Patching Panda Punch MG Quad VCA Decay and Mute Group Module User Manual

**Punch MG Quad VCA Decay and Mute Group
Module User Manual**

Contents

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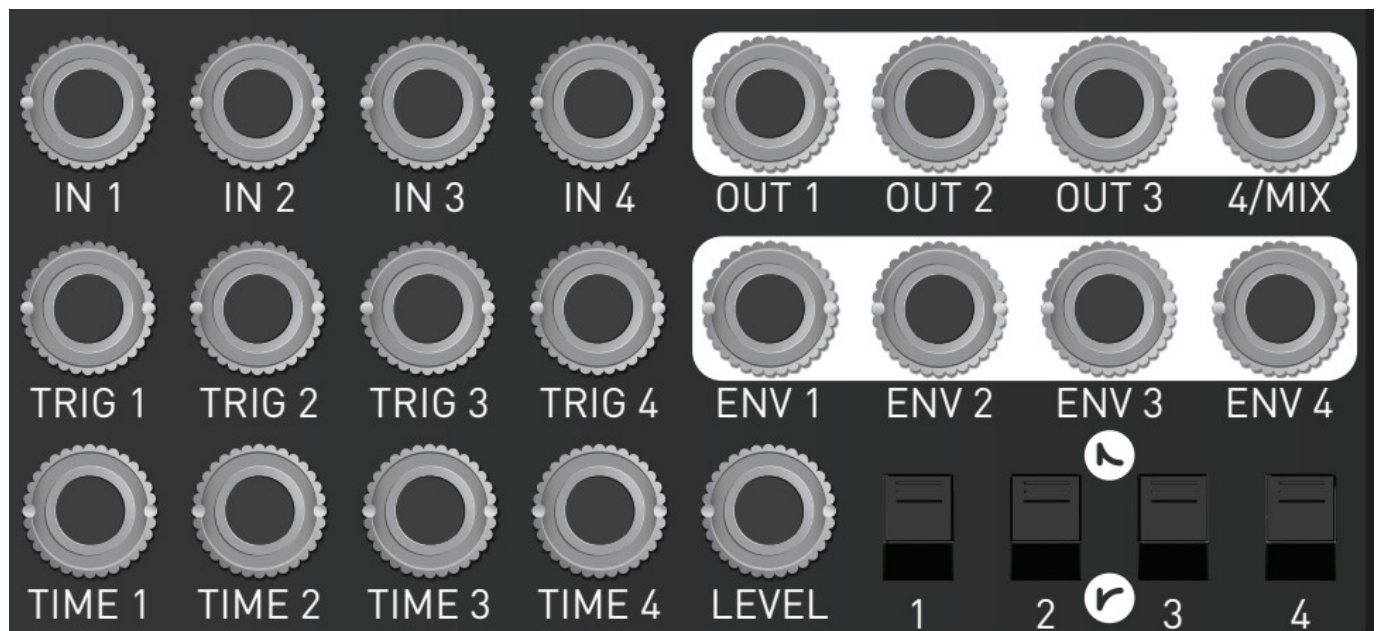
PUNCH MG
USER MANUAL

INTRODUCTION:

Welcome to the user manual for Punch MG, a unique module with VCA-DECAY & Mute GROUP designed for Eurorack systems.

This module has been specially crafted to generate dynamic percussive sounds while also offering the capability to manage multiple signals simultaneously through its innovative mute group feature.

Punch MG provides a versatile platform for crafting dynamic percussive sounds. With its mute group feature, it allows you to handle numerous signals concurrently.

This manual will guide you through the various features and functions of Punch MG, enabling you to explore its full potential.

Key Features:

Dynamic Sound Generation: Punch MG is engineered to generate dynamic percussive sounds with finesse, offering a range of creative possibilities.

Mute Group Interaction and Signal Patterning: Utilize the mute group feature to enable interactions between signals that share the same group.

