

PIEZO INSTRUMENTS

When plugging a passive piezo instrument (no active preamp) directly to the device input, you can benefit from the full potential of the High Impedance Preamp featured in this unit. This preamp is specifically designed to handle demanding nature of piezoelectric pickups commonly used in string instruments:

- Set the impedance switch located next to the audio INPUT to one of the Hi-Z positions matching the Capacitance of your piezo pickup: **HI-C** (high capacitance) / **LO-C** (low capacitance)

WARNING: Only use low capacitance instrument cable when enabling HI-Z preamp featured in this device!impulse9.pro

*In case your instrument requires extreme input level headroom while preserving high input impedance you may consider pairing your instrument with active preamp dedicated to piezo pickups - **IMPEDANCE ROD** that serves as a pre-buffer. It features the same high impedance preamp with further enhanced input headroom (+20dBV) and adjustable output level. For more info please check impulse9.pro*

SPECIFICATION

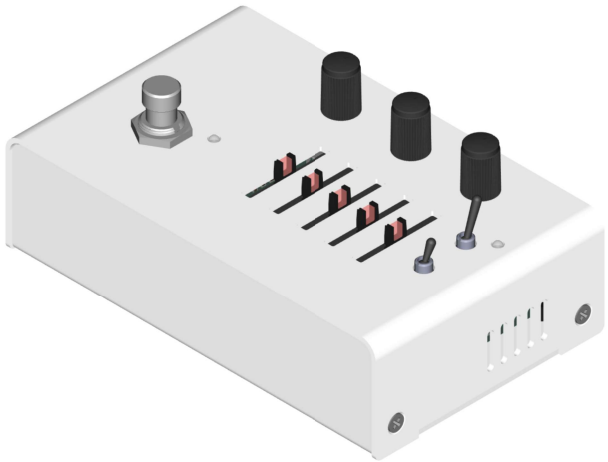
Power Input	Voltage	9V DC
	Current	600 mA
Input Impedance	HI-Z	1 MΩ
	LINE	10 kΩ
Output Impedance		22 kΩ
Max Input Level		+7 dBV
Max Output Level		+5 dBV

Bypass

True	True Hardwire – signal bypasses all active electronics.	
Digital	Internal preamp's passthrough + zero latency $\Delta\Sigma$ (internal hardware passthrough) Note: In Digital Bypass mode only the DSP unit is being bypassed, thus ensuring internal preamps keep the input and output impedances of the device stable.	

$\Delta\Sigma$	Sampling frequency	176 400 Hz
	Sampling resolution	24 bit
	I/O latency	<2 ms

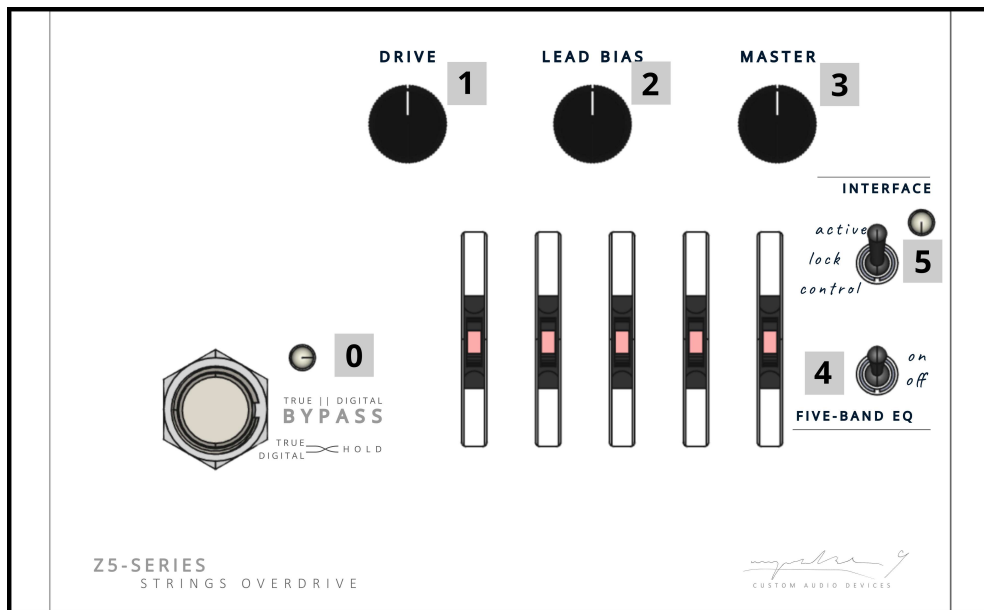
USER MANUAL



Z5-SERIES

STRINGS OVERDRIVE





0 – BYPASS – Toggles the device operation between **active** (DSP) and **passive** (BYPASS).
HOLD 10 sec to toggle **Bypass** mode (*true bypass / digital bypass*).

1 – DRIVE – Adjusts **Presaturation level** to be applied on the **Input** signal.
 Dynamic range adjustment: from -inf to +48dB

2 – LEAD BIAS – Adjusts the **offset of the input-signal band** (PRE) relative to the **primary** overdrive stage.

It's **neutral** (*tonally transparent*) on the **center** (*detent*) position.

