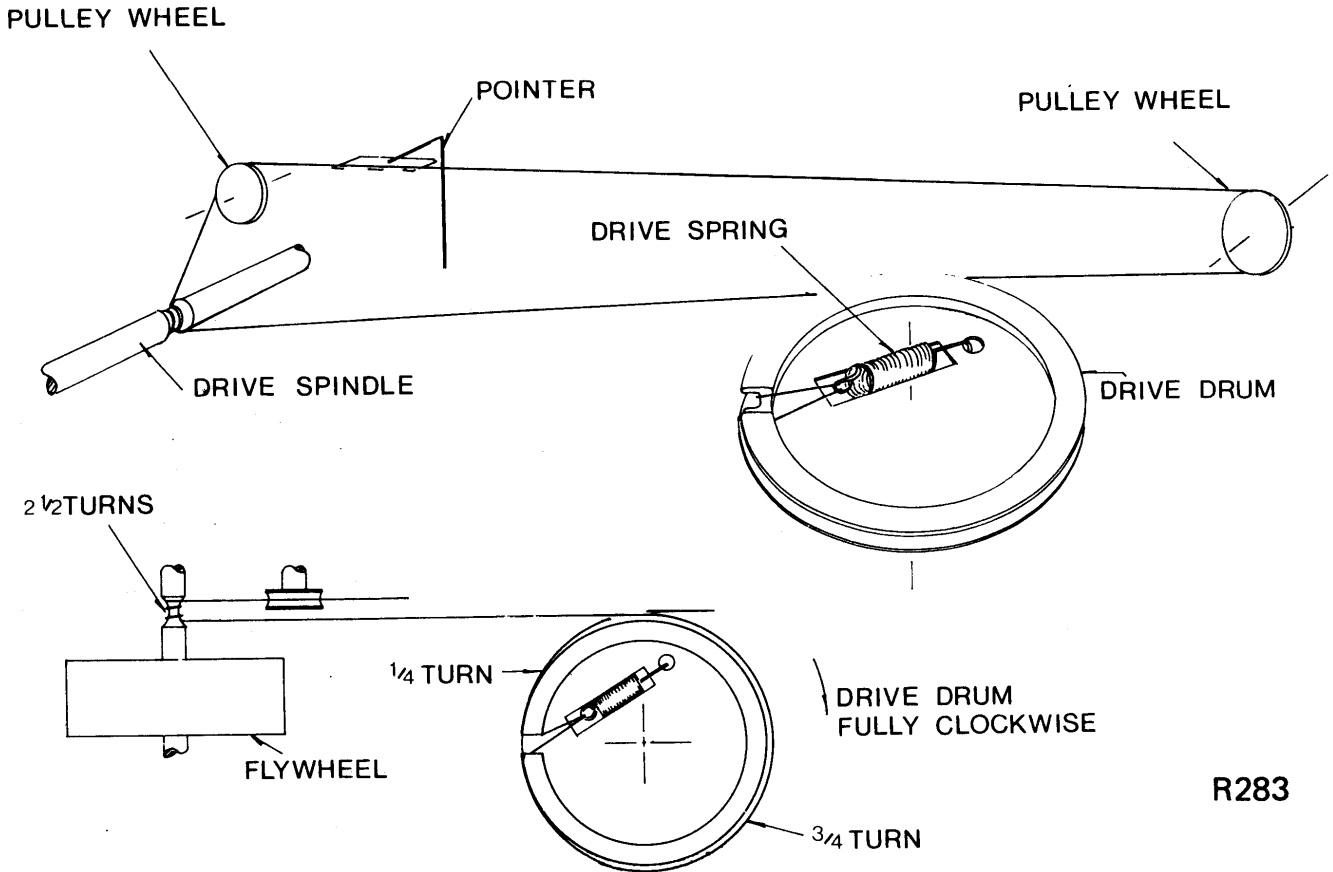

DYNATRON**1275, 1375 Series,
Models HFC202-6, 208-9, RG92-5**

General Description: A mains-operated stereo tuner amplifier system for incorporation in a variety of equipment. Construction is in modular form and an integrated circuit is used in the stereo decoder. Four-channel output is available from a loudspeaker matrixing circuit to obtain 'surround-sound' operation from stereo information.



(R283) DRIVE CORD—1375 SERIES ETC.

Mains Supply: 240 V, 50 Hz.

Fuses: 1.6 A (Power Amplifiers).

Wavebands: L.W. 15–285 kHz; M.W. 525–1,630 kHz; F.M. 87.5–104 MHz.

Tape Output Socket: 180 mV into 22 K.