This feature enables signal muting and amplitude limitation when multiple signals are triggered simultaneously. The amplitude and decay time of each signal are influenced by others in the same group. This characteristic can lead to captivating pattern variations when focusing on specific channels.

Expandable Capability: By linking two modules, you can expand the effect of the mute group to accommodate up to eight signals, fostering intricate interactions and captivating sonic landscapes.

AM Sound Creation: Connect audio rate signals to the level input to explore the creation of AM (Amplitude Modulation) sounds, further extending the sound design possibilities.

Envelope outs: Each envelope's polarity can be inverted using dedicated switches on the front panel, enabling you to achieve effects like side-chain compression and ducking. Moreover, the mute group circuit's influence extends to the envelope signal output, providing intriguing modulation capabilities that add a unique layer of creative expression to your sonic endeavors.

This manual is your guide to effectively utilizing the Punch MG module. It provides comprehensive information on the module's features, connections, controls, and potential applications. Whether you're a seasoned Eurorack enthusiast or new to modular synthesis, this manual will assist you in harnessing the power of Punch MG for your sonic explorations.

Please read through the following sections to gain a deeper understanding of the Punch MG module and its capabilities. Enjoy your journey into the world of dynamic sound generation and creative signal manipulation.

INSTALLATION:

- Disconnect your synth from the power source.
- Double check polarity from the ribbon cable, unfortanetly if you damage the module by powering in the wrong direction it will not be covered by the warranty.
- After connecting the module check again you have connected the right way, the red line should be on the -12V
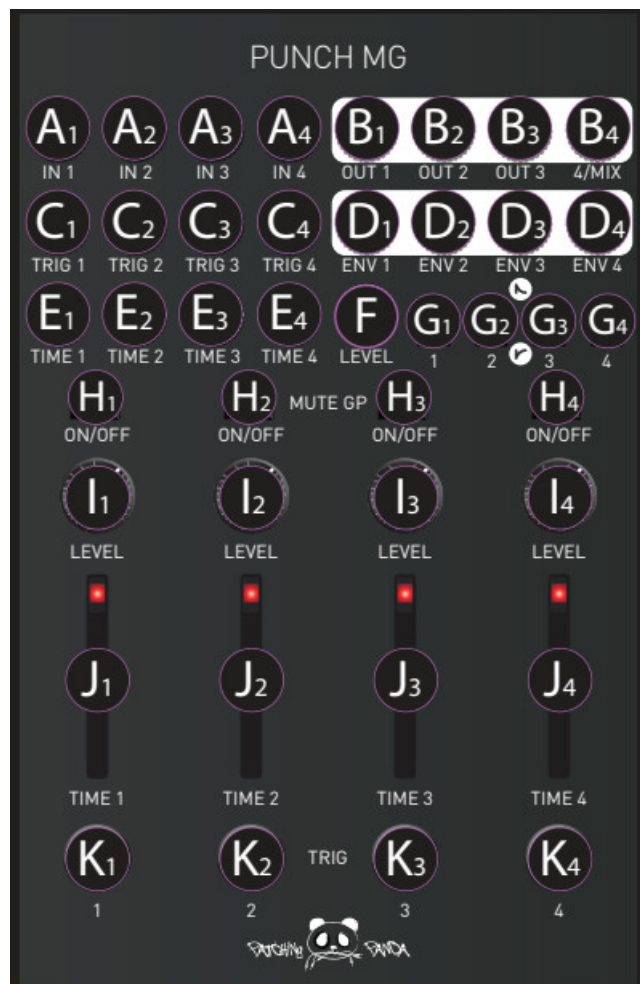
3. CONTROLS:

