

## RADIO CORPORATION PTY. LTD.

DIVISION OF ELECTRONIC INDUSTRIES LTD.
126-130 GRANT STREET, SOUTH MELBOURNE, S.C.4.

## TECHNICAL BULLETIN

Bulletin: HQR-1.

File: Receivers AC.

Date: 20-6-55.

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# MODEL HQR

### GRAMO-RADIO COMBINATION

An Automatic 3 Speed Record Changer (78, 45, 33% r.p.m.) and a 5 Valve Superheterodyne Five Band Receiver incorporating Bandspreading of the 19 Metre, 25 Metre, 31 Metre and 49 Metre Shortwave Bands.

### FOR OPERATION FROM:--

200-250 Volts 50 Cycle AC. Supply Mains. Power Trans. Frimary Mains Taps: 200-220V. and 221-250V.

### POWER CONSUMPTION:—

Radio Operation: 55 Watts-approx. Gramo Operation: 75 Watts-approx.

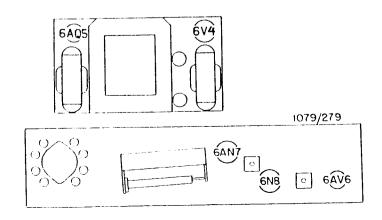
### TUNING RANGES:-

### RECEIVER COVERAGE:-

25 Metre 31 Metre	Band, Band, Band,	14.9-15.5 11.6-12.1 9.4-9.8	Mc/s. Mc/s. Mc/s.	(Bandspread) (Bandspread) (Bandspread)	560.7-186.3 20.13-19.29 25.86-24.79 31.91-30.61	Metres Metres Metres	(approx.) (approx.) (approx.)
10 Metre	Rand.	5.95-6.25	Mc/s.	(Bandspread)	50.42-48.0	Metres	(approx.)

### THIS BULLETIN CONTAINS:-

- 1. Alignment Instructions.
- 2. Circuit Diagram.
- 3. Component Parts List.
- 4. Connections for IF. and kF. Transformers.
- 5. Dial Drive Cording Diagram.
- 6. Valve Placement Diagram.
- 7. Instructions for Changing Mains Input Voltage Tap.
- 8. Instructions for Removing Chassis from Cabinet.



#### ALIGNMENT PROCEDURE

#### **EQUIPMENT**

### ALIGNMENT CONDITIONS

Signal Generator:

0.01MF. (for IF.

trans. alignment)

Output Level: Vol. Control:

Load Impedance:

50 Milliwatts.

Max. Vol. fully

5.000 ohms.

clockwise.

Dumriv Antenna:

Mica Capacitor:

Output Meter:

200MMF. Mica

Capacitor.

Intermed. Freq.: Input Voltage:

455 Kc/s.

230 Volts 50 Cycle AC. input to trans. 221-250 volt pri.

tap.

Dummy Antenna:

400 Ohm non-inductive

resistor.

Alignment Tools: Type M195 and PM581. Tone Control: Treble position.

### LE. TRANS. ALIGNMENT

Oper- ation No.	Generator Connection	Generator Frequency	Dummy Antenna	Instructions

- Remove receiver power supply chassis and tuning unit chassis from cabinet as 1. detailed on page 8.
- Remove dial back plate from tuning unit chassis:-2.
  - A. Loosen off grub screws in tone control gear wheel hub, then pull gear wheel straight upward off the control spindle.
  - Unscrew large nut fastening small metal gear plate to bush on tone control.
  - C. From volume control shaft remove small gear plate with gears attached by pulling it straight upward.
  - Remove dial pointer by prising up centre clip which fastens it to dial cord at rear of pointer carriage.
  - Remove from each end of dial plate the large lock nut fastening dial plate to chassis.
- Connect speaker leads and leads from tuning unit chassis to power supply 3.
- chassis. Turn wave change switch to 0.01 MF Mica To control grid 455 Kc/s. 4. b/cast. band. Leave grid capacitor in

of 6N8 valve wire attached to valve series with pin No. 2. socket. Feak 2nd IF. generator. trans. pri. and sec. for max. output.

0.01 MF Mica To control grid 455 Kc/s. 5. capacitor in of 6AN7 valve, series with pin No. 2. generator.

Leave grid wire attached to valve socket. Turn perm. tuner so that iron cores are out of windings on coil formers. Peak 1st IF. trans. pri. and sec. for max. output.

Refit dial back plate, dial pointer, gear wheel and plate assy. to volume 6. control shaft and gear wheel to tone control shaft. Make sure that the gear wheel teeth mesh correctly.

### B/CAST. AND S/WAVE. ALIGNMENT

Oper- ation No.	Generator Connection	Generator Frequency	Dummy Antenna	Instructions
1.	are out of the wi	ndings on the e centre of th	coil formers and le dial pointer o	hat perm tuner iron cores the unit is hard against n the centre of the end of
2.	To antenna lead	1000 Kc/s.	200 MMF mica capacitor in series with generator.	Turn tuning control and perm. tuner until centre of dial pointer aligns with centre of spot on dial reading at 1000 Kc/s. Peak b/cast. oscl. coil trimmer cond., then peak b/cast. antenna coil trim. Re-peak oscl. coil trim. condenser.
3. 4.				Tuning range after alignment 535-1610 Kc/s. Check logging at each end
	m and the second	muitab to 10	mot us hand (this	of the dial. band must be aligned before
5.	the 31, 25 and 19	metre bands).		
6.	To antenna lead		400 ohm non- inductive resistor in series with generator.	Turn wave change switch to 49 metre band. Turn tuning spindle and perm. tuner until dial pointer aligns with the 6.08 Mc/s. mark on the dial. Adjust 49 metre band oscl. coil ind. trimmer (iron core) for logging, then peak 49 metre antenna coil ind. trimmer (iron core) for max. output.
7.	To antenna lead	9.6 Mc/s.	400 ohm non- inductive resistor in series with generator.	Turn wave change switch to 31 metre band. Turn tuning spindle and perm. tuner until dial pointer aligns with 9.6 Mc/s. mark on dial. Adjust 31 metre oscl. coil ind. trimmer (iron core) for logging, then peak 31 metre antennacil ind. trim. (iron core for max. output.
8.	To antenna lead	11.8 Mc/s.	400 ohm non- inductive resistor in series with generator.	Turn wave change switch to 25 metre band. Turn tuning spindle and perm. tuner until dial pointer align with the 11.8 Mc/s. mark on the dial. Adjust 25 metre band oscl. coil ind trim. (iron core) for logging, then peak 25 metrentenna coil ind. trim. (iron core) for max. output.

9. To antenna lead 15.2 Mc/s.

400 ohm noninductive resistor in series with generator. Turn wave change switch to 19 metre band. Turn tuning spindle and perm. tuner until dial pointer aligns with 15.2 Mc/s. mark on the dial. Adjust 19 metre band oscl. coil ind. trim. (iron core) for max. output.

10. To antenna lead Multivibrator

Check logging on 49, 31, 25 and 19 metre bands at each 100 Kc/s. mark on the dial.

NOTE: The iron cores in the perm. tuner coils and the s/w. conds. on the perm. tuner are set to an exact dimension. No adjustment to the dimensions is to be made if misalignment and incorrect logging are to be avoided.