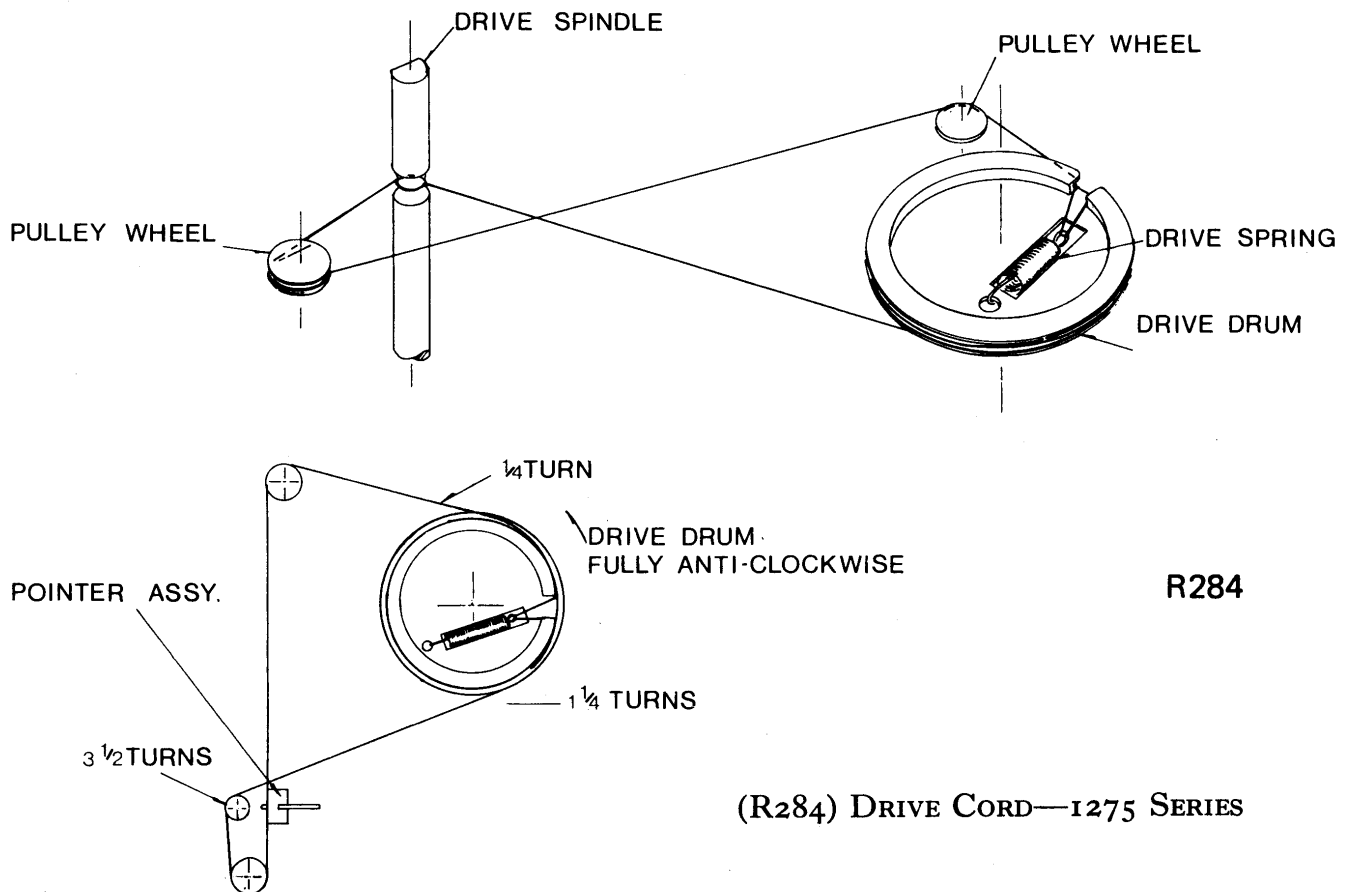
Loudspeakers: The loudspeakers should be connected to the two-pin DIN pattern sockets provided. All Dynatron loudspeaker units are supplied with a suitable plug fitted to the connecting cable. If other types of loudspeaker are to be used they should be of 8 Ω impedance and preferably a matching pair. Ensure correct polarity when wiring the plugs.

Stereo Operation (2 speakers): Connect the right- and left-hand loudspeaker plugs to the 'MAIN' loudspeaker sockets, making sure that the right-hand loudspeaker is connected to the right-hand socket, and vice-versa.

Stereo Operation (4 loudspeakers): If you wish to connect a second pair of loudspeakers—for example as extension speakers in another room, they should be connected to the REMOTE or REAR loudspeaker sockets—ensuring that the right-hand loudspeaker is connected to the right-hand socket, and vice-versa.

Headphone Socket Switch: With the loudspeakers connected between middle and top poles of the REMOTE or REAR loudspeaker sockets, the

DYNATRON



switch within the headphone jack switches off the remote loudspeakers when the phone jack is inserted. With the remote loudspeaker plugs inverted (between the middle and lower poles of the DIN sockets) the headphone jack switch does not switch off the remote loudspeakers when the headphone jack is inserted. The 'MAIN' or 'FRONT' loudspeaker sockets are not reversible and will be disconnected when the headphone jack is inserted.

If 'two-room' stereo is being used, the headphones can be used for personal listening with the main loudspeakers automatically switched off when the headphone jack plug is inserted, but the extension loudspeakers, in another room, can be on or off depending on which way round the remote loudspeaker plugs have been inserted.

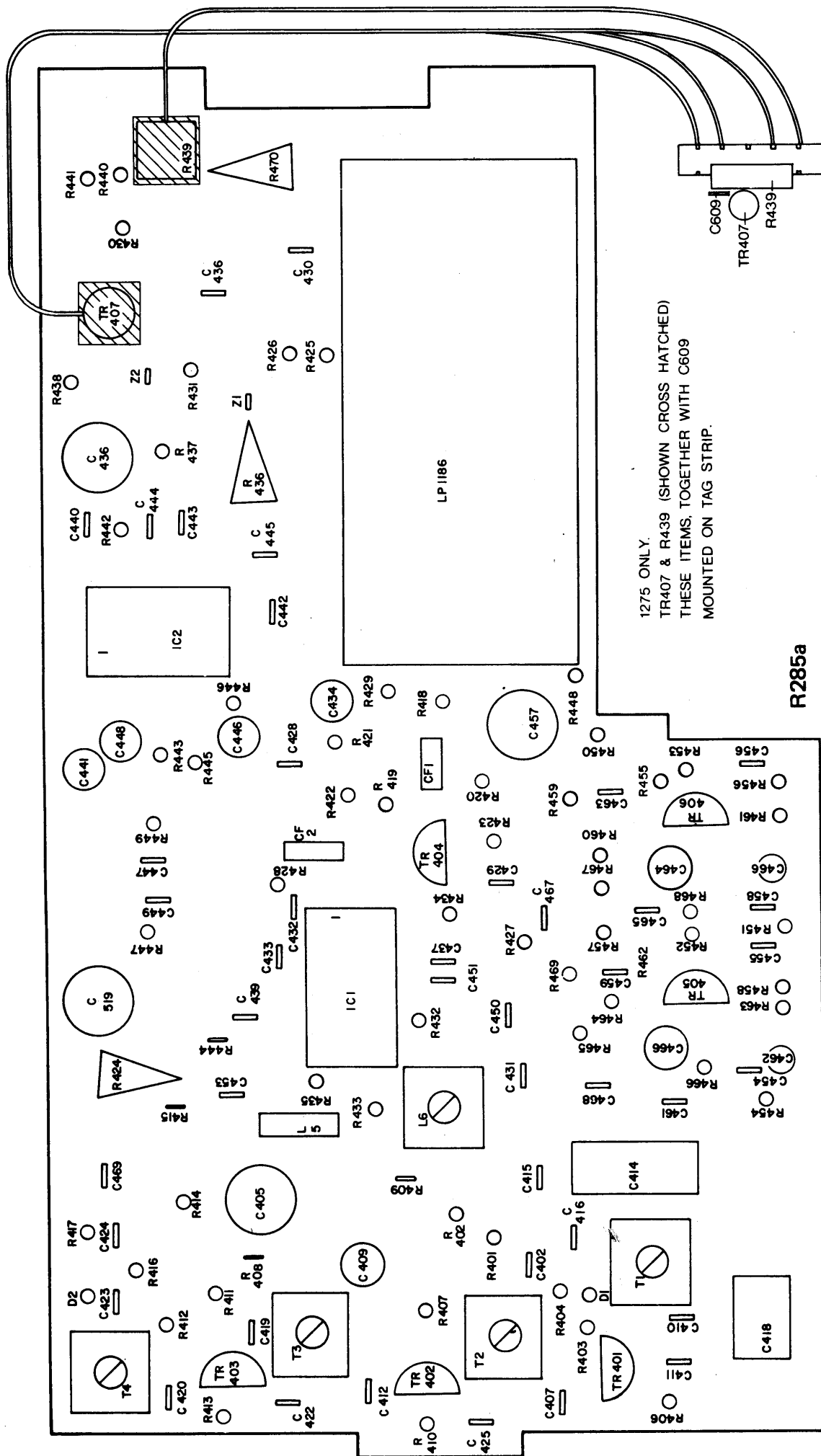
Quadro Sound Operation (4 speakers): *Front:* Connect the front loudspeakers to the 'MAIN' sockets as outlined above, under 'Stereo Operation' (2 speakers).

