



- BLUE SERIES -

MANUAL



SUSTAINOR

General Use

Thank you very much for purchasing SUSTAINOR. In order to use this product for many years to come, please read the instruction manual carefully and use the product in the correct way.

If you want to use SUSTAINOR right now, please follow the instructions on this page. 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 power to the amplifier or other device to be connected is turned off before connecting the SUSTAINOR.

Note: Use the recommended AC adapter.

2. Connect from the SUSTAINOR OUTPUT to a power amplifier, the line input of a mixer, or a guitar amplifier. If you are using a guitar amp with a choice of high or low input, it is recommended to use the low gain input. The tone control on the amplifier or mixer should be set to the center position.

3. First, set SUSTAINOR **GAIN**, **TREBLE BOOST** to 12 o'clock, **SUSTAIN** to "15," **GATE TRIG.** to "0," and **PRESET MODE** and **PHASE** to "OFF."

4. Turn on the power to the connected power amplifier or other sound system. Turn up the volume on the amplifier to set the volume, and adjust the **CHANNEL LEVEL** and **TREBLE BOOST** settings on the SUSTAINOR. Use the **CHAN A/B** tones, **PRESET**, **PHASE**, and other switches according to the sound you want and the ensemble you are working with.

Controller Description

CHANNEL A LEVEL : The output level of CHAN A can be adjusted.

CHANNEL B LEVEL : The output level of CHAN B can be adjusted.

PRESET MODE A/B : CHAN A/B modes can be adjusted more precisely.

PHASE : Reproduces the phase cancellation pattern when a multispeaker cabinet is mic'd.

CHANNEL : Switches between CHAN A (Red) and CHAN B (Green).

MODE SELECT : There are two channels, CHAN A/B, to switch between DIST/EDGE/CLN/CLN2.



OVERDRIVE THRESH : Lights up when DIST/EDGE mode is activated.

ON/OFF SWITCH : Switches effect on/bypass.

GATE TRIG. : The sensitivity of the noise gate can be adjusted. The LED lights up while high frequency components are cut (gated). This noise gate acts only on the high frequency range close to the noise frequency band. This provides a noise reduction effect without sound cutoff.

PREAMP GAIN : Match the output level of the guitar to which it is connected. The best setting is to adjust the CLIP LED so that it lights up when you play a chord strongly in CLN or CLN2 mode.

SUSTAIN : Controls sustain feedback.

COMPRESSOR : Compressor operation is displayed; the LED indicates the compression threshold value.

TREBLE BOOST : Controls the overall treble component. Use when making final corrections to amplifiers, sound systems, etc.

Preamplifier Gain

You can connect any high-impedance device to the input jack, such as a regular guitar pickup, active guitar preamp, electric piano, or effects device. Low-impedance microphones should be connected to the sustainer after passing through a mic preamp or similar device.

PREAMP GAIN It is used for fine gain adjustment in all modes. You can also use the overdrive mode for +8dB of gain boost if necessary. However, too much gain in clean mode may cause unnecessary distortion.

The **PREAMP GAIN** and **CLIP LED**s are there to best set the level of the signal being fed into the sustainer's main compressor. select **CLN** or **CLN2** mode and turn up the **GAIN** until the LED lights up momentarily when you play a chord hard. This will give you maximum compression without too much distortion when using the **CLN** or **CLN2** sound.

It is normal for the **CLIP LED** to light when using **EDGE** or **DIST** mode.

Connecting a device with a high output current level may clip the preamplifier buffer, which can cause distortion; use **CLN** or **CLN2**, and if the **CLIP LED** often still lights up even when **GAIN** is already set to 0, turn down the output of the connected device.

SUSTAIN Adjust the sustain time after making a rough adjustment with **GAIN** at the beginning. It is also used to increase or decrease distortion in all overdrives.

The **SUSTAIN** level is the first compressor controller and is used to adjust the sustain time in all modes and is also used to prevent feedback on a loud stage. This control is also used to increase or decrease distortion overtones when creating distortion sounds with the sustainer.

For normal use, it is recommended to set it to memory 15. At this position, you will get about 15 dB of gain attenuation on the instrument sound, which will give the impression of much longer sustain compared to the raw guitar sound.

Compressor

The **COMPRESSION LED** indicates compressor operation. The "LED" indicates the compression threshold value, with "green" corresponding to approximately 2 dB of gain attenuation. Yellow represents medium compression with 10 dB of gain attenuation, and "red" represents high compression with 20 dB of gain attenuation or more. The amount of gain attenuation is determined by the signal level coming into the compressor and varies with **SUSTAIN**, **PREAMP GAIN**, and the output level of the instrument.

To get a very long sustain, adjust the level to "red". This will apply some distortion even in **CLN/CLN2** mode, but it depends on the output of the guitar.

