
ST-MIX

Stereo mix accessory pedal for the Memory Lane

User Manual
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INTRODUCTION

Thanks for purchasing a Diamond ST-MIX stereo mix accessory pedal. Although designed to be used with the Memory Lane analog delay, the ST-MIX's versatility lends itself to a number of applications not solely limited to the stereo interfacing of the ML.

Remember to protect your hearing and wear appropriate hearing protection when playing loud...

DESIGN BACKGROUND

The ST-MIX began development in 2005 a few months after the release of the Memory Lane when a customer wrote in asking for a true stereo solution - one in which guitar signal went to both amps even with the Memory Lane in true bypass. We saw this as an opportunity to solve several other potential issues with running amps in tandem:

- phase: the ability to correct 180 deg phase differences between different amps
- isolation: the ability to isolate potential grounding issues between amps



Although the first few 'beta' ST-MIX pedals were released in 2006, full production began in 2007 (the beta pedals had an inverted 'upside-down' jack location key changed for the final production units).

FEATURES

- left, right and PAN IN inputs (the left signal is automatically routed to both left and right outputs if no plug is inserted on the right channel input)
- sound field placement of the PAN IN input between the left and right outputs
- increased signal headroom with 15V internally regulated power supply and specially designed discrete JFET input stages
- switchable transformer output isolation of the right channel
- in-phase / out-of-phase footswitch control
- adapter passthrough jack and included patch cable allows a single Memory Lane power adapter (or i8 power cable from a pedal supply) to power both an ST-MIX and a Memory Lane
- genuine Hammond cast aluminum 4.4 x 3.2 x 1.6 inch case

QUICK SETUP INSTRUCTIONS - MEMORY LANE TO TWO AMPLIFIERS

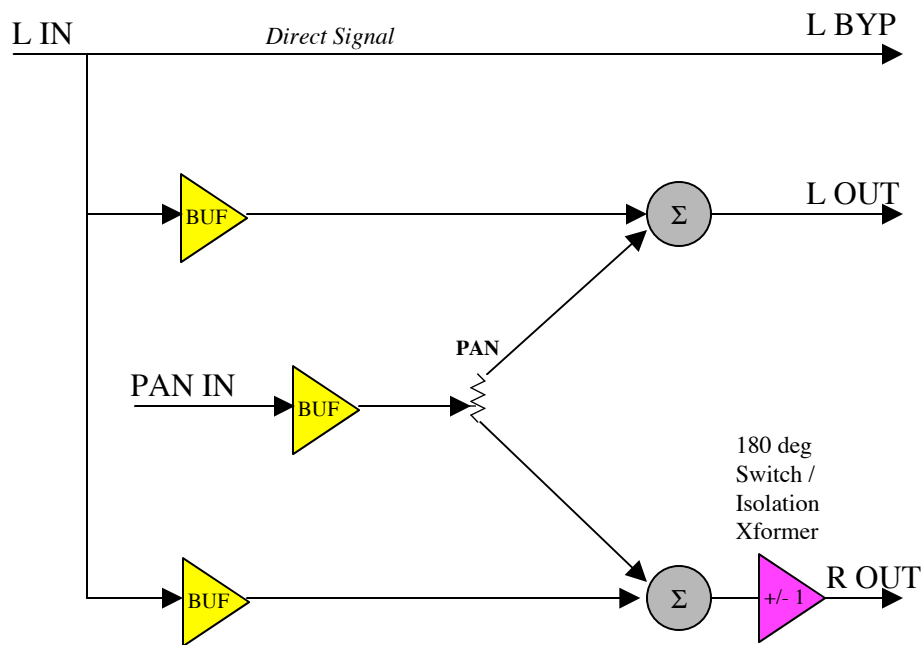
If you're using the ST-MIX to interface a Memory Lane to two guitar amplifiers, follow these basic instructions:

POWERING

Take the power adapter plug normally connected directly to the Memory Lane (whether using the Memory Lane's provided 24VDC adapter, or a custom cable used with pedal power supplies providing between 18 and 24VDC), and connect it instead to any one of the two power jacks on the ST-MIX. Then, using the provided patch cable, connect the remaining power jack on the ST-MIX to the DC input on the Memory Lane.

SIGNAL CONNECTIONS

1. Connect the MIX/DIRECT output of the Memory Lane to the L IN input of the ST-MIX.
2. Connect the DELAY ONLY output of the Memory Lane to the PAN IN input of the ST-MIX.
3. Connect the L OUT and R OUT outputs to the inputs of the two guitar amplifiers.



