

FITTING THE RELAY SWITCH BOARD

Fit M3 x 12mm spacers to the COMPONENT side of the board. Use fibre washers under M3 screws on the SOLDER side of the board to avoid grounding the tracks.

Push the completed Relay Switch Board onto the phono sockets at the inside rear of the case and secure using M3 x 6 bolts through the rear panel into the spacers.

Solder the two (Ground) tinned copper wires from the input phono socket solder tags to the GRD1 PCB terminal pin.

IMPORTANT: DO NOT SOLDER THE PHONO SOCKETS AT THIS STAGE.

FITTING THE INPUT SELECTOR SWITCH

Fig. 9 Holding the shaft of the switch in a small vice or mole grips, cut the shaft of the input selector switch to 20mm length measured from the end of the threaded portion. Sand the cut end of the shaft smooth to fit the chrome knob.

Cut the six way cable from the Relay PCB to length and solder the free ends to the terminals of the input selector switch as follows:

Black - Inner Terminal A, Blue - Pin 2, Green - Pin 3,
Red - Pin 4, Yellow - Pin 5, White - Pin 6.

Check that the inner “locking” washer is set to position 6 (6-way) pass the switch through the hole in the chassis and secure using the washer and nut from the provided.

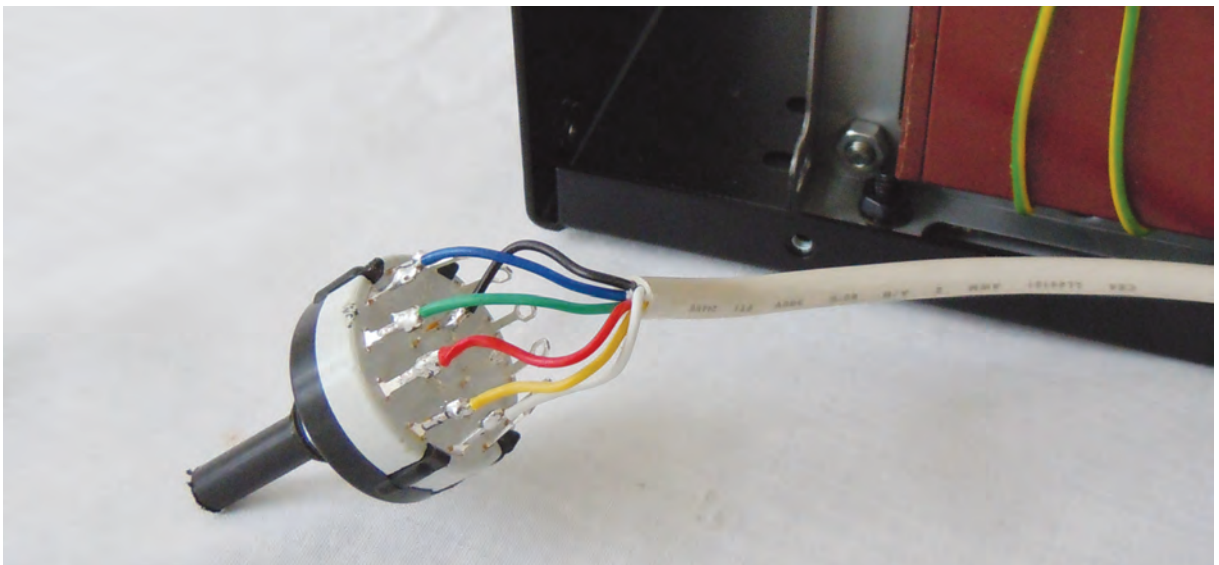


Fig. 9 Input Selector Switch

FITTING THE PRE3 PCB

Fit the main PCB to the case with the IP+ and IP- terminals closest to the front panel. Fit M3 x 12 bolts into 5mm spacers under the PCB. Then offer up the PCB to the case and secure the spacers with M3 serrated washers and nuts under the case.

Fig. 10 Wire the Green cable from the Earth terminal to the GND2 pin on the far end of the PCB. Solder a 180mm length of Green cable from the terminal pin GNDL to the nearest screen tag on the rear of the output transformer. Link all the screen terminals on both output transformers from this tag with tinned copper wire and Green cable.

