

RADIO CORPORATION PTY. LTD.

DIVISION OF ELECTRONIC INDUSTRIES LTD.

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File: Receivers AC.

BULLETIN: AQL-1

Date: 16-8-60

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ASTOR

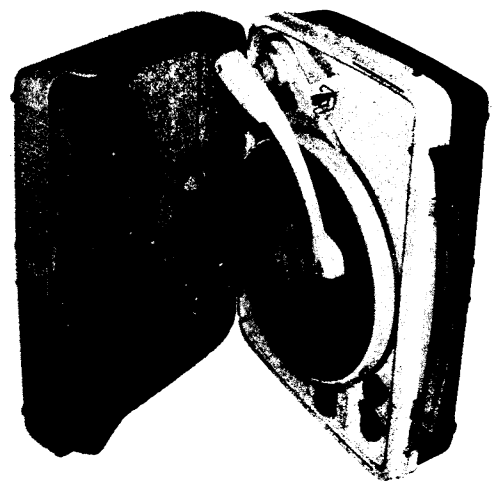
TECHNICAL BULLETIN

PLAY-GRAM MODEL "AQL"

3 VALVE SUPERHETERODYNE BROADCAST RECEIVER AND A 4 SPEED (16-2/3, 33-1/3, 45 and 78 R.P.M.) SINGLE RECORD PLAYER.

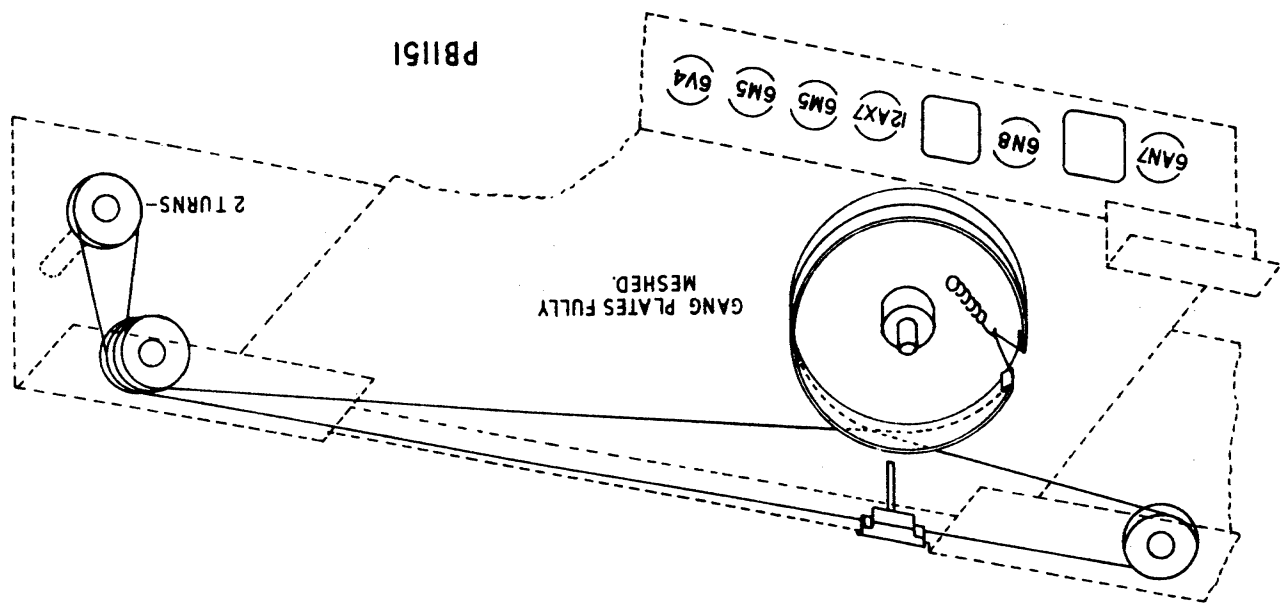
PICK-UP ARM FITTED WITH A STEREO CARTRIDGE.

The right channel output from pick-up cartridge is terminated in a bayonet socket located on the rear of the cabinet. Before playing stereo recordings the input of an external amplifier/speaker unit (Model 'AST') is to be connected to this socket.

