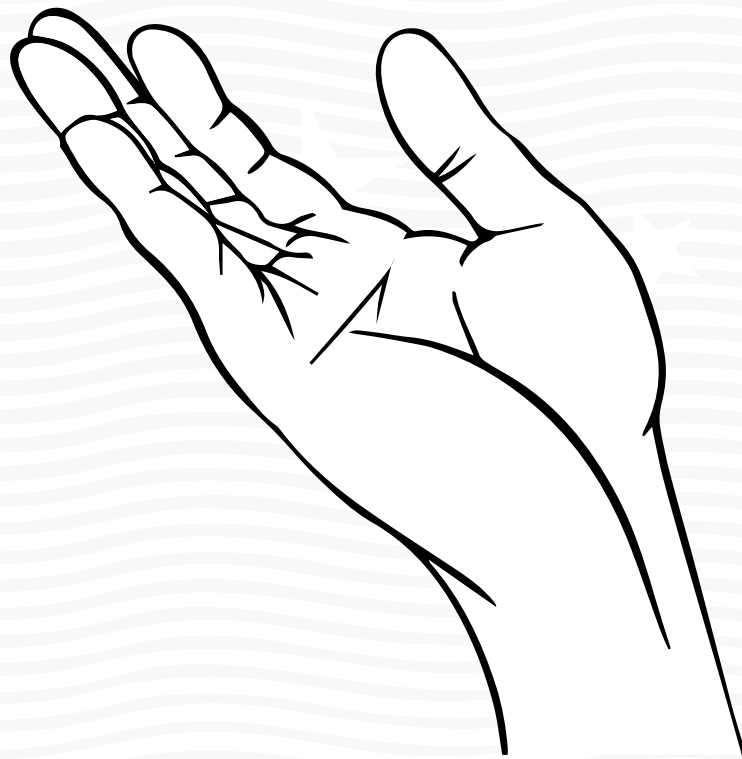


# LUMINOUS

## phaseshifter



# USER MANUAL

**leap**  
SERIES

**v1.00**

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## ABOUT ALEXANDER PEDALS

Alexander Pedals builds hand-crafted effects pedals in Garner, North Carolina. Each Alexander Pedal is meticulously voiced and tweaked by our sonic scientists to achieve sounds that are both instantly familiar yet completely unique.

Alexander Pedals are designed by Matthew Farrow and a group of trusted players, builders, and friends. Matthew has been building guitar pedals since the late 1990s, first with Pharaoh Amplifiers, and now with Disaster Area Designs. Matthew has designed some of the most innovative effects units on the market, including some big names he's not allowed to tell you about.

Alexander Pedals was started for two reasons - to make great tones, and to do good. The great tones part you probably have some idea about. As for doing good, Alexander Pedals donates a portion of the profits from every pedal sold to charity, whether you buy from us or our dealers. Matthew's younger brother Alex passed away in 1987 of a form of cancer called neuroblastoma. Alexander Pedals honors his memory by helping in the fight to end childhood cancer.

## BASIC OPERATION

We sent a team of sonic scientists deep into the arctic circle on a secret mission: to capture bits of the Aurora Borealis so we could transmute them into a pedal. What emerged was Luminous, equal parts phaseshifter and swirly glowing haze machine. It dances and hovers with the utmost mystery, occasionally imperceptible while frequently vivid. And it glows in the dark, because of course it does.

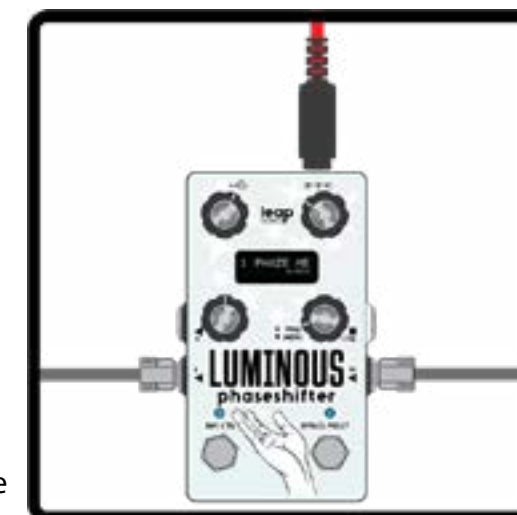
Using the pedal is pretty simple:

Plug your instrument into the INPUT jack and your amplifier or other effect into the L jack.

Power up the pedal with 9V 250mA or more, isolated power is required.

Turn some knobs. As soon as you touch a knob, the display will change to show what is happening.

Hold the right foot switch (BYPASS / PRESET) to advance to the next preset, we've loaded some cool sounds on here for you to try out.



The lower-right knob has a pushbutton switch, tap that to access extra parameters on the back pages of the user interface.

We've put the most common controls up front, tweaking stuff on page 2, and utility items on page 3.

Three small boxes at the bottom of the display indicate the currently selected page.

That's pretty much it. The rest of this manual covers advanced topics and fine details. If you run into any issues, we've got support info at the link below.

Have fun!



scan me for  
more info!