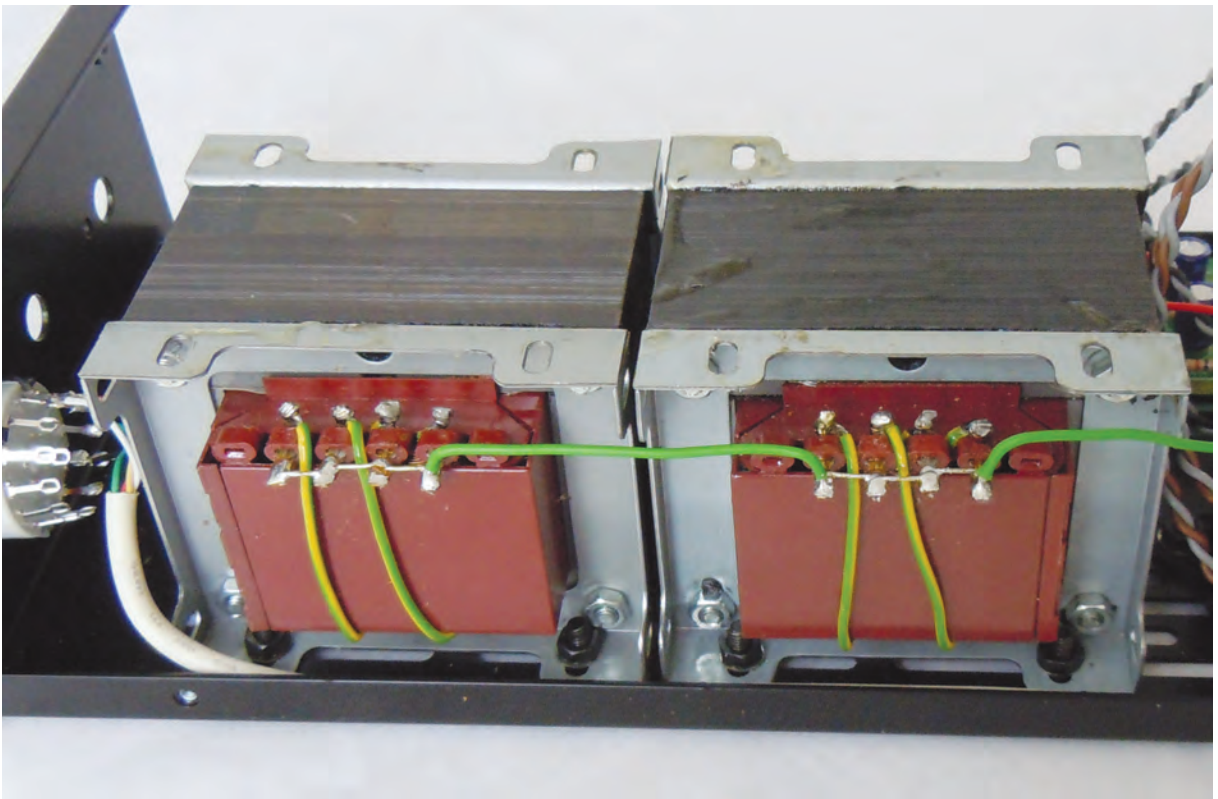


Fig 10. Transformer Screen Links

IMPORTANT – Check with a multimeter switched to Resistance that pins GNDL, GNDR and the screen tags of both transformers have good continuity to the Earth Terminal.

Fig. 11 Solder the red cable from the positive terminal of the power supply capacitor to the HT terminal of the nearest (Left Channel) transformer and, using a length of Red cable link this with the HT terminal of the other (Right Channel) transformer. Using short lengths of red cable link the HT terminals of both transformers to their corresponding HT PCB pins – “HT” for the Right Channel transformer and “HT1” for the Left.

Fig. 11 Using a short length of red cable link the OP+ terminal on the PCB to the A terminal on the transformer. Similarly link the OPL+ terminal on the PCB to the A terminal on the other transformer. If you use slightly longer lengths of wire than you might think necessary, you will be able to “lift” the PCB, without disconnecting it, should you need to access it at a later date.

