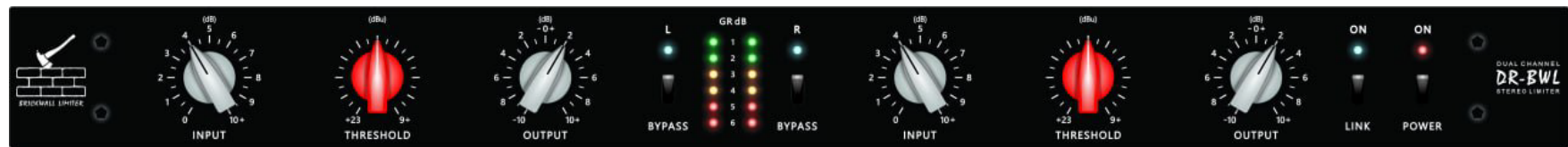


# DR-BWL

## STEREO LIMITER



## BUILD MANUAL

# TABLE OF CONTENT

1	TITLE
2	TABLE OF CONTENT
3	PCB SYMBOLS AND PARTS PICTURES
4	LINK AND METER WIRING
5	THRESHOLD WIRING
6	IN/OUT GAIN WIRING
7	POWER TRANSFORMER 115V WIRING
8	POWER TRANSFORMER 230V WIRING
9	LINK MOD
10	CALIBRATION