This manual contains full technical details on the operation of this pedal. For more information regarding firmware updates, update tools, and software integration, please scan the code in this section to visit our website.

# CONTROLS & DISPLAY

Your Leap Series pedal is pretty complex under the hood, but we worked hard to make sure that it's easy to drive.

We combined a simple user interface with a high-contrast OLED display to get you the maximum tweakability with the minimum frustration. Just turn the knobs, it acts like pretty much every other pedal.

The lower right knob is equipped with push switch. Tap this knob to switch the display page, as indicated by the three small boxes at the bottom of the display. We'll refer to this knob + button as the Page knob throughout this manual.

Hold the Page knob to access the [Setup \(page 7\)](#) and [Preset Save \(page 6\)](#) menus.

## KNOB DISPLAY

Turn the pedal knobs to show the Knob Display. Each knob is labeled with its function and current value. Set DISPLAY = KNOBS in the Setup menu to make the pedal show this screen by default.



## PRESET DISPLAY

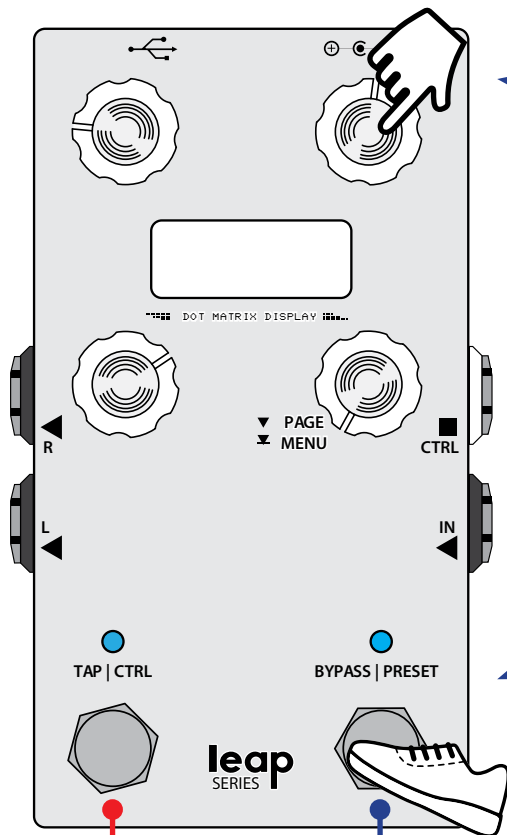
Hold the Bypass / Preset foot switch to load a the next preset and show this display. The current preset name, number, and sound mode are shown.



Set DISPLAY = PRESET in the Setup menu to make the pedal show this screen by default.

## DISPLAY BLANK

Set DISPLAY = BLANK in the Setup menu to blank the display. The display automatically returns to Knobs or Preset mode when a knob is turned or a preset is loaded.



HOLD RIGHT FOOTSWITCH FOR NEXT PRESET

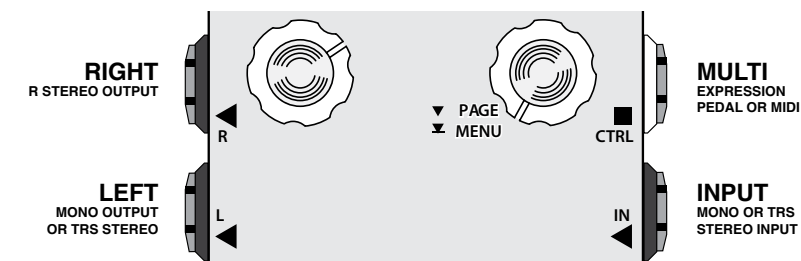
HOLD BOTH FOOTSWITCHES FOR PREVIOUS PRESET

# INS & OUTS

We've equipped every Leap Series pedal with a plethora of pluggable ports, to allow you lots of flexibility in your pedalboard routing.

We'll cover the stereo routing stuff in full detail under [Stereo Routing \(page 11\)](#), but if you're running in mono just use the input and L output jacks.

- INPUT:** Instrument input. Defaults to mono, may be set to TRS Stereo or TRS Sum using the Setup menu.
- RIGHT:** Right stereo output. This output may be phase-inverted in the Setup menu to match the output phase of your amplifiers.
- LEFT / TRS:** Main output. Use this as the main output for mono setups, or the left output for stereo. May also be used as a TRS stereo output (disables the RIGHT jack) if the next effect or input is TRS stereo.
- MULTI:** User configurable jack, used for Expression pedal (TRS only,) remote foot switch, or MIDI input / output (requires converter unit or adapter cable.)



- DC 9V:** Center-negative, 2.1mm ID barrel jack for DC input. The pedal requires a minimum of 250mA to operate, higher current supplies are acceptable. Do not power the pedal from a source greater than 9.6V DC. Use only isolated power supplies.
- USB:** USB mini-B connector for USB MIDI or firmware updates

# BYPASS & TRAILS

Leap Series pedals feature a buffered bypass system designed to keep your signal as clean as possible at all times. The dry signal passes through the digital signal processor in order to maintain phase coherence between wet and dry.

