

"TRADER" SERVICE SHEET
1651

DECCA Deccalian Mk. 4

High Fidelity Record Reproducer

A HIGH quality record reproducer with facilities for the connection of a matching stereo conversion unit, the Decca Deccalian Mark 4 employs four valves plus rectifier and is connected for push-pull output operation. It is fitted with separate bass and treble loudspeakers and crossover network, and is provided with an external loudspeaker socket. A stereo channel output socket provides a right-hand channel output from the Deram pick-up for feeding a second amplifier.

Valve Table

Valve	Anode (V)	Screen (V)	Cathode (V)
V1 ECC83 { a	168	—	1.35
V1 ECC83 { b	168	—	1.35
V2 ECC83 { a	205	—	1.98
V2 ECC83 { b	248	—	14.7
V3, V4 EL84	290	294	11.7
V5 EZ80	275*	—	298.0

*A.C. reading

The amplifier power output is 7W and the output delivered to the internal loudspeaker system is 3.5W. The full 7W is available at the external loudspeaker socket, the internal loudspeaker being automatically disconnected when the external plug is inserted. A third socket provides a high impedance output suitable for feeding a tape recorder.

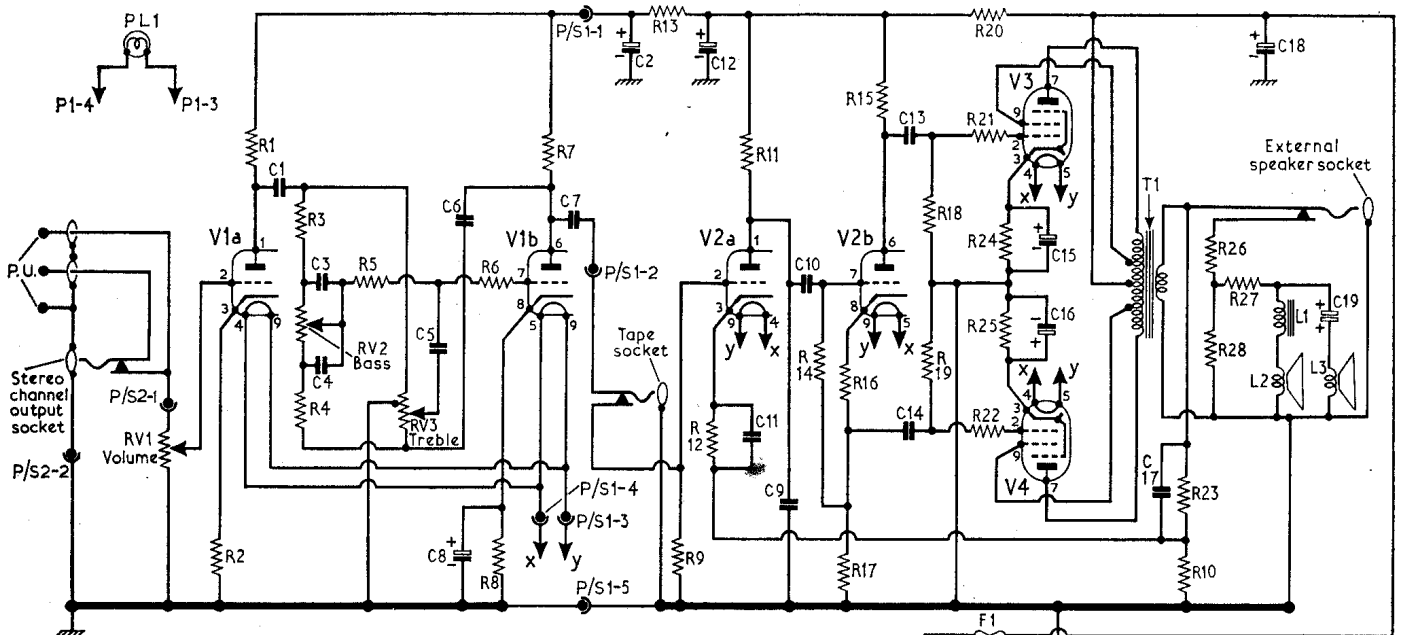
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COMPONENT VALUES AND LOCATIONS

Resistors			
R1	100kΩ	F3	
R2	2.2kΩ	F3	
R3	150kΩ	E3	
R4	100kΩ	E3	
R5	220kΩ	F3	
R6	3.3kΩ	F3	
R7	100kΩ	F3	
R8	2.2kΩ	F3	
R9	470kΩ	A2	
R10	100Ω	A2	
R11	100kΩ	A2	
R12	3.9kΩ	A2	
R13	27kΩ	A2	
R14	470kΩ	A2	
R15	27kΩ	A2	
R16	4.7kΩ	A2	
R17	27kΩ	B2	
R18	220kΩ	A2	
R19	220kΩ	B2	
R20	15kΩ	C2	
R21	18kΩ	B2	
R22	18kΩ	B2	
R23	1kΩ	A2	
R24	390Ω	B2	
R25	390Ω	B2	
R26	2.7Ω	E4	
R27	2.7Ω	E4	
R28	47Ω	E4	
RV1	2MΩ	F3	
RV2	500kΩ	E3	
RV3	1MΩ	F3	
RV4	100Ω	D1	

