

USER MANUAL



Read Before Using

This manual covers the feature set for Riverside pedals running version 1.2 firmware and later. To check if your Riverside is running version 1.2 firmware, follow the instructions in the note at the bottom of page 20.

The User Manual for Riverside version 1.0 is available here.

Riverside version 1.2 adds the ability to remotely control your Riverside via a MIDI connection.

If you wish to install the latest update, go to strymon.net/firmwareupdate and follow the directions.

Technology Overview – Multistage Drive Topology

Riverside achieves its sound by passing the signal through a cascade of individual gain stages. Dynamic complexity and additional harmonics are generated at each stage as the signal travels from one stage to the next.

STAGE ONE: Class A Analog JFET Input Gain Stage

Touch response and dynamic interaction with your guitar are optimized with the class A JFET input gain stage. This analog gain stage is digitally controlled to maximize headroom and noise performance while adding as much as 20dB of analog gain.

STAGE TWO, THREE AND FOUR: Tube-Inspired DSP Gain Stages

Our analysis of tube gain circuits has resulted in a wide-band series of cascading gain stages that are detailed, rich and full of complex harmonics. At each stage, more harmonics are generated and the signal dynamically evolves as the inter-stage circuitry optimally conditions the response for the following stage.

VARIABLE CIRCUIT TUNING

Riverside's continuously variable circuit tuning dynamically tweaks multiple parameters as you adjust the Drive, optimizing the signal path to sit in the 'sweet spot' at any gain setting. This results in a super-versatile drive pedal that is equally comfortable providing sparking clean and mildly-overdriven tones, to high-gain lead and heavily saturated distortion.





Controls and Connections – Controls

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PRESENCE SWITCH

The **minus** (-) position provides clarity with a controlled top end that works well with many amps that have a brighter voice or extended top end character. The

enhanced (center) position extends the top end to allow for more sizzle on high gain tones. This works well with amps that have a warmer voicing, or if you want enhanced detail in the uppermost frequencies. When plugging directly into a power amp, the **plus (+)** position further increases high end detail that may be required. The **plus (+)** position will also deliver extended high end detail to the darkest amps.



GAIN SWITCH

The 'low' channel selects a gain structure that allows for a wide range of low to medium gain sounds while still getting heavily overdriven at maximum Drive settings. The

voicing is dynamic and touch-sensitive, and at high Drive settings is slightly 'loose' like a dimed vintage amp.

The 'high' channel increases the gain throughout the signal path and tightens things up. While still staying clean at lower Drive settings, the 'high' gain mode goes to heavy crunch and high gain as the Drive knob is increased.

3-BAND EQ

Riverside's 3 band EQ, with independent Bass, Middle and Treble knobs, is designed to complement your amp's tone with the flexibility needed to dial in your sound effectively and efficiently. The controls are post-drive, meaning they effectively sculpt and shape the harmonics generated in Riverside's gain stages.

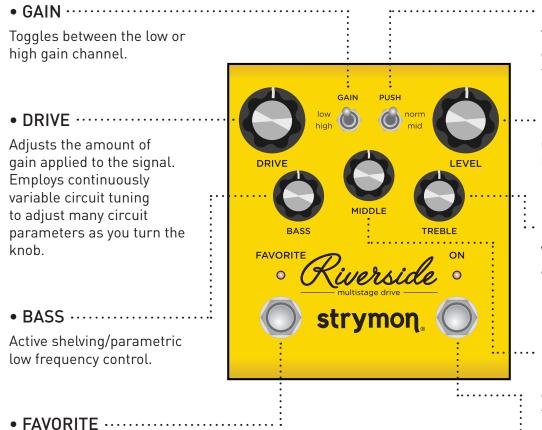


PUSH SWITCH

Adding a mid-band EQ push just after the analog front-end gain results in pushing the subsequent drive stages harder, and tightens up the response. This works great

when looking for fat drive tones, or for pushing a distorted or on-the-edge amp into further breakup. For cleaner or more transparent tones, select the 'normal' position.

Controls and Connections – Front Panel



PUSH

Toggles between flat or enhanced midrange frequencies.

• • LEVEL

Controls the output volume level when the effect is ON.

• TREBLE

Wide-ranging high frequency active shelf control.

• • MIDDLE

Parametric mid boost/ cut control with optimized frequency center.

Used to recall a single stored on-board favorite setting, which consists of all knob, switch, and noise gate settings.