#### COIL COLOUR CODE

49 Metre spreadband coil, YELLOW spot on iron core end of former.

31 Metre spreadband coil, RED spot on iron core end of former.

25 Metre spreadband coil, WHITE spot on iron core end of former.

19 Metre spreadband coil, PROWN spot on iron core end of former.

### INSTRUCTIONS FOR CHANGING MAINS VOLTAGE INPUT TAPS

MAINS VOLTAGE.—The mains adjustment tap should be adjusted as follows: For any AC. voltage between 200 V. and 220 V., on the 200-220 V. tap, and for any AC. voltage between 221 V. and 250 V., on the 221-250 V. tap.

MAINS VOLTAGE ADJUSTMENT: For 200-220 volt operation: The receiver or the power unit chassis do not have to be removed from the cabinet for the adjustment. SWITCH THE RECEIVER OFF AND DISCONNECT THE RECEIVER MAINS LEAD FLUG FROM THE FOWER POINT SOCKET.

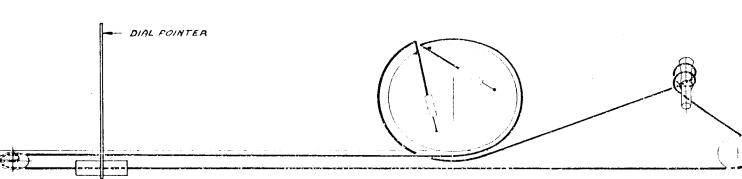
Remove cabinet back board from the cabinet by unscrewing the screws fastening it to the cabinet. From the rear of the cabinet, the mains tap terminal strip may be seen on the side of the power unit chassis mounted to the base of the cabinet. Unsolder the mains lead wire from the AC. junction block which is attached to the mains terminal strip tap marked 221-250V. and re-solder it to the terminal strip tap marked 200-250V. Refit cabinet back board to cabinet.

### CORDING OF DIAL DRIVE

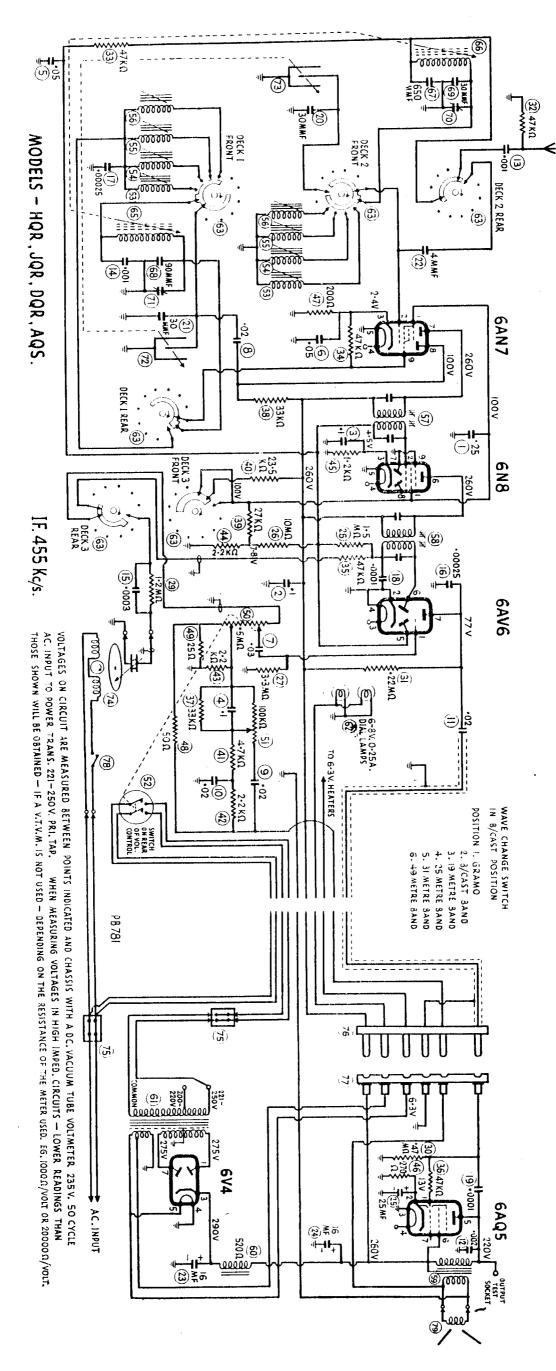
Length of cord required is 5 ft. 6 ins., which includes about 8 ins. to spare for tying to tension spring.

Cord Part No. 34/754.

Tension Spring (2) Part No. 508/30C.



TUNING SPINDLE TURNED FULLY ANTI-CLOCKWISE PERMEABILITY TUNER HARD AGAINST STOP.