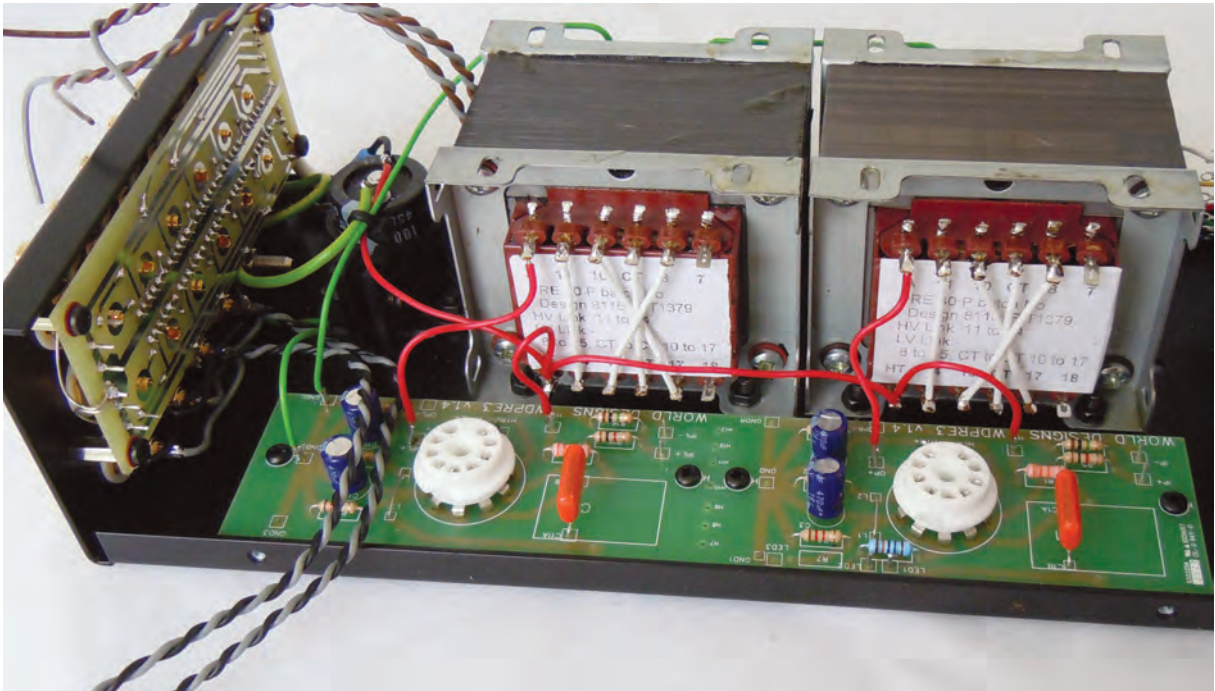


Fig. 11 HT Wiring

Fig. 12 Prepare the heater link cables by twisting approx. 200mm of Brown and Grey wire together. Solder this pair, along with the Brown and Grey wires from the Power input AND the Relay Board, to the HTRL+ (Brown) and HTRL- (Grey) PCB pins, cutting to length as appropriate. Connect the other end of the heater link cables to HTR+ (Brown) and HTR- (Grey).

Fig. 13 Connect the 300mm Grey and Black wires from the Right Channel phono plug to the transformer closest to the front panel. Cut the wires to length and solder the Grey wire to terminal 7 of the transformer. Solder the Black wire to the CT terminal if you require a Gain of x6 (recommended), or to the Terminal 18 if you need a high gain of x12 (for low output sources).

Repeat this process for the Left Channel, connecting the 200mm wires to the transformer closest to the rear of the chassis.

