



- BLUE SERIES -

MANUAL



STEREO ECHO

## Controller Description

⑤ ECHO TIME LED:  
Flashes according to the time of the engineering time.

⑥ OUTPUT VOLUME: Adjust the left and right corroboration volume. Independent control is possible.

⑦ PAN: Three types of stereo output mixes can be selected. The top one has the direct signal in mono and the echo in stereo, the middle one has the direct signal in stereo and the echo in stereo, and the bottom one has the direct signal at 9 o'clock and the echo at 3 o'clock, using the pan pot on the mixer as an example.

④ ECHO TIME: Controls the left and right delay times simultaneously so as not to spoil the stereo image.  
Note: The left and right delay times are intentionally slightly different so that the sound does not become dirty when the direct and echo sounds are mixed.

③ FEEDBACK: Sets the number of repeats.  
Note: If set to maximum ( $\infty$ ), echoes will repeat without limit and will not stop.

① PREAMP LEVEL: Used to set the best operating level of the internal circuitry to minimize distortion and noise. Changing this does not change the output signal level.

② HEADROOM LED: Used to check the internal signal level. Adjust the PREAMP LEVEL so that the LED turns red for a moment when the guitar is played hard.

Reference: Humbucking PU "0  
Single PU "+6" or "0"



(8) ON/OFF LED: Off when bypassed, on when effects are on.

If you want to use STEREO ECHO right away, follow the instructions in this chapter. However, we strongly recommend that you read the rest of the manual immediately to fully understand and master the capabilities of this sophisticated signal processor.

1. Make sure that the amplifier or other equipment you are connecting to is turned off before connecting the STEREO ECHO.

Note: Use the recommended AC adapter. Use alkaline batteries, the operating time is approximately 2 hours.

2. Connect the STEREO ECHO's OUT jacks to a stereo amplifier, two channels of a mixer, or two guitar amplifiers, respectively, using cables. If you need mono outputs, connect the LEFT OUT (MONO) output jack to your sound system. In this case, use the OUTPUT controller to adjust the output volume of the echo.

3. Set all controllers all the way to the left and set the PAN switch in the center.

4. Connect your instrument to the LEFT IN (MONO) jack. If you are using a GENERATOR, connect the GENERATOR output to the LEFT IN (MONO) mono input. If you are using a

stereo output device such as a STEREO CHORUS, connect it to both INPUTS.

5. Since the STEREO ECHO has an amplification level of 1, the input signal level is the same as the output level, so set the volume of the sound system to the same level as when the STEREO ECHO is not used.

6. You are now ready to use STEREO ECHO. Adjust the PREAMP LEVEL so that the red LED turns on momentarily when the guitar is played hard.

Reference: Humbucking PU "0".

Single PU "+6" or "0"

Turn up the FEEDBACK controller gradually (clockwise) to find the proper level.



- BLUE SERIES -

## Function Description

### **PREAMP LEVEL (INPUT GAIN)**

Adjusts the internal gain of the STEREO ECHO to the incoming audio signal level. Setting this to the best position minimizes both distortion and noise. The output level does not change at any position.

The CLIP LED indicates the level of the signal passing through the internal circuitry. The red LED indicates that the level is approaching the distortion point and should not be lit too often. If the red LED is often lit, turn down the PREAMP LEVEL by 1 memory. The yellow LED indicates the best signal level with the least noise. If the yellow LED does not light up at all, increase the PREAMP LEVEL by 1 memory. If the yellow LED is not lit at all, the 0 position is best for normal line-level signals. If you are connecting a guitar directly, you may need to set the PREAMP LEVEL to the +6 position. If you are connecting a generator, set the PREAMP LEVEL to the -6 position. In all cases, watch the LEDs and switch to find the best operating point.

### **DELAY**

The FEEDBACK controller determines the number of echo repeats. The lowest setting produces a single, non-repeating echo, with the number of repetitions increasing with clockwise movement.

Feedback begins on the long delay side (full right side), and a light high-frequency filter, attenuated by -6 dB/octave above 3.5 kHz, is inserted into the feedback circuit to produce a natural sounding echo, similar to a concert hall or tape echo.