A1 Audio input channel 1.
A2 Audio input channel 2.
A3 Audio input channel 3.
A4 Audio input channel 4.
B1 Output channel 1.
B2 Output channel 2.
B3 Output channel 3.
B4 Output channel 4.
C1 Trigger input channel 1.
C2 Trigger input channel 2.
C3 Trigger input channel 3.
C4 Trigger input channel 4.
D1 Envelope output channel 1.
D2 Envelope output channel 2.
D3 Envelope output channel 3.
D4 Envelope output channel 4.
E1 CV decay channel 1.
E2 CV decay channel 2.
E3 CV decay channel 3.
E4 CV decay channel 4.
FCV level or AM input.
G1 Envelope swicth CH1.
G2 Envelope swicth CH2.
G3 Envelope swicth CH3.
G4 Envelope swicth CH4.
H1 Mute group swicth CH1.
H2 Mute group swicth CH2.

H3 Mute group swicth CH3.
H4 Mute group swicth CH4.
I1 Gain amount CH 1.
I2 Gain amount CH 2.
I3 Gain amount CH 3.
I4 Gain amount CH 4.
J1 Decay amount CH 1.
J2 Decay amount CH 2.
J3 Decay amount CH 3.
J4 Decay amount CH 4.
K1 Manual trigger CH1.
K2 Manual trigger CH2.
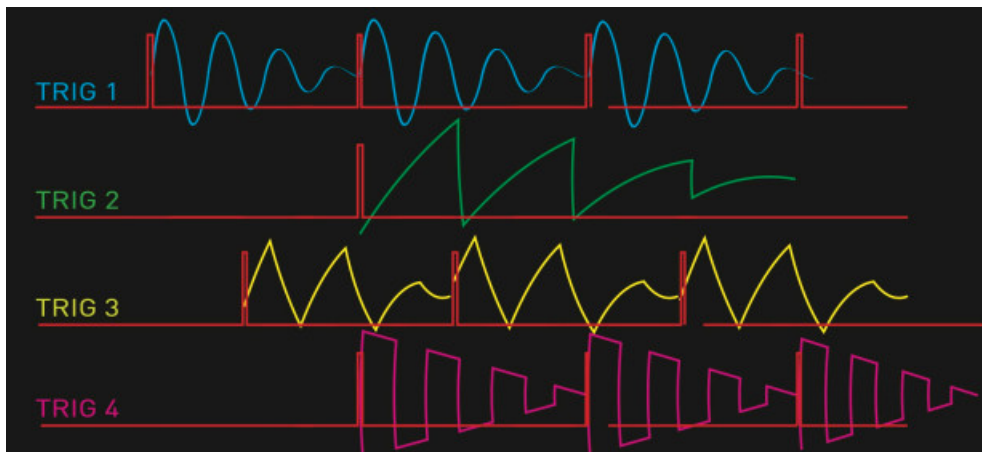K3 Manual trigger CH3.
K4 Manual trigger CH4.
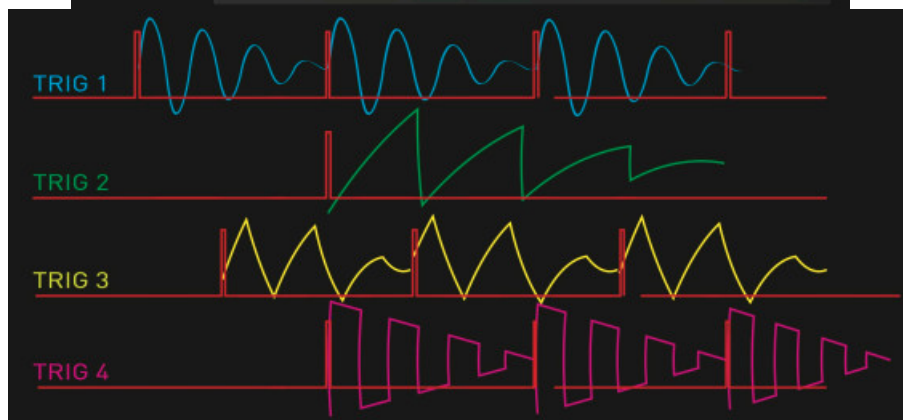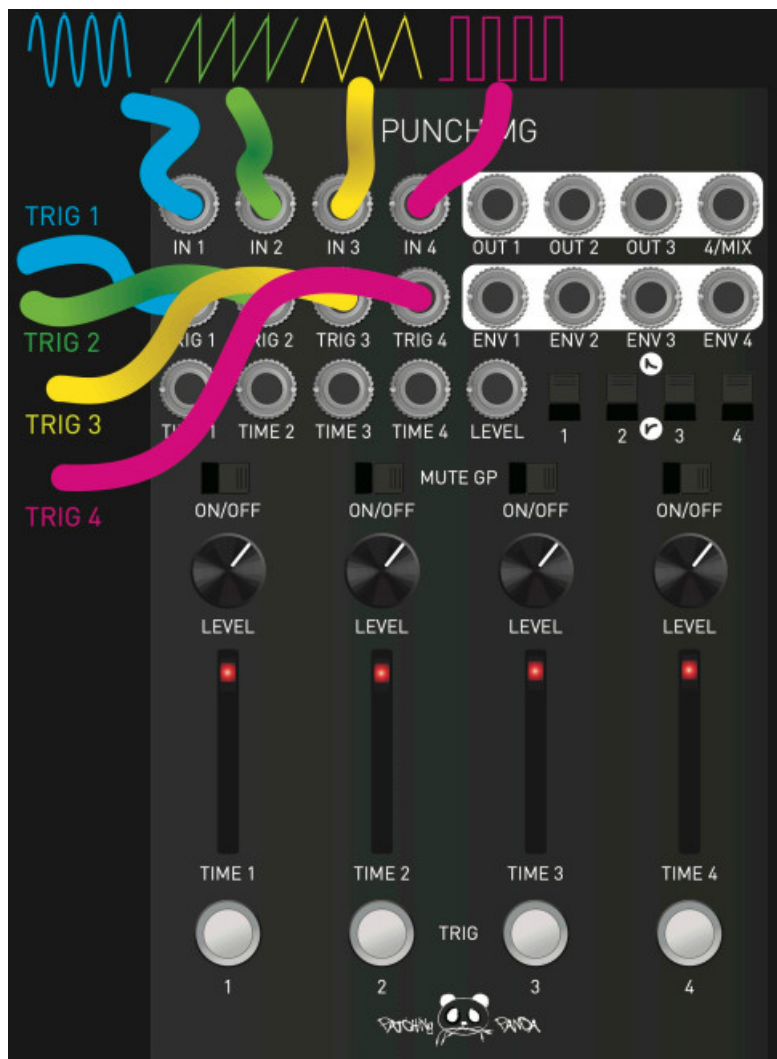
MUTE GROUP OFF: When 2 or more are mixed together the amplitude lags Et ooe
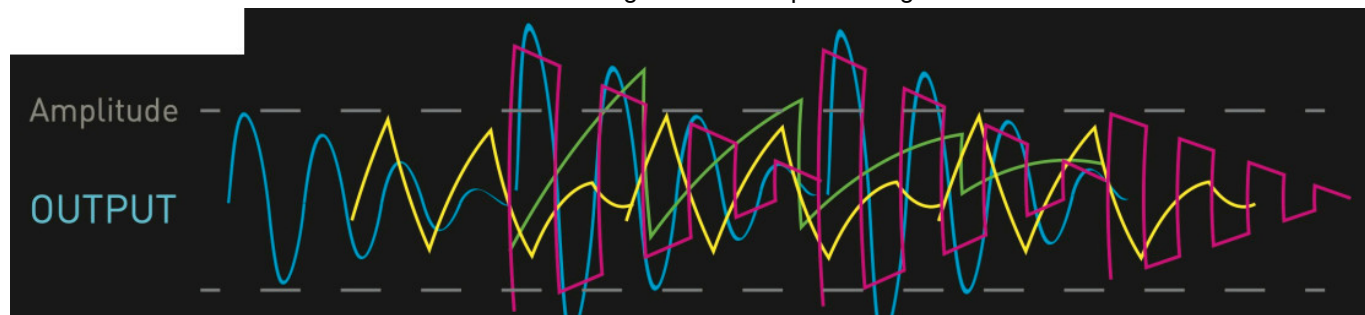