We offer three bypass modes, selectable with the TRAILS item in the Setup menu.

- OFF:** The wet signal is cut off immediately upon entering bypass
- ON:** The wet signal delay / reverb trails are allowed to ring out in bypass
- AUTO:** The wet signal delay / reverb trails are allowed to ring out but automatically fade out after 10 seconds to eliminate noise in bypass

# SOUND MODES

Luminous has ten selectable sound modes, each based on a different phaser effect type. You can tweak these modes to your taste, and you can save any sound to any preset.

To change sound modes, turn the lower right knob on page 1. Tap the lower right knob to advance to the next page.

Knobs marked \* do not respond to expression or ramp controls.

NOTE: selecting a sound mode with the knob doesn't change any of the other knob parameters, so you may need to tweak the controls after changing sound modes.

The following controls are common to all modes on page 3:

**DIV\*** - tap division for modulation or delay, not available in DYNAMIC mode

**LEVL** - overall volume for the pedal (wet + dry)

**FILT\*** - Low-cut filter, higher settings reduce mud or low-end rumble.

**RAMP\*** - Ramp rate and trigger mode, please see EXPRESSION AND RAMPING below.

## CLASSIC

Versatile and powerful studio phaser, configurable between 2 and 24 phase stages. Try a 4-stage phaser with low resonance for stompbox-type phasing, or a 12-stage phaser set to slow sweep for studio style phasing.

RATE - phase speed from 10-0.1s  
DEPT - phase LFO intensity  
MIX - mix of wet and dry signals

STAG\* - phase stages from 2-24  
RESO - phase feedback  
WAVE\* - LFO wave shape  
CENT - LFO wave center point

## K-TREM

Inspired by vintage tuck-and-roll amps, this is phase vibrato combined with tremolo. Try 2 stages with low Image settings for amp-type effects, or 3 stages for more of a vibro thang. Sync sets tremolo to mute during high or low phase sweep.

RATE - modulation speed  
VIB - phase / vibrato intensity  
TREM - tremolo intensity

STAG\* - phaser stages from 2-5  
IMAG - phaser resonance  
WAVE\* - LFO wave shape  
SYNC\* - trem mutes high or low phase

## PATTERN

Rhythmic step-sequenced phaser with 8 selectable patterns.

RATE - pattern step speed  
STEP - number of pattern steps  
MIX - mix of wet and dry signals

STAG\* - phase stages from 2-24  
RESO - phase feedback  
PATT\* - pattern selection  
DIR\* - DOWN, UP, or UP&DOWN

## DUAL PHASE

Two independent phase shifters, configurable as SERIES (A into B,) PARALLEL (A and B summed together,) STEREO (A on left, B on right,) or SPLIT (stereo inputs to each phaser.) Phaser B may be LOCKED or INVERTED to the LFO for Phase A.

RAT1 - phaser A rate  
DEP1 - phaser A intensity  
MIX - mix of wet and dry signals

RAT2 - phaser B rate or LOCK / INV  
DEP2 - phaser B intensity  
WAVE\* - sine or square for A/B  
ROUT\* - phaser A and B routing

## DYNAMIC

8-stage phaser controlled by your playing dynamics. Dynamic engine may control phaser RATE, DEPTH, or set to MANUAL mode to control the phaser directly like an auto-filter.

RATE - phaser speed  
DEPT - phaser depth  
MIX - mix of wet and dry signals

SENS - gain for volume sensing  
RISE - time for volume sensing  
SOFT - control value at low volume  
LOUD - control value at high vol  
MODE\* (pg3) RATE, DEPTH, MANUAL

## UNIQUE

Special mode inspired by an incandescent-powered Japanese effect from the 1960s. The second page has controls to go way beyond the original effect, set these at their minimum position to start at the vintage sound. Set the Mix control to 50% for "chorus" or 100% for "vibrato."

RATE - phase speed from 10-0.1s  
DEPT - phase LFO intensity  
MIX - mix of wet and dry signals

STAG\* - normal (4) or double (8)  
RESO - phase feedback  
BEAT - amount of "throb"  
SYNC\* - sets "throb" polarity

## PHASE DELAY

Clean digital delay (up to 800ms) with an 8-stage phaser on the delay trails. The delay is controlled by the tap tempo in this mode instead of the phaser.

TIME - delay time from 0-800ms  
REPT - delay repeat level  
MIX - mix of wet and dry signals

RATE - phaser rate  
DEPT - phaser intensity  
WAVE\* - LFO wave shape  
CENT - LFO center point

## FLYING PAN

Classic '70s style panned phaser. Warning - this one only works to its full potential in stereo, but it's still a cool tremolo phaser in mono. The phase signal may be placed anywhere in the stereo spectrum before it hits the panning engine.

RATE - phase speed from 10-0.1s  
DEPT - phase LFO intensity  
MIX - mix of wet and dry signals

PRAT - panning rate  
PDEP - panning intensity  
PWAV\* - panning LFO wave shape  
PAN - phaser panning location

## PHLANGER

Takes inspiration from a classic DIY kit. While the original was just a funny spelling of "flanger," our version combines phaser and flanger in a single mode. Use the Time control to mix and swirl between the two effects.

