vfm

volume-fading-mixing

features & specs

- The VFM offers a way to provide graceful (100% analog) control of your pedal board. The VFM can replace much of the necessary in-time stomping with fluid, smooth mixes. The VFM stands for Volume-Fading-Mixing and can do all these things at the same time. The idea is to divide your pedals into two, three, or four groups. Pedals in front of the VFM (example: a tuner), pedals behind the VFM (example: a delay), and pedals for use in the VFM Heel loop (example: pedals used for clean tone), and lastly, pedals for use in the VFM Toe loop (example: pedals used for distorted/fuzz tones). Pedals which are placed before and after the VFM still have to be switched manually, but the VFM allows pedals in the Heel and Toe loops to be On and mixed seamlessly, including a choice of fade-in / fade-out, or constant-volume mixing, as you blend from the Heel loop to the Toe loop and back again using the expression pedal (or Manual Mix knob).

- The VFM features line-level headroom and a Manual Mix knob, so it may be used at the console or desktop to process individual tracks without using the expression pedal. A pair of mix-status Red LEDs (one for the Toe loop and one for the Heel loop) allow for visual indication of amount of Heel loop or Toe loop signal in the final mix. The mix-status LEDs cover the full range from bright to dark, tracking the movement of the Manual Mix knob or expression pedal.

- The VFM features a high-impedance Buffer with an on / bypass toggle switch and a Red LED indicator. When the Buffer is switched On, the VFM will drive any signal chains or loops of pedals, and any length of cables, even when the VFM is foot switched to bypass. The VFM can be used with one, two, or three amplifiers.

- For use with one amp, use the VFM's Mix Out jack and the Mix Out - Amp 1 foot switch. Note: when the Mix Out - Amp 1 foot switch is active (Green LED on), both the Heel and Toe loops and the Heel and Toe Volume knobs are active. When the Mix Out - Amp 1 foot switch is in the bypass mode (Green LED off), both Heel and Toe loops and Volume knobs are bypassed. The Amp 2 foot switch (Yellow LED) is not used with just one amp.

- For use with two amps, use the Amp 1 Out and Amp 2 Out jacks. The Mix Out - Amp 1 foot switch will bypass the Heel loop, and the Amp 2 foot switch will bypass the Toe loop. Note: when both foot switches are in the bypass mode, the VFM functions as a passive splitter box (between the Input jack and the Mix Out, Amp 1 Out and Amp 2 Out jacks), this will load the guitar signal, causing a loss of treble. Remember to switch the VFM's Buffer On to prevent this signal loss when either (or both) VFM foot switches are in the bypass mode.

- The VFM features a Volume knob for each loop. The Volume knobs are active only when the VFM is active (Green or Yellow LEDs on). Each Volume knob has a range from silence to +6 db. Each Volume knob features a center detent (at 12:00), which is the unity gain setting. However, the volume of either loop may be adjusted as necessary. The VFM may simultaneously function as an active volume pedal, simply by turning the Heel Volume down, and the Toe Volume up.

- For foot pedal control, the toneczar EB Expression pedal must be used with the VFM, and is connected with a ¼" (stereo) TRS cable. The expression pedal is to be placed where it is convenient to use. The VFM is to be placed in the center of the pedal board where it is simplest to route the patch cables to the various pedals that will be in the VFM's Heel and Toe loops. Pedals to be placed in the VFM's Heel loop are intended to be placed on the right side of the VFM. Pedals to be placed in the VFM's Toe loop are intended to be placed on the left side of the VFM.

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- The VFM circuit is voltage controlled so there is no audio on the Manual Mix knob, expression pedal, or TRS hook-up cable. For proper operation, the expression pedal's Direction toggle switch must be set in the down position. Normal linear sweep will be with the expression pedal's Taper toggle switch in the middle position. Note: when the expression pedal is plugged in, the Manual Mix knob is completely bypassed.

- The Mix Mode toggle switch provides the ability to choose between panning or cross-fading. In the panning mode there will be a perceived volume dip as you sweep into the center of the expression pedal's range. In the cross-fade mode, volume will remain constant over the entire range of the expression pedal movement. This assumes both Heel and Toe Volume knobs are set to unity gain (12:00). Note: the reaction of the Mix Mode toggle switch will depend on which pedals are on or off in the Heel or Toe loops, and which pedals invert the phase. When using the VFM with two amps, the Mix Mode toggle switch will also be useful in correcting (or creating) an out-of-phase condition between the amps.

- Pedals may still be placed both before and after the VFM and foot switched manually. Pedals which do not like a buffered input (like the classic fuzz face) should not be placed in the loops, but in front of the VFM. If you are using a true-bypass tuner (such as the Sonic Research Turbo Tuner), place the tuner after your guitar and before the VFM. (guitar>tuner>VFM). If you are not using either the VFM Heel or Toe loops, it is not necessary to connect the Send and Return jacks with a short patch cable as the jacks are connected and automatically switched inside the VFM.

- In VFM setups using two amps, it's very important to observe proper grounding of the entire rig to prevent ground loop hum or buzz. Since most amps will have a grounded power plug (3 prongs), using two amps with grounded power plugs can create a ground loop. The simplest solution is to place a 3-prong to 2-prong plug adapter on one of the amp's power cord plugs (either amp, but not both). A completely isolated pedal-board power supply (like the Cioks DC-7) will assure that a ground loop is not created from your pedal board.

- In VFM setups using two dissimilar amps (brand, type or vintage), it's possible to have noise even with proper grounding. In this circumstance, just one amp will have hum or buzz. The amp with hum or buzz will likely have a power polarity miss-match. If the amp has a polarity switch on the back, try flipping the switch.
Or, if the amp has a vintage two prong power plug, just unplug the power plug, flip the plug over, and plug it back in.
If the Amp has a grounded power plug, use a 3-prong to 2-prong plug adapter, flip it over, and plug it in.
Note: some adapters have one prong taller than the other; this type won't work without grinding or filing the taller prong to the same size as the other one.

- Like all toneczar products, the VFM operates on 18 volt DC (no batteries) providing excellent headroom with no clipping. The recommended power supply for the US and World market is the Cioks DC-7. Do not attempt to use a 9v power supply. Power jack is the standard 5.5 x 2.1mm. center tip - negative.

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- Built for life construction featuring full-size thru-hole components and a thru-plated FR4 epoxy-glass printed circuit board that is hand soldered, hand wired, scope-tested and tuned. There are no miniature surface-mount components. No pcb mounted pots, jacks, or switches. No aluminum electrolytic caps in the signal path. No internal trim pots, DIP switches, socketed parts, ribbon wire or push-on connectors. (nothing to work loose and fall apart).
- The VFM is offered in a two finishes, powder-coat matte black box or the optional polished aluminum. Note: this is not a show finish. It will be full of character, matching the rest of the toneczar product line. These products are designed to be installed on a pedal board and stepped on, not polished with a soft cloth and admired.

SPECIFICATIONS

Input Impedance: > 1.0 Meg ohms
Output Impedance: < 10K ohms
Volume adjustment range: 0 to +6 db
Current Consumption: 60ma. @ 18v dc.
Signal to noise: 90 db
Dimensions: 5 3/4” W x 4” D x 2” H
(knobs add 1” to height)
Weight: approximately 2 lbs.

features