No.         Description         Tol ±         Rating         Part           1.         .25 MF         Faper condenser         20%         400V DCW         FC128           2.         .1 MF         Paper condenser         20%         400V DCW         PC128           3.         .1 MF         Paper condenser         20%         200V DCW         PC218           4.         .1 MF         Paper condenser         20%         200V DCW         PC102           5.         .05 MF         Paper condenser         20%         200V DCW         PC102           6.         .05 MF         Paper condenser         20%         200V DCW         PC102           7.         .03 MF         Paper condenser         20%         200V DCW         PC102           8.         .02 MF         Paper condenser         20%         400V DCW         PC111           9.         .02 MF         Paper condenser         20%         400V DCW         PC111           10.         .02 MF         Paper condenser         20%         400V DCW         PC111           11.         .02 MF         Paper condenser         20%         400V DCW         PC111           12.         .002 MF         Paper condense	Circu	it			
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10.   .02 MF   Paper condenser   20%   400V DCW   PC111   12.   .002 MF   Paper condenser   20%   400V DCW   PC111   13.   .001 MF   Mica   condenser   10%   1000 VT   PC118   14.   .001 MF   Mica   condenser   10%   1000 VT   PC118   16.   .0003 MF   Mica   condenser   10%   1000 VT   PC118   16.   .00025 MF   Mica   condenser   10%   1000 VT   PC128   17.   .00025 MF   Mica   condenser   10%   1000 VT   PC128   17.   .00025 MF   Mica   condenser   10%   1000 VT   PC128   18.   .0001 MF   Mica   condenser   10%   1000 VT   PC128   18.   .0001 MF   Mica   condenser   10%   1000 VT   PC128   19.   .0001 MF   Mica   condenser   10%   1000 VT   PC571   18.   .0001 MF   Mica   condenser   10%   1000 VT   PC571   19.   .0001 MF   Mica   condenser   10%   1000 VT   PC571   19.   .0001 MF   Mica   condenser   10%   1000 VT   PC571   19.   .0001 MF   Mica   condenser   5%   500V DCW   PC879   12.   30 MMF   Silvered   Mica   condenser   5%   500V DCW   PC879   12.   30 MMF   Silvered   Mica   condenser   20%   525 PV   PC952   24.   16 MF   Electrolytic   condenser   20%   525 PV   PC952   24.   16 MF   Electrolytic   condenser   20%   525 PV   PC952   24.   16 MF   Electrolytic   condenser   20%   525 PV   PC952   25.   25 MF   Electrolytic   condenser   20%   525 PV   PC952   25.   25 MF   Electrolytic   condenser   20%   525 PV   PC952   25.   25 MF   Electrolytic   condenser   20%   40 PV   PC318   27.   3.3 Megohm   carbon   resistor   15%   3 W.   R1633   37.   37.   38					
11.					
12.   .002 MF   Paper condenser   20%   600V DCW   PC1128     13.   .001 MF   Mica   condenser   10%   1000 VT   PC108     14.   .001 MF   Mica   condenser   10%   1000 VT   PC108     15.   .0003 MF   Mica   condenser   10%   1000 VT   PC108     16.   .00025 MF   Mica   condenser   10%   1000 VT   PC128     17.   .00025 MF   Mica   condenser   10%   1000 VT   PC128     18.   .0001 MF   Mica   condenser   10%   1000 VT   PC128     18.   .0001 MF   Mica   condenser   10%   1000 VT   PC110     19.   .0001 MF   Mica   condenser   10%   1000 VT   PC571     19.   .0001 MF   Mica   condenser   10%   1000 VT   PC571     19.   .0001 MF   Mica   condenser   10%   1000 VT   PC571     20.   30   MMF   Silvered   mica   condenser   5%   500V   DCW   PC879     21.   30   MMF   Silvered   mica   condenser   5%   500V   DCW   PC879     22.   4   MMF   Ceramicon   condenser   20%   525 PV   PC952     23.   16   MF   Electrolytic   condenser   20%   525 PV   PC952     24.   16   MF   Electrolytic   condenser   20%   525 PV   PC952     25.   25   MF   Electrolytic   condenser   20%   525 PV   PC952     26.   10   Megohm   carbon   resistor   15%   % W   R1663     27.   3.3   Megohm   carbon   resistor   15%   % W   R1653     28.   1.5   Megohm   carbon   resistor   15%   % W   R1653     30.   .47   Megohm   carbon   resistor   15%   % W   R1653     30.   .47   Megohm   carbon   resistor   15%   % W   R4733     31.   .22   Megohm   carbon   resistor   15%   % W   R4733     33.   .47,000   ohm   carbon   resistor   15%   % W   R4733     34.   .47,000   ohm   carbon   resistor   15%   % W   R4733     35.   .47,000   ohm   carbon   resistor   15%   % W   R4733     36.   .47,000   ohm   carbon   resistor   15%   % W   R4733     37.   .33,000   ohm   carbon   resistor   15%   % W   R4733     38.   .3000   ohm   carbon   resistor   15%   % W   R2223     44.   .4,700   ohm   carbon   resistor   10%   % W   R3332     47.   .400   ohm   carbon   resistor   10%   % W   R2223     44.   .2,200   ohm   carbon   resistor   10%   % W   R2223					
13.         .001 MF         Mica condenser         10%         1000 VT         PC108           14.         .001 MF         Mica condenser         10%         1000 VT         PC121           15.         .00028 MF         Mica condenser         10%         1000 VT         PC126           17.         .00025 MF         Mica condenser         10%         1000 VT         PC126           18.         .0001 MF         Mica condenser         10%         1000 VT         PC126           18.         .0001 MF         Mica condenser         10%         1000 VT         PC110           19.         .0001 MF         Mica condenser         10%         1000 VT         PC110           20.         30 MMF Silvered mica condenser         5%         500V DCW         PC879           21.         30 MMF Silvered mica condenser         1MMF-0         500V DCW         PC879           22.         4 MMF Ceramicon condenser         1MMF-0         500V DCW         PC879           22.         4 MMF Ceramicon condenser         20%         525 PV         PC952           24.         16 MF Electrolytic condenser         20%         525 PV         PC952           25.         25 MF Electrolytic condenser         20%					
14.   .001 MF   Mica   condenser   10%   1000 VT   FC108     15.   .0003 MF   Mica   condenser   10%   1000 VT   FC212     16.   .00025 MF   Mica   condenser   10%   1000 VT   FC212     17.   .00025 MF   Mica   condenser   10%   1000 VT   FC126     18.   .0001 MF   Mica   condenser   10%   1000 VT   FC126     18.   .0001 MF   Mica   condenser   10%   1000 VT   FC126     19.   .0001 MF   Mica   condenser   10%   1000 VT   FC171     19.   .0001 MF   Mica   condenser   10%   1000 VT   FC571     20.   30   MMF   Silvered   mica   condenser   5%   500V DCW   FC879     21.   30   MMF   Silvered   mica   condenser   5%   500V DCW   FC879     22.   4   MMF   Ceramicon   condenser   10MF-0   500V DCW   FC830     23.   16   MF   Electrolytic   condenser   20%   525 PV   FC952     24.   16   MF   Electrolytic   condenser   20%   525 PV   FC952     25.   25   MF   Electrolytic   condenser   20%   40 PV   FC318     26.   10   Megohm   carbon   resistor   15%   15%   16 W   R1063     27.   3.3   Megohm   carbon   resistor   15%   16 W   R1553     28.   1.5   Megohm   carbon   resistor   15%   16 W   R1553     30.   .47   Megohm   carbon   resistor   15%   16 W   R1253     30.   .47   Megohm   carbon   resistor   15%   16 W   R14733     31.   .22   Megohm   carbon   resistor   15%   16 W   R4733     33.   47,000   ohm   carbon   resistor   15%   16 W   R4733     35.   47,000   ohm   carbon   resistor   15%   16 W   R4733     36.   47,000   ohm   carbon   resistor   15%   16 W   R4733     37.   33,000   ohm   carbon   resistor   15%   16 W   R4733     38.   33,000   ohm   carbon   resistor   15%   16 W   R4733     39.   27,000   ohm   carbon   resistor   15%   16 W   R4733     39.   27,000   ohm   carbon   resistor   15%   16 W   R4733     41.   4,700   ohm   carbon   resistor   15%   16 W   R4733     42.   2,200   ohm   carbon   resistor   15%   16 W   R4733     43.   2,200   ohm   carbon   resistor   15%   16 W   R4733     44.   2,200   ohm   carbon   resistor   10%   16 W   R2222     45.   1,200   ohm   carbon   resistor					PC108
150003 MF Mica condenser 10% 1000 VT FC212 1700025 MF Mica condenser 10% 1000 VT FC126 180001 MF Mica condenser 10% 1000 VT FC126 180001 MF Mica condenser 10% 1000 VT FC110 190001 MF Mica condenser 10% 1000 VT FC110 190001 MF Mica condenser 10% 1000 VT FC571 20. 30 MMF Silvered mica condenser 5% 500V DCW FC879 21. 30 MMF Silvered mica condenser 5% 500V DCW FC879 22. 4 MMF Ceramicon condenser 1MMF-0 500V DCW FC830 23. 16 MF Electrolytic condenser 20% 525 FV FC952 24. 16 MF Electrolytic condenser 20% 525 FV FC952 25. 25 MF Electrolytic condenser 20% 525 FV FC952 26. 10 Megchm carbon resistor 15% ½ W. R1063 27. 3.3 Megohm carbon resistor 15% ½ W. R1553 29. 1.2 Megchm carbon resistor 15% ½ W. R1553 3047 Megchm carbon resistor 15% ½ W. R253 3122 Megchm carbon resistor 15% ½ W. R4733 3122 Megohm carbon resistor 15% ½ W. R4733 33. 47,000 ohm carbon resistor 15% ½ W. R4733 34. 47,000 ohm carbon resistor 15% ½ W. R4733 35. 47,000 ohm carbon resistor 15% ½ W. R4733 36. 47,000 ohm carbon resistor 15% ½ W. R4733 37. 33,000 ohm carbon resistor 15% ½ W. R4733 38. 33,000 ohm carbon resistor 15% ½ W. R4733 39. 27,000 ohm carbon resistor 15% ½ W. R4733 3122 Megohm carbon resistor 15% ½ W. R4733 322,000 ohm carbon resistor 15% ½ W. R4733 3447,000 ohm carbon resistor 15% ½ W. R4733 3547,000 ohm carbon resistor 15% ½ W. R4733 3647,000 ohm carbon resistor 15% ½ W. R4733 3733,000 ohm carbon resistor 15% ½ W. R4733 3835,000 ohm carbon resistor 15% ½ W. R4733 3927,000 ohm carbon resistor 15% ½ W. R4733 4024732 wired in parallel 414,700 ohm carbon resistor 15% ½ W. R2223 432,200 ohm carbon resistor 15% ½ W. R2223 442,200 ohm carbon resistor 10% ½ W. R2224 451,200 ohm carbon resistor 10% ½ W. R2224 46270 ohm carbon resistor 10% ½ W. R2224 47200 ohm carbon resistor 10% ½ W. R2224 482,000 ohm carbon resistor 10% ½ W. PR280 4925 ohm Wire Wound resistor 10% ½ W. PR280 4925 ohm Wire Wound resistor 10% ½ W. PR280 4925 ohm Wire Wound resistor 10% ½ W. PR280 49.					PC108
16.       .00025 MF Mica condenser       10%       1000 VT       PC126         17.       .00025 MF Mica condenser       10%       1000 VT       PC126         18.       .0001 MF Mica condenser       10%       1000 VT       PC110         20.       30 MMF Silvered mica condenser       5%       500V DCW       PC879         21.       30 MMF Silvered mica condenser       5%       500V DCW       PC879         21.       30 MMF Silvered mica condenser       5%       500V DCW       PC879         21.       30 MMF Silvered mica condenser       20%       525 PV       PC952         22.       4 MMF Ceramicon condenser       20%       525 PV       PC952         23.       16 MF Electrolytic condenser       20%       525 PV       PC952         24.       16 MF Electrolytic condenser       20%       525 PV       PC952         25.       25 MF Electrolytic condenser       20%       525 PV       PC952         26.       10 Megohm carbon resistor       15%       W.       R1063         27.       3.3 Megohm carbon resistor       15%       W.       R1553         28.       1.2 Megohm carbon resistor       15%       W.       R4733         31.       2		.0003 MF Mica condenser	1.0%	1000 VT	FC212