RED LED indicates that the on-board Favorite setting is selected. Press and hold **FAVORITE** switch for 2 seconds to save a new on-board favorite sound.

COMPARE MODE

With **FAVORITE** on, LED turns from **RED** to **GREEN** if current position is identical to saved favorite.

NOTES:

Saving Presets works differently when using MIDI. *(See page 20 for more info.)*

When using MIDI, **RED** LED still indicates that the on-board Favorite setting (MIDI Preset 0) has been selected, and **AMBER** LED indicates that any other MIDI Preset is currently selected.

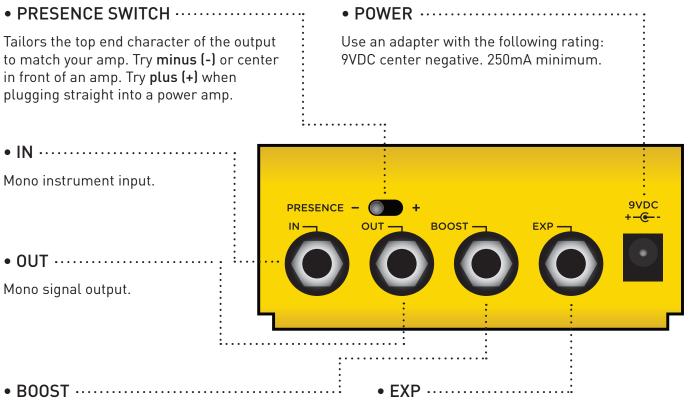
Pressing the **FAVORITE** switch while any MIDI preset is active will return back to the manual (knobs and switches) setting of Riverside. The **FAVORITE** switch will always toggle between the MANUAL MODE setting and the on-board Favorite setting regardless of whether a different MIDI Preset was previously selected.

... • ON

Bypasses analog and digital gain stages. Defaults to relay based true bypass, but can also be set to buffered bypass mode in which the volume pedal and boost functionality are preserved.

Controls and Connections – Rear Panel

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Can be used in one of four ways:

Boost Switch Mode – Use an external Favorite switch to toggle up to +6dB of post boost on/off (See page 9 for setup.)

Favorite Output Mode – Connect to the **EXP** input of another Strymon pedal set to work in Favorite EXP mode to toggle the Favorite setting of that pedal with Riverside's on-board **FAVORITE** switch. *(See page 12 for more info.)*

Expression Pedal Mode – Allows continuous control over any of the knobs with a standard TRS expression pedal. (*See page 13 for more info.*)

Volume Mode – Allows control of the output volume of the effect with a standard TRS expression pedal. (*See page 14 for more info.*)

Can be used in one of four ways:

Expression Pedal Mode – Allows continuous control over any of the knobs with a standard TRS expression pedal. (*See page 13 for more info.*)

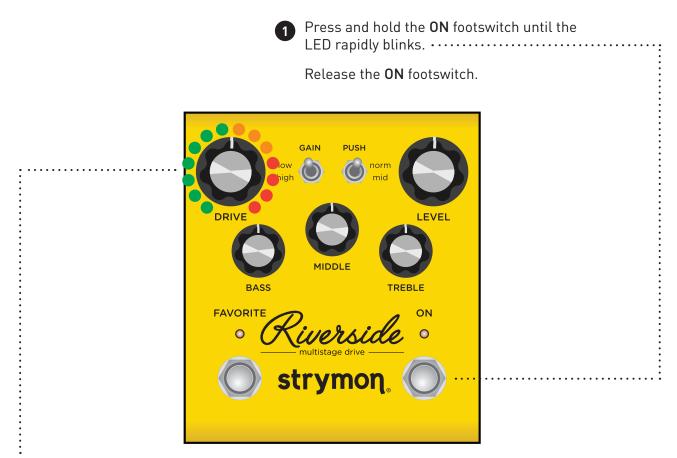
Volume Mode – Allows control of the output volume of the effect with a standard TRS expression pedal. *(See page 14 for more info.)*

MIDI Mode – Allows a MIDI connection for remote preset changes and control messages. *(See page 18 for more info.)*

Favorite Input Mode – Use a Strymon MiniSwitch to remotely toggle the saved Favorite setting on and off. (*See page 11 for more info.*)

Live Edit Functions – Noise Reduction Threshold

Riverside has a variable-threshold noise reduction feature to tame hum and buzz when you're not playing. A downward expander with advanced signal detection techniques creates a seamless transition to noise reduced silence with all types of input signal dynamics, including staccato bursts and slowly sustained notes.



