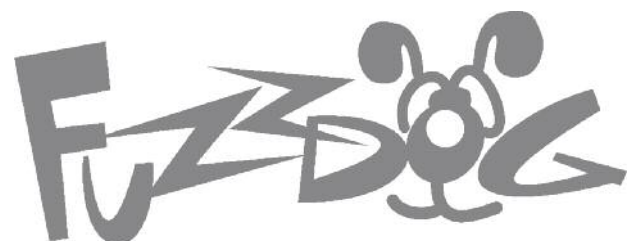
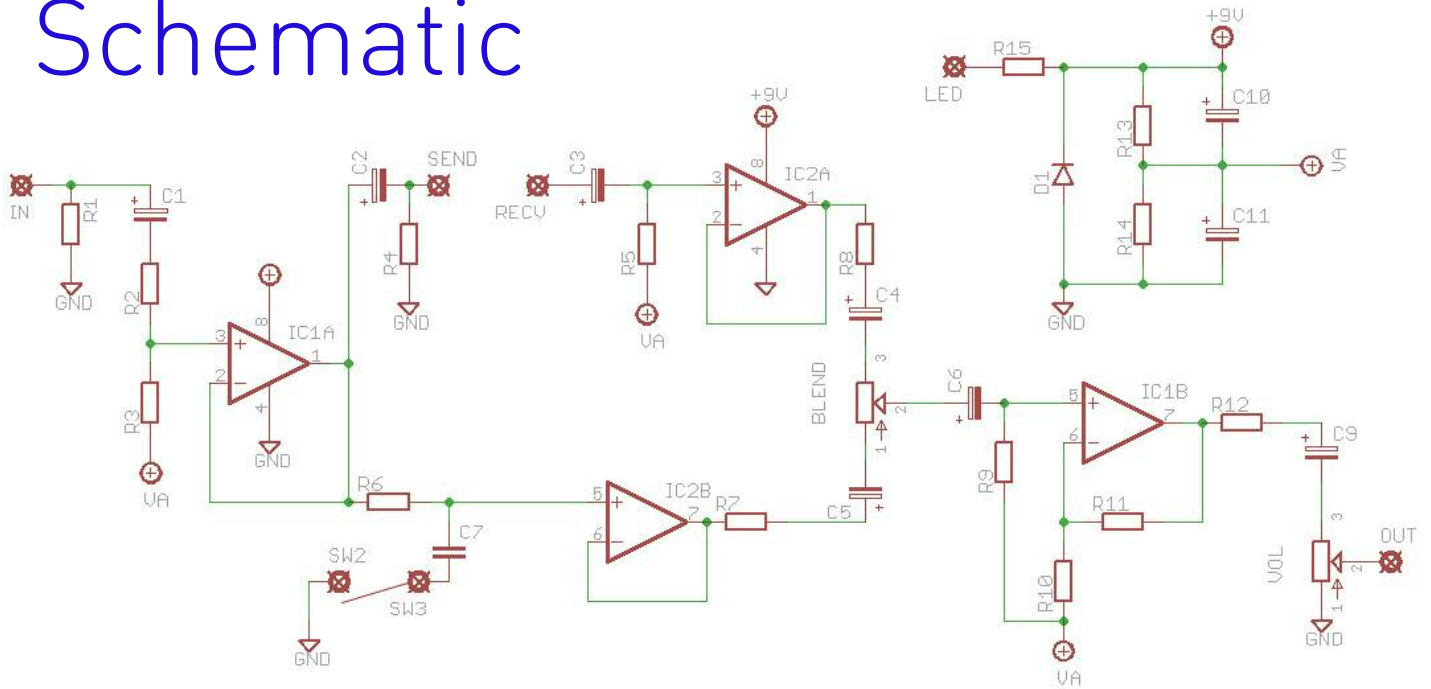


Fat-Ass Blooper

Blender/Looper with
Low-Pass Filter Switch



Schematic



Blend a signal from the SEND-RECEIVE loop with your dry signal. Nice.