Rear: Connect the rear loudspeaker plugs to the 'REAR' or 'REMOTE' loudspeaker sockets between the middle and top poles of these sockets again ensuring that the right-hand loudspeaker is connected to the right-hand socket.

Remember, also, that the right-hand REAR loudspeaker is the one facing the right-hand FRONT loudspeaker.

Amplifier Controls

Quadro Sound: This switch performs more than one function, depending on the number of loudspeakers employed and the choice of operation:



(R285a) COMPONENT LAYOUT (BOARD A)—1275, 1375 SERIES ETC.

Stereo Operation (2 speakers): When used for stereo operation, the two loudspeakers are connected to the MAIN or FRONT loudspeaker sockets (see 'Making Connections') and the equipment will operate as a 2-channel system regardless of the setting of the Quadro Sound switch.

Stereo Operation (4 speakers): With the addition of two loudspeakers, connected to the REMOTE or REAR sockets, the 'Quadro Sound' switch will perform two functions:

Either:

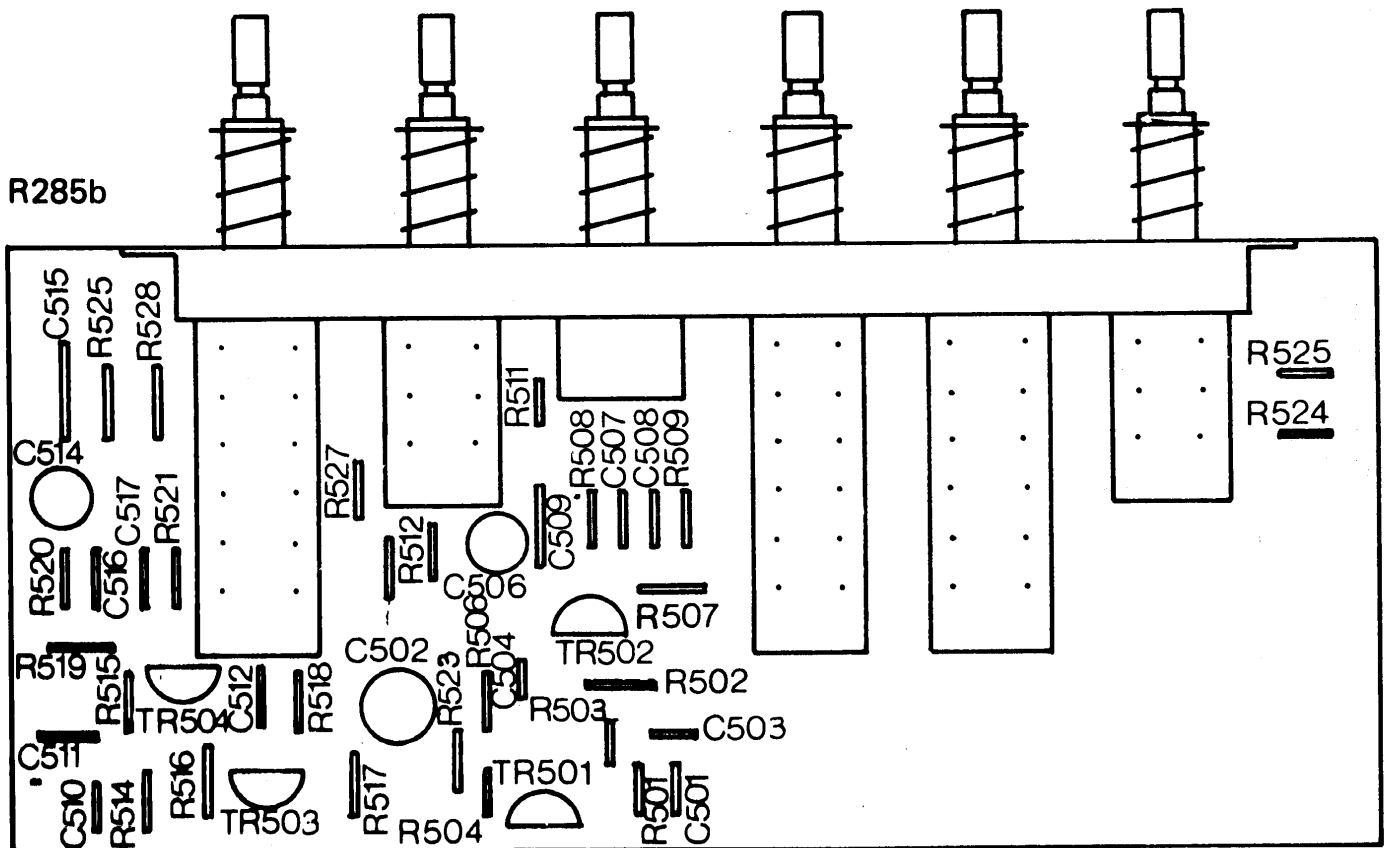
(a) If the two extra loudspeakers are placed in another room as extension speakers, setting the Quadro Sound switch to the 'OFF' position provides full stereo information from each pair of loudspeakers—i.e. 'Two-room stereo'.