18.       .0001 MF Mica condenser       10%       1000 VT       PC110         20.       .0001 MF Mica condenser       10%       1000 VT       PC571         20.       30 MMF Silvered mica condenser       5%       500V DCW       PC879         21.       30 MMF Silvered mica condenser       5%       500V DCW       PC879         22.       4 MMF Ceramicon condenser       20%       525 PV       PC982         23.       16 MF Electrolytic condenser       20%       525 PV       PC952         24.       16 MF Electrolytic condenser       20%       525 PV       PC952         25.       25 MF Electrolytic condenser       20%       525 PV       PC952         26.       10 Megohm carbon resistor       15%       ½ W.       R1063         27.       3.3 Megohm carbon resistor       15%       ½ W.       R153         28.       1.5 Megohm carbon resistor       15%       ½ W.       R1253         30.       .47 Megohm carbon resistor       15%       ½ W.       R4743         31.       .22 Megohm carbon resistor       15%       ½ W.       R4733         32.       .47,000 ohm carbon resistor       15%       ½ W.       R4733         34.       .47,000 oh					PC126
190001 MF Mica condenser 10% 500V DCW PC879 21. 30 MMF Silvered mica condenser 5% 500V DCW PC879 22. 4 MMF Ceramicon condenser 1MMF-0 500V DCW PC879 22. 4 MMF Ceramicon condenser 20% 525 FV PC952 23. 16 MF Electrolytic condenser 20% 525 FV PC952 24. 16 MF Electrolytic condenser 20% 525 FV PC952 25. 25 MF Electrolytic condenser 20% 525 FV PC952 26. 10 Megchm carbon resistor 15% ½ W. R1063 27. 3.3 Megchm carbon resistor 15% ½ W. R1063 28. 1.5 Megchm carbon resistor 15% ½ W. R1553 29. 1.2 Megchm carbon resistor 15% ½ W. R1553 3047 Megchm carbon resistor 15% ½ W. R253 3122 Megchm carbon resistor 15% ½ W. R253 32. 47,000 ohm carbon resistor 15% ½ W. R4733 33. 47,000 ohm carbon resistor 15% ½ W. R4733 34. 47,000 ohm carbon resistor 15% ½ W. R4733 35. 47,000 ohm carbon resistor 15% ½ W. R4733 36. 47,000 ohm carbon resistor 15% ½ W. R4733 37. 33,000 ohm carbon resistor 15% ½ W. R4733 38. 33,000 ohm carbon resistor 15% ½ W. R4733 39. 27,000 ohm carbon resistor 15% ½ W. R4733 39. 27,000 ohm carbon resistor 15% ½ W. R4733 40. 23,500 ohm carbon resistor 15% ½ W. R3332 41. 4,700 ohm carbon resistor 15% ½ W. R4733 42. 2,200 ohm carbon resistor 10% ½ W. R3332 43. 3,000 ohm carbon resistor 10% ½ W. R3332 44. 2,200 ohm carbon resistor 10% ½ W. R2223 45. 1,200 ohm carbon resistor 10% ½ W. R2223 46. 270 ohm carbon resistor 10% ½ W. R2223 47. 200 ohm carbon resistor 10% ½ W. R2223 48. 2,200 ohm carbon resistor 10% ½ W. R2223 49. 2,200 ohm carbon resistor 10% ½ W. R2223 40. 2,000 ohm carbon resistor 10% ½ W. R2223 41. 2,000 ohm carbon resistor 10% ½ W. R2223 42. 2,000 ohm carbon resistor 10% ½ W. R2223 43. 2,200 ohm carbon resistor 10% ½ W. R2223 44. 2,200 ohm carbon resistor 10% ½ W. R2223 45. 1,200 ohm carbon resistor 10% ½ W. R2223 46. 270 ohm carbon resistor 10% ½ W. R2223 47. 200 ohm carbon resistor 10% ½ W. R2223 48. 50 ohm Wire Wound resistor 10% ½ W. PR280 49. 25 ohm Wire Wound resistor 10% ½ W. PR280 505 Megchm Carbon Foentiometer tapped at 40 K. ohms DP.ST. switch attached 20%		.00025 MF Mica condenser	10%	1000 VT	PC126
20.   30 MMF Silvered mica condenser   5%   500V DCW   PC879	18.	.0001 MF Mica condenser		1000 VT	FC110
21. 30 MMF Silvered mica condenser	19.		10%	1000 VT	FC571
21. 30 MMF Silvered mica condenser	20.	30 MMF Silvered mica condenser	5%	500V DCW	PC879
22. 4 MMF Ceramicon condenser	21.		5%	500V DCW	PC879
24.       16 MF Electrolytic condenser       20%       525 FV       PC952         25.       25 MF Electrolytic condenser       20%       40 PV       FC318         26.       10 Megohm carbon resistor       15%       ½ W.       R1063         27.       3.3 Megohm carbon resistor       15%       ½ W.       R3553         28.       1.5 Megohm carbon resistor       15%       ½ W.       R1553         29.       1.2 Megohm carbon resistor       15%       ½ W.       R4743         30.       .47 Megohm carbon resistor       15%       ½ W.       R4743         31.       .22 Megohm carbon resistor       10%       ½ W.       R4733         31.       .22 Megohm carbon resistor       15%       ½ W.       R4733         32.       47,000 ohm carbon resistor       15%       ½ W.       R4733         34.       47,000 ohm carbon resistor       15%       ½ W.       R4733         35.       47,000 ohm carbon resistor       15%       ½ W.       R4733         38.       33,000 ohm carbon resistor       10%       ½ W.       R3333         39.       27,000 ohm carbon resistor       10%       ½ W.       R2233         40.       23,500 ohm carbon resistor <td></td> <td>4 MMF Ceramicon condenser</td> <td>1MMF-O</td> <td>500V DCW</td> <td>PC830</td>		4 MMF Ceramicon condenser	1MMF-O	500V DCW	PC830
25. 25 MF Electrolytic condenser 20% 40 FV FC318 26. 10 Megohm carbon resistor 15% ½ W. R1063 27. 3.3 Megohm carbon resistor 15% ½ W. R3353 28. 1.5 Megohm carbon resistor 15% ½ W. R1553 29. 1.2 Megohm carbon resistor 15% ½ W. R1553 3047 Megohm carbon resistor 15% ½ W. R4743 3122 Megohm carbon resistor 15% ½ W. R4743 3122 Megohm carbon resistor 15% ½ W. R4743 3247,000 ohm carbon resistor 15% ½ W. R4733 3347,000 ohm carbon resistor 15% ½ W. R4733 3447,000 ohm carbon resistor 15% ½ W. R4733 3547,000 ohm carbon resistor 15% ½ W. R4733 3647,000 ohm carbon resistor 15% ½ W. R4733 3733,000 ohm carbon resistor 15% ½ W. R4733 3833,000 ohm carbon resistor 15% ½ W. R3333 3927,000 ohm carbon resistor 10% ½ W. R3333 4023,500 ohm carbon resistor 10% ½ W. R3333 4147,000 ohm carbon resistor 15% ½ W. R4733 4023,500 ohm carbon resistor 10% ½ W. R3333 4147,000 ohm carbon resistor 10% ½ W. R3333 422,200 ohm carbon resistor 10% ½ W. R3223 432,200 ohm carbon resistor 15% ½ W. R4723 442,200 ohm carbon resistor 15% ½ W. R2223 451,200 ohm carbon resistor 10% ½ W. R2223 46270 ohm carbon resistor 10% ½ W. R2223 47200 ohm carbon resistor 10% ½ W. R2223 4850 ohm Wire Wound resistor 10% ½ W. R1222 4925 ohm Wire Wound resistor 10% ½ W. PR280 4925 ohm Wire Wound resistor 10% ½ W. PR280 505 Megohm Carbon Foentiometer tapped at 40 K. ohms DP.ST. switch attached	23.	16 MF Electrolytic condenser		525 PV	PC952
26. 10 Megohm carbon resistor 27. 3.3 Megohm carbon resistor 28. 1.5 Megohm carbon resistor 29. 1.2 Megohm carbon resistor 3047 Megohm carbon resistor 3122 Megohm carbon resistor 3122 Megohm carbon resistor 3247,000 ohm carbon resistor 3347,000 ohm carbon resistor 3447,000 ohm carbon resistor 3547,000 ohm carbon resistor 3647,000 ohm carbon resistor 3747,000 ohm carbon resistor 3847,000 ohm carbon resistor 3947,000 ohm carbon resistor 3047,000 ohm carbon resistor 304	24.	16 MF Electrolytic condenser	20%	525 PV	PC952
27. 3.3 Megohm carbon resistor 28. 1.5 Megohm carbon resistor 29. 1.2 Megohm carbon resistor 30. 47 Megohm carbon resistor 3122 Megohm carbon resistor 3122 Megohm carbon resistor 32. 47,000 ohm carbon resistor 33. 47,000 ohm carbon resistor 34. 47,000 ohm carbon resistor 35. 47,000 ohm carbon resistor 36. 47,000 ohm carbon resistor 37. 37. 37. 37. 37. 37. 37. 37. 37. 37.	25.	25 MF Electrolytic condenser			FC318
28. 1.5 Megohm carbon resistor 29. 1.2 Megohm carbon resistor 3047 Megohm carbon resistor 3122 Megohm carbon resistor 3122 Megohm carbon resistor 3247,000 ohm carbon resistor 3347,000 ohm carbon resistor 3347,000 ohm carbon resistor 3447,000 ohm carbon resistor 3547,000 ohm carbon resistor 3647,000 ohm carbon resistor 3733,000 ohm carbon resistor 3833,000 ohm carbon resistor 3927,000 ohm carbon resistor 3927,000 ohm carbon resistor 4023,500 ohm carbon resistor 414,700 ohm carbon resistor 422,200 ohm carbon resistor 432,200 ohm carbon resistor 444,700 ohm carbon resistor 451,200 ohm carbon resistor 462,200 ohm carbon resistor 47200 ohm carbon resistor 482,200 ohm carbon resistor 492,200 ohm carbon resistor 402,200 ohm carbon resistor 414,700 ohm carbon resistor 422,200 ohm carbon resistor 432,200 ohm carbon resistor 442,200 ohm carbon resistor 451,200 ohm carbon resistor 462,200 ohm carbon resistor 47200 ohm carbon resistor 482,200 ohm carbon resistor 4925 ohm Wire Wound resistor 4925 ohm Wire Wound resistor 505 Megohm Carbon Foentiometer tapped at 40 K. ohms DP.ST. switch attached  PR819		10 Megohm carbon resistor	15%		R1063
29. 1.2 Megohm carbon resistor 3047 Megohm carbon resistor 3122 Megohm carbon resistor 3122 Megohm carbon resistor 32. 47,000 ohm carbon resistor 33. 47,000 ohm carbon resistor 34. 47,000 ohm carbon resistor 35. 47,000 ohm carbon resistor 36. 47,000 ohm carbon resistor 37. 33,000 ohm carbon resistor 38. 33,000 ohm carbon resistor 39. 27,000 ohm carbon resistor 39. 27,000 ohm carbon resistor 40. 23,500 ohm carbon resistor 41. 4,700 ohm carbon resistor 42. 2,200 ohm carbon resistor 43. 2,200 ohm carbon resistor 44. 2,200 ohm carbon resistor 45. 2,200 ohm carbon resistor 46. 2,200 ohm carbon resistor 47. 000 ohm carbon resistor 48. 2,200 ohm carbon resistor 49. 2,200 ohm carbon resistor 40. 2,200 ohm carbon resistor 41. 4,700 ohm carbon resistor 42. 2,200 ohm carbon resistor 43. 2,200 ohm carbon resistor 44. 2,200 ohm carbon resistor 45. 1,200 ohm carbon resistor 46. 270 ohm carbon resistor 47. 000 ohm carbon resistor 48. 50 ohm Wire Wound resistor 49. 25 ohm Wire Wound resistor 49. 25 ohm Wire Wound resistor 50. 5 Megohm Carbon Poentiometer tapped at 40 K. ohms DP.ST. switch attached  10% PR819				½ W.	
3047 Megohm carbon resistor		1.5 Megohm carbon resistor		½ W.	
31.       .22 Megohm carbon resistor       1.0%       ½ W.       R2242         32.       47,000 ohm carbon resistor       1.5%       ½ W.       R4733         33.       47,000 ohm carbon resistor       1.5%       ½ W.       R4733         34.       47,000 ohm carbon resistor       1.5%       ½ W.       R4733         35.       47,000 ohm carbon resistor       1.5%       ½ W.       R4733         36.       47,000 ohm carbon resistor       1.5%       ½ W.       R4733         37.       33,000 ohm carbon resistor       1.0%       ½ W.       R3333         38.       33,000 ohm carbon resistor       1.0%       ½ W.       R3332         39.       27,000 ohm carbon resistor       10%       ½ W.       R3332         40.       23,500 ohm carbon resistor       10%       ½ W.       R4723         42.       2,200 ohm carbon resistor       1.5%       ½ W.       R4723         42.       2,200 ohm carbon resistor       1.5%       ½ W.       R2223         44.       2,200 ohm carbon resistor       1.0%       ½ W.       R2223         44.       2,200 ohm carbon resistor       1.0%       ½ W.       R2222         45.       1,200 ohm carbon resistor <td></td> <td></td> <td>15%</td> <td>½ W.</td> <td></td>			15%	½ W.	
32. 47,000 ohm carbon resistor 33. 47,000 ohm carbon resistor 34. 47,000 ohm carbon resistor 35. 47,000 ohm carbon resistor 36. 47,000 ohm carbon resistor 37. 37. 37. 37. 37. 37. 37. 37. 37. 37.				1/2 W.	
