SUNSET

dual overdrive

USER MANUAL

strymon®

Read Before Using

> This manual covers the feature set for Sunset pedals running version 1.2 firmware. To check if your Sunset is running version 1.2 firmware, follow the instructions in the note at the bottom of page 17.
>
> The User Manual for Sunset version 1.0 is available here.
>
> Sunset version 1.2 adds the ability to remotely control your Sunset via a MIDI connection.
>
> If you wish to install the latest update, go to strymon.net/firmwareupdate and follow the directions.

Controls and Connections – Front Panel

• A

Toggles between 3 different Drive circuits for the **A** effect.

Ge - A circuit combining the softer response of Germanium diodes with a parallel path that blends in the dry signal as the Drive is lowered. At higher gains the lower-mid-range frequencies are emphasized to create a tight, thick response.

texas - A single stage soft-clipper configuration that is filtered before and after the gain stage to create a smooth and dynamic overdrive. Perfect for playing the blues or just fattening up your sound with a signature mid-range bump.

treble - A clean boost that removes the low frequencies as the Tone knob is turned up. Great for tightening up an overdriven amp, or driving another gain pedal that's a bit looser on the low end.

• B

Toggles between 3 different Drive circuits for the **B** effect.

2stage - The 2stage overdrive combines a soft-clipping stage followed by a hard-clipping stage, creating a complex overdrive with a wide range of gain. Its EQ structure preserves the low end while adding some muscle to push your amp. This overdrive can easily take you from lightly clipped to beefy saturation.

hard - A single-stage hard-clipping circuit that has a ton of gain on tap, approaching fuzz territory with the Drive knob maxed. At lower gains, mildly clipped transparent tones are achieved.

JFET - A clean boost that subtly beefs up your signal with the dynamics and response of a JFET front end. As you turn up the drive, the signal gets rounded and warmer.

Controls and Connections – Front Panel (cont.)

• LEVEL

Controls the output volume of each channel.

• DRIVE

Adjusts the amount of gain applied to each channel.

• TONE

Adjusts the treble frequencies for each channel. The character and response of the control vary with the circuit type.

• A (footswitch)

Engages and bypasses the **A** channel. **RED** LED on indicates that the effect is engaged. Press and Hold the **A** footswitch to save a preset that can be accessed with an external Favorite switch or via MIDI.

• B (footswitch)

Engages and bypasses the **B** channel. **RED** LED on indicates that the effect is engaged.

Controls and Connections – Rear Panel

• BRIGHT switch

Tailors the highest frequencies of the output signal. Try the middle for a balanced sound with most setups. Try minus (**-**) for a smooth top end. Try plus (**+**) to cut through with a warm amp/speaker setup.

• IN

Mono instrument input.

• OUT

Mono signal output.

• CONFIG switch

Selects the effect order for the 2 sides of Sunset. Selecting **A+B** will place the effects in a parallel signal chain.

• POWER

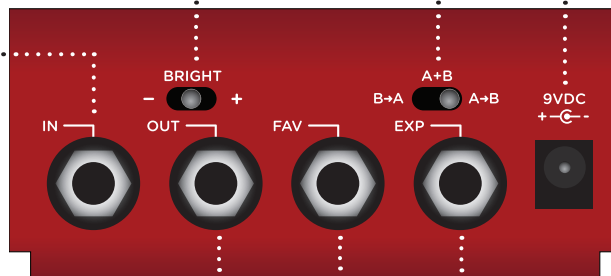Use an adapter with the following rating: 9VDC center negative. 250mA minimum.