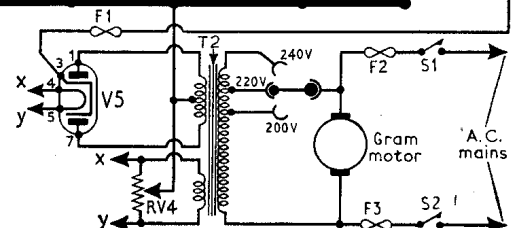
Capacitors			
C1	0.1μF	F3	
C2	16μF	A1	
C3	4,700pF	E3	
C4	4,700pF	E3	
C5	150pF	F3	
C6	0.1μF	F3	
C7	0.047μF	F3	
C8	10μF	F3	
C9	1,000pF	A2	
C10	0.047μF	A2	
C11	0.5μF	A2	
C12	32μF	C1	
C13	0.047μF	A2	
C14	0.047μF	B2	
C15	25μF	B2	
C16	25μF	B2	
C17	5,000pF	A2	
C18	32μF	C1	
C19	8μF	E4	

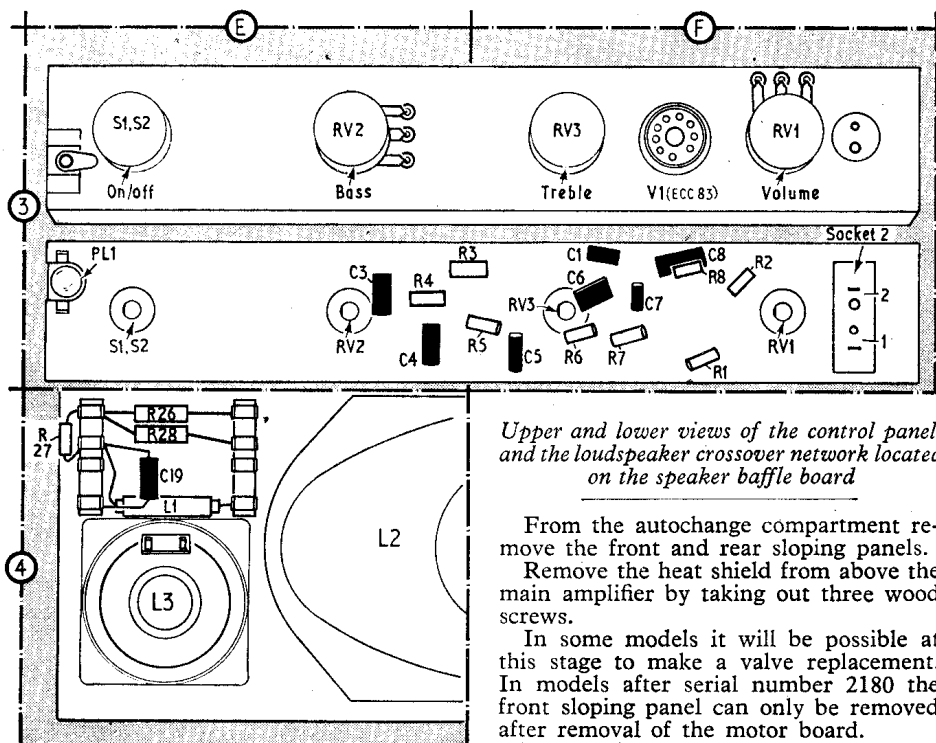
Miscellaneous			
F1	500mA	B1	
F2	2A	C1	
F3	2A	C1	
L1	—	E4	
L2	15Ω	E4	
L3	15Ω	E4	
PL1	6.5V 0.3A	E3	
T1	—	B1	
T2	—	D1	
S1, S2	—	E3	



Circuit diagram of the Deccalian Mark 4 amplifier. For stereo operation a unit containing an identical amplifier is available which can be coupled to the pick-up via the "stereo channel output" socket (see Stereo Unit SC. 100)

Top right: Appearance of the Decca Deccalian showing the Garrard AT6 series "E" autochange unit





Upper and lower views of the control panel, and the loudspeaker crossover network located on the speaker baffle board

From the autochange compartment remove the front and rear sloping panels.

Remove the heat shield from above the main amplifier by taking out three wood screws.

In some models it will be possible at this stage to make a valve replacement. In models after serial number 2180 the front sloping panel can only be removed after removal of the motor board.

Remove four chrome-headed PK screws securing the motor board and remove the motor board. Connectors should be removed from the terminal block beneath the motor board and the mains lead disconnected from the mains block.

Pick-up connections are coded as follows:

Double internal pick-up lead. Signal lead to tag with red lead; screen lead to tag with green lead.

Single external pick-up lead. Signal lead to tag with white lead; screen lead to tag with black lead.

Remove the 5-pin plug (plug 1) from the socket on the main amplifier chassis.

