



A very recurring topic on Eventide Helps (<http://groups.yahoo.com/group/eventidehelps>) is optimization of signal routing/connections between guitar/amps/preamps - Eventides - power amps. General guitar systems management!

I'll be dividing the topic into different usual typical scenarios:

## 1- gtr > combo amp

NOT the most exciting way to enjoy the power of your Eventide and, often, of your gtr and amp.

You are loosing stereo signal (reverb is a stereo natural phenomenon) and usually have interconnection problems.

The advised connection of an Eventide in such a scenario is :  
put your Eventide in the amp FX LOOP!!!

FX Loops are tricky, and often poorly designed.

In a perfect audio world, an FX loop SEND should provide balanced +4dB audio signal and accept balanced +4dB audio on its RETURN.

The FX LOOP is designed to interface amps with rack gear, not footstomp fx. These should be connected between gtr and amp input...they are meant to be there!

In this world though, FX Loops for gtr amps usually use unbalanced 1/4" jack connections, running @ -10dB. Some better designed gtr amps give a choice, w/a selector switch, to change SEND/RECEIVE line levels between -10dB/+4dB, which is a real bonus.

If your combo FX LOOP has a +4dB fixed or switchable level, you are "on board" to enjoying your Tide at its best.

Advised connections are: KEEP the EVENTIDE inputs and outputs BALANCED (we use XLR only! for +4dB) and UNBALANCE the cables ends connected to your amp FX LOOP SEND/RETURN 1/4" I/Os.

You will need line level balanced cables; many professional brands make them....Mogami, Canare, Klotz, Belden....

Info on how to wire balanced XLRs to unbalanced 1/4" connections is available in all units manuals.

This configuration is true for H3000/3500, DSP/GTR4000/4500/7000/7500/4000B/4000B+, ORVILLE, ECLIPSE, Reverb 2016, H8000, H8000A.

In the worst case scenario, your FX LOOP works on instrument level, -10 or -20dB; check the rear panel for any notice on this or the manual. If this is the case...well, for the time you'll need to upgrade your system, you'll have to live with that!

How? Use the 1/4" jack connectors of your 4000/7000/ORVILLE/ECLIPSE to interface the Eventide w/your amp FX LOOP...all unbalanced, instrument level.

H3000/3500 owners will have to keep balanced wiring on the Eventide side and unbalance

the cables end on the FX LOOP side.

Then you also need to open the H3000 top cover and move 2 small internal jumpers to the correct position, to engage -10dB levels handling.

**WARNING: REFER TO THE H3000/3500 MANUAL ON HOW TO PERFORM THIS OPERATION.**

**ALWAYS DISCONNECT POWER CABLE BEFORE EVEN THINKING OF OPENING ANY UNIT. SIMPLY TURNING IT OFF ONLY, IS A VERY RISKY OPERATION. DISCONNECT MAINS AND WAIT FOR A FEW MINUTES TO LET SOME COMPONENTS DISCHARGE !!!**

In any of these scenarios, an FX loop might give an extra choice, particularly on more modern and better designed amps: SERIES or PARALLEL FX LOOP.

The traditional FX LOOP is SERIAL, meaning that it is a real break between your combo's preamp and power amp!

Consequences?

Your preamped gtr signal will always go thru the digital converters of the connected FX processor and you'll need to use the processor fx balance (dry/wet mix) to set dry and wet (=fx) levels.

The PARALLEL FX LOOP features a straight unbroken connection between the combo preamp and power amp, in parallel with a break between send/return , usually with a send level (to the fx inputs) and a mix level (an fx output level) or, more usually, this last level only.

Consequences?

Your preamped gtr signal goes straight to the power amp, untouched, unconverted into digital domain, staying as your main DRY signal...the real thing, dudes!

Your fx processor output is managed in parallel to the dry sound, summed to it.

The advantages are many:

-signal levels are kept at their natural "levels" , without losing that "in the face" energy you all desire!

-tone preservation...you know what's that, don't you?

-better signal/noise ratio.

The only trade-off in PARALLEL fx loops is that typical IN SERIES treatments/fx, like compression/Eq/wah, will be mixed with your dry signal...and this is not what you want when using these fx.

Suggestion: use compression/wah/eq between gtr and amp input, using other gear.

Hope: someday a clever gtr amp company will build an amp with switchable and remotable series/parallel FX loop...one day!

If your combo amp does not have an fx loop...well, it must be a dinosaur with classic tones you love too much to upgrade to new technology.

