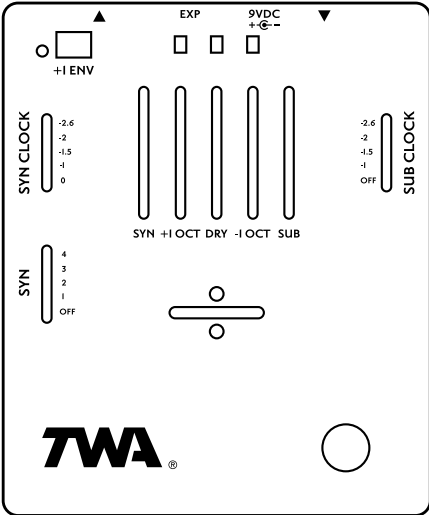
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*The way of the future...*