BRIGADIER

dBucket Delay

strymon®

Front Panel

TIME: Controls the **delay time** according to the selected delay mode. Delay clock is continuously variable so that turning it while repeats are happening can produce interesting pitch effects.

REPEATS: Varies the number of **repeats** from one to runaway oscillation. When set to 3:00, a sustained **infinite repeat** is achieved without runaway.

MODE SWITCH: Controls the delay time range by adjusting the number of **dBucket 'chips'** in the delay. **Short** mode ranges from **40ms to 400 ms**, **med** from **100ms to 1000ms**, and **long** from **500ms to 5s**

TAP SWITCH: Changes the **tap subdivision** between **quarter notes**, **dotted eighth notes**, and **eighth note triplets**.

MIX: Controls the balance of **dry signal** and **wet signal** from 100% dry at minimum to 100% wet at maximum. The **mix** occurs entirely in **analog**. Set to 3:00 to get a 50/50 mix.

BUCKET LOSS: Controls the amount of **bucket loss** at each stage in the **dBucket** algorithm, from no loss at minimum, to full noisy loss at maximum. Set to 3:00 to get maximum distortion loss with just a hint of noise. Increasing from 3:00 adds more noisy loss. **TIP:** Hold TAP and BYPASS while turning the knob to adjust the **filter** for darker or brighter repeats (see pg 5 for more info).
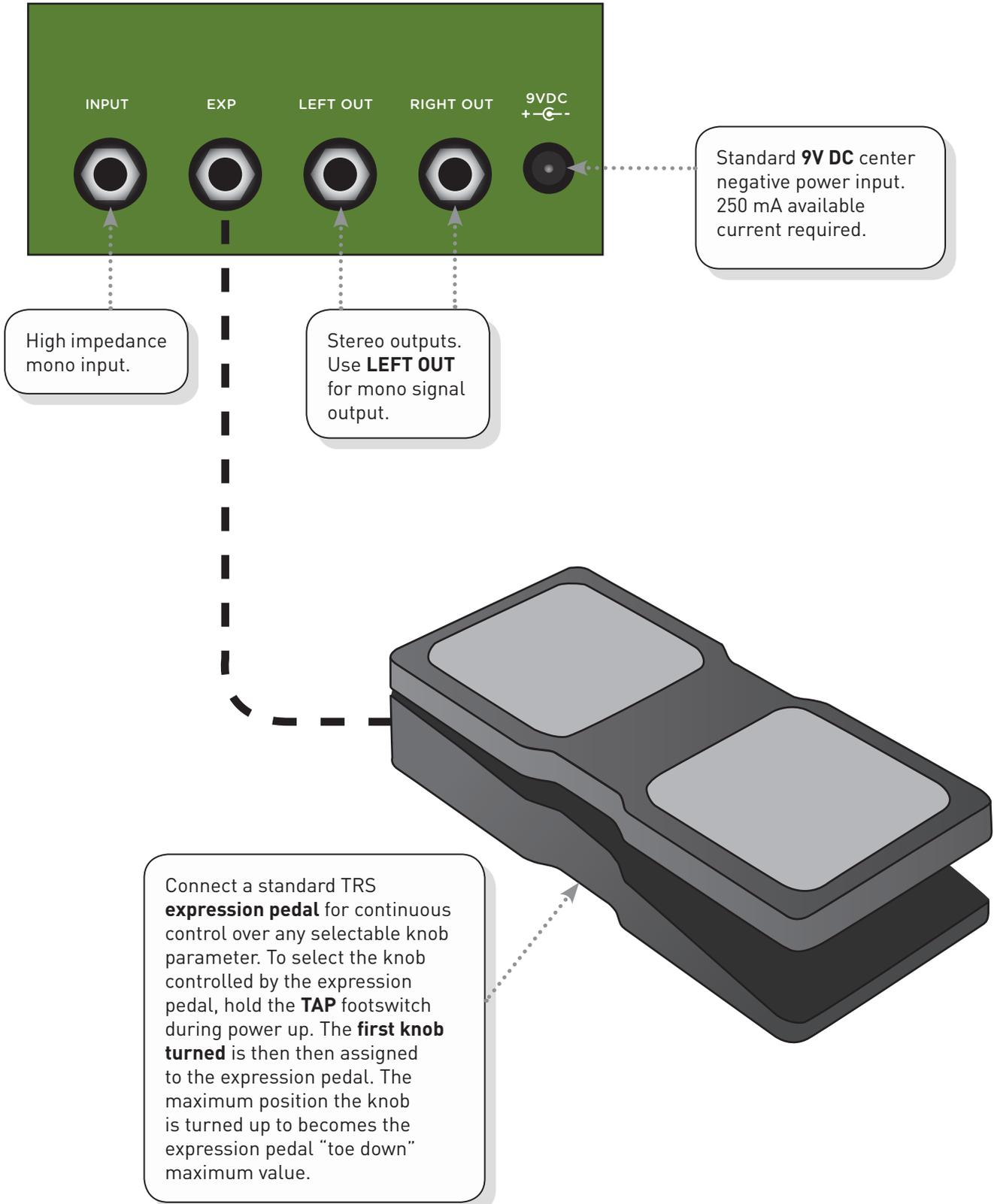
MOD: Adds **LFO modulation** to the delay time. Modulation is off at minimum setting. The modulation speed is slow in the first half of the knob, and fast in the second half of the knob, increasing in intensity as the knob is turned clockwise.

