



***FX Loop board – LND150 based
PCB revision v1.0***

Introduction

Manta Audio FX-Loop is an active effect loop designed as a retrofit kit for tube amplifiers either for guitar or bass use .

Disclaimer:

Please, make sure to work in a safe environment as involved voltages can be lethal. This is not a kit addressed to newbies. If you are not comfortable with such appliances and conditions, please ask a pro technician to install the board for you. Please remember that any modification carried to your amplifiers, will void any legal warranty or certification if applicable.

Manta Audio and any of the distributors of this product shall not be liable for misuse or misapplication of this board.

This kit is powered with high voltage (250-400 VDC) already found inside most of the tube amps.

By Using two LND150s both for Send than for Recovery stages, gives this kit two main advantages:

- Very low current absorption, that will not impact in any significant way amplifier's original power supply and its dynamic behavior.
- An almost total transparent sound when installed, especially compared to other solutions like tube based FX loops that are generally less neutral sound-wise.

Send stage is equipped with a trim potentiometer, to fine tune outgoing signal to external input FX.

Generally speaking, optimal spot to install this kit is right before **MASTER VOLUME** control of your amplifier when present. In this way, your MASTER VOLUME will become also your return level.

If you don't have a master volume amplifier, please insert the loop in between preamp and the power amp section of the circuit you are working on.

BILL OF MATERIALS

All resistors are at least 1/2W (1W also works) except where indicated.

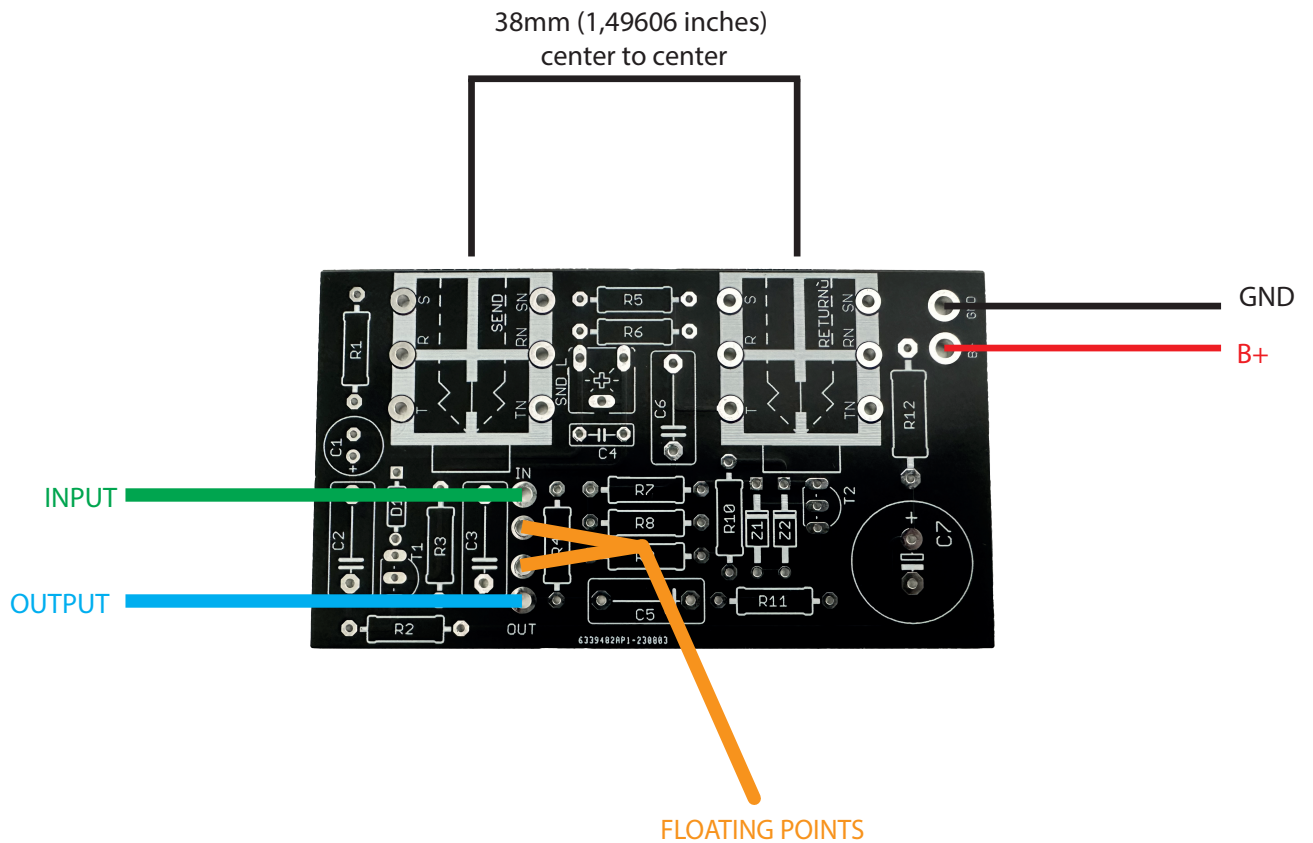
Components	Values
R1	10R
R2	100K
R3, R5	2.2M
R6	220K
R7	1.5K
R4, R8	1M
R9	3.3K**
R10	470R
R11	110K
R12	33K / 2W*
T1, T2	LND150
D1	1N4148
Z1, Z2	1N4744
SND_L (TRIMPOT)	50K
C1	10uF/50V
C2	470nF / 400V
C3, C5	100nF / 400V
C4	10pf /400V
C6	330nf / 400V
C7	22uF / 450V

*R12 can be varied according to your B+. You can lower it, if your B+ is too low, or vice-versa increase it, if you have a too much high B+

Everything between 300 and 330VDC AFTER R12 can be considered the sweet spot for this kit. Ideally, 370-ish VDC should be the voltage to be applied BEFORE R12.

** R9 = if the signal is when look fx engaged is too low even with SENT TRIM at max, you can try to put a jumper or any value up to 3.3k. This will determinate your return stage gain.

WIRING AND DRILLING INSTRUCTIONS



(these two pads are NOT connected to GND, to avoid any possible ground loop issue. Audio ground is attached to GND thru jacks. If you want to, you can use these two pads to solder shelding of input/output cables. If you still want to connect these two floating pads to GND, you must need to solder a little jumper from them to GND pad.

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