

IRON SOUNDS AMPLIFICATION

Effects Loop Installation Guide

Warnings and Disclaimer

You will be working with **HIGH VOLTAGE**. These voltages **CAN BE DEADLY** if you are not extremely careful. If you are not comfortable working with **HIGH VOLTAGE**, please do not attempt to do so. Should you experience difficulty when installing this unit, contact an experienced amplifier technician.

⚠ USE AT YOUR OWN RISK ⚠

Iron Sounds LLC, assumes no liability FOR PERSONAL INJURY OR PERSONAL PROPERTY CLAIMS RESULTING FROM THE USE OF THIS PRODUCT OR THE INFORMATION INCLUDED IN THIS MANUAL.

FURTHERMORE, IRON SOUNDS LLC WILL NOT BE HELD RESPONSIBLE FOR DAMAGE TO YOUR AMPLIFIER RESULTING FROM IMPROPER INSTALLATION OF THIS UNIT.

Before You Begin

When you first receive your kit, remove all of the parts from the shipping box and place them on a well-lit, clean surface. Check all of the parts against the parts list and verify that you have everything before you begin. Contact us at once if you are missing anything, or if something appears to be damaged.

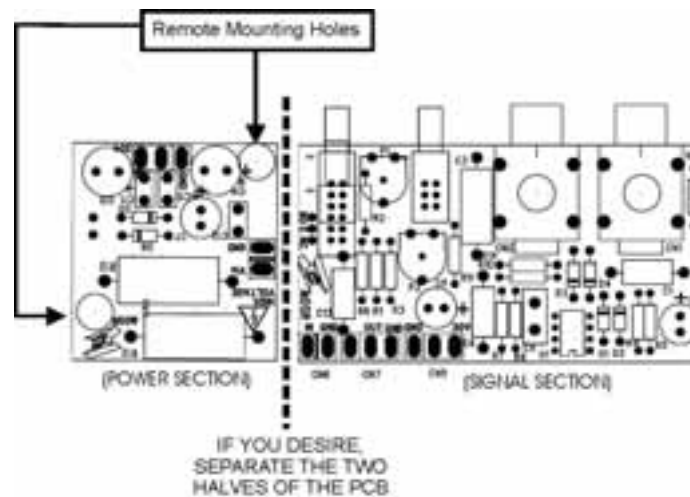
Soldering Tips

- Set the temperature of your soldering iron to about 700F.
- Use 60/40 rosin-core solder.
- Make a good *mechanical* connection first, and then make a good electrical connection.
- Tin all wires before soldering.
- Never “butter” partially melted solder to make a connection.
- Do not apply the tip of the soldering iron to the PCB any longer than it takes for the solder to flow.

Tools Needed

- Soldering Iron
- Solder Vacuum Bulb or Solder-Sucker.
- Needle-Nose Pliers
- Wire Strippers
- Wire Cutters
- Phillips and Flat-Head Screwdrivers for #4, #6 and #8 screws.
- Nut Driver/Socket Set

1. Before starting the assembly, check all of the parts against the parts list and verify that all components are present.
2. Using the drilling template, mark the location on your amplifier where you would like the effects loop mounted. **DO NOT DRILL YET.**
Note: The effects loop board will be supported by the panel-mounted 1/4" send and return jacks.
3. If you wish to locate the power section of the effects loop PCB in a remote location (i.e. closer to the power filtering section in your amplifier), simply snap the board off at the scored line and mount to the chassis using the (2) supplied standoffs.



1. Start assembly of the PCB by soldering the small components first (Recommended order: resistors, diodes, capacitors, switches, jacks). Mount the components facing the bottom of the amplifier chassis.
Note: If you would like to use adjustable trimmer pots to manually adjust the input and output levels of the effects loop, do not assemble **SW2** and resistors **R2** and **R11**. Refer to the parts list for the trimmer pot part numbers.
2. Drill the holes for the jacks and switches. Make pilot holes first!.
Note: Use a "Stepper Bit" to make clean holes in polycarbonate face panels.
3. Mount the signal section of the board to the amplifier using the send/return jack nuts.
Note: You may or may not need to use the jack washers.
4. Install the power section with provided standoffs (optional).
5. Connect the **Vin** terminal on the power PCB to the second power filter in your amplifier (after the first filtering RC network).
6. Connect the **GND** terminal on the power PCB to a ground nearest the power filter section (for Iron Sound JA-TMB model refer to the JA-TMB Installation Diagram).
Note: A bad ground spot will make the loop noisy!