MUTE GROUP ON: The signals sharing the mute group will mute the ongoing signal giving space to play the new signal.
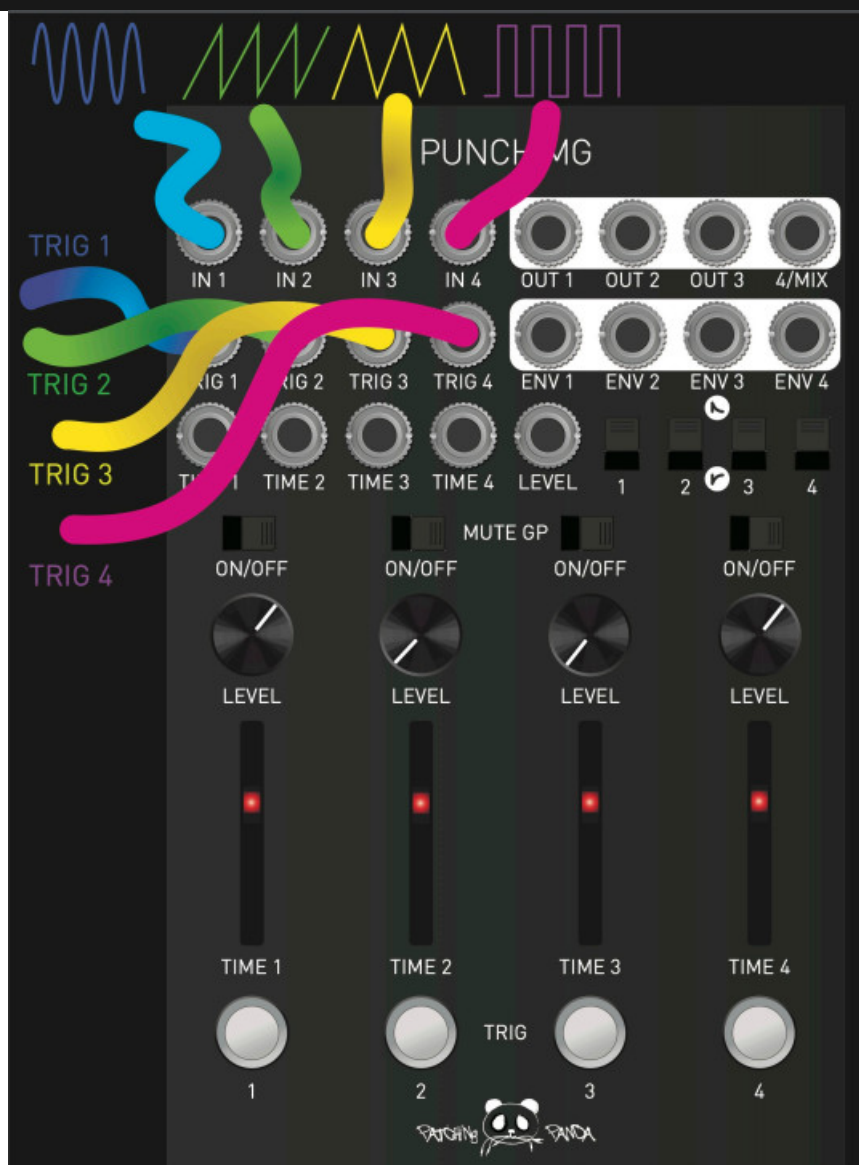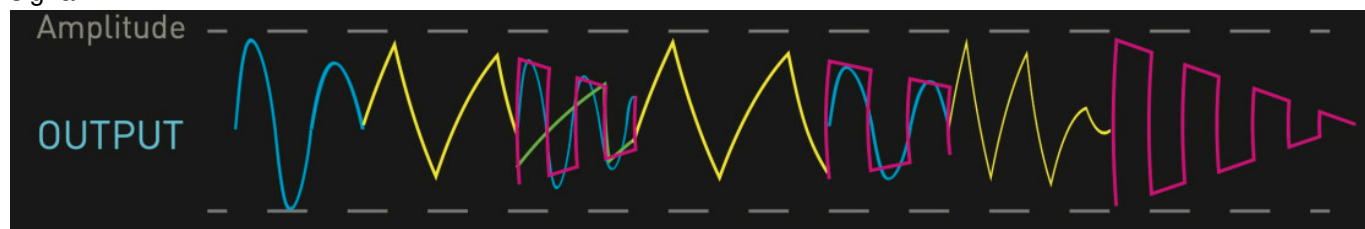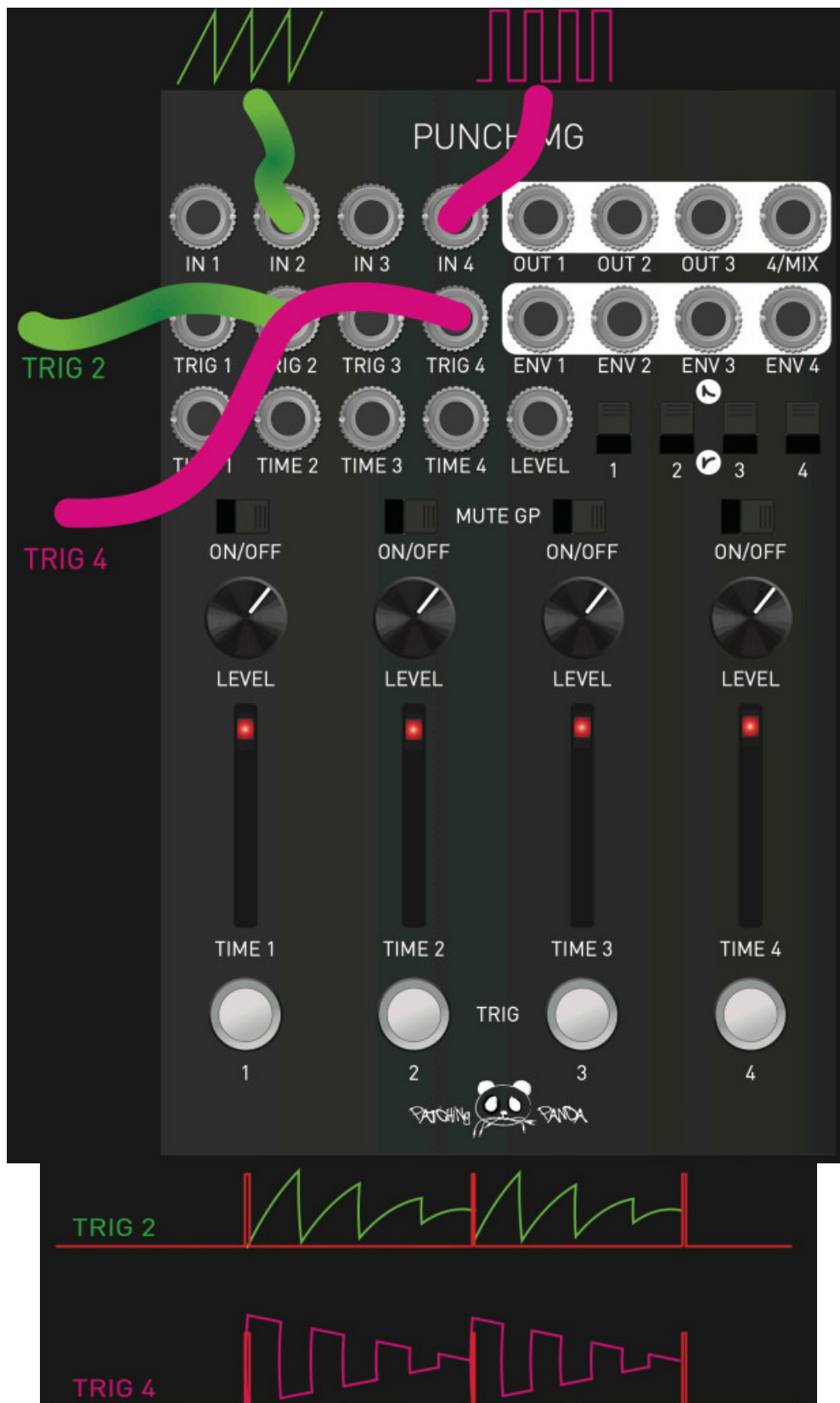
MUTE GROUP ON: When you decrease the gain level or decay time from some channels you can find interesting groove patterns from the active channels being affected by the silent signals:
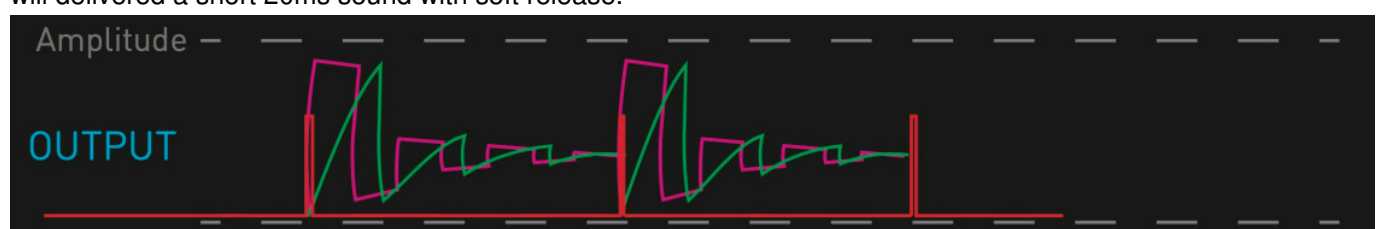