RATE - LFO speed from 10-0.1s  
DEPT - LFO intensity  
MIX - mix of wet and dry signals

TIME - phase at min, flange at max  
RESO - feedback  
WAVE\* - LFO wave shape  
CENT - LFO wave center point

## PRESETS

How do you make quick changes on a pedal that has 12+ knobs? PRESETS. Every Leap Series pedal allows you to save up to 32 presets that contain the entire state of the pedal.

Loading a preset recalls all knob positions, sound modes, and expression pedal mappings.

To load a preset, hold the BYPASS / PRESET foot switch. You can set the number of available presets in the Setup Menu, from 1 to 8. You can also set the pedal to access the upper banks of presets (9-16, 17-24, 25-32) in the same menu. This allows you to use multiple banks of presets for different gigs, bands, instruments, whatever you like. Hold both footswitches to scroll back to the previous preset.

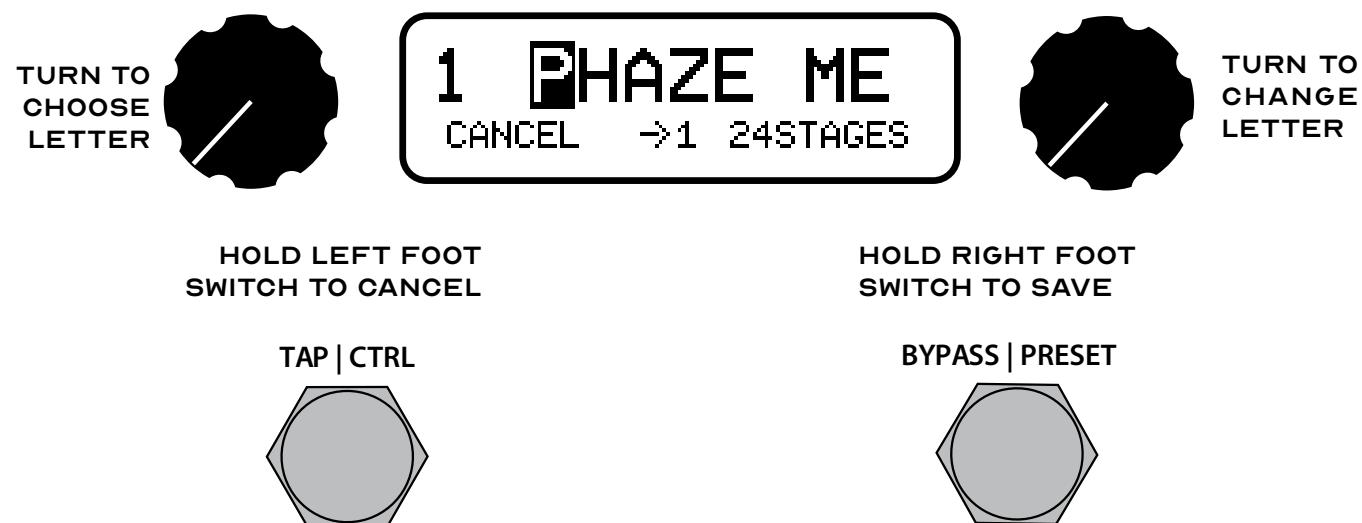
If eight presets per bank isn't enough, you can enable a double-bank of 16 presets by setting PRESET = 1-16 or 17-32.

You can also use an external MIDI controller to load any preset from 1-32, regardless of how the Setup Menu is configured.

To save a preset, first use the pedal knobs to tweak the sound, then hold the Page knob. Press and hold the BYPASS / PRESET foot switch to enter the save menu.

If you want to save to the current preset, you can just hold down the BYPASS / PRESET foot switch again. If you prefer to rename the preset, turn the lower left knob to select a character in the name and turn the Page knob to edit that character. You can also change the save location by highlighting the preset number then turning the Page knob.

Press and hold the BYPASS / PRESET foot switch to save, or hold the TAP / CTRL foot switch to cancel the save.



## SETUP MENU

To enter the Setup menu, first hold down the PAGE / MENU knob (lower right,) then hold the left foot switch.

Turn the lower left knob to scroll through the available parameters, then turn the lower right knob to set its value.

Hold the PAGE / MENU knob (lower right) to save your settings and exit the menu.



