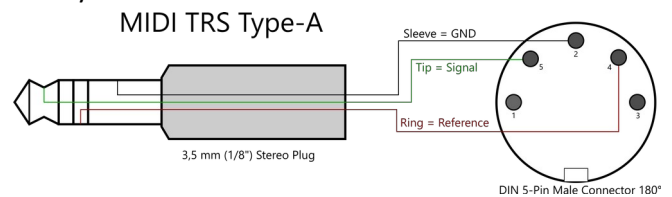


## Connections

- **EXP IN:** A 1/4" stereo (TRS) socket to connect a regular expression pedal. Expression pedal resistance doesn't matter.
- **OUT1/OUT2:** 9V...1VDC Output, Center Negative, Boss Style. Do not exceed 50mA. When set to 9V, the voltage control circuit is disabled and power is supplied directly from the power supply input.
- **+9VDC In:** Power Supply. 9VDC only, Center Negative, Boss Style with a maximum current draw of 180mA.
- **MIDI In:** 3.5mm (1/8") MIDI Input according to MIDI Standard **MIDI TRS Type-A**.
- **MIDI Thru:** 3.5mm (1/8") , latency free MIDI Thru according to MIDI Standard **MIDI TRS Type-A**



## Dying Battery Simulator

The **VOLT** can act as a dying battery simulator. That means, that like with a real drained battery, not only the voltage is lowered, but also the internal resistance is raised. How much internal resistance depends on the battery and their state. Because of that the internal resistance of the outputs of the **VOLT** can be adjusted with two trim pots on the inside.

Upon opening the back of the **VOLT**, you'll see a trim pot labeled *ROUT1* for OUT1 and one labeled *ROUT2* for OUT2.

- Turning it **counter clock wise** lowers the resistance all the way down to 0Ω.
- Turning it **clock wise** raises the resistance all the way up to 500Ω.

The **VOLT** ships set to approx. 60Ω. That's with the trim pot at 9 o'clock pointing towards the expression input.

## LED

There is a Dual Color LED that gets brighter with rising voltage on the outputs. The green LED shows the voltage for OUT1, the red LED for OUT2.

## Knob

The knob, when turned, overrides the voltage on both outputs. See section Expression Pedal on how the knob can interact with the expression pedal.

**Do not use the VOLT with digital pedals, or pedals that draw more current than 50mA.**

# MIDI Channel

The **VOLT** ships on MIDI channel 7. To change the MIDI channel use the following command

CC	#	Function
119	0...16	Set MIDI Channel (0 = Omni)

After that the MIDI channel has to be saved with the commands CC 09 18 + CC 09 52 + CC 09 01 or use the [WebMIDI interface](#) on the Oscillator Devices website.

# MIDI Commands for Voltage

The following MIDI commands set the voltage on the outputs.

CC	#	Function
20	0...127	Sets the voltage on OUT1 from 1V (CC20 00) to 9V (CC20 127)
40	0...127	Sets the voltage on OUT2 from 1V (CC40 00) to 9V (CC40 127)
60	0...127	Sets the voltage on OUT1 and OUT2 from 1V (CC60 00) to 9V (CC60 127)

# Expression Pedal

The expression pedal, when used, **controls the voltage on both outputs**.

## Expression Modes

There are three modes for the expression pedal:

- Moving from heel to toe moves the voltage from 1V to 9V independent from knob position (Full Range)
- Moving from heel to toe moves the voltage from knob position to 9V (Default). So, if the knob is set to 5V, the expression pedal moves from 5V to 9V.
- Moving from heel to toe moves the voltage from 1V to knob position. So, if the knob is set to 5V, the expression pedal moves from 1V to 5V.

To set these modes use the following MIDI commands:

CC	#	Function
102	0	Full Range
	1	Knob sets lower limit (Heel = knob position, Toe = 9V) (Default)
	2	Knob sets upper limit (Heel = 1V, Toe = Knob position)

After that the mode has to be saved with the commands CC 09 18 + CC 09 52 + CC 09 03 or use the [WebMIDI interface](#) on the Oscillator Devices website.

For the full user manual visit: <https://oscillatordevices.com/volt>