Or:

(b) **Quadro Sound Operation:** If all four loudspeakers are placed in one room, with the Quadro Sound switch in the 'OFF' position, full stereo information is again provided from both pairs of loudspeakers creating a 'Surround Sound' configuration, whilst:

(c) Setting the Quadro Sound switch to the ON position will activate the Quadro Sound circuits and provide 4-channel Quadro Sound—those loudspeakers connected to the REMOTE or REAR sockets reproducing the REAR information.

Contour Filter: When set to 'ON' this switch activates a circuit which compensates for the apparent lack of extreme high and low frequencies when listening at low volume levels. This compensation decreases automatically as the volume control is advanced.



(R285b) COMPONENT LAYOUT (BOARD B)—1275, 1375 SERIES ETC.

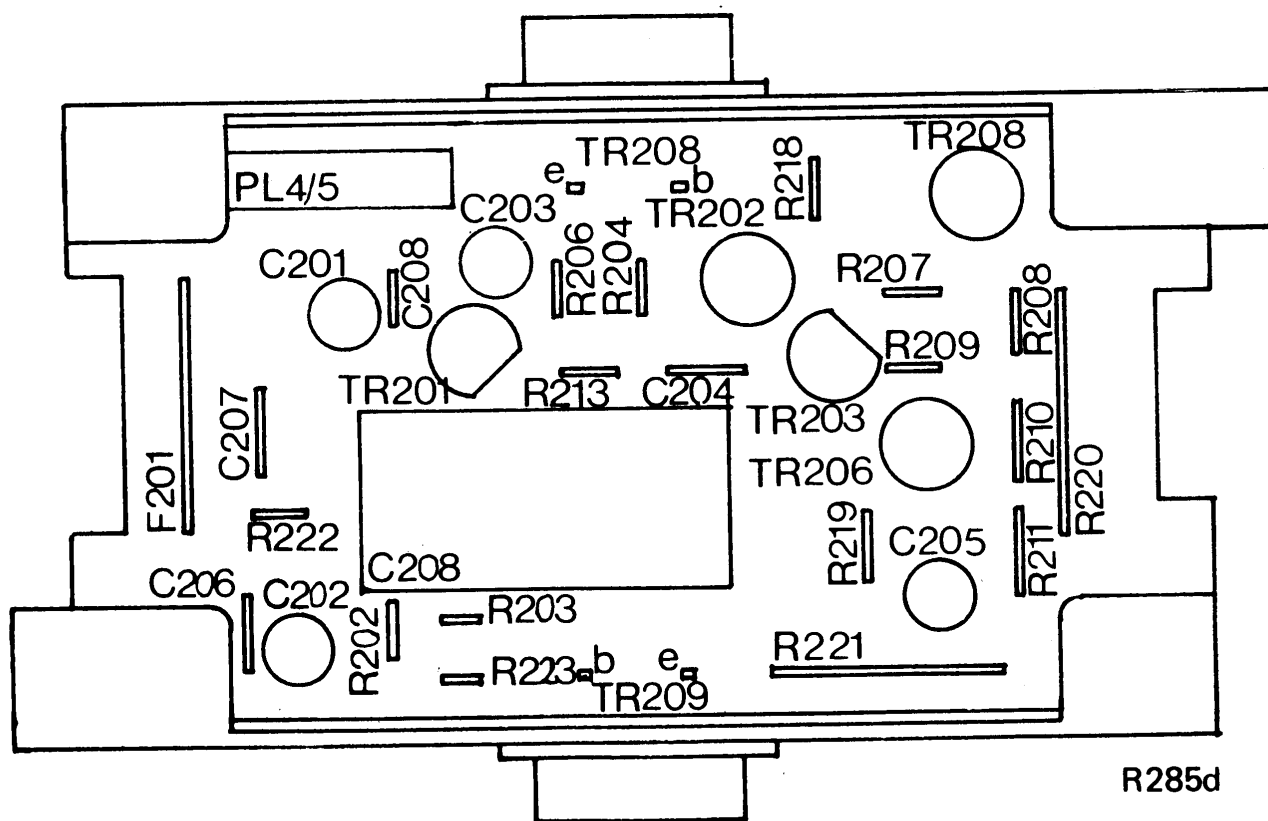
This facility compensates for the room acoustics, e.g. soft furnishings positioned near to either of the loudspeakers (which will tend to absorb the sound) or for various sitting positions by merely moving the control, and subsequently the sound, until the mid-point is immediately ahead.

Mute Button: This button controls a special mute circuit which gives a desired reduction in off-station noise when tuning in a station on the V.H.F./F.M. waveband or when a station which has been pre-set is not transmitting. Reducing the off-station noise also reduces the sensitivity of the tuner thereby enabling you to 'remove' weaker relay transmissions of some radio stations which can complicate tuning for the best signal.

Depress this button to turn the mute circuit 'OFF'.