Turn the **DRIVE** knob past the 12 o'clock noon position to engage the noise reduction.

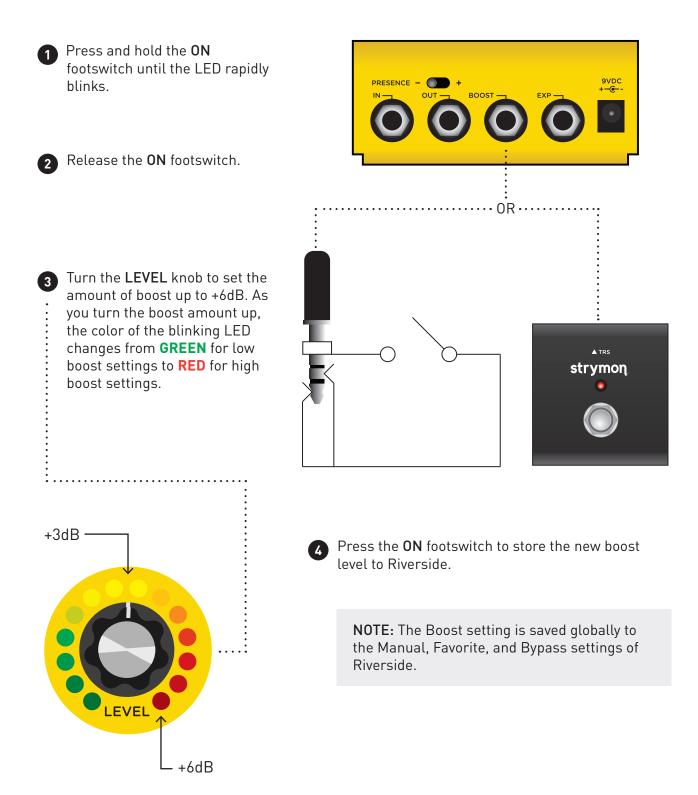
The **FAVORITE** LED will change from **GREEN** to **AMBER** to indicate the noise reduction has been engaged. Turning **DRIVE** past 12 o'clock increases the noise reduction threshold for louder and noisier setups. The **FAVORITE** LED will change from **AMBER** to **RED** to indicate the increased noise reduction threshold level.

3 Press the **ON** footswitch to store the new noise reduction setting to Riverside.

NOTE: The noise reduction setting can be saved independently for the onboard Favorite setting, MIDI presets and the MANUAL settings of Riverside.

Live Edit Functions – Boost Level

Connect an external footswitch with a TRS cable to toggle the boost of up to +6dB on and off.



Power Up Modes – Bypass Mode Selection

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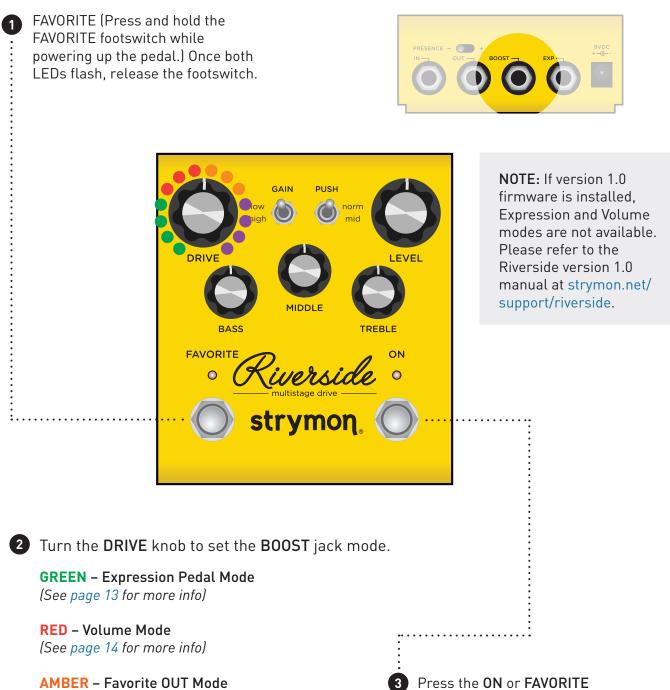
Setting Riverside to Buffered Bypass mode preserves the high frequency response of your guitar signal through your pedal chain and long cable runs.