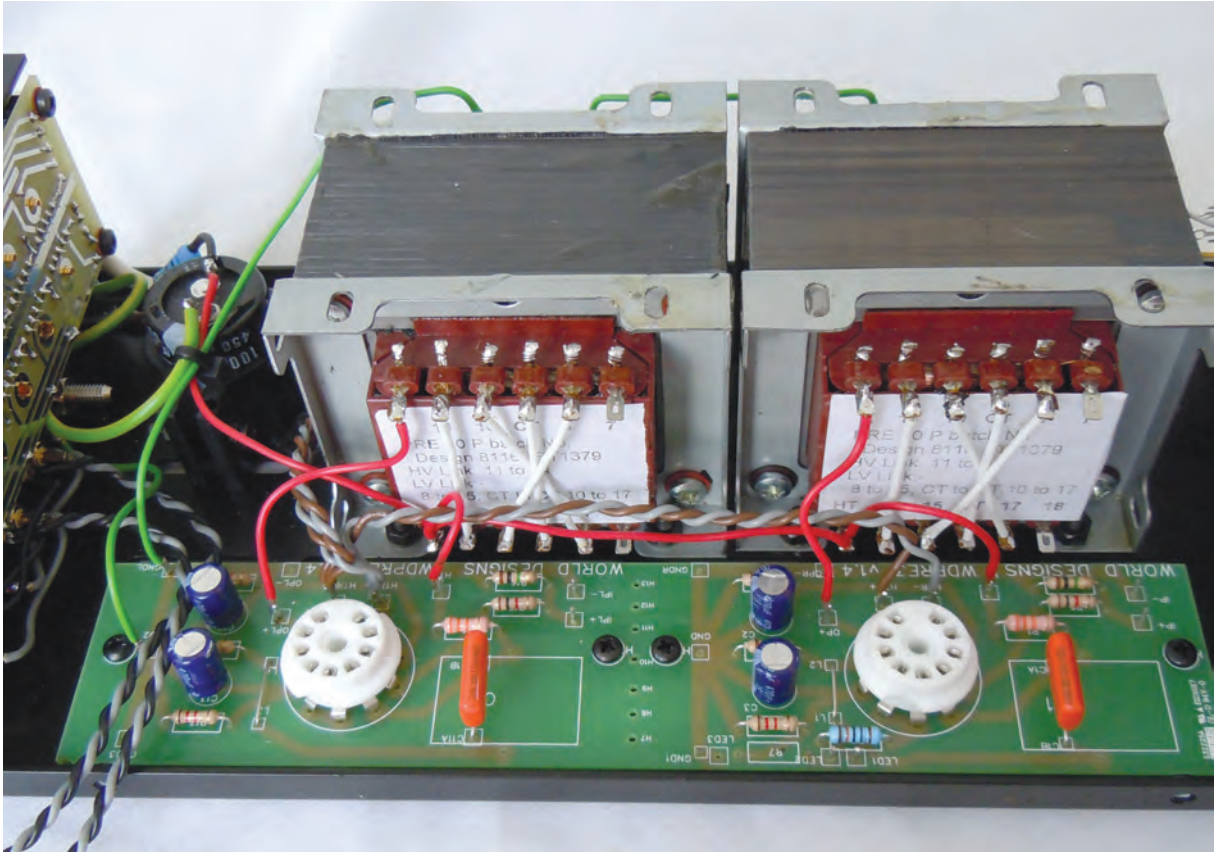


Fig. 12 Heater Wiring

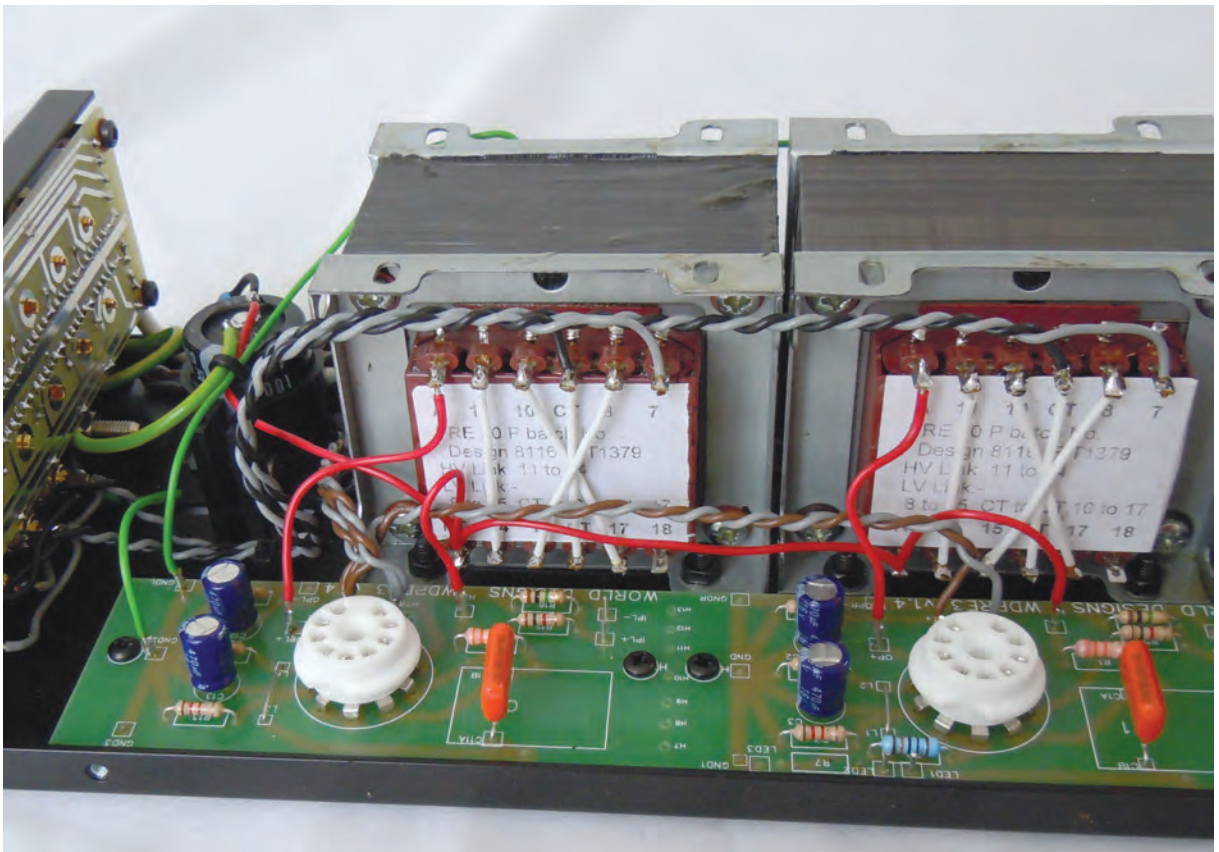


Fig. 13 Output Wiring

WIRING THE INPUTS AND VOLUME CONTROL

Fig. 14 Take 275mm Blue twin core screened cable, cut back the outer insulation AND the screen braid to approx 25mm and insulate to avoid fraying. Solder the White/Clear inner core to the potentiometer terminal L3 and the Blue inner core to the terminal L1.

Repeat for the Right channel, soldering the White/Clear inner core to terminal R3 and the Blue inner core to terminal R1.

Take 200mm Blue twin core screened cable and cut back the outer insulation to approx 25mm. Cut back the Blue inner core insulation to 25mm, unplait the braid, twist these wires together, and insulate. Solder these wires to the potentiometer terminal L1, and the White/Clear inner core to the potentiometer terminal L2.

