

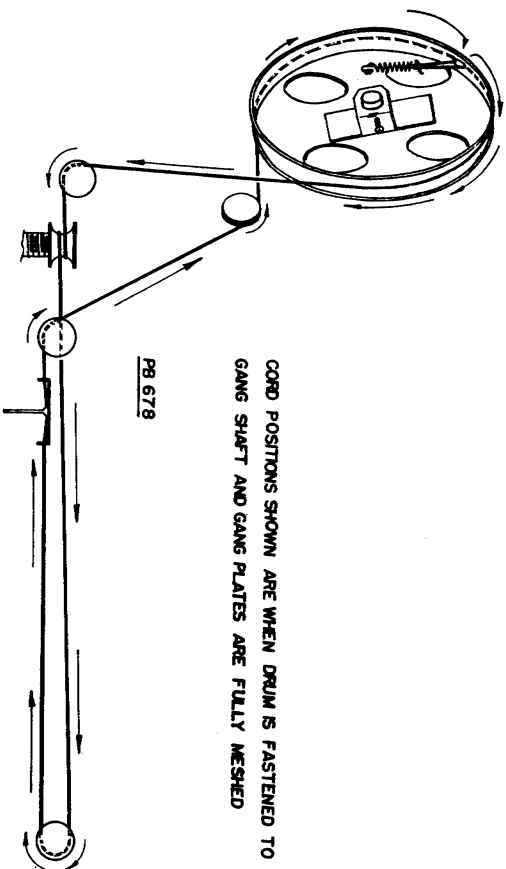
### CORDING OF DIAL DRIVE

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 Part No. 21/698.

Note:— 1 turn shown around drive spindle changed to 2 turns.



### 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 chassis has to be removed from the cabinet for this adjustment. SWITCH THE RECEIVER OFF AND DISCONNECT THE RECEIVER MAINS LEAD PLUG FROM THE POWER POINT SOCKET. Remove chassis from cabinet as detailed on page 2.

The mains lead wire from the switch on the volume control which is attached to the 221-250 V. tap on the mains terminal strip is to be unsoldered from the 221-250 V. tap and re-soldered to the 200-220 V. tap.

### CHASSIS SERIAL NUMBER

The serial number is stamped into the top edge of the metal chassis near the power transformer and is visible from the rear of the cabinet when the cover board is removed.



**RADIO CORPORATION PTY. LTD.**

DIVISION OF ELECTRONIC INDUSTRIES LTD.  
124-130 GRANT STREET, SOUTH MELBOURNE, S.C.A.

### TECHNICAL BULLETIN

### MODEL CNK

### GRAMO-RADIO COMBINATION

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

### FOR OPERATION FROM:—

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

### POWER CONSUMPTION:—

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

### TUNING RANGES:—

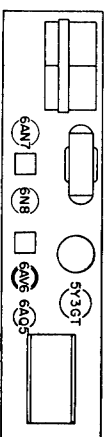
Broadcast Band, 535-1610 Kc/s.	560.7-186.3 Metres.
19 Metre Band, 14.9-15.5 Mc/s. (Bandspread)	20.13-19.29 Metres (approx.)
25 Metre Band, 11.6-12.1 Mc/s. (Bandspread)	25.86-24.79 Metres (approx.)
31 Metre Band, 9.4-9.8 Mc/s. (Bandspread)	31.91-30.61 Metres (approx.)

