



STA35 'RENAISSANCE'

OPERATION

VENTILATION

As these amplifiers run hot it is essential that adequate ventilation is provided. If the amplifier is fitted in an enclosure an easy air passage must be provided through the ventilation holes in the base plate past the valves and out through the cover. If these convection paths are restricted overheating will result in failure of the amplifier.

When the amplifier is new a smell may be noticed: this is due to the mains transformer and valves warming up. This is quite normal and should go after a few hours' operation.

MAGNETIC RADIATION

Although the amplifier is fitted with a mains transformer which has low magnetic radiation, it is advisable to take full advantage of the signal to noise ratio by locating it as far as possible from magnetic pick-ups, tape heads etc. Should any trouble be encountered in this respect, a slight re-orientation of the power amplifier can sometimes result in a considerable improvement.

INPUT CONNECTIONS

The signal input connections to the power amplifier are made via the gold plated phono sockets on the rear panel. It is recommended that high quality interconnect leads be used to maintain optimum performance from this equipment.

LOUDSPEAKER CONNECTIONS

Loudspeaker leads should be kept as short as possible. There are a number of brands of specific cables intended for loudspeaker connections on the market. Your dealer should be consulted regarding the choice of these cables.

MAINTENANCE

MAINS INPUT

The amplifier has been designed to operate on supply voltages of 100 V, 120 V, 140 V, and 200 V, 220 V, 240 V, 50 to 60 Hz A.C.

Normally the mains transformer selection taps will have been pre-set at the factory to suit the requirements of the country to which the amplifier is despatched.

If it is necessary to alter the supply voltage setting this is effected by a change in the connections on the transformer tag jacket. A soldering iron is required for this operation and it is recommended that this work should be carried out by a competent engineer, as described below.

1. Isolate the unit from the mains supply.
2. Unscrew the four cover screws located in the handle flashes and remove the ventilated cover.
3. Connect the appropriate links on the mains transformer tag jacket for the supply voltage required as shown in Fig. 1.
4. Check the mains fuse value is correct and substitute if necessary.
5. Replace the cover before reconnecting the mains supply.

Under no circumstances should the unit be connected to the mains supply with the cover or the base plate removed except when the unit is being tested by a competent electronics engineer (See Bias Adjustment section). Because of the very large capacitors used in the power supplies high voltages may be retained for up to 30 minutes after the amplifier has been switched off; therefore care should be taken when handling the unit with the base plate removed.

The amplifier is supplied with three core power cord in accordance with B.S. coding: BROWN (LIVE), BLUE (NEUTRAL), GREEN/YELLOW (EARTH).

FUSES

Mains fuse

A 20 mm x 5 mm mains fuse is fitted in a screw cover fuse-holder located on the rear panel.

Isolate the amplifier from the mains supply before attempting to remove the fuse for inspection.

The fuse requirements are as follows:

for 200 V to 240 V operation : 3.15 amp delay.

for 100 V to 140 V operation : 5 amp delay.

Mains fuses are stressed by high currents during switch on and may wear thin after a few years' use. This does not imply any fault in the equipment but if fuses need frequent replacement the amplifier should be checked.

H.T. FUSES

A 1 amp 20 mm x 5 mm fuse has been fitted on each channel in the high voltage supply to the output valves, this is located on the power supply board inside the unit. If this fuse fails then it is important that the fault should be found and rectified by a competent electronics engineer before replacement. (Take note of the safety precautions outlined in section one)

VALVE REPLACEMENT

If the output valves are replaced it will be necessary to set the negative grid voltage. As this procedure involves operating the amplifier with the base plate removed it must only be undertaken by a competent electronics engineer.

If V2 is replaced P1 should be adjusted for minimum distortion at the output. If distortion measuring equipment is not available set to mid position.

BIAS ADJUSTMENT

The amplifier output valves obtain negative grid bias from a power supply provided specially for this purpose. The output valves have been run in and the bias voltages set at the factory they should not require further adjustment unless output valves are replaced. Then it will be necessary to adjust the bias as follows:

1. Remove ventilated cover and replace valves, these should be replaced in pairs.
2. Invert amplifier and remove base plate, on pcb No. WS5008 there are four pre-set potentiometers P2, P3, P4 and P5 Rotate each control 5 turns anticlockwise. **DO NOT ADJUST P6!**
3. Switch on unit with no input connected and allow to warm up for 2 minutes. If any of the led indicators light up during this period rotate the adjacent potentiometer anticlockwise until all leds are off.
4. After the 2 minute warm up period rotate each potentiometer clockwise until the adjacent led is on, then slowly anticlockwise until it just goes off. As there is some interaction between these settings it may be necessary to adjust each potentiometer more than once.
5. With the amplifier the correct way up and adequate ventilation run for eight hours adjust again as in 4 above, fit cover and base plate. No further adjustment should be required.

Note:

P6 sets the threshold at which the bias set leds operate and is adjusted at the factory for an output valve current of 50 mA.

