

XPRESSION FX

Expression pedal converter

User guide



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Safety and care

- Avoid excessive force when removing cover, changing switch settings and/or connect pedals and effects
- Avoid contact with, and environments, known to cause adverse effects with small moving parts and metals, such as liquids, dust, sand, high humidity, high temperature and vibrations.

If in doubt contact Oz inventions at contact@ozinventions.com

Introduction

Xpression converter, from Oz Inventions, converts between expression pedal polarities. It is designed for use with guitar effect units and keyboards that have an expression pedal socket, sometimes called a control socket, or foot controller socket.

Functions

- The device converts between TS, TRS and RTS polarities

Common manufacturer polarities and resistances

Manufacturer	Polarity	Resistance (K ohm)
Behringer®	RTS	50
Boss®	TRS	10
Digitech®	RTS	10
EHX®	TRS	10
Line 6®	TS	10
Strymon®	TRS	25
TC Helicon®	TRS	10
Zoom®	RTS	20

Figure 1 – Common manufacturer polarities and resistances for reference

See www.expressionpedals.com for a full listing of manufacturer's effects and expression pedals specifications

Connection and opening

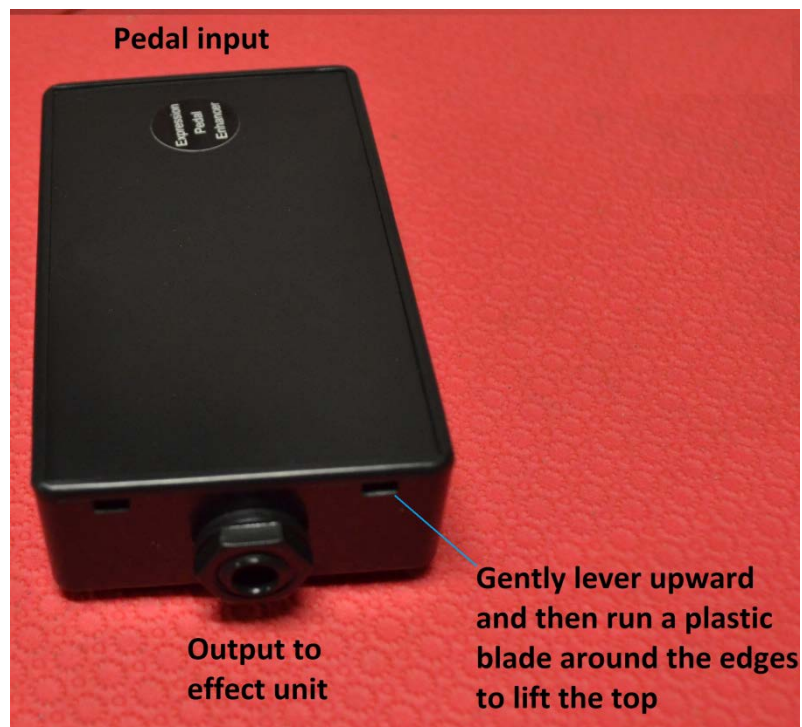


Figure 2 Connection and opening



Figure 3 – Insert converter inline between pedal and effect

Configuration

Switch A	Switch B	
		TS input -> RTS output Set switch A. Then turn ON switch B5, then 4, then 3, then 2, as required to adjust modulation depth versus linearity. E.g 5 ON only, is the best setting for Zoom effects. 2 ON only, is the best setting for Behringer effects.
		TS input -> TRS output Set switch A. Then turn ON switch B5, then 4, then 3, then 2, as required to adjust modulation depth versus linearity. E.g 5, 4, 3 & 2 ON is the best setting for fully modulating Boss and Strymon effects. However only using 4, 3 & 2 has better linearity but less modulation. Only 3 & 2 has even better linearity.
		TRS input -> TS output
		RTS input -> TS output
		TRS input -> RTS output
		RTS input -> TRS output
		Straight thru

What type of cable to use

A mono (TS) or stereo (TRS/ RTS) cable/connector can be used on any TS input or output connection.

A stereo (TRS/RTS) cable/connector is the only suitable option for a TRS/RTS input or output connection.



Figure 4 – Left – TRS/RTS stereo plug and cable;



Right – TS mono plug and cable

Troubleshooting

Problem	Resolution
Switches do not do what they are supposed to do	Ensure expression pedal connects to input and effect unit connects to output
Cannot achieve full modulation	Adjust switches B2,3, 4 & 5 to find the best linearity versus modulation depth
Cannot achieve full modulation	<p>The device is designed to convert between polarities but not between resistances. A 10kohm expression pedal will fully modulate the large majority of effects. However, there are a few effect pedals that can only be fully modulated using a higher resistance pedal. Behringer™ and Zoom™ are such effects.</p> <p>Line 6 effects will not modulate correctly if an expression pedal with a resistance greater than 15Kohms is used.</p> <p>See a full listing of effect manufacturer specifications at http://www.expressionpedals.com/</p>
The effects changes too suddenly	Check polarity. For example, using RTS where TRS or TS is required will create this problem
The effects changes too suddenly	Adjust switches B5, 4, 3 & 2 to find the best linearity versus modulation depth
My expression pedal has an electrical resistance of 10K ohm but the effect unit requires greater than this	This is not usually a problem. Configure the polarity correctly and modulation will likely be sufficient

Specifications

- Input jack – 6.35mm stereo
- Output jack – 6.35mm stereo
- Input polarity – TS, RTS or TRS
- Output polarity – TS, RTS or TRS
- Dimensions – L 85 mm x W 50mm x H 21mm
- Weight – 55 grams