1	Press and hold the ON footswitch while powering up the pedal. Once both LEDs flash, release the footswitch.	Turn the LEVEL knob to select True Bypass or Buffered Bypass
•		GREEN - True Bypass (default)
		RED - Buffered Bypass: Using Buffered Bypass allows Volume mode and Boost Switch mode.
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	ORIVE DRIVE DRIVE </td <td></td>	

3 Press the **ON** or **FAVORITE** footswitch to store The Bypass mode and begin using Riverside.

Power Up Modes - BOOST Jack Options

Select what the BOOST jack will do.



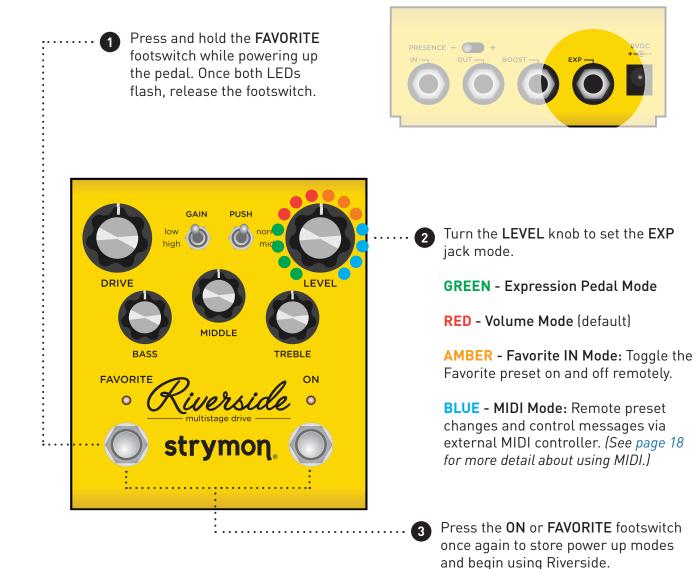
(See page 12 for more info)

PURPLE – Boost Switch Mode (default) (See page 7 for more info)

Press the **ON** or **FAVORITE** footswitch once again to store power up modes and begin using Riverside.

Power Up Modes - EXP Jack Options

Select what the EXP jack will do.



NOTE: Power up modes are saved for all future power ups until they are changed again with the steps above.

NOTE: If version 1.0 firmware is installed, MIDI mode is not available. Please refer to the Riverside version 1.0 manual at strymon.net/support/riverside.

External Control – Using Favorite Input

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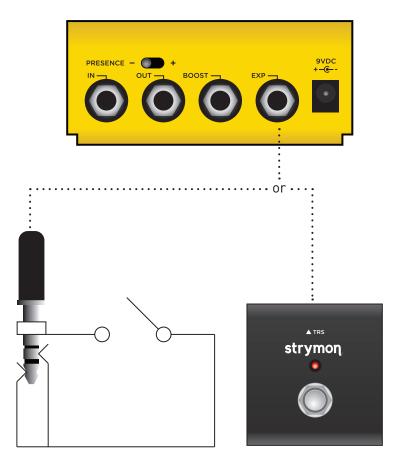
Connect a MiniSwitch with a TRS cable to toggle the on-board Favorite preset on and off.

Ensure that the EXP jack is configured for FAV IN. (See page 10 for more info.)

> Connect a Switch with a TRS cable to the EXP jack of Riverside.



Dial in a setting on Riverside using the knobs and switches for your desired sound.



3 Press and hold Riverside's on-board FAVORITE switch for 2 seconds to save this setting as a new on-board Favorite sound.

NOTES:

The on-board **FAVORITE** switch will not toggle the Favorite preset when Riverside is set to Favorite In mode and a MiniSwitch is connected to the **EXP** jack.

Saving Presets works differently when using MIDI. (See page 20 for more info.)

External Control – Using Favorite Output

Use Riverside to recall the Favorite setting of another connected Strymon pedal.

Configure the **BOOST** jack to send Make sure the connected pedal is set to 2 Favorite Out messages. (See page 9 for Favorite **EXP** mode. more detail about configuring the Boost jack.) Please refer to the favorite switch setup section of the connected pedal's owner's manual for details. All manuals available at Connect the **BOOST** jack of Riverside to the **EXP** input of another Strymon strymon.net/support. pedal with a TRS cable. • 9VDC PRESENCE -INPUT LEFT OUT RIGHT OUT



3 Save a Favorite setting on the connected Strymon pedal.

> **OPTIONAL STEP:** Store a new Favorite setting on Riverside to go along with the Favorite setting on the connected Strymon pedal.



Pressing the **FAVORITE** switch on Riverside will toggle the Favorite setting on both Riverside and the connected Strymon pedal as well.