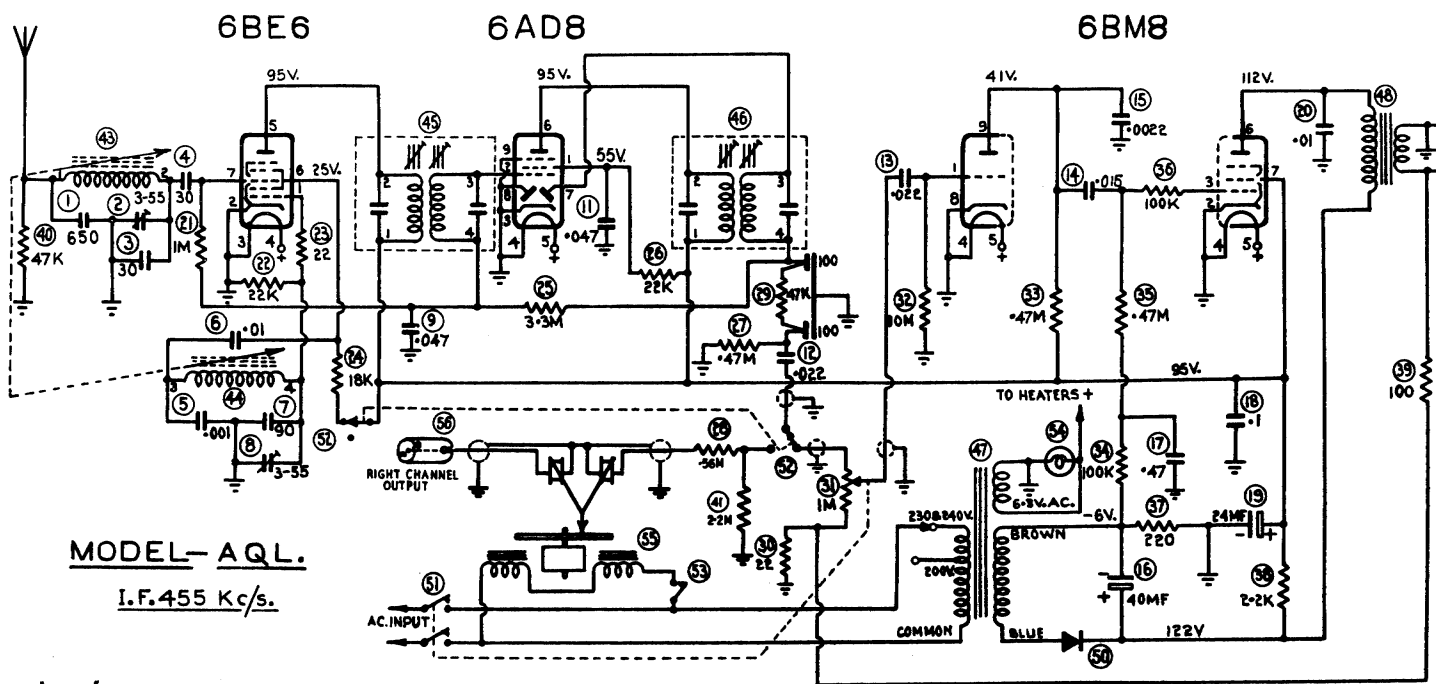


THIS BULLETIN CONTAINS:

1. Service Instructions - Electrical.
2. Service Instructions - Mechanical.
3. Component Parts List.
4. Chassis Serial Number.
5. Valve Placement Diagram.
6. Circuit Diagram.

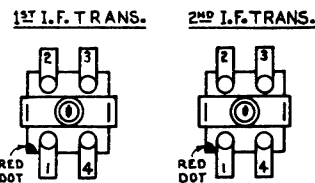
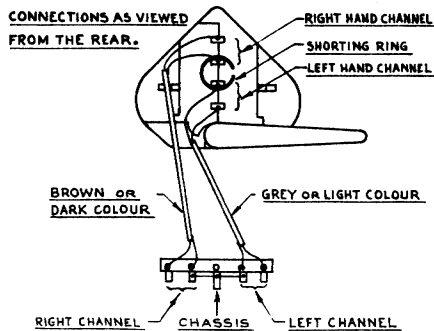


PB1151



MODEL—AQL.
I.F. 455 Kc/s.

'ACOS' STEREPHONIC CARTRIDGE.



NUMBERS ASSIGNED TO TERMINALS OF COILS AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT BE FOUND ON THE UNIT.

DC. VOLTAGES MEASURED BETWEEN POINTS INDICATED AND CHASSIS WITH A D.C. VACUUM TUBE VOLTMETER 230V. 50 CYCLE INPUT TO POWER TRANS. 230-240V. PRI. TAP. (NO SIGNAL)

TUNER COIL CONNECTIONS

- ANTENNA COIL :**
1. START OF WINDING --- FURTHEST FROM MOUNTING END
 2. FINISH OF WINDING --- NEAREST TO MOUNTING END
- OSCL. COIL :**
3. START OF WINDING --- FURTHEST FROM MOUNTING END
 4. FINISH OF WINDING --- NEAREST TO MOUNTING END

PB1090

MODEL—AQL

SERVICE INSTRUCTIONS — electrical

FOR OPERATION FROM:

200-240 Volt 40 or 50 Cycle Supply Mains (Power Transformer T148)	
Power Trans. Primary Mains Tap-red-common	" -green 200V. mains
" " " " " " " "	" -black 230 & 240V. mains.
230-250 Volt 40 or 50 Cycle Supply Mains (Power Transformer T149)	
Power Trans. Primary Mains Tap-red-common.	" " " -green 230V. mains.
" " " " " " " "	" -black 250V. mains.