### **FEEDBACK**

Setting the FEEDBACK controller to  $\infty$  (maximum) allows the feedback to continue indefinitely.

CAUTION: Playing sound with the infinite repeat setting may damage your speakers and ears. In such a case, moving the controller back slightly to the left will produce a delay that repeats many times without the fear that the echo will run out of control.

### **ECHO TIME**

The ECHO TIME controller controls both left and right delay times simultaneously and is designed to maintain the correct stereo image at any setting position. The delay ranges from 75 to 300 milliseconds on the left and from 125 to 500 milliseconds on the right, with a variable filter built into the circuit to provide the best frequency response no matter what delay time is set. Note: The reason the L delay time is slightly longer than half the R delay time is to make room in the mix for the direct signal before the echo returns, making the direct/echo distinction clearer and cleaner sounding.



- BLUE SERIES -

## Function Description

### Echo Time LED

The ECHO TIME LED allows you to visually check the delay time, and the lit period corresponds to the setting of the long side (R side) of the construction echo.

### Output Mix (PAN)

The PAN switch allows you to select one of the three preset stereo output formats. In the upper position, the stereo artificial echo signal is mixed with the mono localized direct signal. In the middle position, both the echo and direct signals are localized in stereo. In the bottom position, the direct signal is localized to 9 o'clock and the echo signal to 3 o'clock in the mixer's pan pot. The ECHO VOLUME controller can be used to independently control the left and right echo volume for the direct signal.

### Mono in and mono out operation

To use STEREO ECHO in mono, use the INPUT jack labeled LEFT IN (MONO) and the OUTPUT labeled LEFT OUT (MONO) on the panel. The PAN switch must be set to the top or middle position. ECHO TIME (125 to 500 milliseconds) during this mono mode operation.

### OUTPUT (ON/OFF switch)

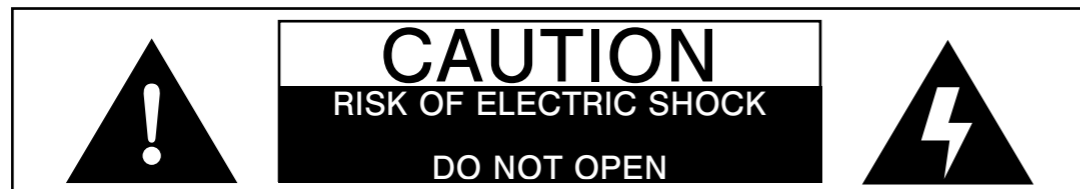
The ON/OFF FOOTSWITCH can be used to bypass the STEREO ECHO effect. The STEREO ECHO must be powered on even when bypassed, since the audio signal still passes through the noise buffer circuit.

### Application

If you set the DAYLAY to a medium length (75/125 to 125/200 milliseconds), the VOLUME to normal volume, and the FEEDBACK to zero, you can simulate a "slapback echo," which is ideal for vocals or deeply de-stressed guitars. The slapback effect can be used to create never-before-heard effects, especially when playing arming techniques or synth bends.

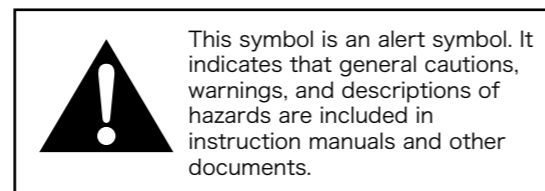
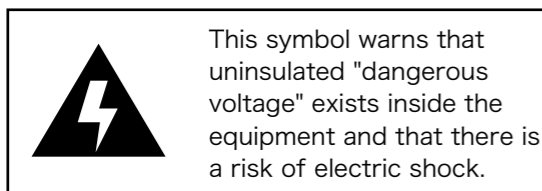
If the mixed sound is too thin, adding a little Kuko can make it sound deeper, and the instruments will sound louder. In general, shorter delays are most suitable for percussive sounds, while longer delays are more suitable for vocals or instrumental parts played with regards.

# Safety Precautions



CAUTION: To prevent electric shock, do not remove the panel or cover.  
Do not attempt to repair or replace the product by yourself as it is very dangerous.