External Control – Expression Mode

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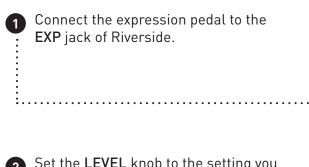
Use a TRS Expression pedal to control the knobs of Riverside

Connect the Expression pedal to the **EXP** jack of Riverside using a TRS cable. **NOTE:** It is also possible to assign the **BOOST** jack as the input for Expression mode. This is useful if you wish to connect MIDI to the EXP jack, but still wish to use a pedal to control Expression. (See page 9 for details about assigning the **BOOST** jack.) Press and hold both FAVORITE and ON footswitches for a few seconds until both LEDs begin blinking GREEN. Rock the expression pedal back to the HEEL position and only the FAVORITE LED will blink **GREEN**. Set the knobs the way you would like them to be in the HEEL position. The **FAVORITE** LED will turn **RED** to indicate that the setting has changed. FAVORITE **5** Rock the xpression pedal forward to the TOE position and only the **ON** LED strymor will blink **GREEN**. 6 Set the knobs you would like to control to the setting for the TOE position of the expression pedal. The **ON** LED will **NOTE:** Expression pedal settings are saved and recalled as turn red to indicate that the setting part of the on-board Favorite setting and MIDI accessible has changed. presets. Press the FAVORITE or ON footswitch NOTE: If you are using the EXP jack for MIDI communication, once to save the expression settings. it is possible to connect the pedal to the **BOOST** jack instead to use an expression pedal. (See page 9 for details on configuring the **BOOST** jack for Expression mode.)

External Control – Volume Mode

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Use a TRS Volume pedal to control the output volume.



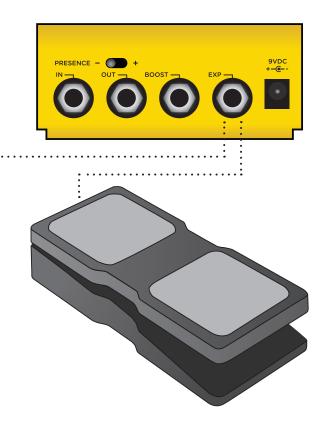
2 Set the LEVEL knob to the setting you would like for the highest TOE down position of the expression pedal.

3 When the FAVORITE setting is engaged, the highest TOE down position of the expression pedal will correspond to the setting that the LEVEL knob was saved as for the favorite setting.

NOTE: When Riverside is in Buffered Bypass mode and the Expression jack is configured for Volume mode, the pedal will still function as a Volume pedal whether the effect is bypassed or engaged.

NOTE: The default assignment for the **EXP** jack is Volume mode. If this has been changed, the **EXP** jack assignment must be changed back to Volume mode. (See page 10 for details on configuring the **EXP** jack to Volume mode.)

NOTE: If you are using the **EXP** jack for MIDI communication, it is possible to connect the pedal to the **BOOST** jack instead to control the volume. (See page 9 for details on configuring the **BOOST** jack for Volume mode.)



Factory Reset

Press and hold the **ON** footswitch during power up. Once both LEDs flash, release the footswitch. GAIN PUSH low norm \bigcirc (\bigcirc) high DRIVE EVEL MIDDLE BASS TREBLE FAVORITE ON 0

2 Turn the **BASS** knob from 0-100% and back two (2) times (back and forth) to reset the pedal to factory power up modes and secondary functions.

FACTORY SETTINGS

- **EXP Input Jack:** Assigned to work in VOLUME PEDAL mode.
- Expression Pedal Mode Assignment: Assigned to control DRIVE.
- **BOOST Input Jack:** Assigned to work in BOOST SWITCH mode.
- BOOST Amount: Set to 50%.
- Noise Reduction: OFF
- Bypass Mode: True Bypass
- MIDI channel: 1
- MIDI Expression On/Off: On
- MIDI Output Mode: Off

Features

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- Custom cascading multistage distortion topology provides a wide range of tube-inspired drive tones
- Digitally controlled analog class A JFET input gain stage maximizes headroom while adding up to 20dB of pure analog gain
- Precision crafted DSP gain stages provide detailed complexity and responsiveness
- Low gain channel for smooth classic overdrive
- High gain channel for modern saturated distortion
- 3-band EQ with independent Bass, Middle and Treble controls
- Selectable post-analog gain mid-band EQ push
- Presence switch to tailor the sound for use with all amplifiers from dark to bright
- Optional variable-threshold noise reduction helps tame noisy guitar pickups
- High impedance mono input
- Mono output
- Favorite footswitch to save and recall a favorite setting