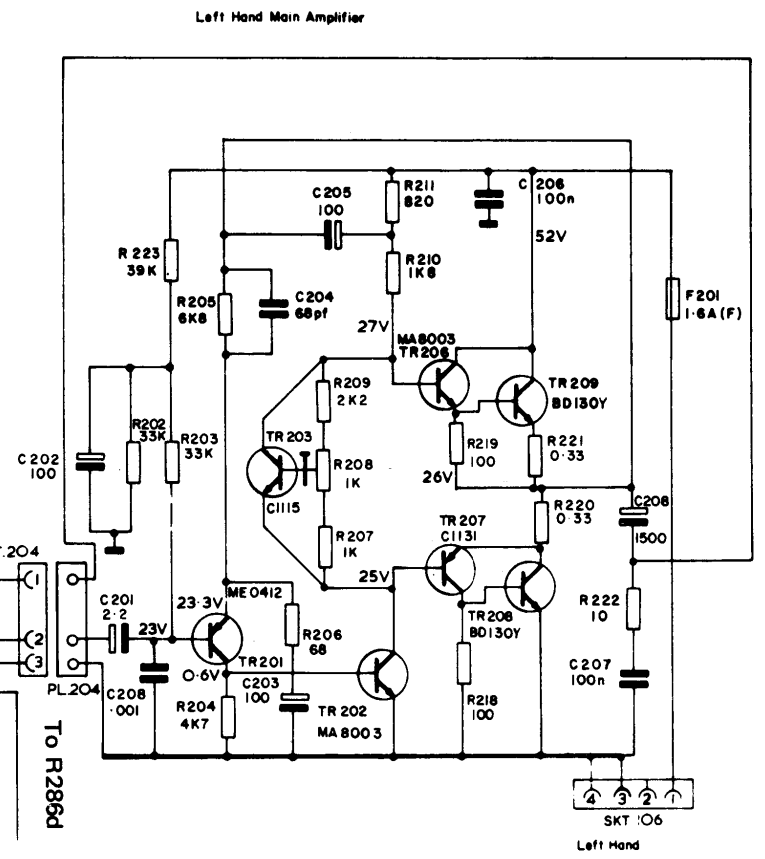
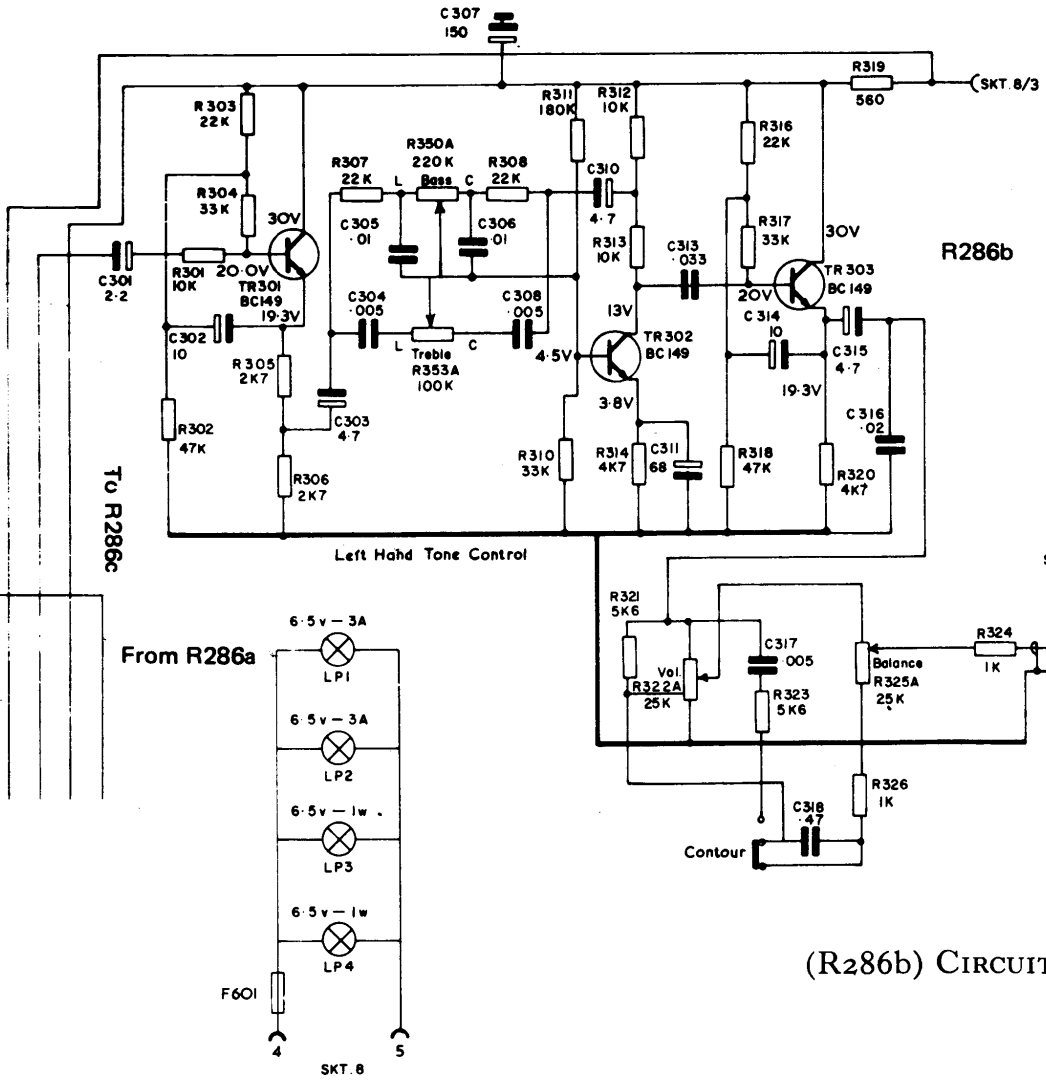
With the mute circuit switched off, full sensitivity is available. If you are able to receive only relatively weak signals in your locality (i.e. the transmitter is some distance away) or you wish to listen to a weak station in particular, then the muting control should be switched 'OFF', so that the station is received at maximum strength. Any stronger station will be unaffected by this setting—only the off-station noise will be relatively louder. For this reason, when retuning to another, stronger station, setting the Mute switch to 'ON' beforehand will reduce the off-station noise and 'remove' the weak stations to facilitate tuning.

Note: Due to the high sensitivity of this tuner, only those very weak stations giving less than acceptable reception quality will be 'removed' by the action of the muting circuit.



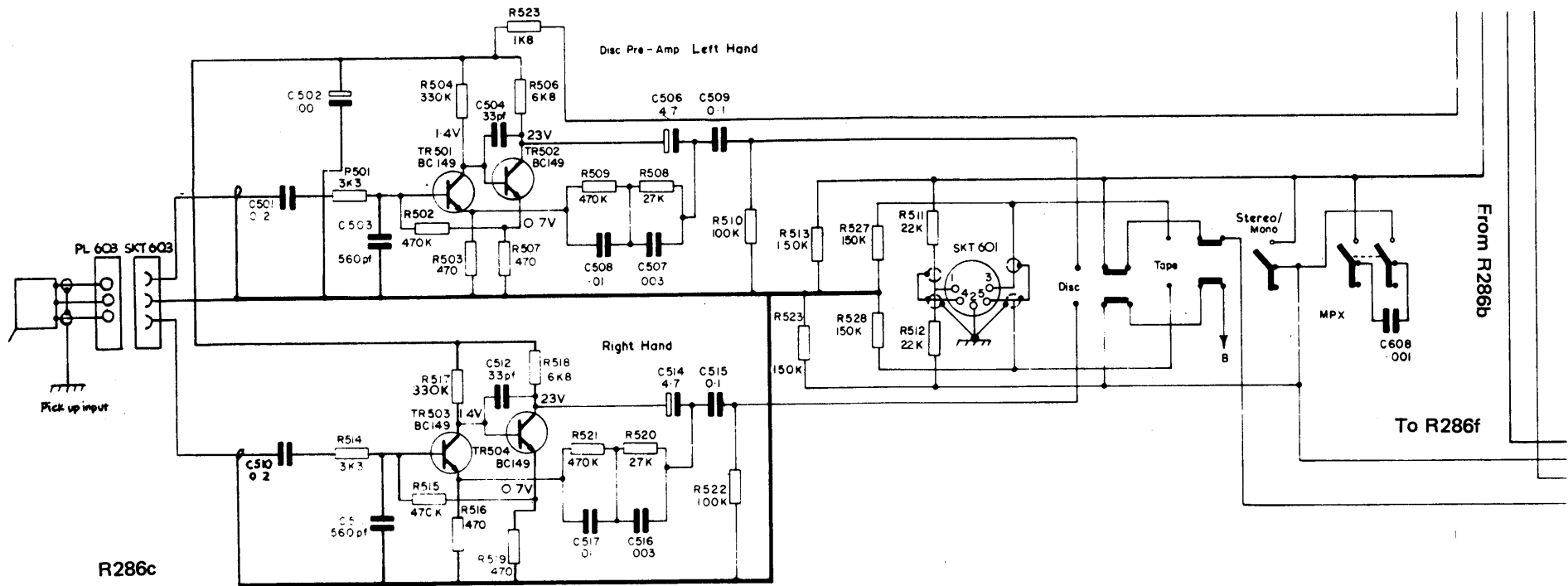
(R285d) COMPONENT LAYOUT (A.F. STAGES)—1275, 1375 SERIES ETC.

