



echoczar

analog stereo delay

features & specs

- The echoczar features two completely independent, foot switchable, Delay Time and Mix settings with individual LED indicators (Green and Yellow). The Vintage / Modern and Echo / Delay Mode toggle switches offer the ability to uniquely alter the delay voice and character of the repeats. Plus a wide range of (100% analog) delay time, stretching from 50ms. to over one full second. (1100 ms. actual) Mono-In / Mono-Out or Mono-In / Stereo-Out operation.
- Stereo applications benefit from the active Mix controls and the Effect Out Phase-Select toggle switch. This allows the creation of a centered stereo image or a wide expansive soundscape. Note: the Effect Out Phase-Select toggle switch makes no audible difference when using just one amp.
- The Effect Out Mute / Normal toggle switch is useful when using two amps in stereo, providing the option of muting the wet amp when foot switching the echoczar into the bypass mode. With the Effect Out Mute / Normal toggle switch in the Normal position, both the Effect Out and Direct Out jacks feature hardwired true-bypass switching. With the Effect Out Mute/Normal toggle switch in the Mute position, the Effect Out jack is muted (silent) in the bypass mode, and the Direct Out jack is hardwired, true bypass. Note: place the Effect Out Mute / Normal toggle switch in the Normal position when using just one amp otherwise your amp will be muted when you foot switch to bypass.
- The Vintage / Modern toggle switch allows for a choice of Repeat voicing. The Vintage Mode is warm and thick, the Modern Mode is brighter. In addition to either of these modes, you may add one of two Multi-head Modes.
- The Multi-head Modes were originally inspired by the various multi-head tape machines. A three-position center-off toggle switch adds Multi-head Slapback (s-back) or Multi-head Reverb (reverb) to either the Vintage or Modern modes, providing a great deal of variety. The Multi-head Slapback Mode sounds similar to two delay units in series, with the first delay set for a soft slapback repeat, and the second delay set for a longer repeat. Note: for best results, the echoczar's delay time setting needs to be set well over 300ms, with a 50/50 wet/dry Mix. After several repetitions (depending on the echoczar's delay time setting), these two separate repeats will either ping-pong, stutter, or morph into each other. Using the Feedback foot switch (or Expression pedal) will provide very interesting feedback (self-oscillation) effects. The Multi-head Reverb Mode sounds like delay plus plate-style reverb, and is useful for amps which do not have reverb. Note: this is not a wet, surf-style, reverb. Very interesting feedback is also easily obtained in the Multi-head Reverb mode. Warning: both Multi-head Modes will feedback (self-oscillate) if the Repeat knob is 3:00 or higher.
- The Echo / Delay toggle switch allows for a choice of Repeat character. The Echo Mode provides repeats which decay in a natural manner, and provides smooth droning feedback (self-oscillation). The Delay Mode provides repeats that can go on and on, or is useful for music styles that need punchy, rhythmic repeats. The feedback (self-oscillation) in this mode is wild, loud and choppy.
- Foot switchable Feedback (with Red LED indicator) and Safety knob allow you to adjust exactly how soft or sudden you want the feedback (self-oscillation) to come in. Dial in a short sustaining tail, or nearly endless sound-on-sound droning, or an insane UFO landing. Foot switch Feedback Off and glide smoothly back to normal repeats.
- The 100% analog echoczar does not feature tap tempo. However, the Delay Time knobs are larger and taller so they can be adjusted with your foot without disturbing your other knob settings.