- Expression pedal input allows the connection an expression pedal for simultaneous morphing control over multiple parameters (Expression mode), or logarithmic taper for smooth volume control (Volume mode)
- Boost pedal input allows connection of an external footswitch for up to +6dB of analog boost, or to toggle the Favorite preset on other Strymon pedals (Favorite Out mode)
- MIDI accessible via EXP Jack for remote parameter control and access to 300 preset locations
- Ultra low noise, high performance 24-bit 96kHz A/D and D/A converters provide uncompromising audio quality
- Premium analog front end and output section
- Super high performance SHARC DSP in a compact form factor
- 32-bit floating point processing
- True Bypass (electromechanical relay switching)
- Designed and built in the USA

Specifications

Input Impedance	500k Ohm
Output Impedance	100 Ohm
A/D & D/A	24-bit 96kHz
Max Input Level	+8dBu
Frequency Response	20Hz to 20kHz
DSP performance	1585 MegaFLOPS
Bypass Switching	True Bypass (electromechanical relay switching)
Dimensions	4.5" deep x 4" wide x 1.75" tall (11.4 cm deep x 10.2 cm wide x 4.4 cm tall)

Power Adapter Requirements

Use an adapter with the following rating: 9VDC center negative; 250mA minimum.

Appendix 1 MIDI Functionality

MIDI – Configuring Riverside to Use MIDI

Using MIDI unlocks a set of tools that can be used to load any of Riverside's 300 preset locations and automate knob changes using a suitable MIDI controller or interface connected to Riverside's EXP jack. This requires a MIDI controller/interface with at least one quarter-inch output or a Strymon MIDI EXP cable. (Check strymon.net/support/riverside for a list of compatible devices.)

Step 1 – Set EXP jack to MIDI Mode

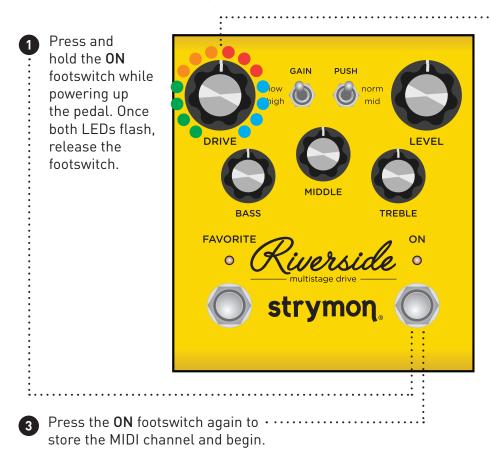
(See page 10 for an illustrated guide to configuring the **EXP** jack for MIDI communication. Steps reprinted here.)

- Press and hold the FAVORITE footswitch while powering up the pedal.
- Turn the LEVEL knob until the ON LED turns BLUE to set the **EXP** jack mode to MIDI Mode.
- Press either footswitch to store the EXP jack assignment.

Step 2 – Set MIDI Channel

This determines which MIDI channel Riverside will use to send and receive MIDI data. See the illustrated guide below for complete instructions.

NOTE: To select channel 4-16, you will need to connect Riverside to a MIDI device.



2 Turn the **DRIVE** knob on the to set the MIDI receive channel. Both LEDs will flash momentarily as the

GREEN - Channel 1 (default)

AMBER - Channel 2

channel is changed.

RED - Channel 3

BLUE - Channel 4-16 (Requires 1/4" MIDI connection.) Once the LED turns **BLUE**, it will blink until the pedal receives a MIDI Program Change message. Once a message is received, the pedal will be set to the MIDI channel that carried the message and the LED will stop blinking.

MIDI – Configuring Riverside to Use MIDI (cont.)

This determines what kind of MIDI data is sent out by Riverside. Note that if you are only sending MIDI data to Riverside – the most common configuration – the MIDI Output mode must be set to OFF.

Step 3 – Set MIDI Output Mode



Turn the **MIDDLE** knob to select what kind of MIDI data is sent from Riverside to other MIDI devices. Both LEDs will flash momentarily as the mode is changed.

GREEN - ON: Using Riverside's knobs and switches generates MIDI messages that are sent out of Riverside.

AMBER - THROUGH: Incoming MIDI messages are sent out of Riverside without any additional MIDI messages generated by Riverside.

RED - OFF (default): No MIDI messages are sent out of Riverside.