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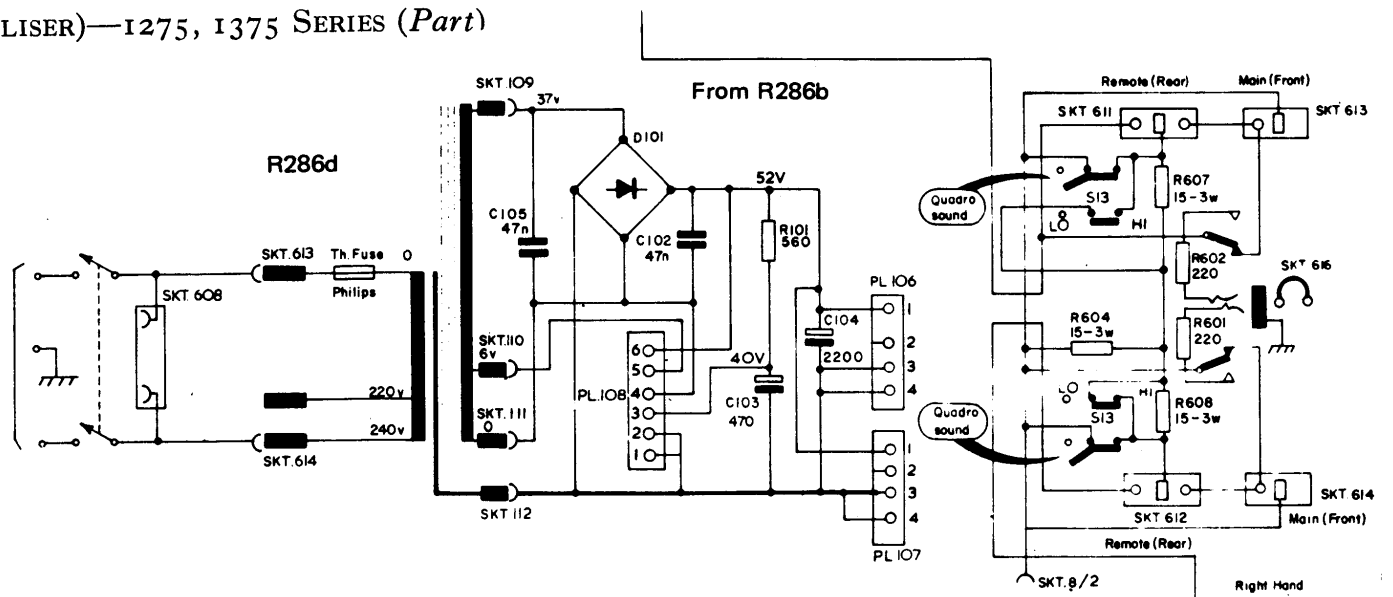
DYNATRON

(R286b) CIRCUIT DIAGRAM (A.F. STAGES)—1275, 1375 SERIES (Part)



