Echo Fix | TAPE ECHO EF-X2

USER MANUAL

THANK YOU FOR CHOOSING THE TAPE ECHO EF-X2

Congratulations on your purchase of the EF-X2 Tape Echo!

If you have not owned and maintained a tape echo unit before, it is strongly recomended that you review this document prior to use.

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For over a decade, the Echo Fix team have serviced and repaired virtually every model of tape echo unit ever brought to market. When it came time to design and release our own, we've endeavoured to avoid the faults and issues most commonly observed in these other products. We humbly believe ours to be the best-sounding and most reliable tape echo ever produced.

We have designed this manual to assist in getting the best possible result from your own EF-X2, while also avoiding any possible pitfalls. Please note the following and keep them in mind as you get to know your unit:

- The EF-X2 is an electromechanical, analog tape echo device. While every conceivable measure has been taken to limit noise, the echo is produced by a tape loop engaging with multiple read and write heads. In consideration of this, tape hiss and minor noise artefacts will be present, particularly when pushing the preamp and running at slow delay speeds with multiple read heads in use. These technical imperfections are inherent to "the tape echo sound", and completely eliminating them would be impractical and defeat the point of building this unit in the first place
- It would also not be realistic to expect any analog device to operate without the possibility of minor sonic interference. You probably know this already, but we felt it important to restate.
- The reverb (and optional chorus) in the unit is a digital circuit, modelled on our favourite examples of these sounds in earlier tape echo designs. The option of including analog versions of these circuits was seriously considered - and ultimately decided against. We are extremely happy with both our decision and the ensuing results, and trust you will be as well.
- When it comes to maintaining your unit, please, please use only the specified tape. The maintenance and upkeep of tape echoes is our entire business - we know what we're talking about here
- We are excited to offer CV control with the unit. Please DO NOT use voltages outside of the 0-5v range. Doing so will void your warranty and may cause irreparable damage to the unit.

2 UNDERSTANDING THE EF-X2

A. Direct ON/OFF Switch - Switches the direct signal off or on. For traditional echo operation (wet + dry signal), set to “ON”. For wet-only, set to “OFF”.

B. Motor ON/OFF Switch - Allows you to turn the tape drive motor on or off. This is useful for achieving slow down/tape stop effects, or to increase tapelife when using the EF-X2 as a preamp or for reverb effect only.

C. Sound On Sound ON/OFF Switch - Activates an additional playback head, positioned at the unit’s longest possible delay time, in addition to your current “speed” setting.

D. Echo ON/OFF Switch - Bypasses the echo record circuit, allowing you to use the unit as a preamp and reverb effect only. It is also recommended to turn “Echo Volume” (R) all the way down when using the unit in this way.

E. Guitar/Hi-Z Input - a dedicated instrument-level input with a FET preamp circuit. Input gain is controlled by M.

F. Line input - Dedicated mono line-level input. Input gain is controlled by N.

Please note that inputs “E” and “F” can be used simultaneously if required.

G. CV Remote Speed - Allows for control of the unit “speed” function using control voltages, including any TRS expression pedal. Connecting a CV source to this input will disable the “Speed” control (Q).

H. CV Remote Feedback - Allows for control of the unit “feedback” function using control voltages, including any TRS expression pedal. Connecting a CV source to this input will disable the “Feedback” control (U).

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I. Remote Effect Cancel - allows for bypassing of unit functions with an external footswitch. Connect a one-button TS footswitch to bypass the echo only, or a two-button TRS footswitch for bypass of the echo (tip) and reverb (ring).

J. Output - connect to an amplifier, audio interface or additional effects processors.

K. Output Level - sets the overall output level of the unit.

L. Echo Mode - 7-position selection of the unit's "read" heads. Please consult the following table for a guide to these settings:

Mode 1 - Head 1 ("short")
Mode 2 - Head 2 ("medium")
Mode 3 - Head 3 ("long")
Mode 4 - Head 1 + 2 ("short" + "medium")
Mode 5 - Head 2 + 3 ("medium" + "long")
Mode 6 - Head 1 + 3 ("short" + "long")
Mode 7 - Head 1 + 2 + 3 ("short", "medium" and "long")

The Sound On Sound playback head can be engaged over all the above settings. Additionally, the lights behind this dial will illuminate blue when the effect is active and red when the input is overloaded (see V also).

M. Guitar/Hi-Z Volume - sets the input gain for "E".

N. Line Volume - sets the input gain for "F".

O. Reverb Decay - controls the decay time for the reverb circuit or the chorus intencity.

P. Reverb Volume - controls the volume of the reverb or chorus.

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Q. Speed - Adjusts the echo rate, corresponding to the heads selected with control L. Turn counterclockwise for longer echo times, or clockwise for shorter. Please note: This is controlling the physical motion of a motor and echo times will ramp up or down gradually when adjusted, with the pitch of any repeated sound being sped up or slowed down accordingly.

R. Echo Volume - Adjusts the volume of the echoes mixed in to the overall output signal. Turned all the way to maximum, the echo volume is marginally louder than the dry signal.

S. Bass - Cuts or boosts the bass frequencies of the overall output. 12 o'clock is "flat".

T. Treble - Cuts or boosts the treble frequencies of the overall output. 12 o'clock is "flat".

U. Feedback - Adjusts the echo repeat level. Please note: Setting this control past 12 o'clock will likely result in self-oscillation. Additionally, adjusting echo modes with "L" at higher feedback settings will increase the likelihood of self-oscillation.

V. VU Meter - Indicates the input signal volume. Kept the signal within the blue range for clean sounds and push into the red for saturaturation and distortion.

W. On/Off - Supplies power to the unit.

Additionally, the rear panel of the unit features balanced "In" and "Out" via XLR connectors, for use in a studio environment. If you have purchased the "reverb to chorus" upgrade, you can switch this inside the lid of the unit.

3 UPKEEP AND TROUBLE SHOOTING

If you have questions or concerns, you are welcome to contact us at any time, and we'll do whatever we can to help. support@echofix.com

Your EF-X2 has been designed to last - whether in a studio environment or regularly used in a live environment, we've done everything we possibly can to ensure that your unit will be up to the task. On your end, however, there are a few simple measures you can take to ensure reliable and consistent performance.

- Tape echoes rely on the use of tape and parts that are designed for the task. We have been fitting premium parts and tape to other units for years - it hopefully goes without saying, but only use genuine Echo Fix EF-X2 parts for the upkeep of your unit. The fitting of inferior tape or parts will void your warranty, will adversely affect performance, and will likely damage the unit.

- Regularly clean the heads on your unit with isopropyl alcohol and and cotton tips (cotton tips supplied). Please refer to our "how-to" guide on Youtube if you aren't sure how to do this.

- If you are not getting expected results from the unit, please ensure that switches A, B, C and D are positioned as follows: Direct ON, Motor ON, S on S OFF, Echo ON. This may seem very simple, but it's surprisingly easy to miss - even for those of us who've designed the unit. Similarly, make sure that the corresponding input volume control for your desired input (M or N) is set to 12 o'clock, the Echo Volume (R) is turned up, and the Feedback control (U) is set around 11 o'clock.

- Your unit ships with a universal-voltage switch-mode power supply. This is safe to connect to any worldwide mains voltage supply, using the correct IEC-C7 ("Figure 8") cable for your region. If you should need to replace this for any reason, please ensure that you use a high-quality, low-noise 24v 2amp supply with a positive centre. Of course, you can always contact us for a replacement supply as well.