MODE — short / med / long

TAP — quarter / dot / triplet

TIME

MIX

REPEATS

BUCKET LOSS

MOD

TAP

BYPASS

BRIGADIER
— dBucket delay —

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TAP FOOTSWITCH: Tap **quarter notes** to set the delay time. The **TAP LED** will flash to indicate the tempo. **TIP:** Holding the tap footswitch will result in **infinite repeats**.

BYPASS FOOTSWITCH: Engages and disengages effect. Bypass mode is **true bypass** by default. LED on indicates that the effect is engaged. **TIP:** Hold the bypass footswitch during power up to change the bypass mode to analog bypass with **trails** (delay persist).

TIP: Hold down **BYPASS** and **TAP** while turning the **MIX knob** to achieve a +/- 3dB boost or cut when the pedal is engaged (12:00 on the Mix knob is unity gain).

Rear Panel

INPUT   EXP   LEFT OUT   RIGHT OUT   9VDC
+ -C- -

Standard **9V DC** center negative power input. 250 mA available current required.

High impedance mono input.

Stereo outputs. Use **LEFT OUT** for mono signal output.

Connect a standard TRS **expression pedal** for continuous control over any selectable knob parameter. To select the knob controlled by the expression pedal, hold the **TAP** footswitch during power up. The **first knob turned** is then then assigned to the expression pedal. The maximum position the knob is turned up to becomes the expression pedal "toe down" maximum value.
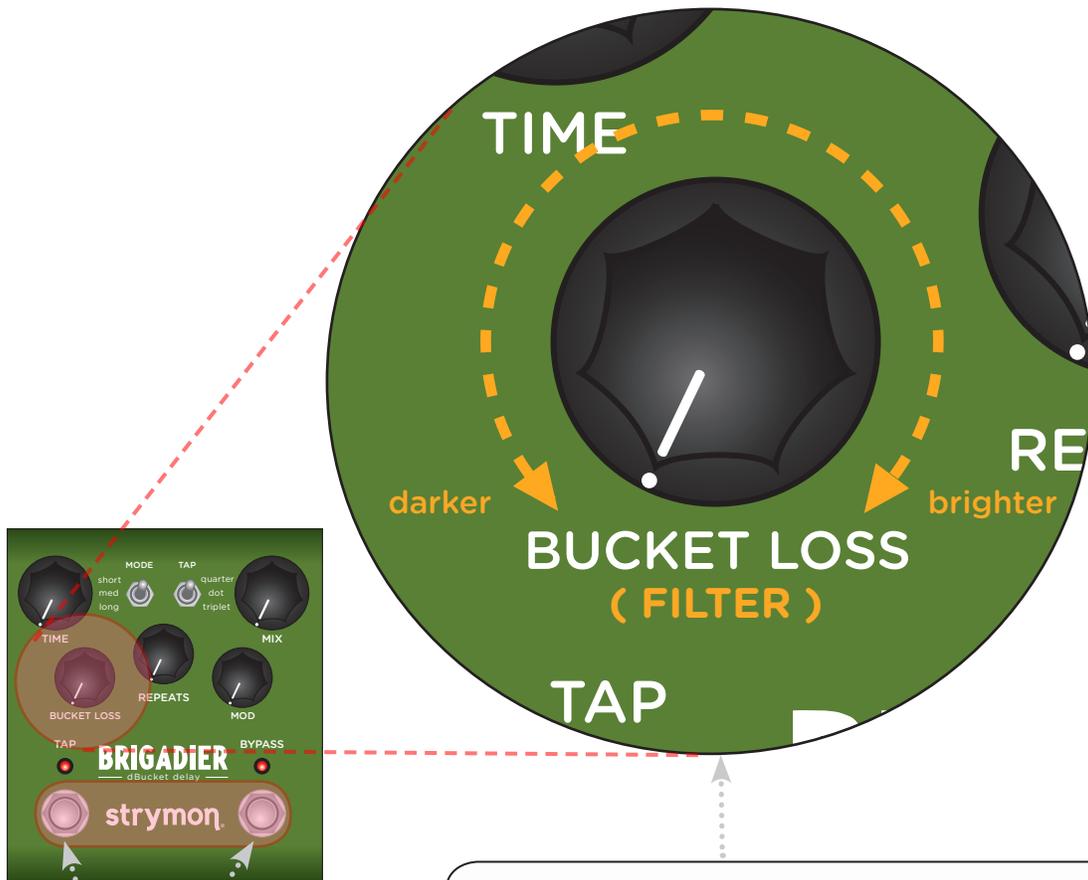
In Depth: Delay Modes