# PCB SYMBOLS AND PARTS PICTURES

RESISTOR



NO POLARITY

FILM CAPACITOR



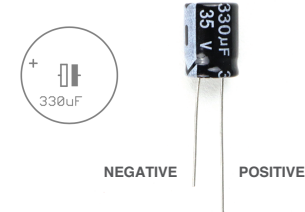
NO POLARITY

CERAMIC CAPACITOR



NO POLARITY

ELECTROLYTIC CAPACITOR

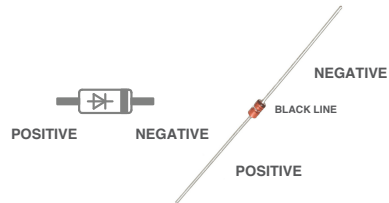


NEGATIVE POSITIVE

TRIMMER POTENTIOMETER

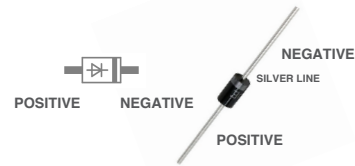


1N4148 DIODE



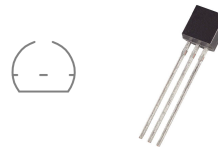
POSITIVE NEGATIVE  
NEGATIVE POSITIVE  
BLACK LINE

1N4001-7 DIODE

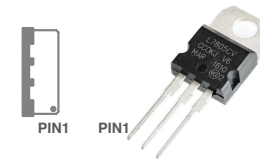


POSITIVE NEGATIVE  
NEGATIVE POSITIVE  
SILVER LINE

TRANSISTOR

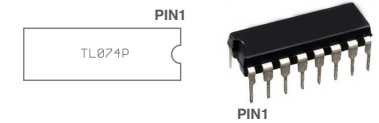


VOLTAGE REGULATOR



PIN1 PIN1

IC



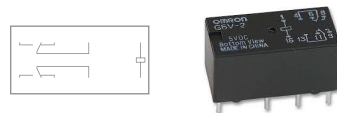
PIN1

LED



POSITIVE NEGATIVE POSITIVE  
NEGATIVE

RELAY

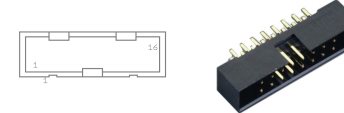


MOLEX CONNECTOR

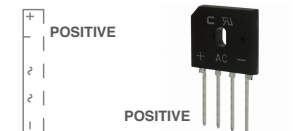


PIN1 PIN1

IDC CONNECTOR



DIODE BRIDGE



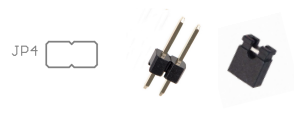
POSITIVE  
POSITIVE

XLR CONNECTORS



FEMALE MALE

JUMPER



JP4

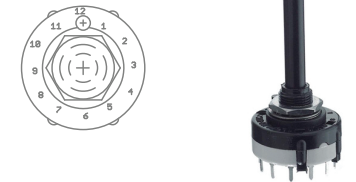
TERMINAL



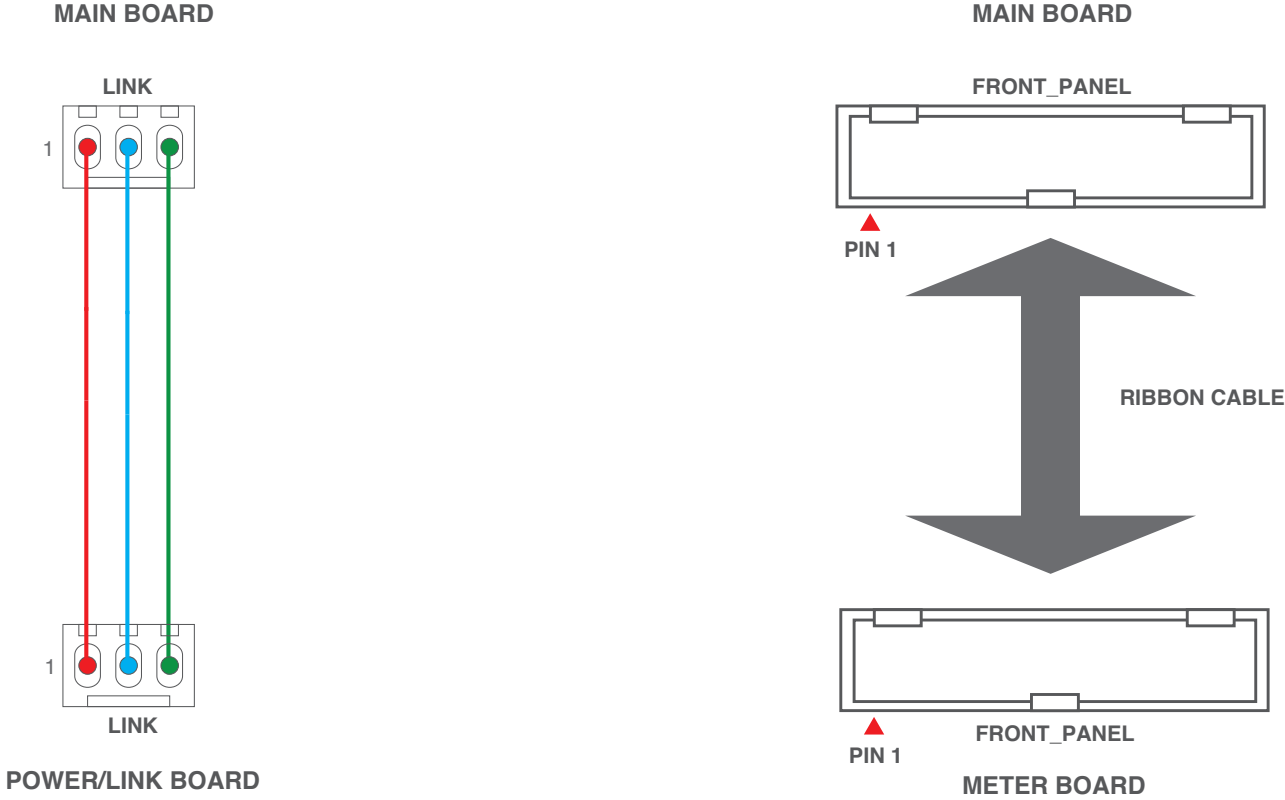
TOGGLE SWITCH



ROTARY SWITCH



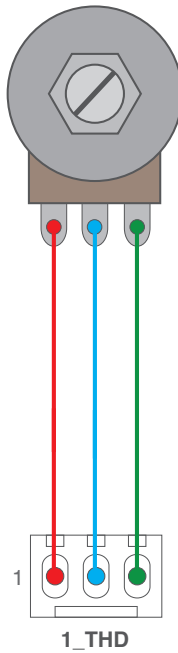
# LINK AND METER WIRING.