BRIGHT
IN   OUT   FAV   EXP
− ● +
B→A ● A→B
A+B
9VDC
+ −○−

• FAV IN

Can be used in one of three ways:

FAV In mode – Connect a MiniSwitch to remotely toggle a Favorite preset. *(See page 9 for more info.)*

Expression Pedal Mode – Allows continuous control over any of the knobs with a standard TRS expression pedal. *(See page 10 for more info.)*

Volume Mode – Allows control of the output volume of the effect with a standard TRS expression pedal. *(See page 11 for more info.)*

• EXP

Can be used in one of three ways:

Expression Pedal Mode – Allows continuous control over any of the knobs with a standard TRS expression pedal. *(See page 10 for more info.)*

Volume Mode – Allows control of the output volume of the effect with a standard TRS expression pedal. *(See page 11 for more info.)*

MIDI Mode – Allows MIDI control of presets and parameters with a TRS cable connection. *(See page 15 for more info.)*

Live Edit Functions – Noise Gate Threshold

Sunset has a variable-threshold noise gate 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 gate silence with all types of input signal dynamics, including staccato bursts and slowly sustained notes.

1 Press and hold the **B** footswitch until the **A** LED blinks.

Release the **B** footswitch.

2 Turn the **LEVEL** knob on the **A** side past the 12 o'clock noon position to engage the noise gate.

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

3 Press the **B** footswitch to store the new noise gate setting to Sunset.

> **NOTE:** The noise gate setting can be saved independently for both the Favorite and Manual settings of Sunset.

Power Up Modes – Bypass Mode Selection

Setting Sunset 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 **B** footswitch while powering up the pedal. Once both LEDs flash, release the footswitch.

2 Turn the **LEVEL** knob on the **B** side to select True Bypass or Buffered Bypass. The **B** LED will change from **GREEN** to **RED** to indicate the current status as the knob is turned.

GREEN - True Bypass (default)
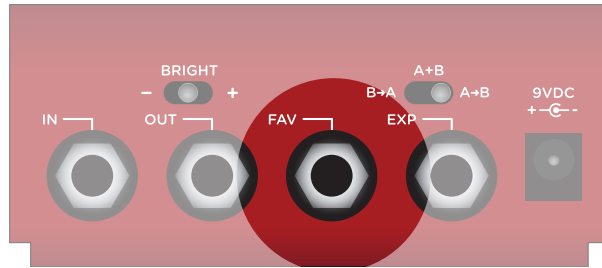
RED - Buffered Bypass
A connected expression pedal will still work in Volume Mode when using Buffered Bypass.

3 Press the **A** or **B** footswitch to store the Bypass mode and begin using Sunset.

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

Power Up Modes - FAV Jack Options

Select what the FAV jack will do.

1 Press and hold the **A** footswitch while powering up the pedal. Once both LEDs flash, release the footswitch.

2 Turn the **LEVEL** knob on the **A** side to set the **FAV** jack mode. The **A** LED will change color to indicate the selection as the knob is turned.

GREEN - Expression Mode
(See page 10 for more info.)

RED - Volume Mode
(See page 11 for more info.)

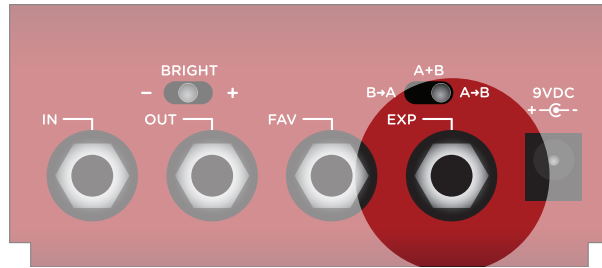**AMBER** - FAV IN Mode
(default) *(See page 9 for more info.)*

3 Press the **A** or **B** footswitch once again to store power up modes and begin using Sunset.

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, Expression and Volume modes are not available. Please refer to the Sunset version 1.0 manual at www.strymon.net/sunset.

Power Up Modes - EXP Jack Options

Select what the EXP jack will do.

1 Press and hold the **A** footswitch while powering up the pedal. Once both LEDs flash, release the footswitch.

2 Turn the LEVEL knob on the **B** side to set the **EXP** jack mode. The **B** LED will change color to indicate the selection as the knob is turned.

GREEN - Expression Mode *(See page 10 for more info.)*

RED - Volume Mode (default) *(See page 11 for more info.)*

BLUE - MIDI Mode *(See page 15 for more info.)*

3 Press the **A** or **B** footswitch once again to store power up modes and begin using Sunset.

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 Sunset version 1.0 manual at www.strymon.net/sunset.