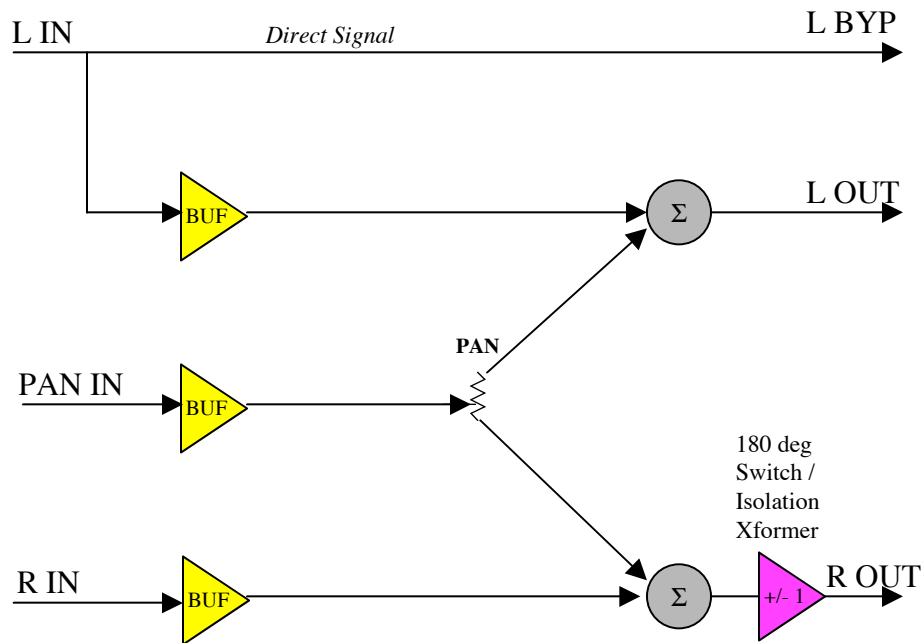
ST-MIX mono input / stereo output

OTHER APPLICATIONS

The unique collection of inputs and outputs on the ST-MIX allows for many other applications and setup topologies.

FULL STEREO

The ST-MIX can be used to take stereo inputs to the L IN and R IN inputs and mix a third signal from PAN IN between the L OUT and R OUT outputs. This topology can be used to develop very sophisticated signal chains - for instance, the outputs of a stereo chorus can then go to separate effects (for instance a stereo delay and mono phaser) and combined together at the ST-MIX (two outputs of the stereo delay to L IN and PAN IN inputs, with the mono phaser sent to the R IN input. The possibilities here are endless!



ST-MIX stereo input / stereo output

FAUX STEREO

The ST-MIX can be used to take monaural inputs to the LEFT input and produce a phase invertible faux stereo signal to two amplifiers. Outputs can be taken from either the L OUT (buffered) and R OUT pair or the L BYP (unbuffered) and R OUT output pair.

TUNER OUT

The L BYP output can be used as an auxiliary output for such devices as tuners or direct boxes.

PAN-ABLE FX LOOP

The L BYP output can be used as an FX send, with the return brought back to the PAN IN input and mixed in with the original dry signal in each channel, allowing for the stereo placement of a particular effect between two amplifiers.

CONTROLS

The ST-MIX has a single control: PAN

PAN

The PAN control acts like a mixing board panner and pans the PAN IN input signal between the L OUT and R OUT outputs. PAN IN signal IS NOT sent to the L BYP output.

SWITCHES

PHASE

This switches the relative phase of the right channel to the left, with green on the LED indicating 0 deg relative phase and red indicating 180 deg relative phase.

ISOLATION

A small internal slide switch can be set for the right channel isolation transformer 'in' or 'out' of operation. This is factory set to the 'in' position with the transformer providing ground isolation of the right channel. For some setups, it may be desired to bypass the transformer and have identical left and right signal paths from input to output, but since the transformer also does second duty for phase inversions, the 180 deg phase footswitch will not flip right channel output phase even though the LED will continue to change color.

POWERING

Take the positive tip power adapter plug normally connected directly to the Memory Lane (whether using the Memory Lane's provided 24VDC adapter, or a custom cable used with pedal power supplies providing between 18 and 24VDC), and connect it instead to any one of the two power jacks on the ST-MIX. Then, using the provided patch cable, connect the remaining power jack on the ST-MIX to the DC input on the Memory Lane.