



R1 HIGH-FIDELITY STEREO REVERB INSTRUCTION MANUAL



WALRUS AUDIO

MAKO SERIES

The R1 is an extremely powerful and versatile multi-function reverb with six customized, studio-quality programs - Spring, Hall, Plate, BFR, RFRCT (Refract), and Air. Every program has the option to be tuned and tweaked from short and subtle room sounds to massive washes of experimental euphoria. The R1 is your architect for new songs and textures to create and inspire.



*The use of an isolated power supply is recommended for powering all Walrus Audio Pedals.
Daisy chain power supplies are not recommended.

REVERB PROGRAMS

Spring - The Spring program emulates an excited spring reverb commonly found in tube amps with loads of bouncy drip. Easily go from subtle to full-on surf rock and beyond. Experiment with the decay knob to get more than normal amounts of reverb not found in traditional amp spring reverb tanks.

X knob controls the size of the Spring. From smaller "shorter spring" sounds at lower settings to an overtly slap-back as you increase the X control.

Hall - The Hall program provides the acoustics of large live sound spaces like concert halls to arenas. Longer decays and higher X knob settings result in a massive wash of ambiance. Shorter decay and lower X settings allow for a more intimate reverb expression.

X knob controls the size of the room; smaller at lower settings to larger room sizes as you increase X.

Plate - The Plate program emulates a smooth analog plate reverb with nice even diffusion inspired by famous plates like the EMT 140.

X knob adds in gentle warm grit to the front end of the program simulating driving a hot signal into the plate.

BFR - BFR is a no holds barred, big, f_____, reverb. This is more than a giant arena reverb. It's a hall-esque reverb with rich and lush decay in a vast cavern filled with choirs of angels.

X knob controls the amount of diffusion applied to the delay network. At lower settings, the delay taps are more apparent. At higher settings, they are smoothed out to create a soft bed of reverb.

Rfrct (Refract) - The RFRCT program allows for lovely, charming, and glitch-like textures hovering over a largely diffused reverb. The Rate controls on RFRCT change how often the glitch effects occur while Depth controls the maximum temporal range for the glitching granular buffers. The Pre-Delay knob controls the size of the grain delays.

X knob X knob controls the amount of diffusion applied to the reverb.

Air - The Air program offers a larger diffused reverb with a subtle shimmer but has a more "crisp" clarity to its decay. Explore slow-building sounds that don't get in the way of your playing. Air complements keys and synths as well.

X knob controls the amount of a positive reverb Octaving. At zero, the effect will be off. Turning clockwise will increase the volume of the +12semitone effect

CONTROLS

Decay - The Decay knob sets the length of the reverb decay. Set this control lower for short natural sounding decays or higher for longer more ethereal sounding reverbs.

Swell - The Swell knob is a Bi-Polar control. Below noon engages a volume envelope applied to your Wet and Dry guitar signal creating a gentle volume swell. This helps create unique moments of cinematic ambiance. Lowering the control to 0 increase how long it takes to fade in the guitar and reverb signal after you play. Above noon introduces a Ducking effect that will reduce the output of the Wet signal when proportional to signal present in the Dry path.

Mix - The Mix knob sets the ratio of dry to wet signal. At minimum, no reverb is heard. At maximum, no dry signal is heard. Equal parts dry and reverb can be found around the 3 o'clock position.

As you dial in different sounds using the Tweak and Tune controls, you will find the Mix knob helpful for maintaining a healthy reverb level. Simply turn the knob to dial in the desired level of the effected signal.

Tweak - The Tweak knob and switch offer creative control over three different parameters that allow you to shape each reverb program to taste. Simply move the toggle below the knob to select the parameter you want to control, then use the Tweak knob to dial in the right amount of mod Rate, mod Depth, or Pre-delay.