Repeat for the Right channel, this time using approx 75mm cable.

Fit the potentiometer to the front panel using the washer and nut provided. If necessary, scrape some paint away from inside the chassis to make sure that the potentiometer is grounded.

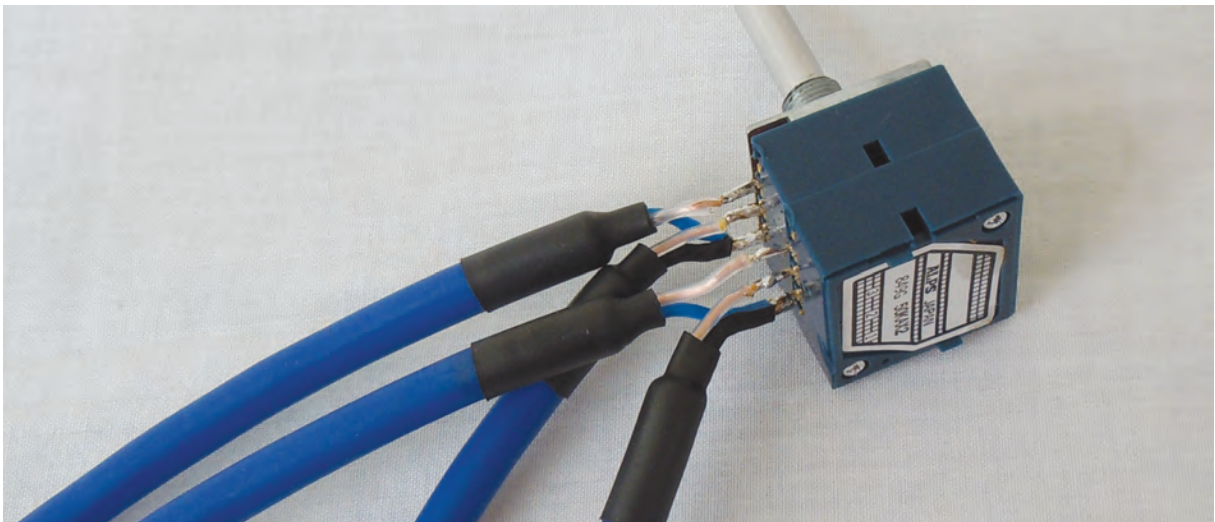


Fig. 14 Potentiometer Wiring

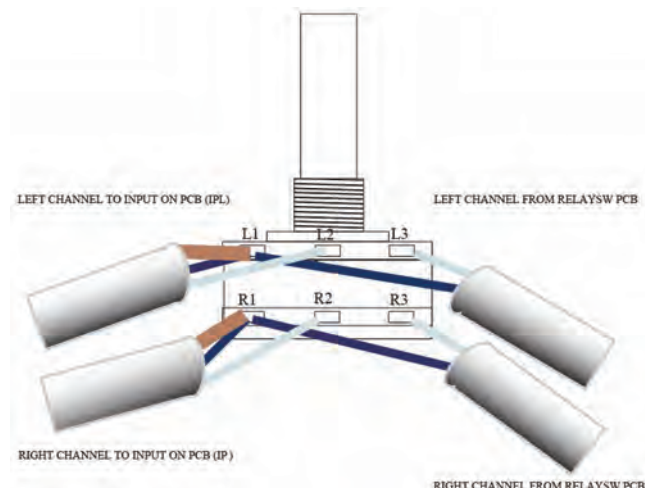


Fig. 15 Taking the 60mm signal cable from the potentiometer, cut to length and trim back the outer insulation AND the screen braid to approx 25mm. Insulate to avoid fraying. Solder the White/Clear inner core to the PCB pin IP+, and the Blue inner core to the PCB pin IP-.

Repeat for the Left Channel (the 200mm length) and solder the White/Clear inner core to the PCB pin IPL+ and the Blue to IPL-.

Taking the 275mm cables from the potentiometer, cut to length and trim back approx 25mm of the outer insulation, unplat and twist the braid together and insulate if you wish. Solder the wires for the Right channel to the pins on the Relay PCB as follows: the Screen braid to GRD3, the Blue inner core to OPR and the White/Clear inner core to OPR. While it is not strictly necessary to separate the screen and the blue inner core, doing so provides extra mechanical stability to the joints.

Repeat for the Left channel - the screen braid to GRD2, the Blue inner core to OPGL and the White/Clear inner core to OPL.



Fig. 15 Signal Wiring and LED

WIRING THE LED

Solder 150 of Black wire to the short leg of the LED and 150mm of Red wire to the long leg of the LED. Cover the joints with heat-shrink sleeving and twist the wires together.

Solder the Red cable to the LED1 PCB pin and the Black cable to the LED2 pin.

The LED can then be pushed through the hole in the front panel, ready for fitting to the fascia.