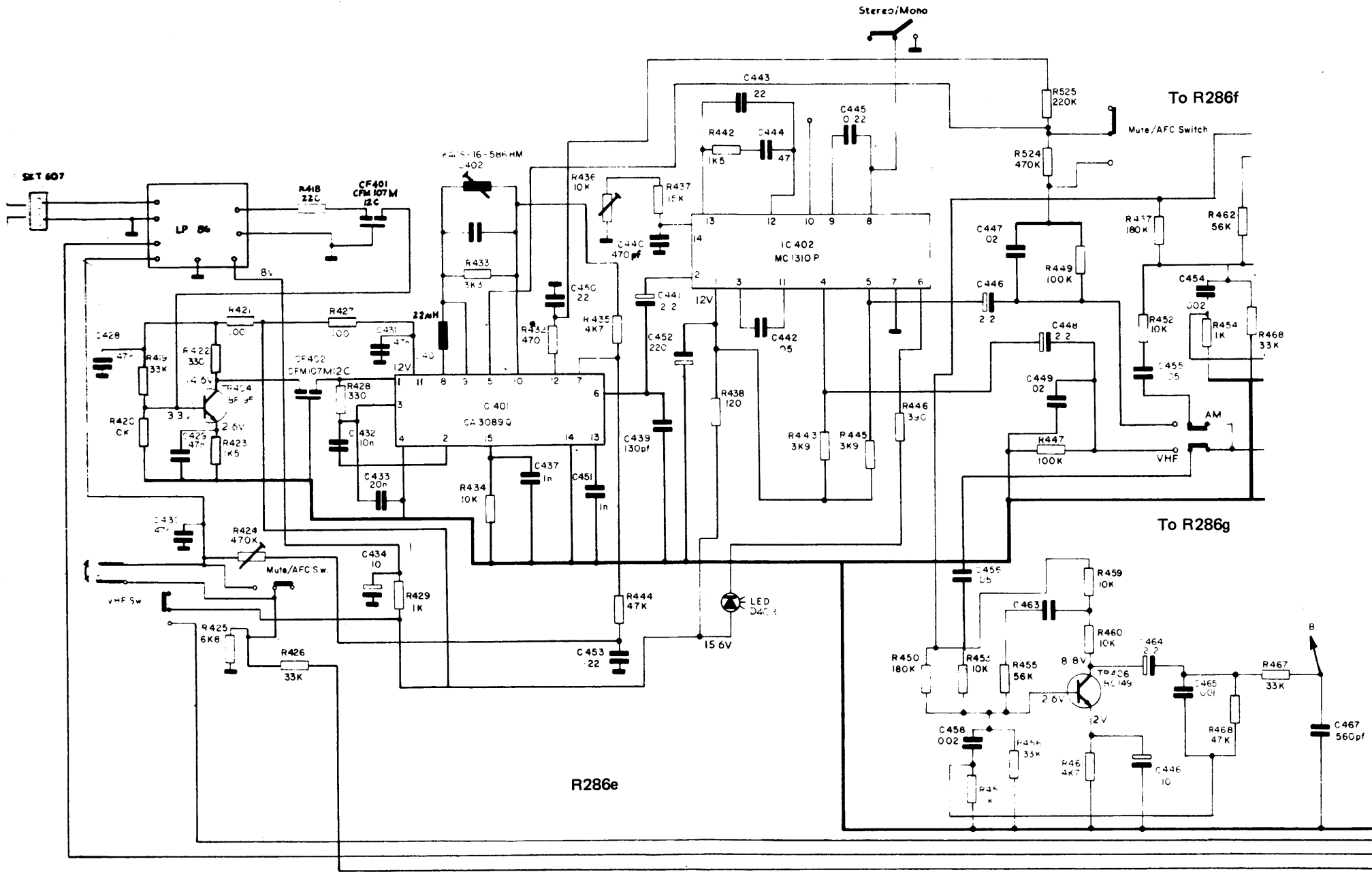
R286c

(R286c) CIRCUIT DIAGRAM (P.U. EQUALISER)—1275, 1375 SERIES (Part)