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- The Repeat knob, when set to 3:00 in the Echo Mode, provides approximately ten repeats, and will not easily induce runaway feedback (self-oscillation). In the Delay Mode expect 15 repeats, and with the Repeat knob at max (full clockwise) expect wild runaway feedback, especially when combined with the Multi-head Modes. When the Repeat knob is set at minimum (full counter-clockwise) the result is one repeat in All modes.
- The echoczar features two Expression pedal jacks. The Delay 2 Expression jack bypasses the Delay 2 (Yellow) Delay Time knob, allowing Expression pedal control of the Delay 2 (Yellow) delay time. Note: this is not a substitute for tap-tempo, but can be used to set the delay time, or used for special noise effects. The Repeat Expression pedal jack bypasses the Repeat knob, and works for both the Delay 1 (Green) and Delay 2 (Yellow) channels. Allowing expression pedal control of Repeats from 1 repeat (heel down) to the onset of feedback/self-oscillation (toe down). This allows for real time control of feedback and reserves the Feedback foot switch for more radical feedback effects or sustained droning. This versatility makes the echoczar an incredible tool.
- For expression control, please use only the toneczar EB Expression pedal with a ¼" TRS (stereo) cable. Do not plug anything else into the Delay 2 Expression jack as the echoczar is voltage controlled. Do not use any other brand of expression pedal as they will not work.
- The Repeat Expression jack may also be used as an effects loop for the delayed signal path. To access this feature, use a **channel-insert-cable** (¼" Y-cable configured with a single TRS stereo plug on one end, and two mono plugs on the other end). The mono plug labeled **Tip** plugs into the input jack of the effect to be added, and the mono plug labeled **Ring** plugs into the output jack of the effect to be added. The TRS stereo plug goes into the echoczar's Repeat Expression jack. It is absolutely necessary that the effect patched in the echoczar's effects loop has a volume knob. If not, a standard volume pedal must also be patched in between the added effect's output jack, and the mono plug labeled Ring. If this is not done, uncontrollable feedback/self-oscillation will result. Note: effects placed in the loop will not alter the echoczar's first repeat.
- The echoczar features two independent Mix knobs (one for each channel), each providing any ratio from 100% dry to 50/50 mix to 100% wet. Foot switching between the two Delay Time settings automatically switches between the two Mix knobs.
- The echoczar may be used in a well-designed amplifier effects loop (but these are few and far between). Note: In front-of-amplifier applications are preferred and make it far easier to get the desired sonic results.
- The echoczar features Flash Tempo. Each channel indicator LED (Green or Yellow) flashes in time to the actual Delay Time setting. Being able to see the delay time setting is helpful when using the expression pedal to control Delay 2 (yellow channel) Delay Time.
- Hardwired, True-Bypass switching, with ON indicator (Red LED).
- Like all toneczar products, the echoczar operates on 18 volt DC (no batteries) The recommended power supply for the US and World market is the Cioks DC-7. Do not attempt to use a 9v power supply. The power jack is the standard 5.5 x 2.1 mm. center tip - negative.



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Highlights on the echoczar xv option

- The echoczar xv retains the familiar echoczar features, knob, switch and jack layout. The methods of operation are the same as the standard echoczar. However on the inside, the echoczar xv is a new design which features **four** tested and matched Xvive MN3005 BBD chips. This results in an echoczar with increased headroom, more dynamic response, brighter repeats, less hiss and noise, and very smooth self-oscillation.
- The Xvive MN3005 BBD chip is a direct copy of the Panasonic MN3005 BBD chip. (Note: Panasonic discontinued their entire line of BBD's in 1999). I first tested the Xvive MN3005 BBD's in August of 2015. The initial test results were fantastic, and the Xvive MN3005's held their own against the NOS Panasonic MN3005's that I've kept for reference testing. However, it took over a year before Xvive started full scale manufacturing. I shipped the first production **echoczar xv** to a customer in November 2017.
- 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 or fall apart).
- The echoczar xv and the standard echoczar are offered in two finishes, powder-coat matte black 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: > 500K ohms
Output Impedance: < 50K ohms
Vintage Mode delay time: 100ms. to over 1000 ms.
Modern Mode delay time: 50 ms. to over 750 ms.
Current Consumption: 150 ma. @ 18v dc.
Signal to noise: 90 db dry only
60-70 db wet only (depends on settings)
Dimensions: 7 1/2" W x 4 1/4" D x 2 1/4" H
(knobs add 1" to height)
Weight: approximately 2 lbs.

NOISE COMPARISON

A TS-9 set: Drive - Max, Tone - Max, Level - 12:00
Has the same hiss when On, as the echoczar has in the space between long repeats
Note: the TS-9 is not known for having too much hiss, neither is the echoczar.