Proceed to Constructing the Power Cables and Testing the Amplifier.

CONSTRUCTING THE POWER CABLES

The power cables for the WDPRe3 and WDPPhono3 are assembled from the cable, binder line sockets and binder line plugs provided with each amplifier.

Use a sufficient length of the 4 core grey lead for each power cable connection (bear in mind that users of the WDPPhono3 with MC transformers may need to place the WDPPhono3 at a distance from all power transformers to minimize hum pickup).

The 4 cores consist of 3 black leads with numbered printing (though this can be difficult to see) and a green/yellow lead. Use the green/yellow lead for the Ground connections to pin 3. Check the continuity with your multimeter of the Black leads to ensure correct labelling and use for pins 1, 2 and 4.

Fig. 16 Always connect plug to socket using the same NUMBER pins e.g. connect a Black lead between Pin 1 on the plug to Pin 1 on the socket. Repeat for Pins 2 to Pins 4.

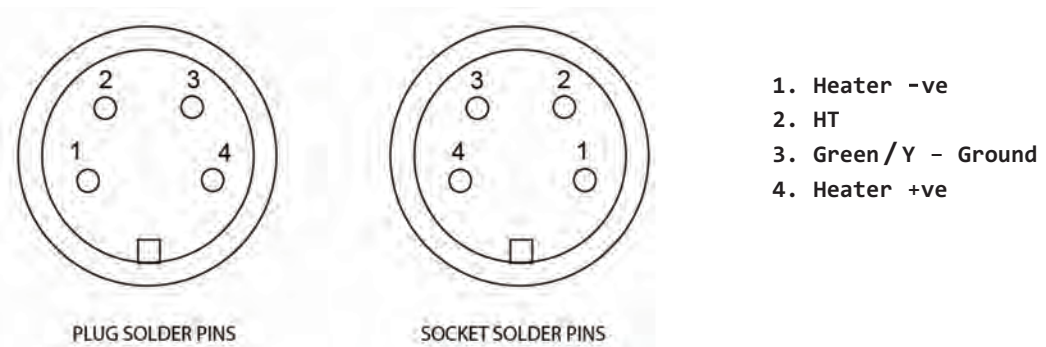


Fig. 16 Power Plug and Socket Connections

Assemble in this order:

- Fig. 17**
1. Pass the rear plastic sleeve, rubber cable bush and socket ring of the plug or socket over the cable.
 2. Push the cable clamp carrier sleeve onto the cable.
 3. Strip and solder the cable cores to the pins as outlined above.
 4. Using your multimeter check continuity between the pins using the numbers as shown in the diagram above.
 5. Slide the cable clamp carrier sleeve up to the plug/socket insert and clip it into the insert.
 6. Screw the metal cable clamp strap onto the carrier sleeve.
 7. Clip the top cover onto the clamp carrier sleeve.
 8. Slide the socket ring, rubber cable bushing and rear sleeve up to the plug or socket body.
 9. Fix the rear sleeve with the self tapping screw provided.