External Control - FAV Switch Setup
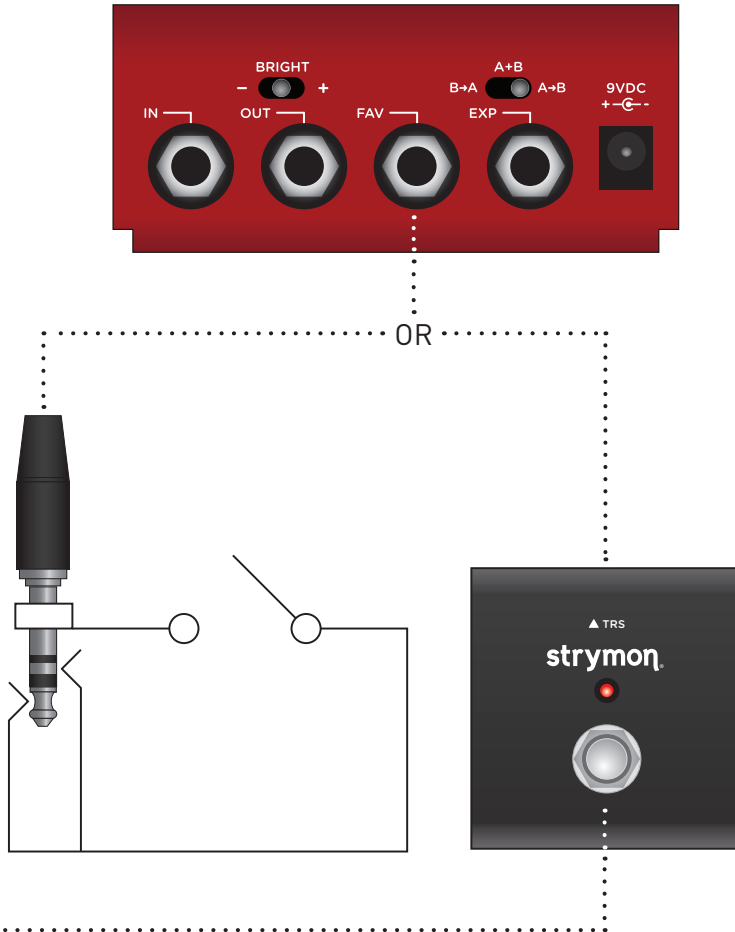
Connect MiniSwitch or other external latching footswitch with a TRS cable to store and recall your Favorite setting.

1 Ensure that the **FAV** jack is configured for **FAV IN**. *(See page 7 for more info.)*

2 Connect an external switch to the **FAV** jack of Sunset.

3 Dial in your desired sound on Sunset.

4 Press and hold the **A** footswitch for 2 seconds to save this setting as a new Favorite sound.

5 Step on the external footswitch to toggle between your favorite setting and the current setting on Sunset.

NOTE: Along with the knobs and toggle switches on the face of the pedal, the setting of the BRIGHT and CONFIG switches, the NOISE GATE and the bypass state of each side of Sunset is stored with the Favorite preset.

NOTE: Saving presets works differently when using MIDI. *(See page 17 for more info about Saving Presets in MIDI mode.)*
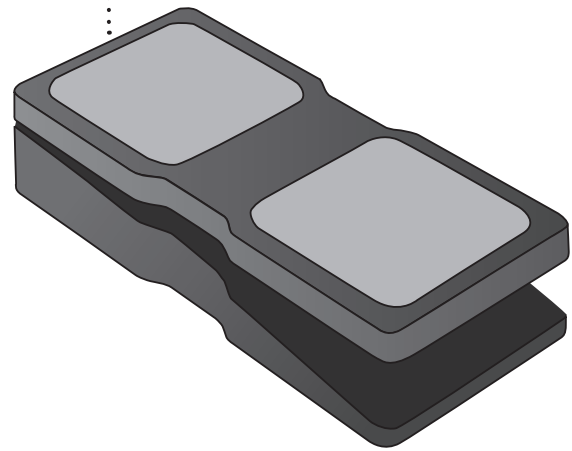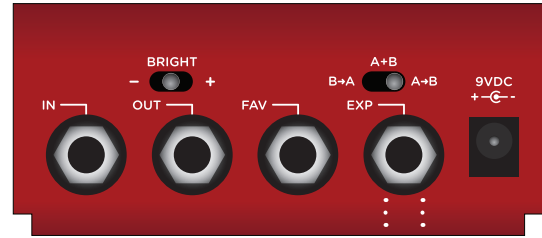
COMPARE MODE

As knob and switch settings are adjusted with the FAVORITE engaged, the LED temporarily changes from **RED** to **GREEN** when the current position is identical to the saved favorite.