Please ask your dealer or Rancher Corporation for repair.



**Please be sure to read this before using the product.**

The precautions listed here are intended to ensure safe and proper use of the product and to prevent harm or damage to you or others. They are important for your safety and the safety of others and for the maintenance of the equipment, so please read them carefully and observe them.

**Observe the following instructions**

- Do not disassemble or modify this equipment.
- Never attempt to repair or replace parts that are not specified in the instruction manual. Always consult with your dealer or launcher.
- Always plug the AC adapter into a 100 VAC power outlet.
- If there is dust on the plug of the AC adapter, wipe off the dust.
- Failure to do so may result in electric shock or short circuit.
- Install the product near an outlet so that you can easily reach the AC adapter plug.

**If any of the following occurs, immediately turn off the power and unplug the AC adapter from the power outlet:**

- When the AC adapter is damaged
- When a foreign object enters the product
- When the product malfunctions or breaks down \* When repair is required, contact the dealer.

Never do anything other than what is described in the instruction manual for repair or replacement of parts.  
Do not forcibly bend the AC adapter cord or place it near equipment that generates heat. Do not place heavy objects on the AC adapter cord.  
Doing so may damage the cord, resulting in electric shock or fire.

- Do not use the product at high or uncomfortable volume levels for long periods of time.
- Prolonged use at high volume may cause hearing loss. If you experience hearing loss or tinnitus, consult a physician.
- Do not put foreign objects (flammable items, coins, wires, etc.) in this product.
- Do not use or store the product in places where the temperature is extremely high (e.g., in direct sunlight, near heating equipment, on top of heat-generating equipment, etc.).
- Do not use or store the product in a place where there is a lot of vibration.
- Do not use or store the product in dusty places.
- Do not use or store in bathrooms or showers.
- Do not use or store the product in a humid place such as outdoors in the rain or in a place subject to water dripping.
- Do not spill liquids on the product.
- Do not use this product with wet hands.
- Keep batteries out of the reach of children.
- If a battery is swallowed, consult a physician immediately.

**Caution: Disregard of these precautions may result in personal injury or physical damage.**

- Do not use the product in a place where normal ventilation is not obstructed.
- Keep the product well away from radios, televisions, electronic equipment, etc.
- If the product is used in close proximity to a radio, television, or other device, it may be subject to noise and malfunction. Also, the product may make noises on radios, TVs, etc.
- When cleaning the exterior, wipe it lightly with a soft, dry cloth.
- When plugging in or unplugging the AC adapter from the power outlet, be sure to hold the plug.
- When not using the product for a long time, remove the batteries to prevent them from leaking.
- Unplug the AC adapter from the power outlet when not using it for a long time.
- Do not use an AC adapter other than the specified one.
- Do not wire the product together with the power cords of other electrical equipment.
- Connect to an outlet that matches the rated power consumption of the product.
- Do not expose the battery to excessive heat sources (sunlight, fire, etc.).
- Do not apply excessive force to switches, knobs, etc.
- Do not apply excessive force to switches, knobs, etc. as this may cause malfunction.
- Do not use benzene, thinner, compound, or strong flammable polishers to clean the exterior.
- Do not place the product on an unstable surface.
- Do not place the product on an unstable surface, as it may fall and cause injury or damage to the product.
- Do not ride on or place heavy objects on this product.
- Doing so may cause the product to fall or be damaged, resulting in injury or damage to the product.



INPUT      Impedance · · · · · 2 MΩ min.  
              Max. level --- 2.8 Vrms(+9dBv)

DELAY      LEFT Echo · · · · · - 75 to 300 ms  
              RIGHT Echo · · · · · 125 to 500 ms  
FEEDBACK · · · · · variable, 0 to ∞  
Frequency Response · · · · · variable, 15 kHz to 4 kHz

Stereo outgoing speaker

Impedance · · · · · 100 ohms  
Maximum level · · · · · 4.5 Vrms(+13dBv)

S/N          Ratio 90dB or better

Size          W126, D126, H50 (mm)

Current consumption

500mA (max)

Power supply (sold separately)

AC adapter 9V DC center minus

Specifications are subject to change without notice.