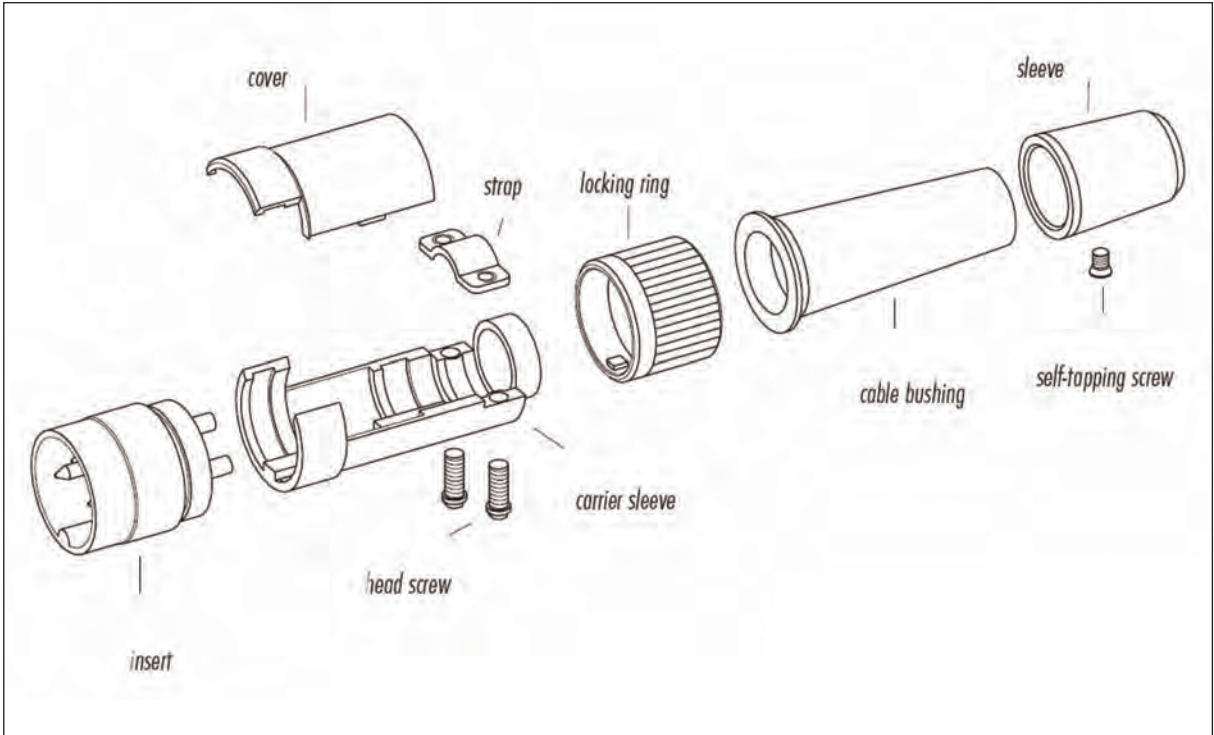
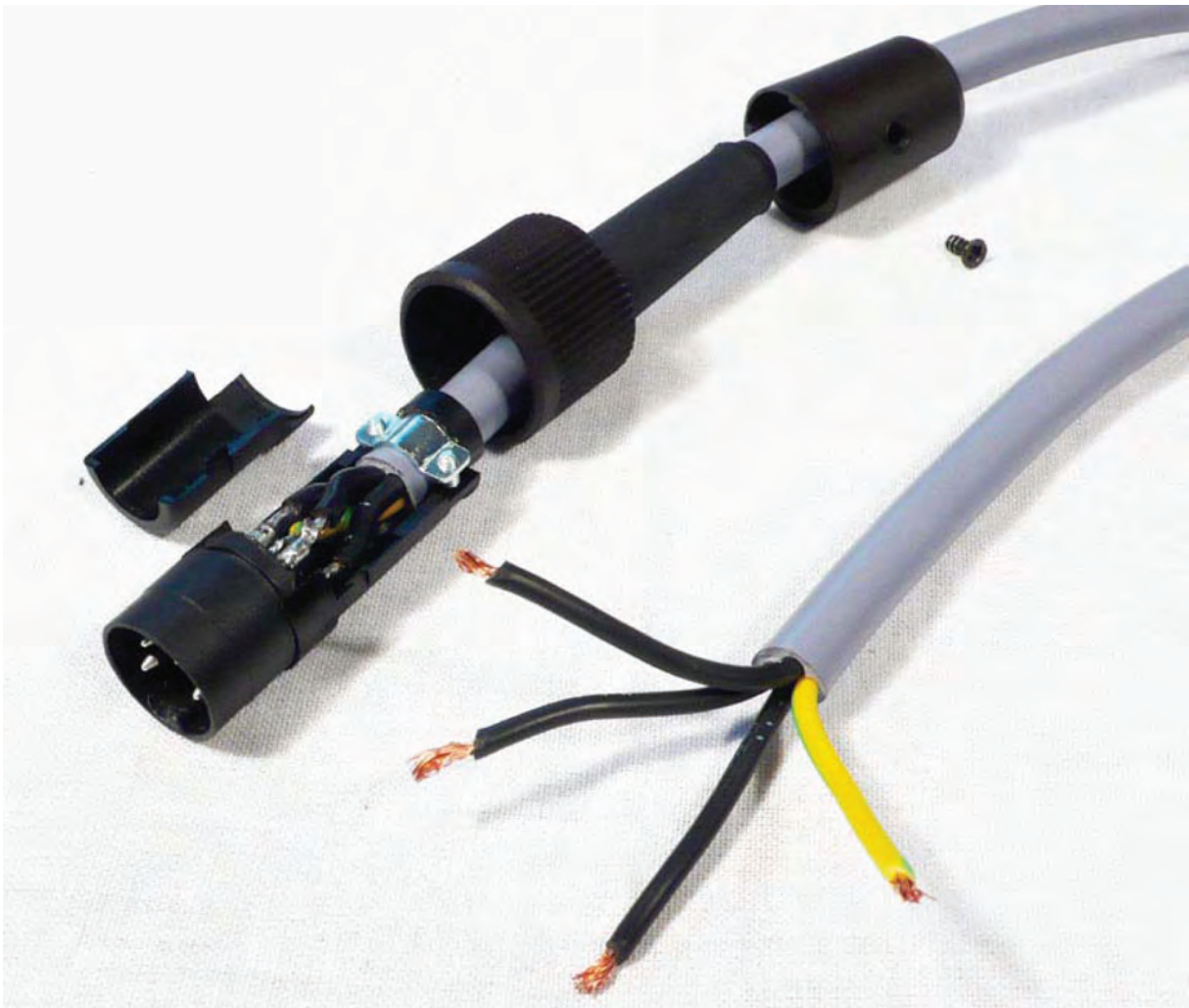


Fig. 17 Binder Line Plug and Socket Construction



TESTING THE AMPLIFIER

Before connecting the power supply it is good practice to check all the wiring, component positions on the PCB and follow the circuit diagrams through the physical circuit to make sure everything is connected correctly. Double checking all your connections and solder joints at this stage will avoid a possible expensive mistake!