33. 47,000 ohm carbon resistor  34. 47,000 ohm carbon resistor  35. 47,000 ohm carbon resistor  36. 47,000 ohm carbon resistor  37. 33,000 ohm carbon resistor  38. 33,000 ohm carbon resistor  39. 27,000 ohm carbon resistor  40. 23,500 ohm carbon resistor  41. 4,700 ohm carbon resistor  42. 2,200 ohm carbon resistor  43. 2,200 ohm carbon resistor  44. 2,200 ohm carbon resistor  45. 1,200 ohm carbon resistor  46. 270 ohm carbon resistor  47. 200 ohm carbon resistor  48. 50 ohm Wire Wound resistor  49. 25 ohm Wire Wound resistor  50. 5 Megohm Carbon Poentiometer tapped at 40 K.  ohms DP.ST. switch attached				½ W.	
34.       47,000 ohm carbon resistor       15%       ½ W.       R4733         35.       47,000 ohm carbon resistor       15%       ½ W.       R4733         36.       47,000 ohm carbon resistor       15%       ½ W.       R4733         37.       33,000 ohm carbon resistor       10%       ½ W.       R3333         38.       33,000 ohm carbon resistor       10%       ½ W.       R3332         39.       27,000 ohm carbon resistor       10%       ½ W.       R3332         40.       23,500 ohm carbon resistor consisting of two 47,000 ohm l watt 10% resistors part No.       24732 wired in parallel       15%       ½ W.       R4723         41.       4,700 ohm carbon resistor       15%       ½ W.       R4723         42.       2,200 ohm carbon resistor       15%       ½ W.       R2223         43.       2,200 ohm carbon resistor       10%       ½ W.       R2223         44.       2,200 ohm carbon resistor       10%       ½ W.       R1222         45.       1,200 ohm carbon resistor       10%       ½ W.       R1222         46.       270 ohm carbon resistor       10%       ½ W.       PR176         48.       50 ohm Wire Wound resistor       10%       ½ W.       PR280					
35. 47,000 ohm carbon resistor 36. 47,000 ohm carbon resistor 37. 33,000 ohm carbon resistor 38. 33,000 ohm carbon resistor 39. 27,000 ohm carbon resistor 40. 23,500 ohm carbon resistor consisting of two 47,000 ohm l watt 10% resistors part No. 24732 wired in parallel 41. 4,700 ohm carbon resistor 42. 2,200 ohm carbon resistor 43. 2,200 ohm carbon resistor 44. 2,200 ohm carbon resistor 45. 1,200 ohm carbon resistor 46. 270 ohm carbon resistor 47. 200 ohm wire Wound resistor 48. 50 ohm wire Wound resistor 49. 25 ohm wire Wound resistor 49. 25 ohm wire Wound resistor 49. 25 ohm wire Wound resistor 50. 5 Megohm Carbon Poentiometer tapped at 40 K. ohms DP.ST. switch attached  15% ½ W. R4733 10% ½ W. R2223 10% PR819			15%	1/2 W •	
36. 47,000 ohm carbon resistor  37. 33,000 ohm carbon resistor  38. 33,000 ohm carbon resistor  39. 27,000 ohm carbon resistor  40. 23,500 ohm carbon resistor consisting of two  47,000 ohm l watt 10% resistors part  No. Z4732 wired in parallel  41. 4,700 ohm carbon resistor  42. 2,200 ohm carbon resistor  43. 2,200 ohm carbon resistor  44. 2,200 ohm carbon resistor  45. 1,200 ohm carbon resistor  46. 270 ohm carbon resistor  47. 200 ohm carbon resistor  48. 50 ohm Wire Wound resistor  49. 25 ohm Wire Wound resistor  50. 5 Megohm Carbon Poentiometer tapped at 40 K.  ohms DP.ST. switch attached			15%	½ W.	
37. 33,000 ohm carbon resistor 15% ½ W. R3333 38. 33,000 ohm carbon resistor 10% ½ W. R33332 39. 27,000 ohm carbon resistor 10% 1 W. Z2732 40. 23,500 ohm carbon resistor consisting of two 47,000 ohm 1 watt 10% resistors part No. Z4732 wired in parallel 41. 4,700 ohm carbon resistor 15% ½ W. R4723 42. 2,200 ohm carbon resistor 15% ½ W. R2223 43. 2,200 ohm carbon resistor 15% ½ W. R2223 44. 2,200 ohm carbon resistor 10% ½ W. R2223 45. 1,200 ohm carbon resistor 10% ½ W. R1222 46. 270 ohm carbon resistor 10% ½ W. R1222 47. 200 ohm wire Wound resistor 10% ½ W. PR176 48. 50 ohm Wire Wound resistor 10% ½ W. PR280 49. 25 ohm Wire Wound resistor 10% ½ W. PR280 505 Megohm Carbon Foentiometer tapped at 40 K. ohms DP.ST. switch attached 20% PR819			15%		
38. 33,000 ohm carbon resistor 10% ½ W. R3332 39. 27,000 ohm carbon resistor 10% 1 W. Z2732 40. 23,500 ohm carbon resistor consisting of two 47,000 ohm 1 watt 10% resistors part No. Z4732 wired in parallel 41. 4,700 ohm carbon resistor 15% ½ W. R4723 42. 2,200 ohm carbon resistor 15% ½ W. R2223 43. 2,200 ohm carbon resistor 15% ½ W. R2223 44. 2,200 ohm carbon resistor 10% ½ W. R2223 45. 1,200 ohm carbon resistor 10% ½ W. R2222 46. 270 ohm carbon resistor 10% ½ W. R1222 47. 200 ohm wire Wound resistor 10% ½ W. PR176 48. 50 ohm Wire Wound resistor 10% ½ W. PR280 49. 25 ohm Wire Wound resistor 10% ½ W. PR280 505 Megohm Carbon Poentiometer tapped at 40 K. ohms DP.ST. switch attached 20% PR819			15%		
39. 27,000 ohm carbon resistor 40. 23,500 ohm carbon resistor consisting of two 47,000 ohm 1 watt 10% resistors part No. Z4732 wired in parallel 41. 4,700 ohm carbon resistor 42. 2,200 ohm carbon resistor 43. 2,200 ohm carbon resistor 44. 2,200 ohm carbon resistor 45. 1,200 ohm carbon resistor 46. 270 ohm carbon resistor 47. 200 ohm wire Wound resistor 48. 50 ohm Wire Wound resistor 49. 25 ohm Wire Wound resistor 50. 5 Megohm Carbon Poentiometer tapped at 40 K. ohms DP.ST. switch attached 5 versistor 10% 1 w. Z2732 1 w. R4723 1 w. R2223 1 w. R2223 1 w. PR280 1 w. PR280 1 w. PR280 2 w. PR281			15%	½ W.	
40. 23,500 ohm carbon resistor consisting of two 47,000 ohm 1 watt 10% resistors part No. Z4732 wired in parallel 41. 4,700 ohm carbon resistor 15% ½ W. R4723 42. 2,200 ohm carbon resistor 15% ½ W. R2223 43. 2,200 ohm carbon resistor 15% ½ W. R2223 44. 2,200 ohm carbon resistor 10% ½ W. R2223 45. 1,200 ohm carbon resistor 10% ½ W. R1222 46. 270 ohm carbon resistor 10% ½ W. R1222 47. 200 ohm wire Wound resistor 10% ½ W. PR176 48. 50 ohm Wire Wound resistor 10% ½ W. PR280 49. 25 ohm Wire Wound resistor 10% ½ W. PR281 505 Megohm Carbon Poentiometer tapped at 40 K. ohms DP.ST. switch attached 20% PR819					
47,000 ohm 1 watt 10% resistors part No. Z4732 wired in parallel 41. 4,700 ohm carbon resistor 15% ½ W. R4723 42. 2,200 ohm carbon resistor 15% ½ W. R2223 43. 2,200 ohm carbon resistor 15% ½ W. R2223 44. 2,200 ohm carbon resistor 10% ½ W. R2223 45. 1,200 ohm carbon resistor 10% ½ W. R1222 46. 270 ohm carbon resistor 10% ½ W. R1222 47. 200 ohm wire Wound resistor 10% ½ W. PR176 48. 50 ohm Wire Wound resistor 10% ½ W. PR280 49. 25 ohm Wire Wound resistor 10% ½ W. PR281 505 Megohm Carbon Poentiometer tapped at 40 K. ohms DP.ST. switch attached 20% PR819				I W.	Z2732
No. Z4732 wired in parallel 41. 4,700 ohm carbon resistor 15% ½ W. R4723 42. 2,200 ohm carbon resistor 15% ½ W. R2223 43. 2,200 ohm carbon resistor 15% ½ W. R2223 44. 2,200 ohm carbon resistor 10% ½ W. R2223 45. 1,200 ohm carbon resistor 10% ½ W. R1222 46. 270 ohm carbon resistor 10% ½ W. R1222 47. 200 ohm Wire Wound resistor 10% ½ W. PR176 48. 50 ohm Wire Wound resistor 10% ½ W. PR280 49. 25 ohm Wire Wound resistor 10% ½ W. PR281 505 Megohm Carbon Poentiometer tapped at 40 K. ohms DP.ST. switch attached 20% PR819	40.				
41.       4,700 ohm carbon resistor       15%       ½ W.       R4723         42.       2,200 ohm carbon resistor       15%       ½ W.       R2223         43.       2,200 ohm carbon resistor       15%       ½ W.       R2223         44.       2,200 ohm carbon resistor       10%       ½ W.       R2222         45.       1,200 ohm carbon resistor       10%       ½ W.       R1222         46.       270 ohm carbon resistor       10%       ½ W.       PR176         47.       200 ohm Wire Wound resistor       10%       ½ W.       PR280         49.       25 ohm Wire Wound resistor       10%       ½ W.       PR281         50.       .5 Megohm Carbon Poentiometer tapped at 40 K.       ohms DP.ST. switch attached       20%       PR819			part		
42.       2,200 ohm carbon resistor       15%       ½ W.       R2223         43.       2,200 ohm carbon resistor       15%       ½ W.       R2223         44.       2,200 ohm carbon resistor       10%       ½ W.       R2222         45.       1,200 ohm carbon resistor       10%       ½ W.       R1222         46.       270 ohm carbon resistor       10%       ½ W.       PR176         47.       200 ohm Wire Wound resistor       10%       ½ W.       PR280         49.       25 ohm Wire Wound resistor       10%       ½ W.       PR281         50.       .5 Megohm Carbon Poentiometer tapped at 40 K.       20%       PR819	4.1		3.50	1/ 111	D4607
43.       2,200 ohm carbon resistor       15%       ½ W.       R2223         44.       2,200 ohm carbon resistor       10%       ½ W.       R2222         45.       1,200 ohm carbon resistor       10%       ½ W.       R1222         46.       270 ohm carbon resistor       10%       ½ W.       PR176         47.       200 ohm Wire Wound resistor       10%       ½ W.       PR280         48.       50 ohm Wire Wound resistor       10%       ½ W.       PR280         49.       25 ohm Wire Wound resistor       10%       ½ W.       PR281         50.       .5 Megohm Carbon Poentiometer tapped at 40 K.       ohms DP.ST. switch attached       20%       PR819					
44.       2,200 ohm carbon resistor       10%       ½ W.       R2222         45.       1,200 ohm carbon resistor       10%       ½ W.       R1222         46.       270 ohm carbon resistor       10%       1 W.       Z2712         47.       200 ohm Wire Wound resistor       10%       ½ W.       PR176         48.       50 ohm Wire Wound resistor       10%       ½ W.       PR280         49.       25 ohm Wire Wound resistor       10%       ½ W.       PR281         50.       .5 Megohm Carbon Poentiometer tapped at 40 K.       ohms DP.ST. switch attached       20%       PR819					
45. 1,200 ohm carbon resistor  46. 270 ohm carbon resistor  47. 200 ohm Wire Wound resistor  48. 50 ohm Wire Wound resistor  49. 25 ohm Wire Wound resistor  505 Megohm Carbon Poentiometer tapped at 40 K.  ohms DP.ST. switch attached  10% ½ W. PR280  10% ½ W. PR281					
46. 270 ohm carbon resistor 10% 1 W. Z2712 47. 200 ohm Wire Wound resistor 10% ½ W. PR176 48. 50 ohm Wire Wound resistor 10% ½ W. PR280 49. 25 ohm Wire Wound resistor 10% ½ W. PR281 50. 5 Megohm Carbon Poentiometer tapped at 40 K. ohms DP.ST. switch attached 20% PR819					
47. 200 ohm Wire Wound resistor 10% ½ W. PR176 48. 50 ohm Wire Wound resistor 10% ½ W. PR280 49. 25 ohm Wire Wound resistor 10% ½ W. PR281 505 Megohm Carbon Foentiometer tapped at 40 K. ohms DP.ST. switch attached 20% PR819					
48. 50 ohm Wire Wound resistor 10% ½ W. PR280 49. 25 ohm Wire Wound resistor 10% ½ W. PR280 505 Megohm Carbon Foentiometer tapped at 40 K. ohms DP.ST. switch attached 20% PR819					
49. 25 ohm Wire Wound resistor 10% ½ W. PR281 505 Megohm Carbon Poentiometer tapped at 40 K. ohms DP.ST. switch attached 20% PR819					
505 Megohm Carbon Poentiometer tapped at 40 K. ohms DP.ST. switch attached 20% PR819					
ohms DP.ST. switch attached 20% PR819			1.0%	½ W.	LKS8I
	9U•				TOOLO
or. 100,000 onm carbon potentiometer 20% PR695	<b>61</b>				
	OT.	100,000 onm carbon potentiometer	20%		rn099

