



1. ONE CORD TO INSTRUMENT CONNECTOR

Despite being a common RJ45 connector, this is not a computer network interface. If you own a CRUMAR instrument with a «ONE-CORD TO FX» connector, you can use the proper cable to connect the two units together (cable not included). The instrument will send audio and power to the effect unit. Audio coming from the JACK input will override this audio connection, it's not possible to connect two audio sources at the same time. Same goes for power: plugging an external PSU will override power coming from this connector. To prevent damage to your unit, do not connect two ONE-CORD devices (two effects) together.

2. CONTROL KNOBS

- **ECHO:** this is the volume of the echo signal.
- **RATE:** varies the speed of the capstan motor that drives the tape. It also affects the quality of the sound being recorded onto and played from the tape. Faster the tape, higher the quality.
- **INTENSITY:** it's the amount of output signal coming from the pick-up heads that is fed back into the write head along with the audio coming from the inputs. Higher the level, higher the feedback with delayed sound with long tail.
- **BASS and TREBLE:** equalization of just the echo sound, not affecting the dry signal and the reverb. It is applied at the very last output stage.
- **REVERB:** adjusts the output level of the spring reverb. It's the simulation of the peculiar small Z-shaped spring reverb tank of the original effect.

3. TAP FOOTSWITCH

Tap tempo refers to the possible delay length offered by the 3rd pickup head.

4. PICKUP HEAD SELECTORS

The switches let you activate the three playback heads that read the virtual tape at different positions along the path. Each head produces a different delay. H1 has a short delay time (min 60ms, max 165ms), H2 is medium (min 117ms, max 325ms) and H3 has the longest (min 176ms, max 487ms).

5. BYPASS FOOTSWITCH

Removes audio input from the effect (echo tail will not cut out). Also used to toggle the «clean mode».

6. INPUT LEVEL SELECTION

This selector sets the input gain. Since this effect provides a fully analog dry-signal path (from input to output without any digital conversion), setting the selector to «HIGH» increases the output level of both the «WET» and «DRY» signals. To obtain a 1:1 ratio, the selector must be set to «LOW».

7. EFFECT OUTPUT

This output provides the effect output without the dry input signal.

8. DRY + WET OUTPUT

This output provides both the effect output and the dry input signal mixed together.

ENABLING THE "CLEAN" MODE: The CLEAN mode disables all simulated noises of a tape echo machine (hiss, hum, excessive distortion, wow & flutter, etc.). To enable (blue LEDs) or disable (red LEDs) the CLEAN mode, press and hold the BYPASS footswitch while powering on the unit.

This pedal faithfully recreates a 70s-style effect, preserving all the distinctive flaws that made the original unique. Unlike a modern fully digital echo effect, where the delayed repeats are exact copies of the input signal and can be intentionally altered with filters or other processing, in a true magnetic-tape machine certain results are inherent to the electronic and mechanical operation of the apparatus and cannot be removed. And although some of these aspects could be attributed to the structural limitations of certain units, their impact on the sound is precisely what makes these machines unique, recognizable, desirable, and ultimately musical and pleasing. For example, hiss is an integral part of any sound recorded to and played back from magnetic tape, and despite all efforts in tape quality and in the design of the record/playback circuitry, in a tape-echo machine, where the tape is only a few centimeters long and runs in a continuous loop, its deterioration is naturally rapid and unavoidable, making certain defects more evident than in standard reel-to-reel recorders. Other factors that significantly affect the final sound include the frequency response of both the tape and the circuitry, which can never be perfectly flat. Another aspect, not always obvious but important, is the change in bandwidth as tape speed varies: the faster the tape runs, the shorter the delay time and the clearer the sound, but hiss becomes more noticeable and the output level may increase slightly; conversely, lower speeds produce longer delay times but a darker tone, less noticeable hiss, slightly lower output level, and reduced definition. If a musician seeks the sound of a tape-echo effect, they are seeking the full experience, imperfections included. However, in the virtual environment offered by digital audio and simulation, it is possible to reduce or even eliminate certain undesirable artifacts, at the expense of absolute realism. This effect can easily reach a state of self-oscillation and it can distort the sound in a transistor-fashioned way. When the splice of the tape passes around the capstan, it slips or jumps and sometimes it can cause unintended erasure of part of the echo tail. The tape speed is not truly stable and this creates the «wow & flutter» effect: slight fluctuations in the tape speed introducing micro-variations in the delay time, which translate into corresponding pitch shifts in the repeated sound, creating the lively, organic character typical of tape echoes. One aspect of the original effect is particularly relevant: the erase head cannot completely clear the tape when the recorded signal reaches saturation. A highly saturated sound that is not fully erased may leave a residual trace on the next pass. This secondary echo can occur approximately 15–20 seconds later, depending on the motor speed.



ONE-CORD RJ45 Connector is not Ethernet. Use only compatible ONE-CORD equipment.

This device is a professional musical instrument, it's not a toy. Please keep the instrument and the packaging bag out from the reach of small children. Do not open or modify this device, do not expose to moisture, water, direct sunlight and extreme weather, please use only the provided power supply. Do not connect it to damaged or incompatible devices, with damaged connectors, cables or power supplies. This instrument can only be used in domestic or similar environments. It may cause interferences if not correctly installed. This product complies with the european Directive 2011/65/EU on the restriction of hazardous substances. WEEE notice: the product must not be disposed of with household waste, it must be taken to the appropriate collection point.

MADE IN ITALY BY VMConnection - VIA LUCIO VERO 2, RONCADE (TV)- www.crumar.it



TAPE ECHO SIMULATOR

**FULL ANALOG DRY SIGNAL PATH
TRUE PHYSICAL MODELING EMULATION**