7. Using the supplied diagram, connect the signal PCB to the power PCB.
8. Locate the filter input capacitor to the phase splitter in your amplifier.
9. Using the supplied diagram, connect the **IN** and **OUT** terminals on the signal PCB to your amplifier.
Note: You **MUST** use shielded wire, or you will get noise.
10. Verify that all components have been installed properly before applying power to the amplifier.
Triple Check all connections!!
IRON SOUNDS LLC WILL NOT BE HELD RESPONSIBLE FOR DAMAGE TO YOUR AMPLIFIER RESULTING FROM IMPROPER INSTALLATION OF THIS UNIT.
11. Apply power to the amplifier.

Note: Be ready to pull the power cord if you see, smell or detect anything unusual (i.e. smoke)
12. Measure voltage at the input to the FX Loop. It should read +15V and + 30V in reference to ground.
13. Connect an effects device to the **Send** and **Return** jacks. Use the **Pad** switch to decrease the signal by 10dB. Use the **Bypass** switch to completely bypass the effects loop (True Bypass).
14. Enjoy your new effects loop.

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IRON SOUNDS

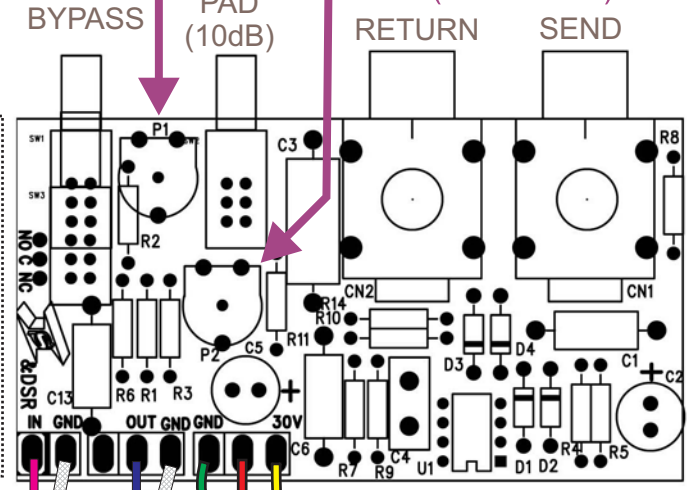
EFFECTS LOOP INSTALLATION DIAGRAM v1.0

Optional Input
Level Trimmer (P1)

Optional Output
Level Trimmer (P2)

* If optional level trimmers are used do not assemble SW2 (PAD switch) and resistors R2 and R11.

YOU MAY RELOCATE THIS PART OF THE PCB BY SNAPPING IT OFF.

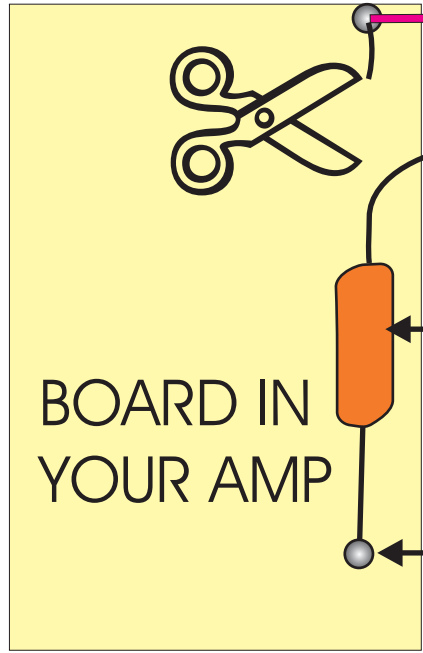


Do not connect shield on this side

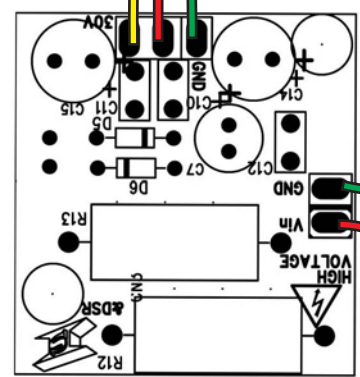
Do not connect shield on this side

SHIELDED WIRE

SHIELDED WIRE



This is the filter input capacitor to your phase splitter in your amp.



BOARD IN YOUR AMP

Connect **GND** to a ground spot in the same general area as **Vin**. A bad spot will make the loop noisy.

Connect **Vin** to the second filter (AFTER the first filtering RC network) in your amp.