TIP: A simple way to check that communication is working is to send CC #10 with a value of 127 when the **FAVORITE** footswitch is off. This will turn the **FAVORITE** footswitch on if MIDI is properly connected and configured.

MIDI – Expression On/Off

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This setting selects whether Riverside will respond to incoming MIDI Expression messages. If your rig uses MIDI Expression messages with multiple pedals that are set to the same MIDI Channel, this setting can be used to determine which pedal(s) will respond to expression messages for a given preset.





NOTE: An easy way to check if your Riverside is running version 1.0 or version 1.2 firmware is to try setting the MIDI Expression functionality. If you are running version 1.0 firmware, the **ON** LED will not change as you turn the **TREBLE** knob.

Saving Presets in MIDI Mode

- When in MIDI mode, the currently loaded settings can be saved to any of Riverside's 300 preset locations at any time.
- ••• To enter SAVE mode, press and hold the **FAVORITE** footswitch. The LED will illuminate in **BLUE**.
 - Send the unit a patch change message from the connected MIDI device. The LED will flash and Riverside will save the settings to that preset location.
 - To save the preset to the currently loaded preset location, press the **FAVORITE** footswitch.

MIDI – Controlling Riverside With an External Device

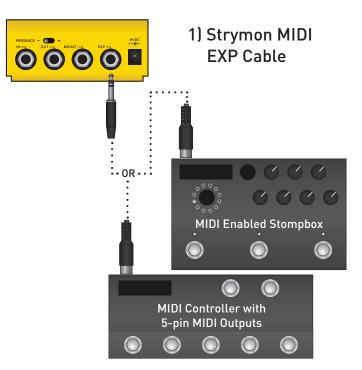
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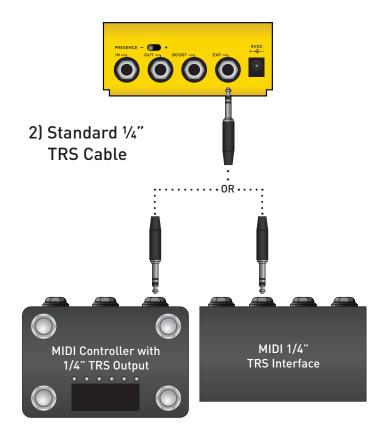
To begin using Riverside with an external MIDI device, connect the MIDI out jack from a pedal, controller or computer interface to the **EXP** jack on Riverside. The following can be used to do this:

- Strymon MIDI EXP cable
- Compatible 5-pin MIDI to ¼" MIDI Interface (check strymon.net/support/riverside for a list of compatible devices)

Once you have connected Riverside to a MIDI source, choose a channel for MIDI communication with Riverside. Riverside is set to MIDI channel 1 by default. (See page 18 for detailed instructions for changing the MIDI channel.)

Refer to Riverside's MIDI Specification on page 22 for additional details about the specific parameters that can be controlled via MIDI.





NOTE: If you are only sending data to Riverside – the most common configuration – the MIDI Output mode must be set to OFF. (See page 19 for details on configuring the MIDI Output Mode.)

MIDI – Specifications

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MIDI Patch Changes

Riverside contains 300 preset locations, numbered sequentially from 0-299. Because MIDI Program Change messages have a maximum number of 128 (0-127) the presets are grouped into three MIDI patch banks.

- MIDI BANK 0 = PRESETS 0-127
- MIDI BANK 1 = PRESETS 128-255
- MIDI BANK 2 = PRESETS 256-299

Riverside always powers up in MIDI Patch Bank 0, so if you plan to stay within the first 127 presets, simply send a standard MIDI Program Change message to load a preset.

If you will be using MIDI Banks 1 and/or 2, it is advisable to send a standard MIDI Bank Change message "MIDI CC# 0 with a value equal to the MIDI Bank#" before each MIDI Program Change.

Selecting bank 0, patch 127 will put Riverside into Manual mode. In this mode, the pedal will be set to the current knob and switch settings. No preset data can be stored at this preset location.