If feedback occurs on a loud stage, turn down **SUSTAIN** instead of **OUTPUT LEVEL**. In this case, you may want to lower **PREAMP GAIN** a little. **GAIN BOOST** will also increase feedback.

To eliminate compression, set **SUSTAIN** to "0" and lower **GAIN** as needed. When **SUSTAIN** is set to "0", the output volume is automatically adjusted so that no significant volume loss is felt. The output volume is automatically adjusted to prevent any significant volume loss.

Gate

This noise gate is specifically designed to exclude high frequency noise (hiss/buzz, etc.). When there are no high frequency components in the signal, the higher audio frequency components decay at a rate of 6 dB per octave above 1.5 kHz, thus allowing the fundamental and lower frequency harmonics to sustain fully without change.

The Noise Gate not only prevents noise and hiss from rising to the surface at high sustain settings, but also eliminates hiss and buzz from single coil pickups and other effects connected between the guitar and the sustainer.

The effect of this noise gate is different from most, as it reacts slowly when notes are stretched long and quickly when they are short, automatically eliminating the noise so that the last part of the note is not interrupted. The gate's attack time is extremely fast, so note heads are reproduced correctly.

GATE TRIG. controls the threshold level (sensitivity) of the gate, and the gate starts cutting high frequencies at "0". If there is a lot of noise from the guitar or other equipment, the gate will not close when **GATE TRIG.** is set to "0". Also, if the gate is set to maximum, the high frequencies may be cut off while the sound is being played. Therefore, adjust the knob so that the hissing noise starts to disappear before the sound is completely eliminated. While the hissing noise is attenuating, the yellow LED will light up.

Channel

The **MODE SELECT/PHASE** section can be used to create anything from crystal-clear cleans to intense distortion sounds. the **CHAN A/B** controller is a selector for four basic guitar sounds, and the **PRESET MODE A/B** provides variations on these PHASE is the controller that affects the MODE circuit later.

The **MODE** switch (**DIST/EDGE/CLN/CLN2**) is the most important controller and classifies the overtones of the guitar sound into four different types. Each time the mode is changed, the internal EQ, gain, compression, distortion circuit and various parameters change.

DIST Consciously intensifies midrange frequencies to provide powerful overdrive.

EDGE It has an overdriven sound quality with a slightly stronger midrange frequency and sustain.

CLN The overall EQ is similar to DIST and EDGE, but with a clean sound that sustains well.

CLN2 Natural EQ with extended high frequencies, and a compressed, eleco-style clean sound.

Two channels can be used to switch between two different preset sounds via the CHANNEL footswitch; two cannot be used simultaneously.

The **OVERDRIVE THRESH LED** lights when the guitar signal is at a level high enough to produce distortion in **EDGE** or **DIST** mode.

Preset Mode

GAIN BOOST Boosts the signal going into the distortion circuits of **DIST** and **EDGE**. 7dB of gain is added in the case of **DIST** for a super high sustain sound, suitable for high power leads and power chords. 14dB of midrange boost in the case of **EDGE** for another high energy sound. By amplifying the gain in this way, **EDGE** sounds similar to normal **DIST**, making it suitable for power rhythms and the like. If you ever experience feedback on a loud stage, turn off the **GAIN BOOST** or turn down the **SUSTAIN** on the compressor. This switch does not work on **CLN** and **CLN2**.

AUTO CLN You can change from a distorted sound to a clean sound simply by adjusting the guitar's volume knob. Unlike a normal guitar amp, the sound does not become muffled or lose volume when the guitar volume is turned down.

Also, **AUTO CLN** only works in **EDGE** mode. A loud signal (guitar volume fully open) will not change the **EDGE** sound. At small signals, the highs and volume loss that occurs when the guitar volume is turned down are automatically compensated for; the **AUTO CLN** works even when **GAIN BOOST** is turned on, but the clean sound is slightly emphasized in the midrange.

SEMI CLN A slight distortion is added to the normal clean sound. In this mode, the gain setting is changed before entering the light distortion stage.

Also, the **SEMI CLN** sound only works in **CLN** mode.

PHASE It reproduces the ideal phase sound of a microphone recording a cabinet with four speakers, for example. It is particularly effective at line output and can be connected directly to a mixer or DAW.

Output

The **OUTPUT** adjusts the overall EQ and volume after going through all the compressors and distortions.

TREB BOOST This function roughly adjusts the overall frequency response. This is not designed to be a tone controller, but rather a function to adjust the frequency response of the sustainer to suit all output devices, from small guitar amps to PA mixers. In its normal position, "+20" gives a flat sound system. If you feel that the high frequencies are too tight for your amp or speakers, please lower the setting a little.