Circu		m		
No.	Description	Tol. ±	Rating	Part No.
52.	ON/OFF Switch - part of vol. control circ	uit		
53.	19 metre spreadband coil (brown spot)			L131
54.	25 metre spreadband coil (white spot)			PT913
55.	31 metre spreadband coil (red spot)			PT912
56.	49 metre spreadband coil (yellow spot)			L116
57.	IF. Transformer 455 Kc/s.			PT869
58.	IF. Transformer 455 Kc/s.			PT869
59.	Input. trans. 5,000-2 ohms imped. code No.	KBG81		PT799
60.	Choke 14 H. 60 mA-520 ohms DC. resist.	_		PT806
61.	Power trans. 200-250V. 50 cycle mains	-		T119
61.	Power trans. 200-260V. 40 cycle mains			T120
62.	Dial lamp 6-8V. 0.25A. Min. screw base T3			PM678
63.	Gramo-radio/wave-change switch 6 positi	on		S201
64.	Perm. tuner - complete assy.			L115
65.	Osc. coil - less iron core			PT961
66.	Antenna coil - less iron core	E at	EOOU DOW	PT960
67.	650 MMF Silvered mica cond. 90 MMF Silvered mica cond	5%	500V DCW	PC926
68. 69.	90 MMF Silvered mica cond 30 MMF Silvered mica cond.	5% 5%	500V DCW 500V DCW	PC965 PC879
70.	3-55 MMF Trimmer cond.	5%	SOOV DOW	PC899
71.	3-55 MMF Trimmer cond.			PC899
,	Iron core - ant. and oscl. coils (wh	ite snot)		11/766-1
	Iron core - ant. and oscl. coils (bl			11/766-2
72.	Short wave trim. cond. (male section	)		A108/766
	Short wave trim. cond. (female secti			A109/766
73.	Short wave trim. cond. (male section			A108/766
	Short wave trim. cond. (female secti			A109/766
74.	Record changer: Collaro type 3RC531, cre	eam colour, 200	-	•
	250V. 50 cycle, 3 speed,		,	
	''Studio'' crystal cart			M308
	Crystal cartridge - inc			
	and plug-in pick-up			236/524
	Crystal cartridge - inc			A134/524
	Crystal cartridge - les	s needles		512/524 520/524
	L.P. needle - red spot STD. needle - green spo	+		521/524
	40 cycle drive bush	·		237/524
	Record changer: Collaro 3RC54, cream co	lour 200-2501	,	2017021
	50 cycle operation, tu		•	
	''Studio O'' crystal ca	nrtridge		M371
	Crystal cartridge - inc	ludes needles		A134/524
	Crystal cartridge - les			512/524
	L.P. needle - red spot			520/524
	STD. needle - green spo	t		521/524
	40 cycle drive bush			237/524
75.	AC. lead junction block			297/279
76.	6 pin oblong plug			A102/366
77.	6 pin oblong socket			
	cover section			6/366
	base section			5/366
	contact lugs			15/58-2
78.	ON/OFF switch, part of record changer of	circuit No. 74		-
79.	12" permag. speaker type 12M			K172
		al pointer ass		A101/816
	al reading 35/816-2 Rul	bber grommet (	4.1	64/30A