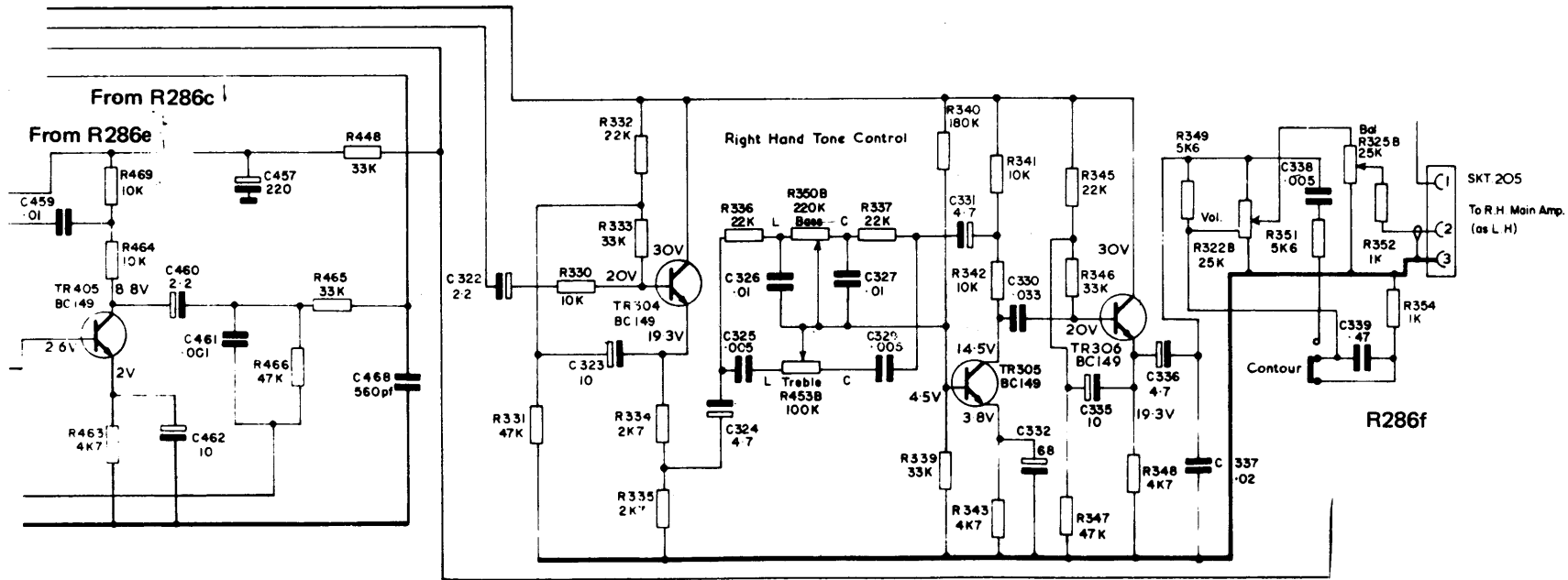


R286d

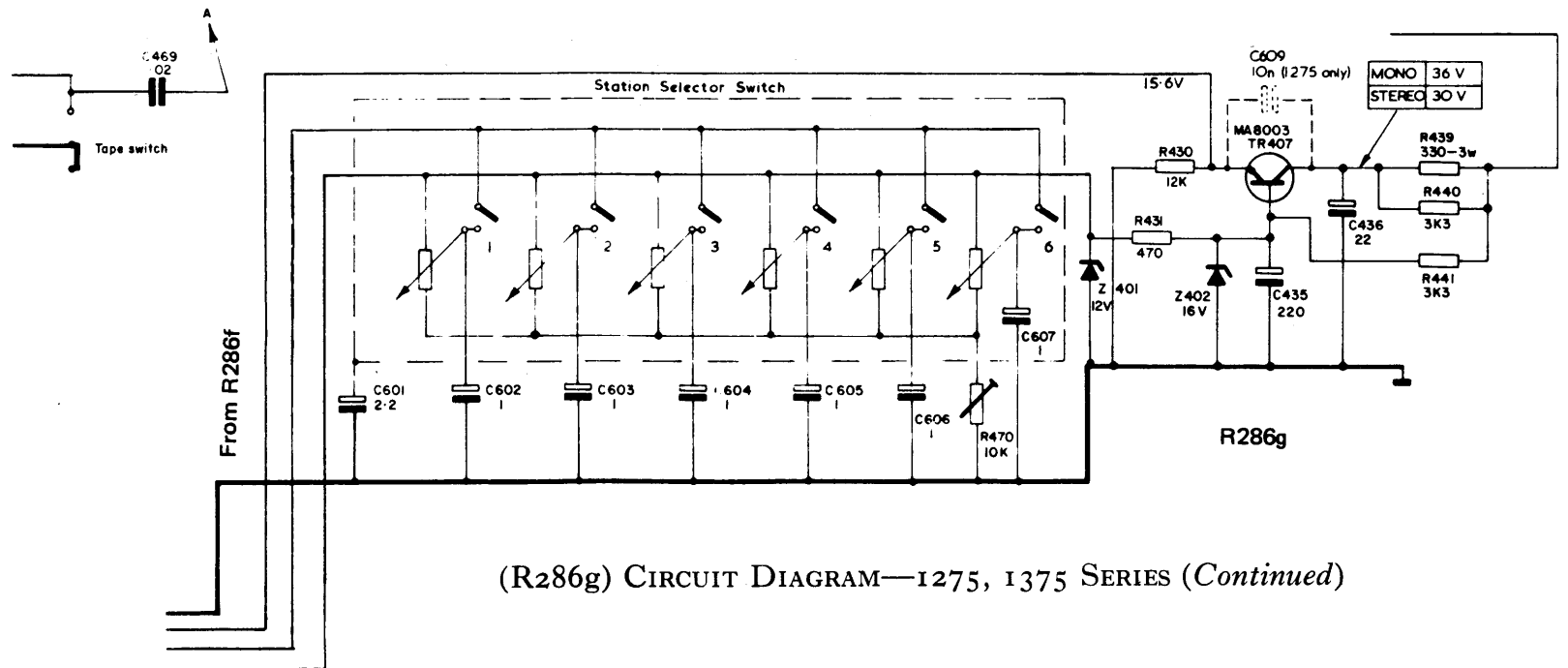
(R286d) CIRCUIT DIAGRAM (POWER SUPPLIES)—1275, 1375 SERIES (Part)



(R286e) CIRCUIT DIAGRAM (F.M. TUNER)—1275, 1375 SERIES (Part)



(R286f) CIRCUIT DIAGRAM—1275, 1375 SERIES (Part)



(R286g) CIRCUIT DIAGRAM—1275, 1375 SERIES (Continued)

Dismantling

Accessibility of Chassis and Modular Units: In all of these models, the mains transformer, power supply module and main amplifier modules are inter-connected with the main chassis by plugs and sockets. When removing and installing these items always carefully note the positioning of the cables and the points at which they are cleated. Interaction between units may occur if cables are not correctly placed.

The thermal fuse fitted to the mains transformer is replaceable by withdrawing the active element from its housing. This housing is taped into position. The element of the thermal fuse is bridged by a special low melting-point metal and **must not be repaired using ordinary solder**.

Always fit a replacement element. When replacing a transformer, do not tighten the fixing screw more than is required to prevent the transformer from rotating. Over-tightening can cause vibration to be transmitted to the cabinet work and could give rise to mechanical hum.

Secure the fixing screw with a dab of cellulose paint.

Removal of power supply or main amplifier modules is simply a matter of unplugging the relevant cables, releasing the springy tongue of the mounting clip moulding, and lifting the module clear.

Installation is in reverse order but note that the notches in the end of the circuit boards are of unequal size to mate with the mounting clip.

Chassis Removal and Installation: Models HFC202, 203, 204, 205, 206, 208: Fitted with '1275' chassis.

Secure the pickup arm to its rest and tighten the record playing unit transit screws so that the unit is in the fully clamped position.

Close the lid and invert the unit, placing it on a soft surface (i.e. felt covering).

Remove the base fixing screws and remove the base.

Release all plugs to modules and pull off mains lead connectors from the mains transformer.

Disconnect the mains and signal leads to the record player (and on HFC205 and 206, the tape deck) from the chassis.

Locate 3×4 BA nuts securing chassis over studs. Remove these nuts and associated washers and carefully lift chassis clear of cabinet.

Install the chassis in reverse order.

Models RG92, 93 and 95: Disconnect internal loudspeaker and aerial plugs from rear sockets panel.

Proceed as for above but note that it is not necessary to remove the loudspeaker housing base panels unless access to the loudspeakers is required. (See note below.)

Models HFC209 and RG94—fitted with 1375 chassis:

HFC209: Proceed as above (including disconnection of tape deck).

Locate and release the two screws on the underside of the cabinet securing the chassis.

Locate and release the two screws on the extreme ends of the rear panel. Withdraw the main chassis through the front of the cabinet to the limit of the cables connecting the chassis to the rear sockets panel.

Locate and remove the 2×4 BA nuts and washers securing the rear sockets panel.

Withdraw the complete chassis and sockets panel assembly through the front of the cabinet.

Installation: Proceed as for Removal in reverse order, taking care to ensure that the mains lead is fed through the sockets panel aperture and is not trapped as the sockets panel is fitted.

RG94: Proceed as in item 1.

Disconnect the internal loudspeakers.

Locate and release the screws securing the motor board assembly and lift the complete assembly clear of the cabinet using the recesses provided in the two end mouldings on the motor board. Installation is in reverse order—remember to pass the mains lead through the rear sockets panel aperture in the cabinet.

Note: When reconnecting the internal loudspeakers, ensure that they are inserted into the loudspeaker sockets marked 'MAIN' and that the left-hand loudspeaker is connected to the L.H. socket, and vice-versa.

Remove the chassis as follows:

Locate and remove the 2 screws securing the base of the main chassis to the metal brackets attached to the motor board assembly.

Locate and remove the 2 screws on the end of the brackets, tensioning the chassis straps located at each end of the chassis.

Locate and remove the two nuts and washers securing the rear sockets panel.

Withdraw the complete chassis and sockets panel assembly through the aperture in the top of motorboard assembly.

Removal and Installation of Cassette Tape Deck: Model HFC209: Place the unit on one end, with the lid open and remove the base board.

Disconnect the mains and signal leads from the main chassis.

Locate the $4 \times$ Long screws passing through the top moulding of the unit and $4 \times$ nuts and washers on the underside of the motor board. Steadying the unit, remove the screw, nuts and washers and remove the unit from the top of the motor board.

Model RG94: Remove the complete motor board assembly as detailed in the above and proceed as for HFC209.

Record Playing Units: The Garrard SP25 Mk. IV and 86SB units are removed from the motor board having made the necessary disconnections, in the conventional manner by placing the transit screw clips in the vertical position so that they will pass through the holes in the motor board.

When handling the 86SB take care not to introduce any grease on to the drive belt.