BOM

SW1-2 kicks in a low-pass filter which will take out some top-end out of the dry signal, letting all the bass through.

| | |
|-----|-----------|
| R1 | 1M |
| R2 | 10K |
| R3 | 1M |
| R4 | 470K |
| R5 | 1M |
| R6 | 2K2 |
| R7 | 1K |
| R8 | 1K |
| R9 | 1M |
| R10 | 10K |
| R11 | 10K |
| R12 | 1K |
| R13 | 10K |
| R14 | 10K |
| R15 | 2K2 (CLR) |

| | |
|-----|-----------|
| C1 | 10u elec |
| C2 | 10u elec |
| C3 | 10u elec |
| C4 | 10u elec |
| C5 | 10u elec |
| C6 | 1u elec |
| C7 | 47n |
| C9 | 1u elec |
| C10 | 100u elec |
| C11 | 100u elec |

| | |
|-------|--------|
| SW1-2 | SPST |
| D1 | 1N4001 |
| IC1 | TL072 |
| IC2 | TL072 |
| BLEND | 100KB |
| VOL | 100KA |

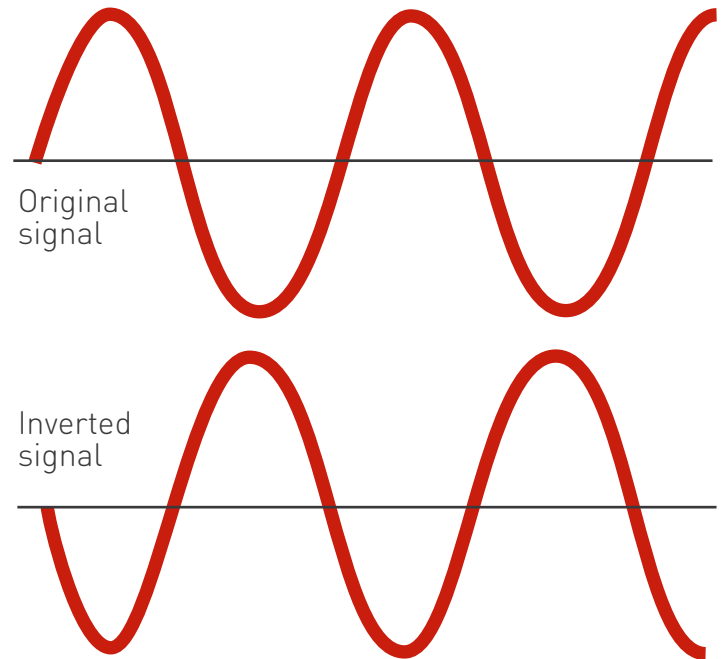
A brief note about phase...

...in basic terms.

Your guitar signal is a waveform. It has peaks (high points) and troughs (low points) that all cross a zero-point in the middle.

When your signal passes through various stages of an effect this wave may be inverted due to the way components amplify that signal (summing it with a voltage).

The signals to the right are now 'out of phase'. If we combine these signals to any degree they will begin to cancel each other out. (+2 summed with -2 is zero, yes?)



This is a consideration when adding a blender to a circuit. If the end result signal of that circuit is inverted, then blending it with your original signal will result in cancellation, which means volume drop.

So how do you know whether your circuit produces an inverted phase? Unfortunately there's no easy way. You can check it with an oscilloscope or try to work it out using the schematic, which requires some electronic knowledge.

Another way is to try it! If you get volume drop when you blend the circuits, you're probably out of phase.

I'm out of phase - how do I fix it?

The only way to do it is to run the signal through another inverting stage, which means more circuitry. Sorry. If you're using the Fat-Ass as a looper (i.e. attaching external pedals to the blended chain) you could try adding different pedals which may give an inverted signal.

Wiring it up

...well, it depends what you're doing with it.

Let's say, for instance, you're building a Big Muff, and you want to add the blend circuit to mix some dry signal with the Muff signal, all inside one pedal.

For your switch wiring, just replace the Muff IN and OUT wires with the Fat-Ass IN and OUT wires. Then connect Fat-Ass SND to Muff IN, and Fat-Ass RCV to Muff OUT.

Fat-Ass 9v and GND just connect to the same as the Muff.

To wire it as an effects loop pedal with a blend control, connect up your SND and RCV pads to your effects loop jacks (including GND connections).