MIDI CC Numbers

PARAMETERS	CC#	RANGE	NOTES
MIDI Patch Bank	0	0-2	
Volume Pedal	7	0-127	
Level	12	0-127	
Drive	13	0-127	
Bass	14	0-127	
Mid	15	0-127	
Treble	16	0-127	
Boost Level	17	0-127	
Boost Off/On	18	0, 127	(0=off, 1-127=on)
Gain (low/high)	19	1-2	(1=low, 2=high)
Push	20	1-2	(1=norm, 2=mid)
Presence	21	1-3	(1= +, 2= -, 3=middle)
Noise Gate	22	0-127	(0=off)
MIDI Expression Off/On	60	0,127	(0=off, 1-127=on)
Expression Pedal	100	0-127	
Bypass/On	102	0,127	(0=off, 1-127=on)

Appendix 2 Live Edit Functions and Powerup Modes

Live Edit Functions

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illustrated description)

Below is a list that details how to access all secondary parameters that are adjustable from Riverside's interface that do not have dedicated knobs or switches. All secondary control parameters are saved per-preset.

Press and Hold the **ON** footswitch until both LEDs start blinking to enter Live Edit mode. Release and use knobs as described below.

Press **ON** again to store your changes and exit Live Edit mode.

NOISE GATE THRESHOLD (Separate for Preset/Man) (See page 6 for an illustrated description)	Turn DRIVE knob - status shown on FAVORITE LED Off = Green (default) Engaged = Amber Extreme = Red
MIDI EXPRESSION ON/OFF (Off= ignore CC100) (See page 20 for an illustrated description)	Turn TREBLE knob - BOTH LEDs show status momentarily Off = Red (default) On = Blue
BOOST LEVEL (See page 7 for an	Turn LEVEL knob - Status shown on ON LED Sweeps from 0dB (Green) to +6dB (Red)

Power Up Modes

Below is a list of global parameters and functions that are accessed via a power up procedure. All power up functions persist through power cycles.

	Press and Hold the ON footswitch at power up until the LEDs flash. Release and use knobs as described below. Press any footswitch to store settings & exit.
BYPASS MODE (See page 8 for an illustrated description)	Turn LEVEL knob - status shown on ON LED True Bypass = Green (default) Buffered Bypass = Red
SET MIDI CHANNEL (See page 18 for an illustrated description)	Turn DRIVE knob - status shown on FAVORITE LED 1 = Green (default) 2 = Amber 3 = Red 4-16 = Blue (channel set by next MIDI Program Change message)
FACTORY RESET (See page 15 for an illustrated description)	Sweep MIDDLE knob twice to RESET - status shown on FAVORITE LED Turn 1 = Amber Turn 2 = Red Turn 3 = Amber Turn 4 = Both LEDs flash Red, pedal resets & power cycles
JACK OPTIONS	Press and Hold the FAVORITE footswitch at power up until the LEDs flash. Release and use knobs as described below. Press any footswitch to store settings & exit.
JACK OPTIONS EXP (See page 10 for an illustrated description)	Release and use knobs as described below. Press any footswitch to store
EXP (See page 10 for an	Release and use knobs as described below. Press any footswitch to store settings & exit. Turn LEVEL knob – status shown on ON LED Expression = Green Volume = Red (default) Favorite Input = Amber

Appendix 3 Sample Settings

Sample Settings



DROP TUNE

SINGING LEAD

Strymon Non-Transferrable Limited Warranty

Warranty

Strymon warranties the product to be free from defects in material and workmanship for a period of two (2) years from the original date of purchase when bought new from an authorized dealer in the United States of America or Canada. If the product fails within the warranty period, Strymon will repair or, at our discretion, replace the product at no cost to the original purchaser. Please contact your dealer for information on warranty and service outside of the USA and Canada.

Exclusions

This warranty covers defects in manufacturing discovered while using this product as recommended by Strymon. This warranty does not cover loss or theft, nor does the coverage extend to damage caused by misuse, abuse, unauthorized modification, improper storage, lightning, or natural disasters.

Limits of Liability

In the case of malfunction, the purchaser's sole recourse shall be repair or replacement, as described in the preceding paragraphs. Strymon will not be held liable to any party for damages that result from the failure of this product. Damages excluded include, but are not limited to, the following: lost profits, lost savings, damage to other equipment, and incidental or consequential damages arising from the use, or inability to use this product. In no event will Strymon be liable for more than the amount of the purchase price, not to exceed the current retail price of the product. Strymon disclaims any other warranties, expressed or implied. By using the product, the user accepts all terms herein.

How to Obtain Service Under this Warranty

For North American customers: Contact Strymon through our website at strymon.net/support for Return Authorization and information. Proof of original ownership may be required in the form of a purchase receipt.

For International Customers: Contact the Strymon dealer from which the product was purchased from in order to arrange warranty repair service.

Strymon[®] is a division of Damage Control[®], LLC.