### RECEIVER COVERAGE:—

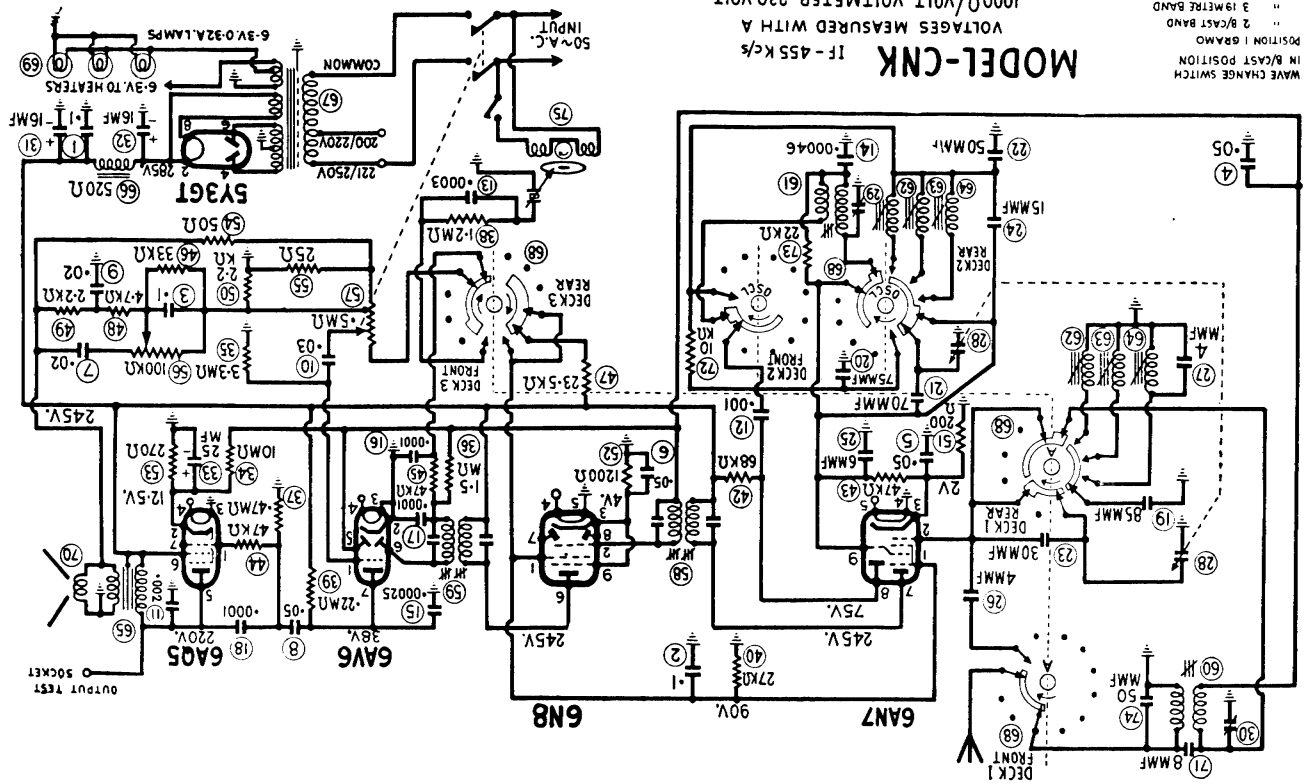
### THIS BULLETIN CONTAINS:—

Alignment Instructions.  
Circuit Diagram.

Connections for IF. and RF. Transformers.  
Dial Drive Cording Diagram.  
Valve Placement Diagram.  
Instructions for Changing Mains Input Voltage Tap.  
Instructions for Removing Chassis from Cabinet.  
Chassis Serial Number.



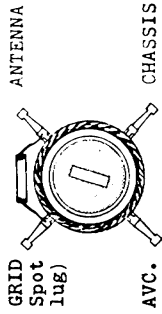
PB 764



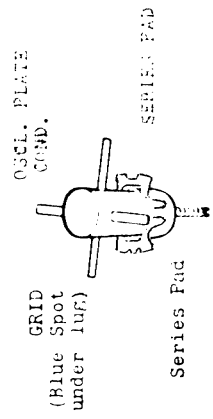
MODEL-CNK  
 IF - 455 K/c  
 VOLTAGES MEASURED WITH A  
 1000Ω/VOLT VOLTMETER 230 VOLT  
 INPUT TO 221-250 VOLT PRI. TAP.

WAVE CHANGE SWITCH  
 IN CAST POSITION  
 POSITION 1 GRABO  
 .. 2 8/CAST BAND  
 .. 3 19METRE BAND  
 .. 4 25METRE BAND  
 .. 5 31METRE BAND

ANTENNA TRANS.



OSCL. COIL



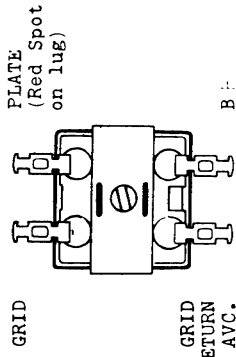
19, 25 AND 31 METRE ANT. TRANS.

Lead from top lug (iron core end):- GRID.  
 Lead from bottom lug (mounting end):- CHASSIS - EARTH.

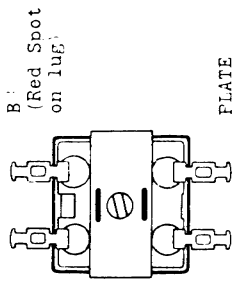
19, 25 AND 31 METRE OSCL. COIL

Lead from top lug (iron core end):- GRID.  
 Lead from bottom lug (mounting end):- OSCL. PLATE COND.