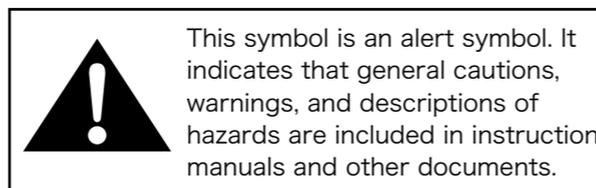
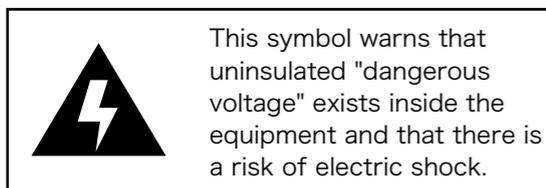
CHANNEL LEVEL This is the last volume controller of the sustainer. It is located behind all distortion and compression circuits and can be considered the master volume. The total adjustable range is 15 dB.

CHANNEL A and **B** can individually adjust the volume of the mode selected by **CHAN A** and **CHAN B**, respectively.

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.



WARNING

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. These precautions are important for your safety and the safety of others and for the maintenance of the equipment.

Observe the following instructions

- Do not disassemble or modify this equipment.
- Never do anything that is not described in the instruction manual when repairing or replacing parts. Always consult your dealer or Rancher Co.
- Always plug the AC adapter into a 100 VAC power outlet.
- If there is dust on the AC adapter plug, wipe off the dust.

Failure to do so may cause electric shock or short circuit.

- The product should be placed near an electrical outlet so that the user can easily reach the AC adapter plug.

In the following cases, immediately turn off the power and unplug the AC adapter from the outlet.

- When the AC adapter is damaged
- When a foreign object enters the interior
- When there is an abnormality or malfunction in the product
- ※When repair is required, ask the dealer.

- Do not forcibly bend the AC adapter cord or place it near equipment that generates heat. Also, do not place heavy objects on the AC adapter cord.

The cord may be damaged, resulting in electric shock or fire.

- Do not use it for long periods of time at high or uncomfortable volume levels.

Prolonged use at high volume may cause hearing loss. If you experience hearing loss or tinnitus, consult your hearing care professional.

- Do not put foreign objects (flammable items, coins, wires, etc.) in this product.
- Places with extremely high temperatures (direct sunlight, near heating equipment, on top of heat-generating equipment, etc.)
- Do not use or store in a place subject to high vibration.
- Do not use or store in dusty places.
- Do not use or store in bathrooms or showers.
- Do not use or store in damp or wet places, such as outdoors during rainy weather.
- Do not spill liquids on the product.
- Do not use this product with wet hands.
- Keep batteries out of reach of infants.

If a battery is swallowed, consult a physician immediately.

Attention Disregard of these precautions may result in personal injury or physical damage.

- Install and use where normal ventilation is not obstructed.
 - Use well away from radios, televisions, electronic devices, etc.
- If the product is used in close proximity to a radio, TV, etc., it may malfunction due to noise. Also, the product may make noise on radios, televisions, etc.
- To clean the exterior, wipe lightly with a soft, dry cloth.
 - Always hold the plug when unplugging or plugging in the AC adapter from the power outlet.
 - When not in use for an extended period of time, remove the batteries to prevent them from leaking.
 - Unplug the AC adapter from the outlet when not in use for an extended period of time.
 - Use only the specified AC adapter.
 - Do not wire the power cords of other electrical equipment 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 batteries to excessive heat sources (sunlight, fire, etc.).
- Do not apply more force than necessary to switches, knobs, etc.

This may cause malfunction.

- Do not use benzene, thinner-based liquids, compound quality, or strong flammable polishers to clean the exterior.
- Do not place it in an unstable place.

The product may fall and cause injury to the customer or damage to the product.

- Do not climb on the product or place heavy objects on it.

This product may be dropped or damaged, resulting in injury to the customer or damage to the product.

INPUT	Impedance · · · · · 2MΩ 以上 Maximum Level · · · · · 3.3Vrms(+10dBv)
Compressor	Adjustment Range · · · · · 21dB
Gate	High cut frequency response · · · -3dB at 1.5kHz, -20dB at 15kHz THRESH Range · · · · · 20dB continuous
OUTPUT	Impedance · · · · · 1kΩ CLN Maximum Level · · · · · 1.5Vrms(+6dBV) DIST/EDGE Maximum Level · · · 1Vrms(0dBV) High frequency Boost Range · · · 20dB at 4kHz continuous TREB. BOOST Range · · · · · 20dB continuous
Size	W134, D126, H71 (mm) Including protrusions
Battery	9V Alkaline Battery×1
AC Adapter	9V DC Center minus 1A or more Due to the specifications, the continuous usage time with battery is about 10 minutes. Use of a dedicated AC adapter is recommended.

Specifications are subject to change without notice.

Distributed by Rancher Co. Ltd.
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