MUTE GROUP ON ENVELOPE OUTPUT: The envelope output alos is affected by the mute group circuit:

MUTE GROUP ON: With the decay time slider fully open, when 2 or more signals are triggered at the same time it will delivered a short 20ms sound with soft release.

MUTE GROUP ON: The more you close the decay trme when 2 or more signals are triggered at the same time

the shorter the signal will become but they will still respect the same amplitude.

CALIBRATION

Punch MG is capable of generating AM (Amplitude Modulation) sound by patching an audio source into the level input. To ensure that the audio signal does not leak when the VCA is fully closed, we need to perform an offset calibration. Follow these steps for calibration:

1. Signal Setup: Connect a signal source, such as a Voltage-Controlled Oscillator (VCO}, to the input level of the module. Connect the MIX output to your sound system for monitoring.
2. Isolate Channel1: Close ail level potentiometers except for channel 1. Ensure that only channel 1 is active.
3. Calibration: Use a screwdriver to turn the trimmer knob to the left until you no longer hear the signal through your sound system.


4. Repeat step 2 and 3 for the rest of the channels.

When the VCA is successfully calibrated, you should not hear any signal leakage through your sound system, and the fader LED for channel 1 should be OFF.
This calibration process ensures that the module functions as intended, preventing unwanted audio signal leakage when the VCA is fully closed.

Documents / Resources
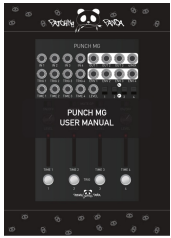
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