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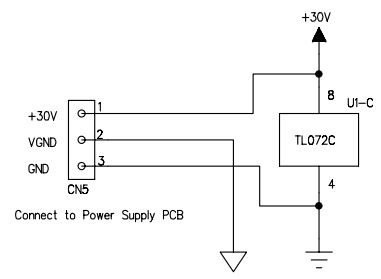
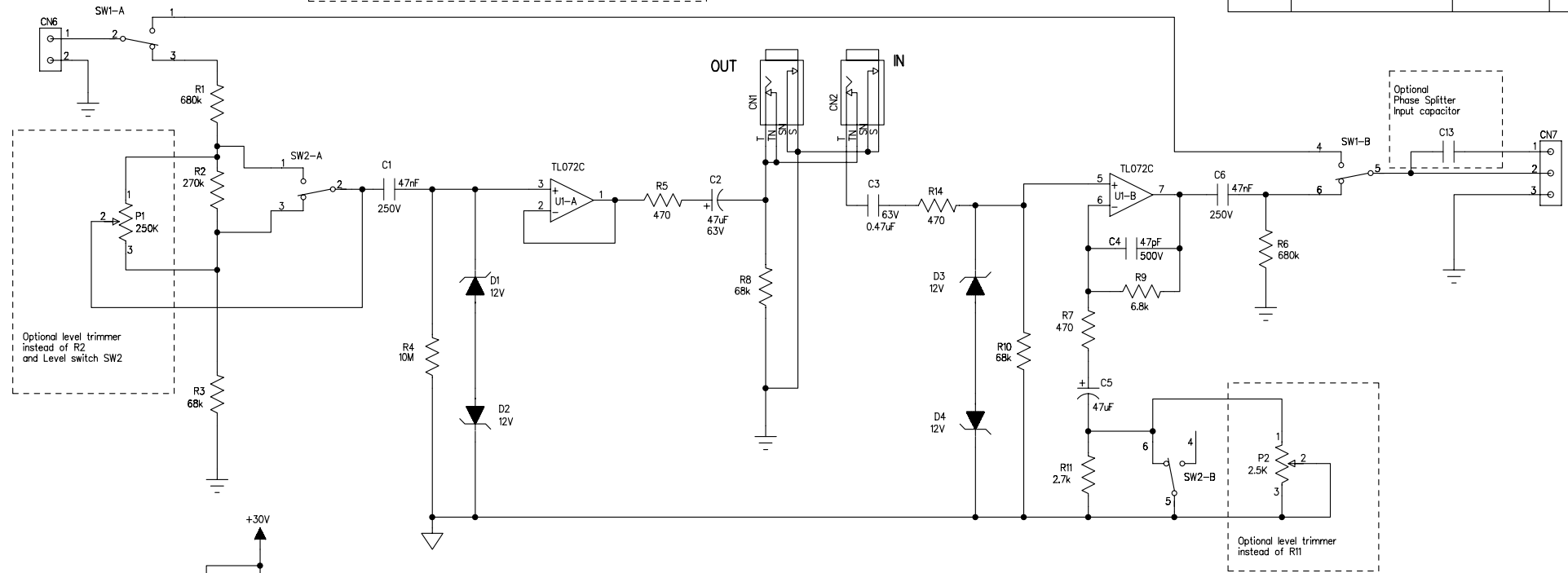
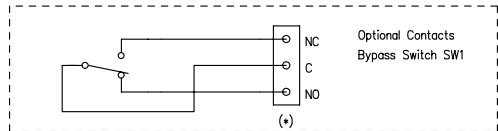
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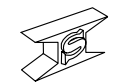
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REVISION RECORD			
REV	ECO NO:	Date	Aproved
1.1	Change R7 to 470 ohm	01/02/07	



(*) There is mistake with marking of the SW1 optional switch contacts on the PCB-000050. The marking as described in the schematic reflect the actual connection.

MODEL1 : MEC-10	PCB1 : XXX	PARTS1 : XXX	PWB1 : PCB-000500	MEC-1
MODEL2 : MEC-10-A	PCB2 : XXX	PARTS2 : XXX		
MODEL3 : MEC-10-B	PCB3 : XXX	PARTS3 : XXX		



COMPANY: **IRON ELECTRONICS LLC**

TITLE: **Effect Loop Option**

DRAWN: EE www.IronElectronics.com	DATED: 12/26/2006
CHECKED: XX	DATED: XX
QUALITY CONTROL: XX	DATED: XX
RELEASED: Confirmed	DATED: XX