External Control – Expression Mode

Use a TRS Expression pedal to control the knobs of Sunset.

1 Configure the **EXP** jack for Expression Mode. *(See page 8 for details.)*

2 Connect the Expression pedal to the **EXP** jack of Sunset using a TRS cable.

3 Press and hold both **A** and **B** footswitches for a few seconds until both LEDs begin blinking **GREEN**.

4 Rock the expression pedal back to the HEEL position and only the **A** LED will blink **GREEN**.

5 Set the knobs the way you would like them to be in the HEEL position. The **A** LED will turn **RED** to indicate that the setting has changed.

6 Rock the expression pedal forward to the TOE position and only the **B** LED will blink **GREEN**.

7 Set the knobs you would like to control to the setting for the TOE position of the expression pedal. The **B** LED will turn red to indicate that the setting has changed.

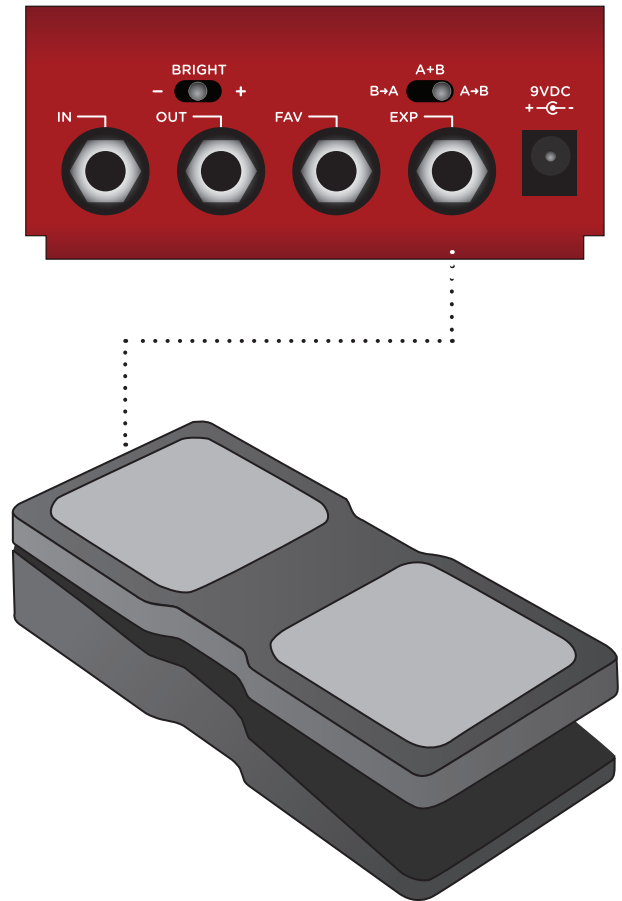**8** Press the **A** or **B** footswitch once to save the expression settings.

NOTE: Expression pedal settings are saved and recalled as part of the on-board Favorite setting and MIDI accessible presets.

NOTE: If you are using the **EXP** jack for MIDI communication, it is possible to connect the pedal to the **FAV** jack instead to use an expression pedal. *(See page 7 for details on configuring the **FAV** jack for Expression mode.)*

External Control – Volume Mode

Use a TRS Expression pedal to control the output volume.

1 Connect the Expression pedal to the **EXP** jack of Sunset using a TRS cable.

NOTE: When Sunset 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 8 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 **FAV** jack instead to control the volume. *(See page 7 for details on configuring the FAV jack for Volume mode.)*

Factory Reset

Restore the pedal to factory power up modes and secondary functions.