POWER CONSUMPTION:

Radio Operation: 20 Watts - approx.
Gramo Operation: 40 Watts - approx.

TUNING RANGE:

535 - 1640 Kc/s. : 560.7 - 182.9 Metres.

ALIGNMENT PROCEDURE.

EQUIPMENT:

Signal Generator: modulated 400 C.P.S.	Load Impedance: 7000 ohms
Output Meter: 0.01 MF (for I.F. trans. alignment)	Output Level: 50 Milliwatts
Mica Capacitor: Dummy Antenna	Vol. Control: Max. Vol. fully clockwise
Dummy Antenna: 200MMF Mica capacitor	Intermed. Freq: 455 Kc/s.
Straight Alignment Tool: Type FMS81	Input Voltage: 230 Volts.
Flexible Alignment Tool: Type 48/712	input to trans. 50 Cycle AC.
	230-240 volt. pri. tap.
	Radio position (clockwise)

ALIGNMENT CONDITIONS

I.F. TRANSFORMER ALIGNMENT

NOTE: Remove the record player turntable from its spindle. Removal instructions are detailed in the Service Instruction (mechanical) section of the bulletin. The receiver chassis does not have to be removed from the cabinet for alignment purposes.

Oper. No.	Generator Connection	Generator Frequency	Dummy Antenna	Instructions
1.	To control grid of 6AD8 valve (pin No.2)	455 Kc/s.	0.01MF Mica capacitor in series with generator	Leave grid wire attached to valve socket. Peak 2nd IF. trans. pri. and sec. for max. output.
2.	To control grid of 6BE6 valve (pin No.7)	455 Kc/s.	0.01MF Mica capacitor in series with generator	Turn tuning drum until perm. tuner iron cores are out of the windings on coil formers and the unit is hard against the stop. Leave the grid wire attached to valve socket. Peak 1st IF. trans. pri. and sec. for max. output.
3.	Repeat operations 1 and 2.			

DIAL DRUM SETTING

Turn dial drum toward the rear of plastic mount plate until the perm. tuner iron cores are out of the windings on the coil formers and the unit is hard against the stop. The end of travel spot on dial reading near 1700 Kc/s. is to align with the indicator lines moulded on the top of the plastic mount plate. The dial drum is adjusted by loosening off the screw through the slot in the drum.

BROADCAST ALIGNMENT

- NOTE: 1.** Dummy Antenna: The 200MMF dummy antenna must not be connected to the free end of the 25 ft. antenna during alignment. The dummy antenna must be connected to the antenna junction lug on the chassis. It is not necessary to have the 25 ft. antenna connected to the receiver during alignment. If the 25 ft. antenna is connected it must be rolled into a small hank.
- NOTE: 2.** The antenna and oscillator trimmer condensers are accessible through the two holes in the plastic mount plate on the right hand side of the control knobs. The oscillator trimmer being nearest to the front edge of the mount plate.
- NOTE: 3.** Both iron cores are pre-set at the factory to an exact dimension of 2.275" between the extreme end of the former protruding through the rubber grommet, and the end of the iron core in the former, when the unit is turned hard against the stop. If incorrect legging and misalignment are to be avoided no adjustment of the iron cores must be made to vary this dimension. Both iron cores must have the same colour identification spot on the end of the iron core.

Oper. No.	Generator Connection	Generator Frequency	Dummy Antenna	Instructions
1.	To antenna junction lug on chassis	1000 Kc/s.	200 MMF Mica capacitor in series with generator	Turn tuning drum until alignment spot at 1000 Kc/s. aligns with moulded indicator lines on top of plastic mt. plate. Peak oscl. trim. cond. then peak antenna coil trimmer cond. for max. output. Repeat oscl. coil trim cond.
2.	Tuning range after alignment	535 - 1640 Kc/s.		
3.	Refit plastic mount plate with receiver attached to the cabinet.			

SERVICE INSTRUCTIONS—mechanical

1. TO OPEN BASE SECTION OF CABINET

- Open lid of cabinet by pressing two lid release buttons one located on each side of the cabinet.
- Place pick-up arm on rest pillar and secure it to rest pillar wire spring clip attached to rest pillar.
- Unscrew and remove two screws located near edge of cabinet between control knobs. The other located near edge of cabinet close to speaker grille.
- Close lid and turn cabinet completely over then open base lid section of cabinet.

2. TO REMOVE TURNABLE FROM RECORD PLAYER UNIT

- Open the base section of cabinet as detailed in para. 1.
- The base end of the turntable spindle fits into a three point mount die-cast housing. On the side of this housing is a leaf spring the free end of which fits into a groove in the turntable centre boss. This prevents the turntable sliding off the spindle when the unit is inverted.
- To release the turntable to allow it to slide off the spindle insert a screwdriver between the housing and the spring then lever the spring slightly outward.
- When the spring has been disengaged from the turntable open the top lid and remove turntable from interior of cabinet.