CODE: XX	SIZE: B	DRAWING NO: SCH-000050	REV: 1.1
SCALE:			SHEET: 1 of 2

D

D

C

C

B

B

A

A

6

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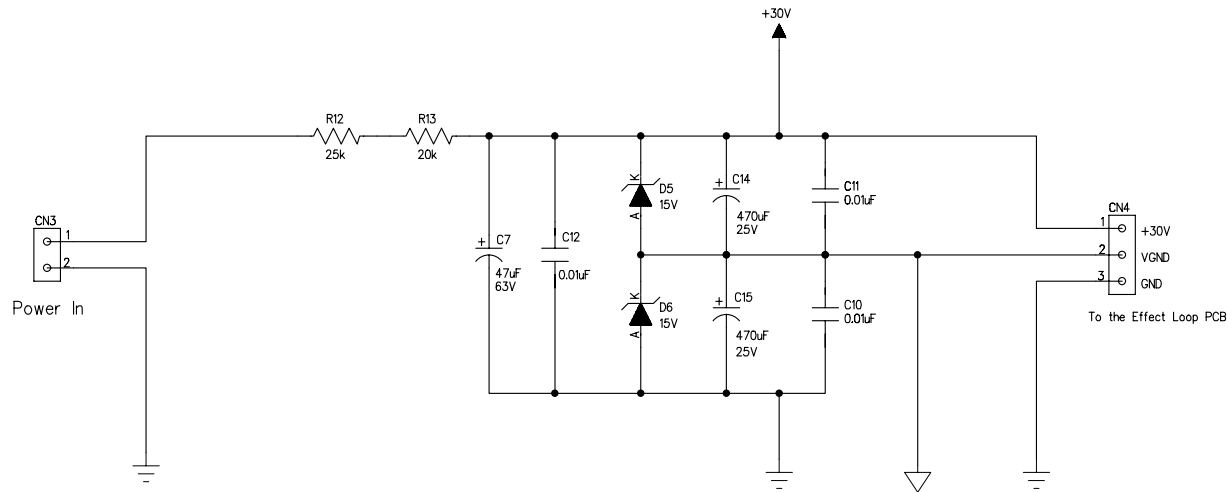
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2

1

REVISION RECORD			
REV	ECO	Date	Aproved
1.1	Change R7 to 470 ohm	01/02/07	



COMPANY: IRON ELECTRONICS LLC			
TITLE: Effect Loop Option			
CODE: XX	SIZE: B	DRAWING NO: SCH-000050	REV: 1.1
SCALE: <Scale>			SHEET: 2 of 2

DRAWN: EE	DATED: 12/26/2006
CHECKED: XX	DATED: XX
QUALITY CONTROL: XX	DATED: XX
RELEASED: Confirmed	DATED: XX

D

C

B

A

D

C

B

A

Iron Sounds
FX Loop BOM version 1.2

Name	DESC	VALUE	SPEC	NOTES
C1,6	Capacitor	47nF	250V .047uF 10%	
C13	Capacitor	47nF	250V .047uF 10%	Optional
C2,5,7	Capacitor Electrolytic	47uF	63V 47uF 20%	
C3	Capacitor	0.47uF	63V .47uF 5%	
C4	Capacitor	47pF	MICA 47PF500VJ	
C10,11,12	CAPACITOR	0.01uF	0.01uF	
C14,15	Capacitor Electrolytic	470uF	25V 470uF 20%	
CN1,2	CONNECTOR JACK		4 pins Jack PCB mount	
D1,2,3,4	ZENER VOLTAGE REGULATO	12V	Zener Diodes 12V, 0.5W	
D5,6	ZENER VOLTAGE REGULATO	15V	Zener Diodes 15V, 0.5W	
P1	VARIABLE RES	250K	250K	Optional
P2	VARIABLE RES	2.5K	2.5K	Optional
PWB1	PC BOARD		MAIN BOARD	
R1,6	RESISTOR	680k	680k	
R2	RESISTOR	270k	270k 1/4W	
R3,8,10	RESISTOR	68k	1/4W	
R4	RESISTOR	10M	10M 1/8W	
R5,7,14	RESISTOR	470	470	
R11	RESISTOR	2.7k	2.7k	
R12	RESISTOR	25k	25K 5W	
R13	RESISTOR	20k	20K 5W	
R9	RESISTOR	6.8k		
SW1	Switch PUSH-PUSH		Switch 4 position	Optional
SW1,2			Switch 2 position	
SW-a	SWITCH CAP ROUND DARK GREY		SWITCH CAP ROUND DARK GREY	
U1	LOW NOISE,JFET INPUT, OPERATIONAL		AMPLIFIER	
	STANDOFF		STANDOFF HEX 6-32THR ALUM .375"	