Fig.1 Mains Transformer Voltage Selection STA35 Renaissance

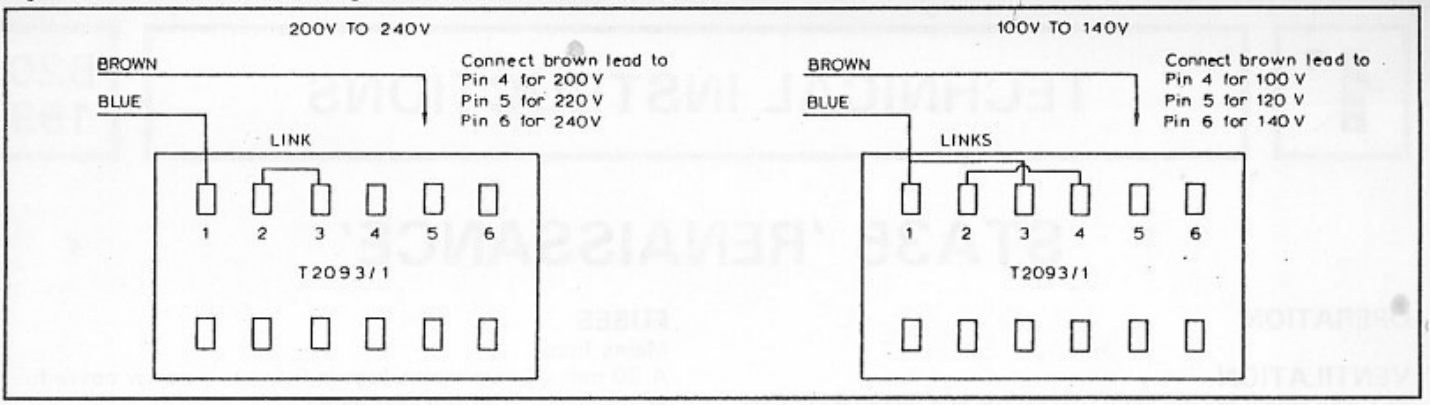


Fig.2 Amplifier Circuit STA35 Renaissance

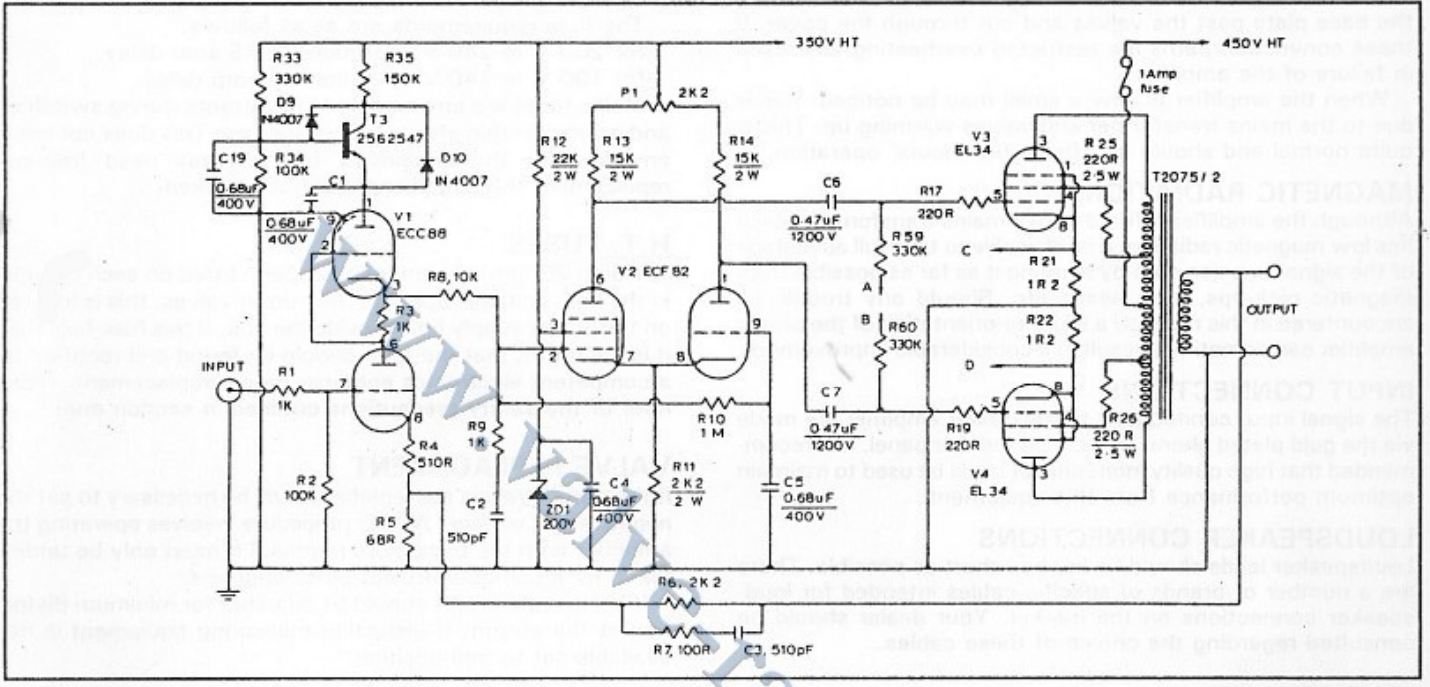


Fig.3 Power Supply Circuit STA35 Renaissance

