

# RC-1324-PDL-V4



## 13 TO 24 PIN BUS CONVERTER OWNER'S MANUAL

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### DESCRIPTION

The RC-1324-PDL is a unique processor designed to convert modern, 13-pin Roland guitar synthesizer signals to the 24-pin format used by vintage Roland and Roland-compatible guitar synthesizers.

Because the vintage Roland guitars featured more controls than modern systems, the RC-1324-PDL's control panel recreates the essential controls for a vintage system.

To replace the LFO touch pads on a vintage guitar controller, the RC-1324-PDL has a front panel foot switch and a CV pedal input on the back for hands free control over vibrato/LFO depth.

Version 4 includes more input gain and a smoother, richer hex fuzz tone.

The RC-1324-PDL incorporates circuitry and concepts designed by Mark Smart.

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### IMPORTANT NOTES

- When connecting a guitar and synthesizer to the RC-1324-PDL, be sure that power to the synthesizer(s) is switched off.
- The 13-pin connector used with the RC-1324-PDL is a locking style connector, and therefore cables cannot be disconnected unless the locking pin is released.
- Using the 1/4" output on the guitar while at the same time using the 13-pin output may create a ground loop or signal hum.

# FRONT PANEL

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- 1. FILTER Preset Controls:** Generally, these knobs control the filter cutoff on the Roland GR-100, GR-300, and GR-700. With the Roland GM-70 and Ibanez MC-1, this knob can be assigned various functions. The foot switch located below the two preset knobs selects between preset 1 and preset 2. The red and green LEDs indicate which preset is active.
- 2. RESONANCE Control:** This knob controls the filter resonance, or emphasis, on the Roland GR-100 and GR-300. On the Roland GR-700, this is the EDIT knob.
- 3. MODE Switch:** This switch reproduces the function of the **MODE Switch**. Like the **MODE Switch** on a vintage guitar, **Mode I** is selected when the switch is in the up position. **Mode II** is selected when the switch is in the middle position, and **Mode III** is selected when the switch is in the down position.
- 4. LFO Control:** This knob controls the LFO or vibrato depth on the Roland GR-100, GR-300, and GR-700. With the Roland GM-70 and Ibanez MC-1, this knob can be assigned various functions, though the default value is modulation depth. With a CV pedal plugged into the **LFO Pedal** jack on the back of the RC-1324-PDL, the **LFO Control** works together with the pedal. The front panel **LFO Control** always controls the maximum amount of LFO depth. For example, with the front panel control at 50%, or in the 12 o'clock position, the maximum LFO depth will be 50%. Plugging a Yamaha/Korg pedal into the rear LFO jack and pressing the pedal all the way to the floor will still only result in a maximum LFO depth of 50%. The foot switch below the LFO knob is used to turn the LFO on and off, and the yellow LED above the switch will glow when the LFO is on.
- 5. MIX Control:** This knob controls the balance between the Synthesizer output and the Guitar output. By turning the knob in a clockwise direction, the output will blend from 100% guitar to 100% synthesizer. The 12 o'clock position will result in an approximate 50/50 blend of guitar and synthesizer. The knob in a fully clockwise position results in a synthesizer only output. To use this feature, it is important to turn the guitar volume knob to maximum. If you are using an external GK-1, GK-2 or GK-3 equipped guitar, be sure to have the guitar plugged into the GK controller module, and turn the regular guitar volume to maximum. If no guitar is plugged into the GK module, or if the volume is turned down on the guitar, the **Balance Knob** will simply work like a regular volume knob. You can also use an external Yamaha/Korg pedal to control the synthesizer/guitar blend. Plugging a pedal into the rear **Balance** jack will over ride the front panel Mix control. With the pedal back, in the "heel" position, the mix is all guitar. As you move the pedal forward, there will be more synthesizer sound. In the "toe" position will result is synthesizer only output. ***IF YOUR GUITAR HAS A GTR/GTR+SYNTH/SYNTH SWITCH, SET THE POSITION TO "GTR+SYNTH"***