Remove the 2-pin plug (plug 2) from

the socket on the control unit panel. Remove the red and brown leads from the crossover unit.

Pull off control unit knobs and felt washers and remove two 4BA control unit securing bolts from location holes underneath the control panel.

To remove the amplifier chassis, slacken two 2BA nuts and remove two Phillips-head wood screws from the case back.

Note: When replacing leads to the loudspeaker network it is important that the phasing is correct. Ensure that the red lead is connected to the equivalent red spot tag on the loudspeaker itself.

GENERAL NOTES

Stylus Replacement.—The incidence of groove jumping and distortion particularly in the upper frequencies may be symptoms that the stylus is reaching the end of its playing life.

To remove the old stylus, run the finger down the front of the pick-up head to ease the stylus bar out of its slot. The stylus bar is then gripped between finger and thumb, and pushed forward free from its rear locating hole.

The new stylus should be held between finger and thumb and the rear peg inserted into the locating hole in the pick-up. Push the stylus gently backwards until the protrusions on the stylus bar locate gently against the nose of the stylus slot then touch the stylus bar into the slot.

If the stylus does not sit squarely with the diamond shank vertical, do not attempt to twist the bar into a better position, remove the stylus and re-set it into position as described.

Heater Balance Adjustment.—If any valve is replaced, RV4 located on the mains transformer T2 should be adjusted for minimum hum level. This may be done aurally by adjusting RV4 under no signal conditions for minimum audible hum from the loudspeakers with volume and bass controls turned to maximum.

A preferred method is to connect a suitable a.c. millivoltmeter across the bass speaker terminals and adjust RV4 for maximum dip on the meter.

Continued—

An automatic record changer is incorporated, and a full-wave isolated power unit permits operation from a.c. mains only, of 200-250V 50c/s.

Release date and price: September 1963 £35 5s 9d. Purchase tax extra. Stereo conversion unit SC. 100 £21.

AUTOCHANGE RECORD UNIT

The autochange unit fitted is the Garard AT6 Series "E" with provision for manual control. The pick-up is a Deram transcription head, suitable for mono and stereo recordings; stylus Deram Diamond/S, coded white.

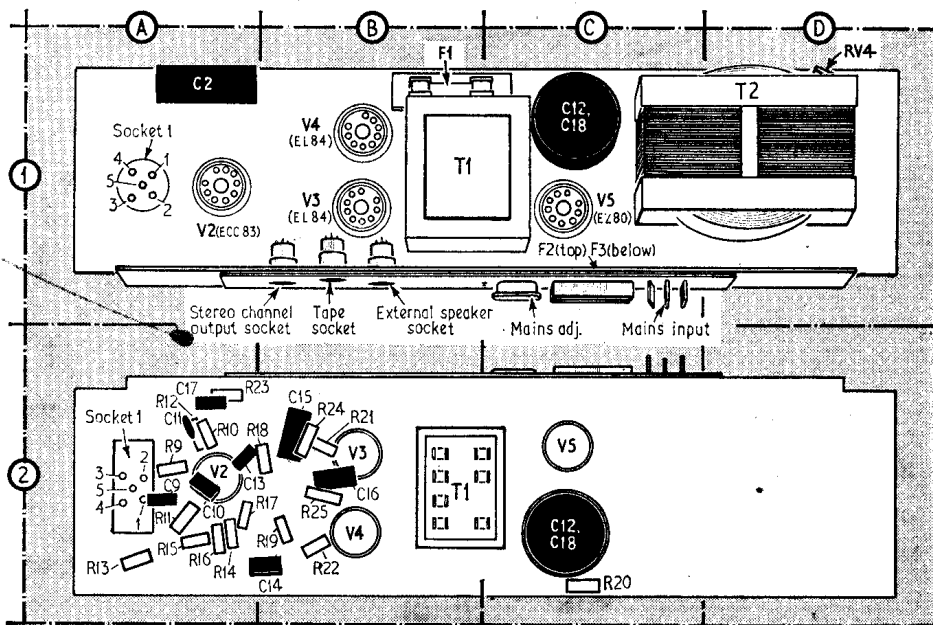
Stereo Conversion.—In order to convert the Deccalian Mark 4 to stereo operation, a suitable amplifier and loudspeaker unit is required with provision for matching to the Deram pick-up. (The Decca SC.100 amplifier/loudspeaker is recommended for this purpose.) If a suitable lead and plug is connected from the second amplifier to the stereo channel output socket of the Deccalian Mark 4, the Deram pick-up automatically provides a right-hand channel signal for the second amplifier.

STEREO UNIT SC.100

Stereo unit SC.100 comprises an amplifier, loudspeaker and power unit assembly, identical to that employed in the Deccalian Mark 4. Its input circuit is matched to the Deram pick-up making it suitable for use as a stereo conversion unit for the Deccalian Mark 4, requiring simply a lead and plug connection from its input socket to the Deccalian Mark 4 stereo channel output socket.

DISMANTLING

To remove the chassis from the cabinet, proceed as follows:



Plan and underside illustrations of the main amplifier chassis