54.3	43.4		
Dial drum	41/785	Fulley "" dia. wood	17/87
Collar dial drum	56/678-1	Fulley	13/613
7 pin socket	A104/58	Pulley stud (2)	18/87
9 pin socket	279/250	I.F.T. Mt. clips	7/670
Pick-up lead phone tip socket		Circlip (2)	22/755
Aerial transfer	29/250	Nut - dial background	
Earth transfer	30/250	fastening to chassis (2)	41/161
Valve retainer wire (long)	307/250	Nut $-\frac{1}{4}$ " thick, tone control	
Valve retainer wire (short)		mt.	7/347
Lamp socket assy. (2)	A105/861	Nut - tone control gear	
Cabinet light bezel	292/250-1	plate mt.	17/304-6
Light bezel socket assy.	A574/30C	Tone control mt. plate	37/816
Insulated staple	238/250	Tone control spindle and	
Phone tip - pick-up lead	11/252	brass gear assy.	A108/816
Terminal strip - 2 lug	A557/30C	Tone control bakelite gear	•
Terminal strip - 3 lug (2)	A555/30C	and bush assy.	A107/816
Terminal strip - 5 lug	A573/30C	Brass bush - switch and vol.	•
Terminal strip - 8 lug	A572/30C	control mt. (2)	972/495-1
Terminal strip - 8 lug	A150/30C	Hollow spindle - tuning	24/816
Terminal strip - 5 lug	•	Knob - wave change	291/81-3
AC. mains	A567/30C	Knob - volume	291/81-4
Audio power unit assy. com-		Knob - tuning	292/81-3
plete with valves	A105/816-1	Knob - tone	292/81-4
Screw - chassis/cab. mt.		Knob spring insert	22/755
Csk. hd. N.P. (4)	269/250-1	Cabinet assy.	266/221
Cup washer on chassis mt.	300,000 =	occurrence construction of the construction of	~00,~~
screw N.P. (4)	293/250	•	
Screw - receiver cover board		,	,
$\frac{1}{2}$ " x No. 6 rd. hd. N.P. (4)			
/2 A 110 . O 1 u . 11 u . 11 · ( · )	40,000-00		