<b>M.JACK</b>	<b>EXPRESSN</b>	MultiJack is expression pedal input
	<b>FOOT. SW</b>	MultiJack is foot switch input
	<b>MIDI</b>	MultiJack is MIDI input (requires MIDI to TRS adapter)
	<b>PRST.EX</b>	Preset selection using <b>ALEXPANDER</b> footswitch
	<b>SCRL.EX</b>	Preset scroll using <b>ALEXPANDER</b> footswitch
<b>CHANNL</b>		Sets MIDI input channel
<b>STEREO</b>	<b>MONO IN</b>	INPUT jack is mono
	<b>INP. SUM</b>	INPUT jack sums to mono
	<b>STEREO</b>	INPUT jack is stereo
<b>RPHASE</b>		Sets phase of R output, allows correction for amp or effect phase.
<b>PRESET</b>		Sets number of presets available on device. Does not affect MIDI.
<b>DISPLY</b>	<b>PRESET</b>	Display shows preset except when turning knobs
	<b>KNOBS</b>	Display shows knobs except when loading preset
	<b>BLANK</b>	Display is off when not adjusting knobs
<b>KNOBS</b>	<b>JUMP</b>	Knobs will jump to new value immediately
	<b>PICKUP</b>	Knobs don't move until turned to previous value first
<b>RETURN</b>		Pedal will return to the main control page after 5, 10, 30 seconds
<b>MIDOUT</b>	<b>OFF</b>	Pedal does not send MIDI CC values
	<b>JACK</b>	Pedal sends MIDI CC from MultiJack
	<b>USB</b>	Pedal sends MIDI CC from USB MIDI
	<b>BOTH</b>	Pedal sends MIDI CC from both
<b>TRAILS</b>	<b>OFF</b>	hard bypass, <b>ON</b> - trails bypass, <b>AUTO</b> - trails fade out
<b>EXP LO / HI</b>		Sets heel and toe calibration for expression pedal
<b>TEMPO</b>	<b>PRESET</b>	Presets load with saved tempo
	<b>GLOBAL</b>	Presets load with the current tap tempo
<b>PWR ON</b>		Choose <b>BYPASS</b> or <b>ENGAGE</b> to set the power-on state of pedal
<b>RESET</b>		Turn to reset <b>CONFIG, PRESETS, or ALL</b> . Hold PAGE knob to reset. Select <b>MIDIDUMP</b> to export presets over USB MIDI

## EXPRESSION PEDAL

Connect a TRS expression pedal to the MultiJack to control any or all of the pedal parameters remotely. Enter the Setup menu and configure M.JACK = EXPRESSN, then save and exit.

Leap Series pedals requires a TRS expression pedal, sleeve = 0V (common,) ring = 3.3V, tip = 0-3.3V. You can also use an external control voltage (CV) connected to tip and sleeve, as long as it doesn't exceed 3.3V.

If you're using a MIDI controller, you can send MIDI CC 100, value 0-127. 0 is the same as full heel setting, 127 is toe setting.

To map expression pedal values to pedal settings, first set the expression pedal to the heel setting then turn the pedal knobs. Then sweep the expression pedal to the toe setting and turn the knobs again.



HEEL SETTING



TOE SETTING

Your Leap Series pedal will smoothly blend between the two knob settings as you move the expression pedal. You can map any of the effect knobs to the expression pedal, other than a few controls that don't have linear functions like tap division and ramp settings.

If you prefer to have controls that aren't affected by the expression pedal, simply set them with the pedal heel down, then gently "wiggle" the knob with the pedal at toe down. This will set the same values for heel and toe and those knobs won't change as you sweep the pedal. You can also use the Ramp Clear function to clear the expression pedal settings, as described on the next page.

The MultiJack input is factory-calibrated for most common expression pedal types, but you can also adjust the range using the Setup menu. Sweep the pedal to the heel position and then set the EXP LO value to match the number shown in the box on the display next to it. Repeat for the EXP HI value and then save.



CALIBRATE  
HEEL VALUE



CALIBRATE  
TOE VALUE

## RAMPING

If you're not into using an expression pedal, that's okay - the Leap Series pedals feature a built-in expression control function called RAMP. Imagine the Ramp as an automatic expression pedal that you trigger from a foot switch. Hold the Tap / Ramp foot switch to fire the ramp, and the pedal will smoothly move between expression pedal settings by itself.

The RAMP knob sets how fast the built-in expression ramp function will run, with clockwise settings ramping more slowly. The range of this knob is divided into three sections that also select the ramp trigger type.

(T)OGGLE: Ramp will trigger when the Tap / Ctrl switch is held, then remain at the "toe" position until Tap / Ramp is held again.

(M)OMENTARY: Ramp will trigger while the Tap / Ctrl switch is held, then return when the switch is released

CLR\*: Ramp / EXP reset. Hold the Tap / Ctrl switch to set the "toe" values of each knob to match the "heel" values.

Ramping and expression use the same "heel" and "toe" values. You can set these values in ramp mode by firing the ramp in T mode, then turning the knobs while the ramp is at full / "toe" position. Fire the ramp again to return to minimum / "heel" position to set the other values.

## REMOTE FOOT SWITCH

You can also connect a standard momentary normally-open foot switch to the MultiJack to remotely control the Tap / Ramp functions.

Enter the Setup menu and configure M.JACK = FT.SW, then save and exit. Tap the remote foot switch to set the tap tempo rate, hold to trigger the ramp. The remote foot switch will duplicate the functions of the built-in left foot switch.