All readings were taken at 240V. Check your mains voltage before starting.

Use the OHM or RESISTANCE setting on your multimeter to check around the circuit for continuity to ground. Attach one lead of your multimeter to the Earth Terminal Ground and check that all ground points on the PCB show close to zero Ohms. Check the cathodes of each valve base show the correct resistance - Pin 3 U1/R3 1.2K, Pin 8 U1/R4 1k.

Before proceeding to test the amplifier, double-check that you have wired the power cable correctly. Plug it into the rear of the PSU and referring to Fig. 10 below, check that the voltage across pins 1 and 4 of the lead binder socket is between 5.9 volts and 6.7 volts DC. Check that the voltage across pins 2 and 3 of the lead binder sockets is between 380V and 420V DC.

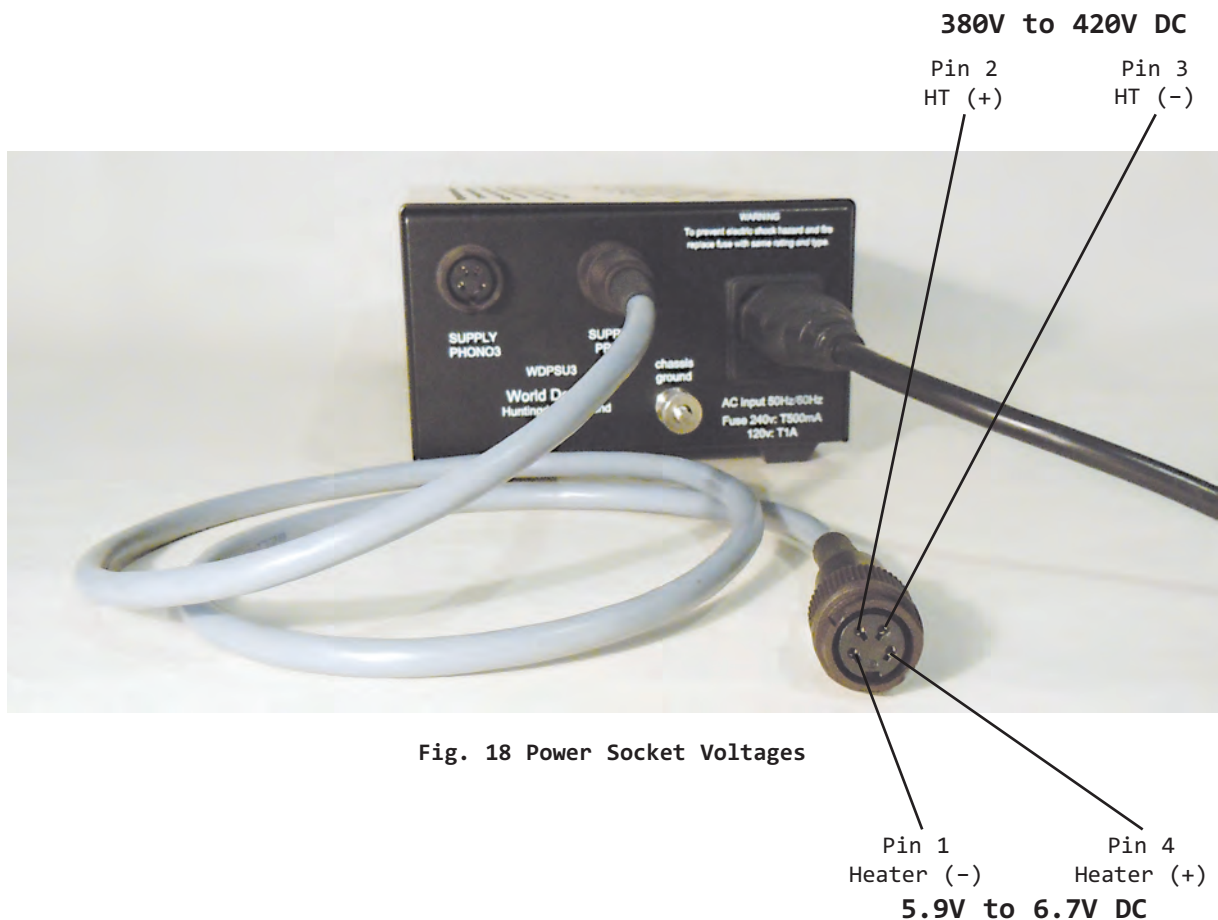


Fig. 18 Power Socket Voltages