# THRESHOLD POTENTIOMETERS WIRING

## CHANNEL 1

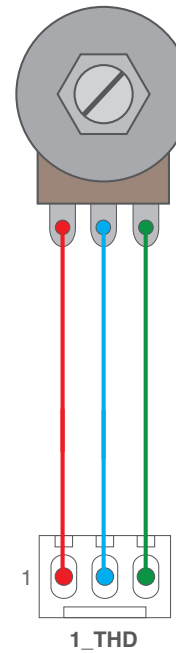
THRESHOLD POTENTIOMETR  
FRONT VIEW



MAIN BOARD

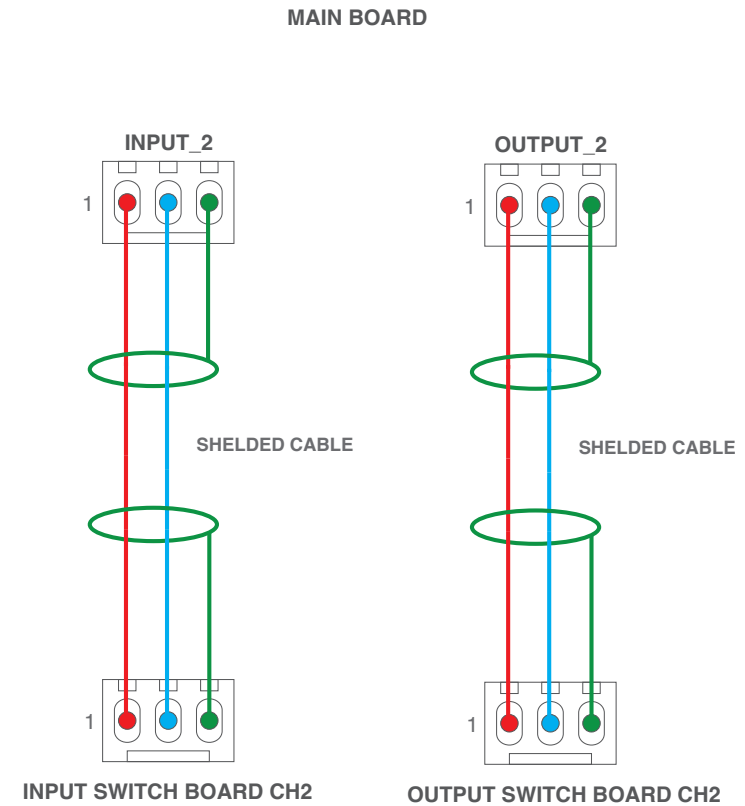
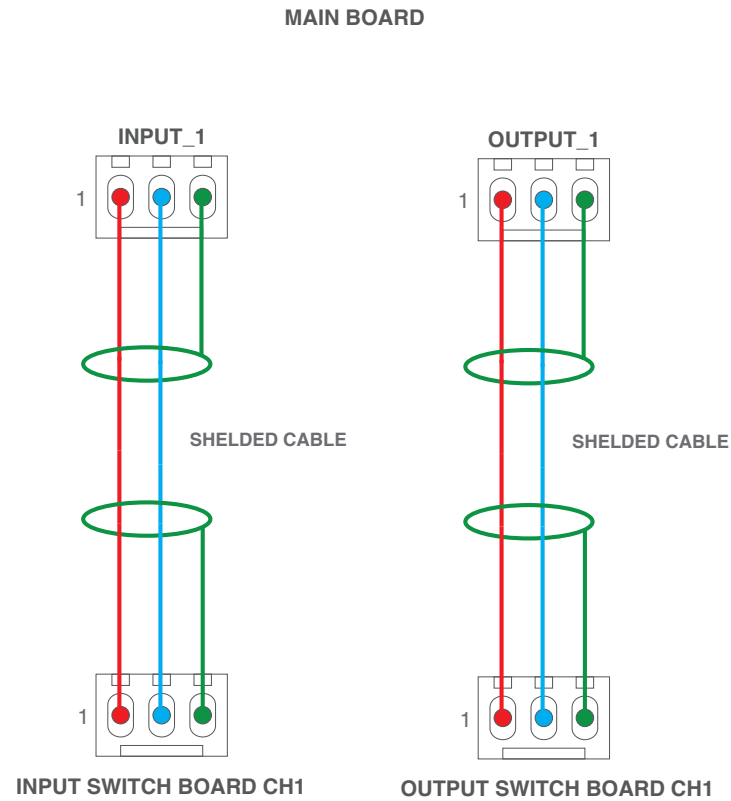
## CHANNEL 2