## EXPANDER SWITCH

All Leap Series pedals support the AEXPANDER triple foot switch for preset selection or scrolling. Connect your AEXPANDER to the MultiJack using a standard TRS / stereo cable, then enter the Setup menu and configure M.JACK = PRST.EX or SCRL.EX. Save and exit.

In PRST.EX mode, the three buttons of the AEXPANDER directly select presets 1, 2, and 3 with a single tap. You can still use the footswitches on the pedal itself to access any other presets in your currently selected bank.

In SCRL.EX mode, the A and C (left and right) buttons of the AEXPANDER will scroll through all 32 presets in order. Tap the B (center) button to enter SEARCH MODE, which will scroll through the presets without activating them. When you arrive at your desired preset, tap the B (center) button again to load that preset and exit SEARCH.

# TAP TEMPO AND MIDI CLOCK

Leap Series pedals support Tap Tempo for the modulation LFO or the delay time. The pedal will always prioritize the delay time for sound modes that have both LFO and delay.

Tap the TAP / CTRL (left) footswitch once to begin the Tap Tempo function. The display will show TAP and a timeout bar in the lower left corner to indicate that the pedal is waiting for a second tap.

Tap the TAP / CTRL (left) footswitch a second time to set the tempo and end the Tap Tempo function.

If you don't tap a second time before the timeout bar resets, the tempo will remain at the previously set value.



The DIV parameter on PG3 of the display sets the tap tempo subdivision.

- HALF:** time multiples to half-note (1/2 tap speed)
- QTR:** time is not subdivided, quarter-note (1x tap speed)
- 8TH:** time subdivides to eighth-note (2x tap speed)
- 16TH:** time subdivides to sixteenth-note (4x tap speed)
- NCLK:** time is not subdivided, quarter note, MIDI CLOCK is ignored

PHASE DELAY mode controls the delay with tap tempo, instead of the LFO rate and uses the following subdivisions:

- TRP:** time subdivides to eighth-note triplet (3x tap speed)
- 8TH:** time subdivides to eighth-note (2x tap speed)
- DOT:** time subdivides to dotted eighth-note (1.5x tap speed)
- QTR:** time is not subdivided, quarter-note (1x tap speed)
- NCLK:** time is not subdivided, quarter note, MIDI CLOCK is ignored

The pedal will use the most recent tempo adjustment, so if you tap tempo and then turn the Time or Rate knob the tapped tempo will be canceled and set to the knob value.

**If you tap in a tempo and then save the preset**, the saved time will use the tempo and the subdivision as set by the DIV knob.

**If you use the time or rate knob to set the tempo**, it may load with a different tempo unless DIV is set to QTR or NCLK. If you mostly plan to use the pedal knobs to set the tempo, we recommend using the QTR or NCLK setting for DIV.

Leap Series pedals also sync to incoming MIDI clock over the MultiJack or USB. MIDI clock will override all other tempo sources including Tap Tempo and the pedal knobs, unless DIV is set to NCLK in which case the pedal will ignore MIDI clock entirely.

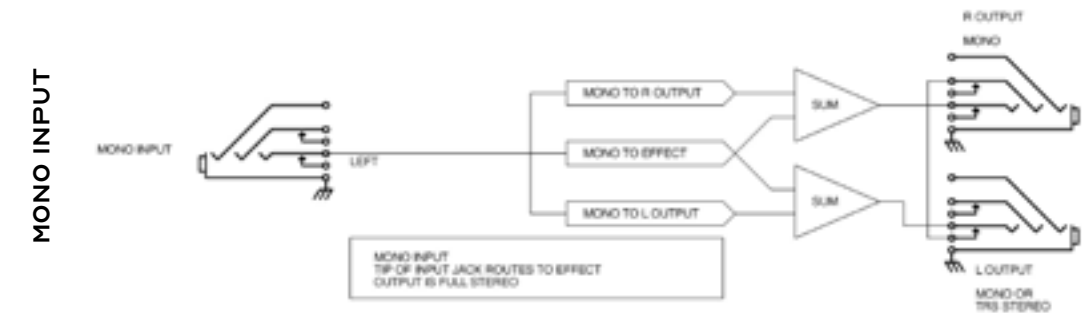
The DIV setting is saved for each preset, so you can use any division on any preset based on your musical needs.

# STEREO ROUTING

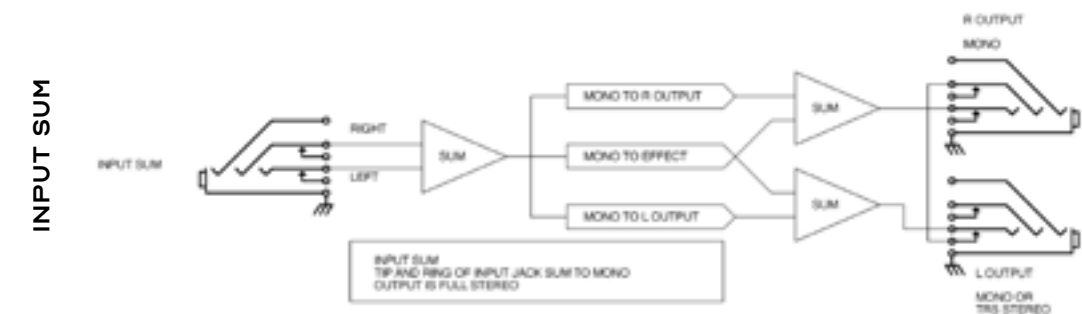
Every Leap Series pedal is designed to work in a stereo context, but also shines in mono. We'll cover how all the various stereo modes work so you can pick the one that works best with your rig.