#### 6. Hex Fuzz Level and Filter Cut:

Version 4 includes a hex fuzz circuit based on the G-303/808 circuit. The hex fuzz level adjusts the hex fuzz output, and the foot switch below the hex fuzz controls engages a low-pass filter, designed to reduce the high frequencies and make the individual hex fuzz output more pleasing. Version 4 also has a multifunction, tip-ring-sleeve hex fuzz rear panel output. There are three possible ways to use this out. If you plug in a basic, tip-sleeve cable, the hex fuzz sound will be removed from the synthesizer output, and will only be available via the output jack. If you use a TRS tip-ring-sleeve cable, you can use insert effects with the hex fuzz sound. The **tip** is the **output-send**, and the **ring** as the **input-return**, and specific effects or processing can be applied to the hex fuzz sound only, and the hex fuzz sound is added back to the GR-300 input for further processing by the -24 dB filtering section of the GR-300. The top panel **fuzz** knob controls the amount of send from the hex fuzz circuit to the external device. Finally, you can plug in a Roland EV-5 type CV pedal to control the level of the hex fuzz sound mixed in with the GR-300 VCO synthesizer section. The creates new, musically useful tones that are not available with a GR-300 on its own. Like the LFO depth pedal input, the external pedal works in conjunction with the top panel hex fuzz control. So if the top panel fuzz control is set to 50%, even pressing the external pedal all the way down will still result in a maximum output of 50%.

#### 7. Top Panel String Level Adjustment

**Controls:** Use these knobs to adjust the output level of each string. Start with the knobs in the 25%, or 3-o'clock position, and play each string and adjust for sensitivity. Each Roland synthesizer responds differently to string level. Some synthesizers will have trouble tracking a string with the output turned up too high.

8. **Bass or Guitar Input Switch:** The final addition to Version 4 is a Bass or Guitar input switch located on the rear panel, above the 13-pin input. The has been designed and tested with the Roland **GK-3B** bass pickup and **GR-33B** Bass Synthesizer. When using the **GK-3B** bass pickup put the switch in the **bass** input position. This switch is designed to work with a GK-3B pickup that has been mounted in the center of a bass, with the pickup guide marked centered between the **A** and **D** strings. Even if you are using a five or six string bass, the **GR-33B** only works with four strings, **E, A, D** and **G**.

# REAR PANEL

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1. **24-Pin Output:** This is the guitar synthesizer output. Connect a Roland C-24D or similar 24-pin cable from this connector to a vintage Roland, or Roland compatible guitar synthesizer.
  2. **13-Pin Input:** Input for Modern, GK or RMC equipped guitar.
  3. **LFO Pedal:** This is the input for a Roland EV-5 style CV pedal to control LFO depth. A Roland or EV-5 style pedal will not work. The maximum depth of the LFO pedal is set by the Front Panel **LFO Knob**. To get maximum control from the **LFO Pedal**, set the front panel **LFO Knob** to 100% (fully clockwise).
  4. **Balance Pedal:** This is the input for a Roland EV-5 style CV pedal to control **Mix/Blend** of guitar and synthesizer. Plugging a pedal in over rides the top panel control. See above notes.
  5. **Hex Fuzz:** This jack provides a direct output of the hex fuzz circuit. The top panel hex fuzz level adjust controls the output level as well. See above notes.
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## ADDITIONAL NOTES

The RC-1324-PDL Bus Converter is powered by the connected 24-pin synthesizer. The unit will not work unless the attached guitar synthesizer is turned on.

The RC-1324-PDL uses special circuitry to adapt the volume knob on the 13-pin guitar to control the vintage, 24-pin synthesizer. The RC-1324-PDL has been tested with the Roland US-20 Unit Selector. In this case the volume knob on the guitar will control the volume of both the vintage, 24-pin synthesizer and the modern, 13-pin synthesizer.

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## SPECIFICATIONS

### RC-1324-PDL-V4 Bus Converter:

- **Connectors:** One 24-pin output connector, one 13-pin input connector, and one 1/4" input for LFO pedal.
- **Dimensions:** 8 (W) x 11(D) x 4.25(H) inches
- **Weight:** 2 lbs 15 oz

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