THRESHOLD POTENTIOMETR  
FRONT VIEW

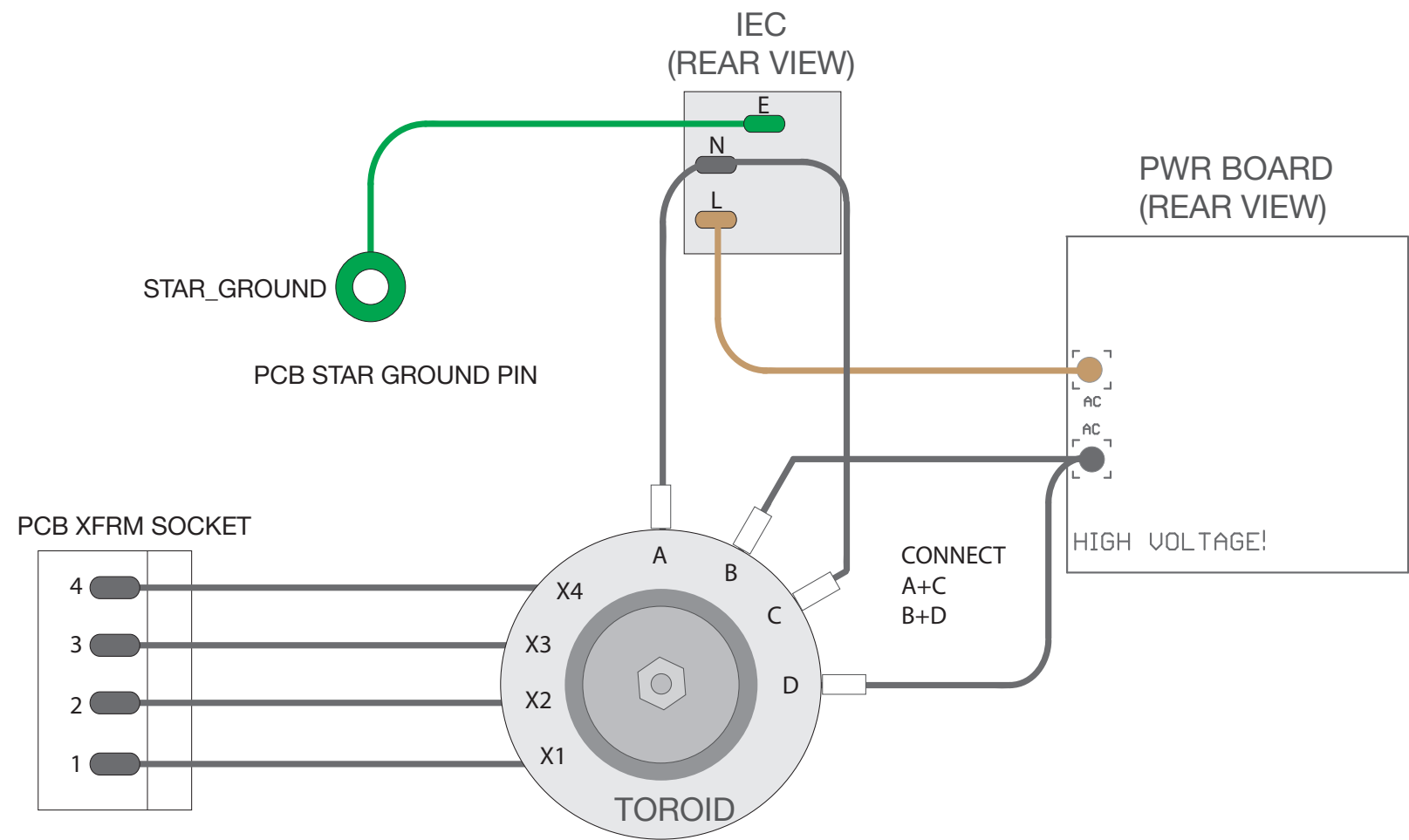


MAIN BOARD

# 11 STEPS IN/OUT SWITCHES OPTION.

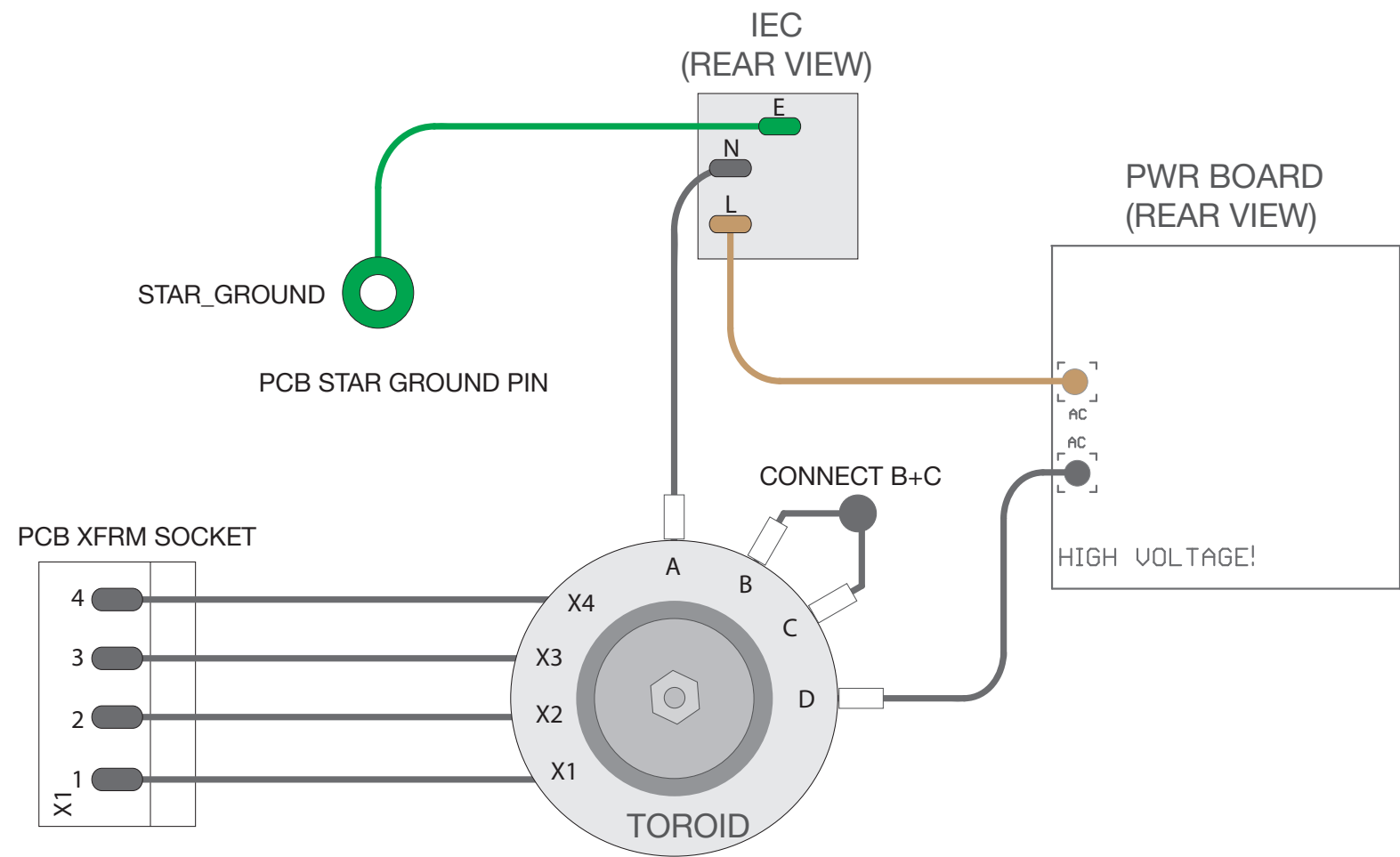


# POWER TRANSFORMER 115V



**FOLLOW THE EXTRA SHIELDING FOR AC WIRES AND A B C D AND X1 X2 X3 X4 PATTERNS!**

# POWER TRANSFORMER 230V

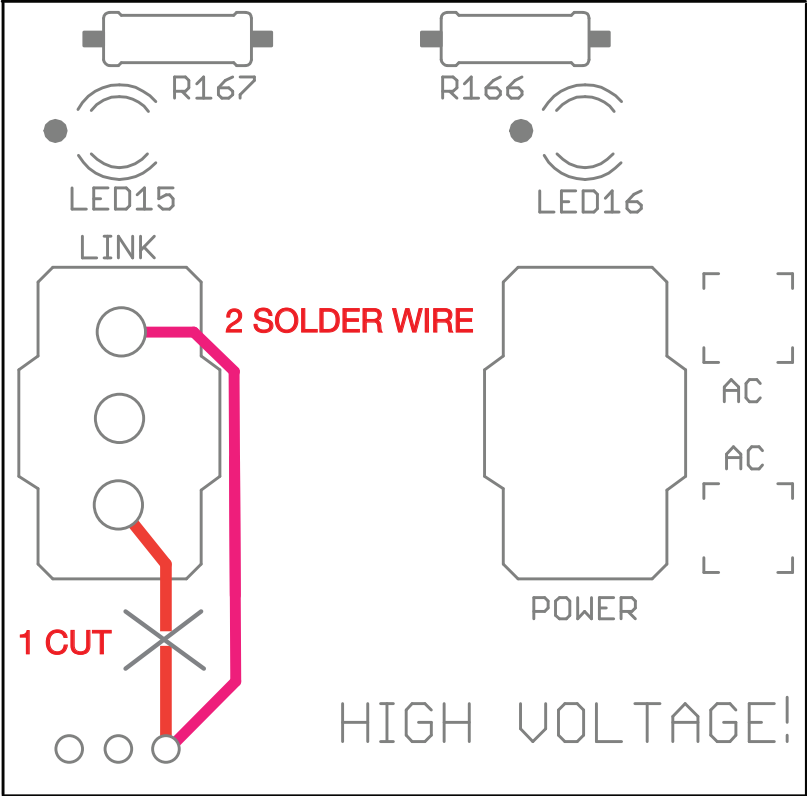


**FOLLOW THE EXTRA SHIELDING FOR AC WIRES AND A B C D AND X1 X2 X3 X4 PATTERNS!**



LINK MOD FOR MAIN BOARD V.1

PWR BOARD  
(FRONT VIEW)



# CALIBRATION

## TEST PROCEDURE and PSU CALIBRATION

1. With **not installed ICs and PSU JUMPERS** power UP limiter check no smoke. Let it work 10-15 minutes
2. Measure Voltage on PSU Test Points Measure between TP\_GND and TP+15V, TP+18V, TP-18V