To set the stereo mode, enter the Setup menu and navigate to STEREO. The pedal will reconfigure its inputs and outputs as you step through the menu, and once you've set it as you like just hold the PAGE knob to save.

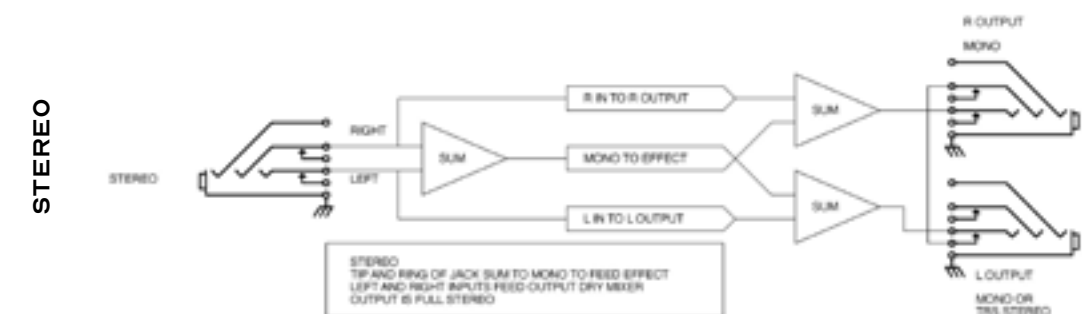
We also allow you to change the phase of the R output to correct issues with the phase of your amplifiers or other effects. Try setting R.PHASE to both options, the one with more low end is usually correct.



Standard mono input.  
Use this for mono input with full stereo output  
Use the L output for mono.



Input is summed L+R from TRS, output is full stereo.  
Use this if you play in mono but have stereo effects before the Leap Series pedal.



Input is stereo from TRS, output is full stereo.  
Use this if the previous device in chain has stereo output.