The 3 modes in Brigadier give you 3 different delay pedals in essence. Each mode has a delay range that is determined by the number of **dBucket 'chips'** in the delay. The **short** mode has delay times ranging from 40 to 400ms. The **medium** mode adds another dBucket 'chip' for a delay range between 100ms and 1000ms. The **long** mode adds even more bucket stages to achieve delays ranging from 500ms to 5 full seconds.

MODE

short

med
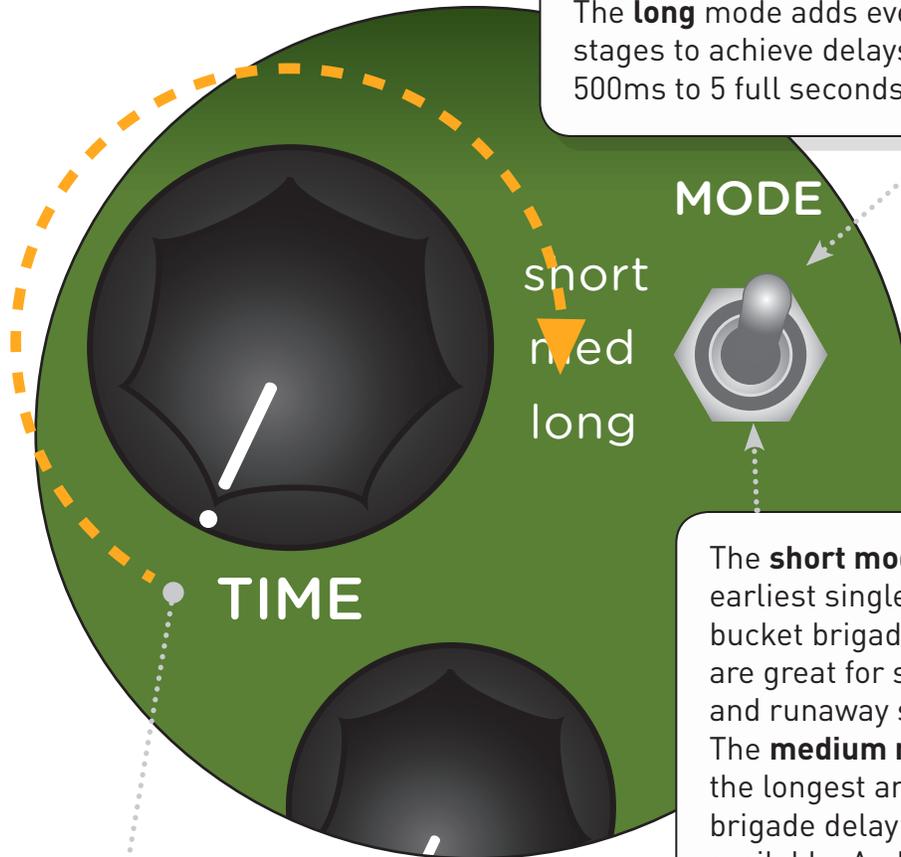
long

TIME

The **short mode** recreates the earliest single-chip analog bucket brigade pedals that are great for slap back, leads, and runaway sci-fi sounds. The **medium mode** achieves the longest analog bucket brigade delay times currently available. And, **long mode** goes far beyond what is physically possible with analog bucket brigade chips.