3. Adjust +18V and -18V rails with trim pots(TR\_+18V, TR\_-18V)
4. Switch OFF limiter
5. Install PSU jumpers JP\_+15V, JP\_-18V, JP\_+18V
6. Switch ON limiter, check no smoke, let it work 5 minutes
7. Switch OFF limiter
8. Install all ICs
9. Switch ON limiter, check no smoke, let it work 5 minutes
10. Measure Voltage on PSU Test Points Measure between TP\_GND and TP+15V, TP+18V, TP-18V

## UNITY GAIN TEST

1. Set limiter front panel controls to THRESHOLD 23dBu, INPUT 0dB, OUTPUT 0dB, LINK OFF, BYPASS OFF(DOWN)
2. Generate in your DAW 1kHz Sinus
3. Feed -18dBfs test signal from your DAW to Limiter LEFT and RIGHT Inputs
4. Check limiter LEFT and RIGHT OUTPUT level in your DAW level meter. Should be about -18dBfs(+/-0.1dB)
5. Turn BYPASS ON(UP)
6. Check limiter LEFT and RIGHT OUTPUT level in your DAW level meter. Should be about -18dBfs(+/-0.1dB)

## DISTORTION CALIBRATION

1. Set limiter front panel controls to THRESHOLD 9dBu, INPUT 0dB, OUTPUT 0dB, LINK OFF, BYPASS ON(UP)
2. Generate in your DAW 1kHz Sinus
3. Feed -8dBfs test signal from your DAW to limiter LEFT Input
4. Check limiter LEFT OUTPUT signal with spectral analyzer(Voxengo Span, Blue Cat)
5. Adjust TRIM\_1 trim pot for minimum level second harmonic(2kHz) on Spectral Analyzer
6. Feed -8dBfs test signal from your DAW to limiter RIGHT Input
7. Check limiter LEFT OUTPUT signal with spectral analyzer(Voxengo Span, Blue Cat)
8. Adjust TRIM\_2 trim pot for minimum level second harmonic(2kHz) on Spectral Analyzer