1 Press and hold the **B** footswitch during power up. Both LEDs will blink.

2 Release the footswitch and turn the **A** channel **DRIVE** knob from 0-100% and back two (2) times. The **A** channel LED will change to **AMBER** at the extremes of the knob range and blink **RED** to indicate that the reset is taking place.

Once the **A** channel LED stops blinking **RED**, the reset is complete and Sunset is ready for use.

FACTORY SETTINGS

- **EXP Input Jack:** Assigned to work in VOLUME PEDAL mode.
- **FAV Input Jack:** Assigned to work in FAV IN mode.
- **Expression Pedal Mode Assignment:** Assigned to control both DRIVE knobs simultaneously.
- **Noise Gate:** OFF
- **Bypass Mode:** True Bypass
- **MIDI channel:** 1
- **MIDI Expression On/Off:** On
- **MIDI Output Mode:** Off

Features

- Two independent effects that can be configured and controlled separately or blended together as a single effect

- The ability to run the two effects in series (in either direction) or parallel

- Six hand crafted circuit algorithms provide a wide range of drive from clean to heavy distortion

- Bright Switch tailors the sound for use with all amplifiers from dark to bright

- Expression pedal input provides seamless morphing between different sounds (Expression mode), or smooth volume control with logarithmic taper (Volume mode)

- Optional external Favorite switch toggles between a saved favorite setting and the current settings on the pedal

- MIDI accessible via EXP Jack for remote parameter control and access to 300 preset locations

- Selectable noise gate minimizes buzz and hum

- Premium analog front end and output section

- Ultra Low Noise, high performance A/D and D/A Converters

- High Performance DSP

- Rugged & Lightweight Anodized Aluminum Chassis

- True Bypass

- Selectable high-quality, transparent analog buffered bypass

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 Sunset to Use MIDI

Using MIDI unlocks a set of tools that can be used to load any of Sunset's 300 preset locations and automate knob changes using a suitable MIDI controller or interface connected to Sunset'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/sunset for a list of compatible devices.)*

Step 1 – Set EXP jack to MIDI Mode

*(See page 8 for an illustrated guide to configuring the **EXP** jack for MIDI communication. Steps reprinted here.)*

- Press and hold the **A** footswitch while powering up the pedal.

- Turn the **LEVEL** knob on the **B** side until the **B** 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 Sunset 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 Sunset to a MIDI device.

1 Press and hold the **B** footswitch while powering up the pedal. Once both LEDs flash, release the footswitch.

2 Turn the **LEVEL** knob on the **A** side to set the MIDI communication channel. The **A** LED will change color as the MIDI channel is changed.

GREEN - Channel 1 (default)

AMBER - Channel 2

RED - Channel 3

BLUE - Channel 4-16 (Requires ¼" 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.

3 Press the **B** footswitch again to store the MIDI channel and begin.

MIDI – Configuring Sunset to Use MIDI (cont.)

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

Step 3 – Set MIDI Output Mode

1 Press and hold the **A** footswitch while powering up the pedal. Once both LEDs flash, release the footswitch.

2 Turn the **TONE** knob on the **A** side to select what kind of MIDI data is sent from Sunset to other MIDI devices. Both LEDs will flash momentarily as the mode is changed.

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

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

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

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

MIDI – Expression On/Off

This setting selects whether Sunset 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.

1 Press and hold the **B** footswitch until both LEDs blink. Release the **B** footswitch.

2 Turn the **DRIVE B** knob to select whether Sunset will respond to incoming MIDI Expression messages (CC #100).

RED - Sunset will not respond to MIDI Expression messages.

BLUE - (default) Sunset will respond to MIDI Expression messages.

3 Press the **B** footswitch to store the setting to Sunset.

Saving Presets in MIDI Mode

- When in MIDI mode, the currently loaded settings can be saved to any of Sunset's 300 preset locations at any time.

- To enter SAVE mode, press and hold the **A** footswitch. The LED will illuminate in **BLUE**.

- Send the unit a patch change message from the connected MIDI device. The LED will flash and Sunset will save the settings to that preset location.