In such case the best advice is to have highly qualified guitar amp tech service to modify your amp, adding an FX loop; this is what most pros do.

In case you don't want... you can only use your guitar > Eventide > amp front gtr input configuration, all unbalanced, on -10dB. This is probably the worst possible setup you can use as technology has evolved and necessary adjustments are required to interface "the bold & the beautiful".

A serious "con" of this setup is the limitation on using amp distortion: infact if you are

getting your faved distorted tone from a 1959 Marshall Plexi (no FX Loop amp!) you'll be in trouble as your delays and reverbs will be destroyed, nuked by your amp disto\_tones. In this case, distortion pedals should be used between guitar and the Eventide. There are many other possibilities that pros use....quite expensive though, like miking an old amp and processing it on the PA..or having the "dinosaur" modded with an added line output that usually feeds digital effects units, going to a stereo power amps w/2 cabinets, strictly dedicated to effects. This 3 amps setup is also called Left FX/Center Dry/Right FX setup.

## **2- gtr > 2 combo amps**

All previous suggestions apply to this scenario too, BUT... you might want to use 1 preamp only and the two power amps....how? Connect the FX LOOP SEND of combo A to your Eventide, then connect the Eventide's outputs to the COMBO A and B FX LOOP RETURNS, as right and left feed. This will allow you to run FX in stereo and manage tones with a single preamp, much easier for channel switching than 2 preamps, right? Another, MORE adventurous, scenario is to have both combos preamps feeding your Eventide inputs, from their FX LOOPS SENDS. With some imagination, using a router or 2 line level pedals to change level between SENDS and Eventide inputs, you can instantly switch or "blend-Xfade" the two preamps into the Harmonizer, then out to power amps.

This will allow you to have 4 channels tones, if your combos support two channels each. You will need to have a very accurate dry level management: best if you have SERIAL FX LOOPS. ORVILLE/DSP/GTR4000/4500/7000/7500 will allow you to manage all dry-s and wet-s internally, taken the time to create such routing/mixing parameters within EACH patch, using Vsigfile PC Editor or third party vSigX for MAC computers. Again...this is not a common "orthodox" thing and can be quite complex and tricky...but clever applications arise from it! Imagination is the key.

## **3- gtr > rack preamp > rack power amp**

Easier to interface! In theory!!! What's been said regarding balanced vs. unbalanced /+4dB line level vs. -10/20dB instrument level applies to this setup too. A vastly used pro-approach is to insert some kind of switching/mixing devices between preamps and power amps. If you only use one single FX processor, follow the previous guidelines. If you have 2 or 3 or 5 Eventides....lucky dudes,. you need a splitter and a mixer! Connect one of the preamp outputs to the mixer, straight; set panning on CENTER: this will be your DRY sound! You sweated for years to achieve THIS tone, don't you? Connect another preamp output to the splitter (Digital Music Corporation, C.A.E., Rane make these boxes) and feed the splitter outputs to the Eventides you want to use IN PARALLEL; run these Eventide's outputs to 2 mixer channels each, pan them full R and L for stereo spread.

Run your Tides on 100% wet!

You might use the mixer's FX send(s)/return(s) (or mixer channels) to use another Eventide or two to add reverb/delay to all desired channels, thru the channels SENDS pots.

This approach is definitely open, allowing for multi-processors setups management and exciting series/parallel blending of fx. Studio attitude on your gtr rig...bang!

More diverse and complex routings (splitting/mixing/serial/parallel/...more) are possible with a particular dedicated device like the SoundSculpture Switchblade; a very unique and powerful unit that deserves your attention on [www.soundsculpture.com](http://www.soundsculpture.com)

Many Eventide users, of any fame, use these incredible devices! Take a look at them.

## **Conclusion:**

These are the most common scenarios. Others may exist and need to be specifically analyzed to give proper advices. Please always refer to qualified rack assembly services for advices and custom modifications.

To sum up a few things:

-current Eventide units use ¼" connectors for unbalanced -10dB instrument level signals and XLR connectors for balanced +4dB line level signals. XLRs can be unbalanced; when this is necessary, always use balanced cables and refer to your unit manual for an explanation and drawing of how to unbalance the connection.

-when balanced to unbalanced connections are needed (XLRs to ¼"), keep the Tides inputs and outputs BALANCED, while unbalancing the other ends connected to your unbalanced guitar equipment (amps/fx loops/power amps).

-try to run your Tides at the highest line level possible...better +4db than all lower ones.

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