- **Rate:** Set the switch to the Rate position and use the Tweak knob to adjust the speed of the modulation applied within the reverb.
- **Depth:** Set the switch to the Depth position and use the Tweak knob to adjust the amount of the modulation applied within the reverb.
- **Pre-Delay:** Set the switch to the Pre-Delay position and use the Tweak knob to adjust the amount of pre-delay applied to your guitar signal before it enters the reverb. Pre-delay is useful for shaping how the reverb responds to your playing. At low (short) pre-delay settings, the reverb is heard almost immediately after you play a note. As you increase the pre-delay, the reverb is delayed a small amount to provide some separation between the notes you are playing and the reverb signal.

CONTROLS

Prog (Program) - The Prog knob selects the desired R1 delay program. See the Program section for more details about each reverb program.

Tune - The Tune knob and switch offer creative control over three additional parameters that allow further shaping of each reverb program. Simply move the toggle below the knob to select the parameter you want to control, then use the Tune knob to dial in the right amount of Lo, High, or X.

- **Lo:** Set the switch to the Lo position and use the Tune knob to adjust the amount of low frequencies in the reverb. Turn up for a thicker reverb and down for a thinner sound.
- **High:** Set the switch to the High position and use the Tune knob to adjust the amount of high frequencies in the reverb. Turn up for a brighter sound and down for a darker sound.
- **X:** The X parameter controls a different effect depending on which program you are using. To edit the X parameter, set the switch to the X position and use the Tune knob to adjust. See the program overview section to learn what the x knob does

Stereo Width: The R1 has a stereo width control built in to all the algorithms. This control is useful for dialing in how wide or narrow of a stereo image you desire and is saved per preset.

To access this control, set the Tune switch to the X position. Hold down the bypass switch. Once the bypass knob starts flashing, turn the X knob to change the width of the stereo image – from very narrow at minimum, to stereo at noon, to enhanced stereo above noon.

A | B | C Bank Switch - The R1 offers three banks for storing presets. Each bank holds three presets for a total of nine that the user can access without using MIDI. The Bank switch selects which bank of presets the pedal will access. Bank A is presets 0-2, Bank B is 3-5, and Bank C is 6-8. The presets in each bank correspond to the Red, Green, and Blue preset LED. The first preset in each bank is Red, the second is Green and the third is Blue.

Bypass Switch - Used to turn the pedal on and off. Click to turn the pedal on and click again to turn the pedal off.

Bypass LED - Indicates if the pedal is on or off by illuminating solid when on, and off when the pedal is off.

Sus/Latch Switch - The Sus/Latch switch allows you to momentarily sustain the current reverb sound by pressing and holding on the switch. You can also latch the sound by clicking this switch on and click again to unlatch. Due to the powerful architecture of the R1, anytime you sustain a reverb, your guitar signal is rerouted through an identical reverb so anything you play over the sustained sound will have the same reverb applied to it that was sustained.

Sus/Latch LED - The Preset LED lights up the color of the selected preset – Red, Green, or Blue. When a knob is turned, this LED turns purple to indicate the preset has been modified. When that knob crosses its saved position, the LED changes back to the color of the currently selected preset to let you know its last saved position. This is helpful when you want to tweak a parameter on a preset but cannot remember where a knob was last saved.

Audio Input and Output - The Mako R1 offers multiple input and output configurations.

- o Mono In / Mono Out - Use the mono jacks for mono in - mono out.
- o Mono In / Dual Mono Out - Only available when using DSP bypass mode.
- o Stereo In / Stereo Out
- o Stereo In / Mono Out - Only available when using DSP bypass mode.

PRESETS

The pedal includes 128 total presets slots. The first 9 presets are accessible from the pedal using the Bank switch and both stomp switches. All 128 presets are accessible via MIDI Program Change messages which are outlined in the MIDI section.

Switching presets on the R1 is seamless. When you change to a new preset, the previous reverb is allowed to decay naturally over the sound of the newly loaded preset. Note that scrolling through multiple presets too quickly can cause the previous reverb decay to cut off to load the new preset.

o **To recall a preset:**

1. First, select the bank of presets you want to access with the A|B|C switch. The pedal will automatically recall the red preset in that bank.
2. Next, scroll through the presets in that bank by pressing both stomp switches at the same time. Each press of both stomp switches will load the next preset until you get back to red and the pattern repeats.

o **To save a preset:**

1. First, recall the preset in which you would like to build a new sound.
2. Using the knobs and switches, dial in the desired reverb sound. The preset LED will turn purple indicating the preset has been modified.
3. To save, hold down the Bypass and Tap switches until the LEDs stop blinking. The preset is now saved.