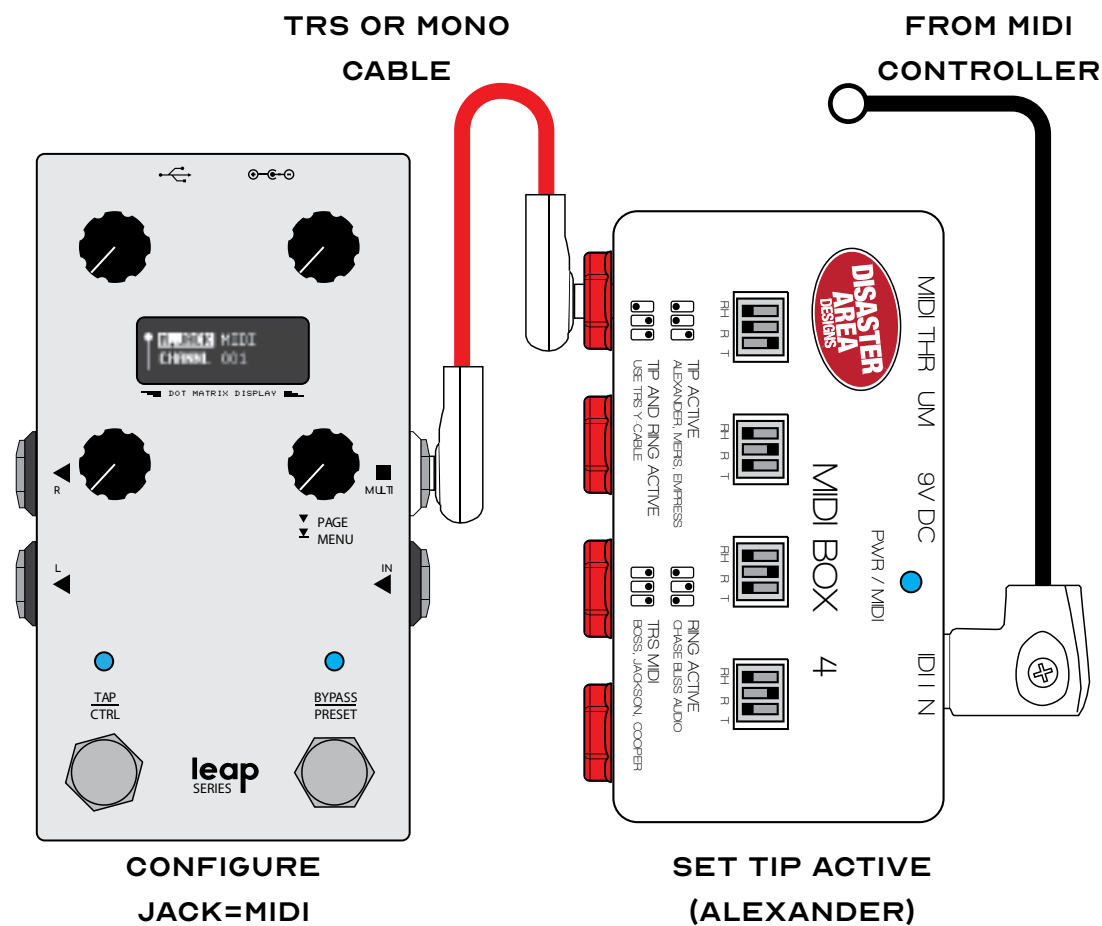
# MIDI SETUP

The MultiJack can also act as a MIDI interface, to allow full remote control of your Leap Series pedal.

Enter the Setup menu and configure M.JACK = MIDI, then set CHANNL = your desired MIDI channel. Save and exit.

You can then connect your Leap Series pedal to your MIDI controller or other device using the MultiJack.

We recommend the use of an active MIDI converter such as the Disaster Area MIDI Box 4.



The MultiJack is also compatible with many devices using a passive MIDI to TRS cable. We recommend the Disaster Area 5P-TRS PRO but most TRS type-A cables should work so long as pin 2 is earthed at the MIDI controller output. Please note that some MIDI controllers do not support the use of a passive MIDI to TRS cable, consult your controller manufacturer.

The MultiJack is wired using Tip = Current Sink, Sleeve = Ground / Common.

**NOTE: In some cases, MIDI interference can occur if the TRS ring is left floating. We recommend you set MIDOUT to OFF or USB, this disables the ring connection and will prevent MIDI echoes.**

# MIDI COMMANDS

Your Leap Series pedal features full and comprehensive MIDI implementation. Every single function and knob may be controlled by MIDI.

Each MIDI command controls the knob or function as described below. Please consult the [Sound Modes \(page 4-5\)](#) section to match each knob position to the relevant control.

Leap Series pedals will sync to incoming MIDI clock messages for any modes that have the DIV knob on the last page of the display. The pedal will subdivide incoming clock as set by DIV, or set DIV to NCLK to force the pedal to ignore incoming clock. This setting is saved per-preset. Please consult the Tap Tempo and MIDI Clock section on page 10 for details.

Command	MIDI CC	Range
Knob 0 (PG1 upper L)	50	0-127
Knob 1 (PG1 upper R)	51	0-127
Knob 2 (PG1 lower L)	52	0-127
Knob 4 (PG2 upper L)	54	0-127
Knob 5 (PG2 upper R)	55	0-127
Knob 6 (PG2 lower L)	56	0-127
Knob 7 (PG2 lower R)	57	0-127
Knob 8 (PG3 upper L)	58	0-127
Filter	59	0-127
Level	60	0-127
Ramp	61	0-50 TOGG 51-110 MOM 111-127 CLR*
PATTERN 8 STEP 1	110	0-127
PATTERN 8 STEP 2	111	0-127
PATTERN 8 STEP 3	112	0-127
PATTERN 8 STEP 4	113	0-127
PATTERN 8 STEP 5	114	0-127
PATTERN 8 STEP 6	115	0-127
PATTERN 8 STEP 7	116	0-127
PATTERN 8 STEP 8	117	0-127

Command	MIDI CC	Range
<b>SOUND MODE</b>	53	0-12 CLASSIC 13-25 DUAL PHZ 26-37 PHAZDLAY 38-50 K-TREM 51-63 DYNAMIC 64-75 INFINITE 76-88 FLYINGPAN 89-101 PATTERN 102-113 UNIQUE 114-127 PHLANGER
<b>TAP TEMPO</b>	93	ANY
<b>RAMP TRIGGER</b>	97	ANY
<b>EXPRESSION PDL</b>	100	0 HEEL, 127 TOE
<b>BYPASS</b>	102	0 BYP, 127 ON
<b>MIDI BEAT CLOCK</b>		CONTROLS DELAY TIME or LFO DETAILS ON <a href="#">PG 10</a>



# SPECIFICATIONS

- Input: Mono or stereo (TRS)
- Output: Mono or stereo (use either TRS or dual TS)
- Input Impedance: 1M ohms
- Output Impedance: 560 ohms
- Power Requirements: DC 9V only, 250mA or greater
- Requires isolated DC power supply
- Dimensions: 2.4" x 4.7" x 1.6"W x H x D not including knobs (67 x 120 x 42mm)
- 32 user presets, selectable on-device without additional controllers
- MultiJack enables expression pedal, foot switch, expander switch, or MIDI input
- Full MIDI control over every knob and setting
- EXP Morph allows controlling all knobs from expression or MIDI
- Automated ramping function for expression without external pedal
- CTL foot switch for tap tempo or ramp trigger
- USB port for firmware updates and USB MIDI
- Buffered bypass (hybrid analog+digital)

## CHANGE LOG

Manual version 1.00, firmware version 1.00

Initial Release