- To save the preset to the currently loaded preset location, press the **A** footswitch.

NOTE: An easy way to check if your Sunset 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 **B** LED will remain the same as you turn the **DRIVE** knob.
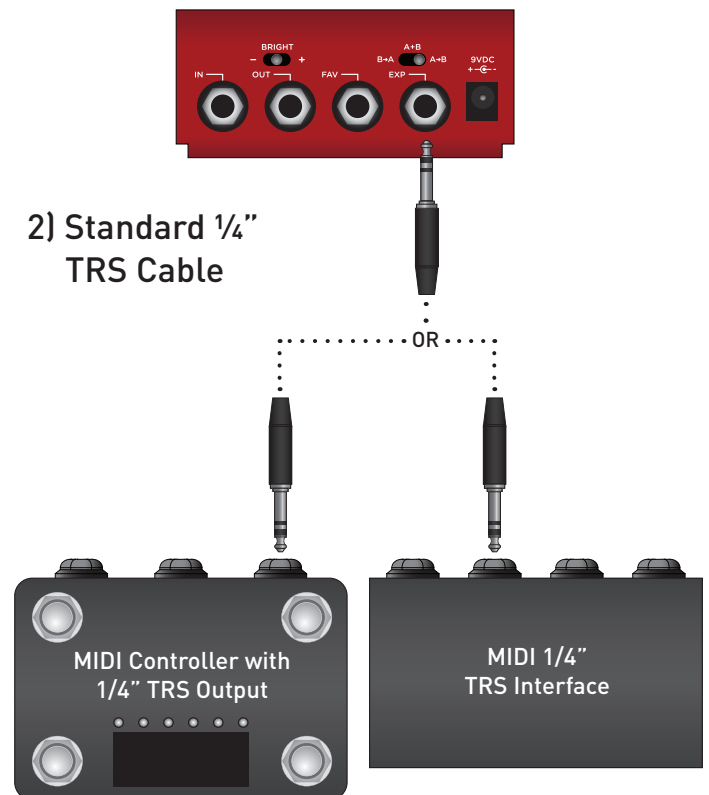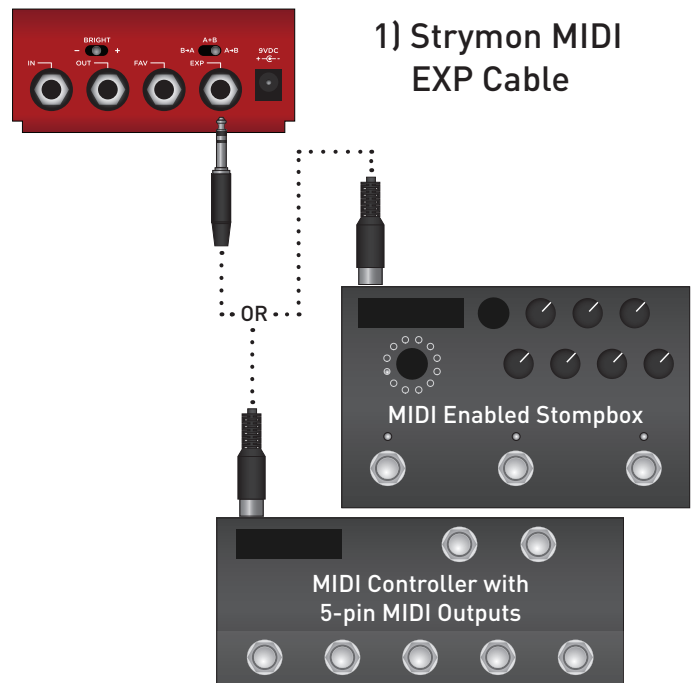
MIDI – Controlling Sunset With an External Device

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

- Strymon MIDI EXP cable

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

Once you have connected Sunset to a MIDI source, choose a channel for MIDI communication with Sunset. Sunset is set to MIDI channel 1 by default. *(See page 15 for detailed instructions for changing the MIDI channel.)*

Refer to Sunset's MIDI Specification on page 19 for additional details about the specific parameters that can be controlled via MIDI.