GLOBAL PREFERENCES

Bypass Mode - The R1 offers three bypass modes. True Bypass, DSP+True Bypass, and DSP Bypass. In True Bypass mode, the R1 uses relays to bypass the pedal. In DSP+True Bypass mode, the R1 uses relays to bypass the pedal after the reverb decay dies out. In DSP Bypass mode, the R1 locks the relays on and uses the DSP to bypass the pedal. The R1 ships in True Bypass mode by default. Use the following procedure to change the bypass mode:

1. Hold down the Bypass switch while applying power until the preset LED lights up a solid color. The Bypass LED will also flash until a selection is confirmed.
2. Press the Bypass switch to scroll to the color corresponding to the desired bypass mode.
 - a. Red: True Bypass
 - b. Green: DSP+True Bypass
 - c. Blue: DSP Bypass
3. Press the Bypass and SUS/LATCH switches simultaneously to confirm selection.

Factory Reset - To reset the pedal back to factory settings, hold both stomp switches while applying power to the pedal for longer than 10 seconds. After 10 or more seconds, release both stomp switches and the pedal will be reset to factory default settings.



MIDI

The R1 is able to be controlled via standard MIDI messages. Simply connect your MIDI controller to the R1 MIDI "IN". Downstream MIDI devices can be connected to the MIDI "THRU" which simply lets all incoming MIDI messages pass through to your other devices. The R1 ships with the MIDI channel set to 1 by default.

- o **To assign the MIDI device channel:**

1. Hold down both stomp switches at power up then release once the LEDs begin flashing white.
2. Now send a MIDI Program Change message on the desired MIDI channel for the pedal.
3. The LEDs will flash green momentarily, and the pedal will save that MIDI channel and only respond to messages on that channel until the user changes it again.

- o **MIDI In** - Connect upstream MIDI devices or your MIDI controller to the R1 MIDI "IN".
- o **MIDI Thru** - Connect downstream MIDI devices to the R1 MIDI "THRU".
- o **MIDI PC** - Presets on the R1 are able to be recalled via MIDI program change messages. Simply send a program change message corresponding the desired preset to be recalled on the R1 MIDI channel. See the table on next page for a list of R1 presets and how they map to program change messages.

MIDI

PRESET

Bank A (Red)	0
Bank A (Green)	1
Bank A (Blue)	2
Bank B (Red)	3
Bank B (Green)	4
Bank B (Blue)	5
Bank C (Red)	6
Bank C (Green)	7
Bank C (Blue)	8
Accessible via MIDI	0-127

MIDI PROGRAM CHANGE (PC)

o **MIDI CC** – Most parameters on the R1 can be controlled via MIDI CC messages. The list below shows all applicable MIDI CC numbers and their associated parameters and control values.

PARAMETER

MIDI CC

MIDI CC Value

Decay	3	0-127
Swell	14	0-127
Mix	15	0-127
Rate	20	0-127
Depth	21	0-127
Pre Delay	22	0-127
Prog	23	Spring: 1, Hall: 2, Plate: 3, BFR: 4, RFRCT: 5, Air: 6
Lo	24	0-127
High	25	0-127
X	26	0-127
Tweak Switch	27	Rate: 0-42, Depth: 43-85, Pre Delay: 86-127
A B C Switch (Bank)	28	A: 0-42, B: 43-85, C: 86-127
Tune Switch	29	Left: 0-42, Middle: 43-85, Right: 86-127
Bypass Switch	30	Bypass=0, Engaged=127
Sus/Latch	31	Bypass=0, Engaged=127

UPDATES

We occasionally may have new features and updates for the R1.

These will be made available through:

walrusaudio.io

Scan the code below to be the first to know when any firmware updates are available.





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Got questions?

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All our pedals come with a limited lifetime warranty.

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