#### INSTRUCTIONS FOR REMOVING CHASSIS FROM CABINET

- 1. Remove cabinet back by unscrewing the screws fastening it to the cabinet.
- 2. Unplug 6 pin plug from power supply unit and disconnect AC. mains leads from the two AC. mains junction blocks.
- 3. Unsolder two speaker leads connected to terminal strip on power supply unit.
- 4. Unsolder black earth lead and 1" braid lead connected to power supply unit.
- 5. Unsolder cabinet indicator lamp lead connected to power supply unit.
- 6. Unclip aerial and earth leads from inside cabinet door.
- 7. Unscrew four  $1'' \times 5/32''$  Whit. screws fastening power supply unit to cabinet.
- 8. Unscrew the small grub screw in the vol. and w/change knobs, then withdraw all four knobs.
- 9. Remove polished plywood plate from top of chassis by unscrewing the six screws fastening it to the chassis.
- 10. Unsolder pick-up leads connected to wave change switch on early production receivers or unplug the leads on later production receivers.
- 11. Unscrew and remove four screws two at each end of chassis then lift chassis out of the cabinet.

### TRANSFORMER CONNECTIONS

### B/CAST ANTENNA TRANS.

Start of winding - furthest from mounting end - Antenna, A.V.C.

Finish of winding - nearest to mounting end - Grid.

### B/CAST OSCL COIL.

GRID.

Start of winding - furthest from mounting end - Oscl. plate. Finish of winding - nearest to mounting end - Oscl. grid.

### 19, 25, 31 AND 49 METRE ANT. TRANS.

Lead from top lug (iron core end):-

Lead from bottom lug (mounting end):- CHASSIS - EARTH.

### 19, 25, 31 AND 49 METRE OSCL. COIL

Lead from top lug (iron core end):- GRID.

Lead from bottom lug (mounting end):- OSCL. PLATE COND.

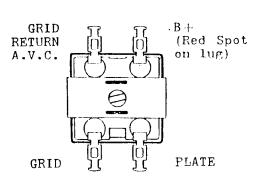
49 Metre spreadband coil, YELLOW spot on iron core end of former.

31 Metre spreadband coil, RED spot on iron core end of former.

25 Metre spreadband coil, WHITE spot on iron core end of former.

19 Metre spreadband coil, PROWN spot on iron core end of former.

#### 1st IF. TRANS.



#### 2nd IF. TRANS.