1) Strymon MIDI EXP Cable

OR

MIDI Enabled Stompbox

MIDI Controller with 5-pin MIDI Outputs

2) Standard ¼" TRS Cable

OR

MIDI Controller with ¼" TRS Output

MIDI ¼" TRS Interface

NOTE: If you are only sending data to Sunset – the most common configuration – the MIDI Output mode must be set to OFF. *(See page 16 for details on configuring the MIDI Output Mode.)*

MIDI - Specifications

MIDI Patch Changes

Sunset 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

Sunset 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 Sunset 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

A PARAMETERS	CC#	RANGE	NOTES
A Bypass/On	10	0-127	(0=bypass, 1-127=On)
Circuit Select A	11	1-3	(1=treble, 2=Ge, 3=texas)
Level A	12	0-127	
Drive A	13	0-127	
Tone A	14	0-127	

B PARAMETERS	CC#	RANGE	NOTES
B Bypass/On	15	0-127	(0=bypass, 1-127=On)
Circuit Select B	16	1-3	(1=JFET, 2=2stage, 3=hard)
Level B	17	0-127	
Drive B	18	0-127	
Tone B	19	0-127	

COMMON PARAMETERS	CC#	RANGE	NOTES
Config (A/B)	20	0-127	(1=A>B, 2=B>A, 3=A+B)
Bright	21	1-3	(1= +, 2= −, 3=middle)
Noise Gate	22	0-127	(0=off)
Bypass/On A and B	33	0,127	(0=bypass, 127=on)
MIDI Patch Bank	0	0-2	
Volume Pedal	7	0-127	
MIDI Expression Off/On	60	0,127	(0=off, 127=on)
Expression Pedal	100	0-127	

Appendix 2

Live Edit Functions and Powerup Modes

Live Edit Functions

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

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

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

NOISE GATE THRESHOLD

(Separate for Preset/Man)

(See page 5 for an illustrated description)

Turn **LEVEL** knob (**A**) - status shown on **A** LED

Off = **GREEN**

Engaged = **AMBER**

Extreme = **RED**

MIDI EXPRESSION ON/OFF

(See page 17 for an illustrated description)

Turn **DRIVE** knob (**B**) - status shown on **B** LED

Off = **RED** LED

On = **BLUE** LED

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.

GENERAL SETTINGS

Press and Hold the **B** 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 6 for an illustrated description)

Turn **LEVEL** knob (**B**) - status shown on **B** LED

  True Bypass = **GREEN** (default)

  Buffered Bypass = **RED**

SET MIDI CHANNEL
(See page 15 for an illustrated description)

Turn **LEVEL** knob (**A**) - status shown on **A** LED

  1 = **GREEN** (default)

  2 = **AMBER**

  3 = **RED**

  4-16 = **BLUE** (channel set by next MIDI Program Change message)

FACTORY RESET
(See page 12 for an illustrated description)

Sweep **DRIVE** knob (**A**) twice to RESET - status shown on **A** 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 **A** footswitch at power up until the LEDs flash. Release and use knobs as described below. Press any footswitch to store settings & exit.

EXP
(See page 8 for an illustrated description)

Turn **LEVEL** knob (**B**) - status shown on **B** LED

  Expression = **GREEN**

  Volume = **RED** (default)

  Digital = **BLUE**

FAV
(See page 7 for an illustrated description)

Turn **LEVEL** knob (**A**) - status shown on **A** LED

  Expression = **GREEN**

  Volume = **RED**

  Favorite In = **AMBER** (default)

MIDI OUT MODE
(See page 16 for an illustrated description)

Turn **TONE** knob (**A**) - both LEDs show status momentarily

  On = **GREEN**

  Through = **AMBER**

  Off = **RED** (default)

Appendix 3

Sample Settings

Sample Settings

Heavy Stack

A+B
B→A A→B

Blues Stack

A+B
B→A A→B

Fat Stack

A+B
B→A A→B

Texas Classic

Dirty FET Boost

Defined Fuzz

A+B
B→A A→B

Thick & Juicy

Harmonic Drive

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.