Note: Fundamentally alters the overdrive's interaction with your instrument, affecting its tonal character, dynamic response and playability:

Below center: the overdrive acquires a more **vocal, lead-oriented** quality.

Above center: the overdrive becomes **harder, faster and modern/contemporary** — particularly useful in percussive contexts to tame the behavior of the *instruments* resonant body.

3 – MASTER – Adjusts the **Output Signal Level**.
 It's **neutral** (-0dB) on the **max** position.

4 – FIVE-BAND EQ – Adjusts **Voicing** to be applied on the **Output** signal.
 Each band modulation is **neutral** (*tonally transparent*) on the **center** (*detent*) position.
on - **Applies** the FIVE-BAND EQ settings on the **Output** signal.
off - **Bypasses** the FIVE-BAND EQ.

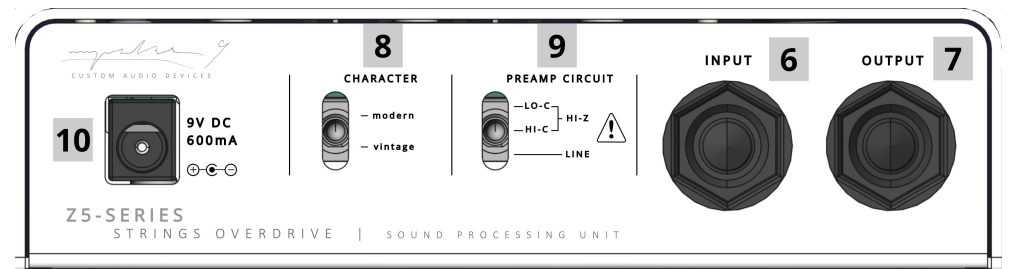
5 – INTERFACE – Interface locking system: *Quickly lock/unlock the potentiometers (1,2,3,4)*

- active** - All knobs are **active** and work **live** - what you turn is what you hear.
- lock** - Knobs are **inactive** (*locked*):
 Each knob value is read from memory, physical knobs are ignored
 (*unless a knob had been unlocked in **Edit mode** -! see control 1).*
- control** - **TAPPING** toggles the **INTERFACE lock** between **Locked mode** (LED red) and **Edit mode** (LED yellow).
 (*momentary **HOLDING** overwrites **active** (unlocked) knobs to memory.*)

Note: In **Edit mode** you can **unlock** any knob by simply moving/sliding it to its locked value. Unlocked knobs become **active**; others stay at the **locked value**.

Note: If you **SNAP** (quick "jump") directly from **active** position to **control** position and **HOLD**, all current knob positions are saved to memory, replacing previous **locked values**.

CUSTOM AUDIO DEVICES



6 – INPUT – Jack 6.3mm Mono **Mono Audio Signal Input**.

7 – OUTPUT – Jack 6.3mm Mono **Mono Audio Signal Output**.

8 – CHARACTER – Offers two different characters:
modern – Fast, scoped and focused with rich harmonics.
vintage – Dark and soft, with uncapped lowend from the instrument.

9 – PREAMP CIRCUIT – Determines the Input Preamp:
HI-Z | HI-C – High Impedance, **High Capacitance** input preamp for **high** capacitance passive **PIEZO INSTRUMENT**
HI-Z | LO-C – High Impedance, **Low Capacitance** input preamp for **low** capacitance passive **PIEZO INSTRUMENT**
LINE – **Low Impedance** LINE input preamp for **active** instruments electronics and other pedals.

11 – 9V DC – Power Supply input
 Center negative, 9VDC, ≥600mA, High quality **linear power supply** required (not included).

GENERAL SETUP

Run a cable (up to 3m) from your instrument to the INPUT jack located on the back of the device. Ensure the correct input impedance: set the impedance switch located next to the audio input to **LINE** position. **If using a piezo pickup check the *PIEZO INSTRUMENTS* section.**

WARNING: DO NOT plug cable longer than 3m to the INPUT!

Run Another cable from the OUTPUT of the device to the amplifier or monitoring/PA system (it's a good practice to pair with a passive transformer DI-BOX and run XLR cable), ensuring proper grounding of the installation.

Plug the device to a high quality, low noise **linear power supply** (not included) **only!** – the device is ready to operate within **2 seconds**.

WARNING: DO NOT use switching power supply with audio equipment!

NOTE: In case the device is to drive a **guitar amplifier** you may want to disable the **Impulse Response** algorithm (*on by default*) to drive **guitar speakers** with proper bandwidth. To do this **snap** down the **INTERFACE** switch (*control position*) while **holding** main **BYPASS** switch. *The main LED flashes 3 times and changes its color to blue to indicate that IR is disabled.* Repeat the process to re-enable the **IR** algorithm.

To engage the device, use the BYPASS footswitch on the face of the unit. The various controls on the device allow you to modulate, shape, and adjust the effect in search of the desired sound.

Note: The interface control knobs remain permanently operative when the **INTERFACE locking switch** is set to **active** position **only**.

Note: Before disconnecting power source ALWAYS make sure the device is in BYPASS mode

CUSTOM AUDIO DEVICES