One thing you'll notice as you turn the Delay **Time knob** to around **3:00** or greater (in any mode) is the **clock artifacts** that arise due to the slower clocks used to achieve the longer delay times. This is independent of the Bucket loss. In fact, it is more noticeable with zero bucket loss because higher bucket loss can serve to overshadow some of those clock artifacts. In the short mode, you'll hear these artifacts strongly at 400ms delay. If you want a cleaner sounding 400ms delay, you can go to Med mode, where you'll hear the clock artifacts strongly at 1s. If you want a cleaner 1 second delay, you can go to Long mode where you'll hear the clock artifacts strongly at 5 seconds.

In Depth: Filter control

TIME

BUCKET LOSS
(FILTER)

darker   brighter

RE

TAP

Filter Control: The **filter** control on the Brigadier allows the delay repeats to be either **darker** or **brighter** depending on preferece. 12:00 is a neutral filter setting. Turning the filter counterclockwise makes the repeats darker and they will get progressively darker with each repeat. Increasing the bucket loss will darken the repeats even further. Turning the filter clockwise makes the repeats brighter by applying a 'post' high shelf EQ to the wet signal.

To adjust the **Filter** control, hold the **TAP** and **BYPASS** switches while turning the **Bucket Loss** knob.

MODE TAP
short   quarter
med   dot
long   triplet

TIME   MIX

REPEATS

BUCKET LOSS   MOD

TAP   BYPASS

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Sample Settings

MODE short med long | TAP quarter dot triplet
TIME | MIX
BUCKET LOSS | REPEATS | MOD

Rockabilly

MODE short med long | TAP quarter dot triplet
TIME | MIX
BUCKET LOSS | REPEATS | MOD

Vintage

MODE short med long | TAP quarter dot triplet
TIME | MIX
BUCKET LOSS | REPEATS | MOD

Ambient Clean

MODE short med long | TAP quarter dot triplet
TIME | MIX
BUCKET LOSS | REPEATS | MOD

Lead Enhancer

MODE short med long | TAP quarter dot triplet
TIME | MIX
BUCKET LOSS | REPEATS | MOD

1 Second Vibrato

MODE short med long | TAP quarter dot triplet
TIME | MIX
BUCKET LOSS | REPEATS | MOD

5 Second Fun

MODE short med long | TAP quarter dot triplet
TIME | MIX
BUCKET LOSS | REPEATS | MOD

June Echo

(Tap in quarter notes and you will hear repeats as dotted eighth notes.)

MODE short med long | TAP quarter dot triplet
TIME | MIX
BUCKET LOSS | REPEATS | MOD

Triplets

(Tap in quarter notes and you will hear repeats as eighth note triplets.)

Features

- Hand Crafted dBucket Algorithm
- Super Low Noise, high performance A/D and D/A Converters
- Premium analog front end and output section
- Analog dry path for a zero latency dry signal that is never converted to digital
- High Performance DSP
- Bucket Loss control to control the amount of loss that occurs at each stage of the dBucket
- 3 delay time modes (short: 40-400ms, medium: 100-1000ms, long: 500ms-5s)
- 3 Tap Tempo modes (quarter, dotted eighth, and eighth note triplets)
- Stereo Output
- Expression pedal input with selectable control over any knob parameter
- +/- 3dB adjustable analog boost or cut when effect is engaged
- Tap Tempo footswitch
- Rugged & Lightweight Anodized Aluminum Chassis
- No-Nonsense User Interface
- Bypass selectable between True Bypass or Analog Bypass with "trails"

Specifications

Input Impedance	1Meg Ohm
Output Impedance	100 Ohm
Signal to Noise	115 dB typical
A/D & D/A	24-bit 96kHz
Frequency Response	20Hz to 20kHz
Max Input Level	+8dBu
DSP performance	1596 MegaFLOPS
Bypass Switching	True Bypass (electromechanical relay switching) or Analog "trails" Bypass (selectable)
Dimensions	4.5" deep x 4" wide x 1.75" tall

Power Supply

Input Voltage	9VDC Center Negative
Required Current	250mA

Strymon Non-Transferrable Limited Warranty

Warranty
Strymon warrants the product to be free from defects in material and workmanship for a period of one (1) year from the original date of purchase. 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.

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, express 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 http://www.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.