1st IF. TRANS.



2nd IF. TRANS.



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, BLUE spot on iron core end of former.

ALIGNMENT PROCEDURE

EQUIPMENT

- Signal Generator: Load Impedance: 5,000 ohms.  
 Output Meter: Output Level: 50-Milliwatts.  
 Mica Capacitor: 0.01MF. (for I.F. trans. alignment) Max. Vol. fully clockwise.  
 Dummy Antenna: 200MMF. Mica Capacitor. 400 Ohm non-inductive resistor.  
 Dummy Antenna: 400 Ohm non-inductive resistor.  
 Alignment Tools: Type M195 and PM581. Treble position.

ALIGNMENT CONDITIONS

- Intermed. Freq.: 455 Kc/s.  
 Input Voltage: 230 Volts 50 Cycle AC. input to trans. 221-250 volt pri. tap.  
 Tone Control: Treble position.

**To Remove Chassis from Cabinet—** DISCONNECT THE RECEIVER MAINS LEAD PLUG FROM THE POWER POINT SOCKET. Remove three push-on type control knobs from spindles near radio-dial and wave change switch knob from right hand side of cabinet. Remove screws fastening cabinet back to cabinet. Withdraw speaker lead plug from socket at end of chassis and pick-up lead plugs from small sockets beneath gramophone unit. Disconnect cabinet base indicator lamp lead plug from its socket and receiver AC. mains leads from AC. junction block on cabinet. Remove small wood screw fastening tone control bracket to underside of receiver mount board. Remove a nut from each of two captive screws through brackets at each end of receiver chassis; then lift receiver chassis out of cabinet. Refit the chassis to the cabinet in the exact reverse procedure to removing it.

Generator Connection Frequency Antenna Dummy Antenna Instructions

1. To control grid of 6N8 I.F. valve (pin No. 2) 455 Kc/s. 0.01MF Mica capacitor in series with Generator. Turn wave change switch to B/cast band. Leave grid wire attached to valve socket. Peak 1st I.F. trans. pri. and sec. for max. output.
2. To control grid of 6AN7 valve (pin No. 2) 455 Kc/s. 0.01MF Mica capacitor in series with generator. Turn cond. gang plates fully out of mesh. Leave grid wire attached to valve socket. Peak 1st I.F. trans. pri. and sec. for max. output. Repeat operations No. 1 and 2.
3. Fully mesh the cond. gang plates. Set the centre of the dial pointer to align with the centre of the end of travel mark on the dial reading near 540 Kc/s.
4. To antenna lead from receiver. 600 Kc/s. 200MMF. Mica capacitor in series with generator. Turn cond. gang and dial pointer until centre of dial pointer aligns with centre of 600 Kc/s. spot on dial reading. Leave the gang and pointer set in this position and peak the oscil. coil inductance trim (iron core) for max. output.
5. To antenna lead from receiver. 1400 Kc/s. 200MMF. Mica capacitor in series with generator. Turn cond. gang and dial pointer until centre of dial pointer aligns with centre of 1400 Kc/s. spot on dial reading. Adjust oscil. coil trim condenser for logging and peak antenna trans. trim. condenser for max. output.

7. To antenna lead from receiver. 600 Kc/s. 200MMF. Mica capacitor in series with generator. Turn cond. gang and dial pointer until centre of dial pointer aligns with centre of 600 Kc/s. spot on dial reading. Leave the gang and pointer set in this position. Re-peak oscil. coil. ind. trim. (iron core) and then peak the antenna trans. ind. trim. (iron core) for max. output. Do not rock the gang or dial pointer to and fro through the signal while adjusting or move them until after the inductance trimmer (iron core) of both of these transformers has been peaked for max. output.
8. To antenna lead from receiver. 1400 Kc/s. 200MMF. Mica capacitor in series with generator. Turn cond. gang and dial pointer until centre of dial pointer aligns with centre of 1400 Kc/s. spot on dial reading. Adjust oscil. coil trim condenser for logging and re-peak antenna trans. trim. condenser for max. output.
9. Turn wave change switch to 31 metre band (this band must be aligned before the turn dial pointer and cond. gang to 9.6 Mc/s. Adjust 31 metre band oscil. coil ind. trim. (iron core) for logging and peak 31 metre ant. trans. trim. (iron core) for max. output. Rock cond. gang to and fro through the signal while adjusting.
10. To antenna lead from receiver. 9.6 Mc/s. 400 ohm non-inductive resistor. Turn wave change switch to 25 metre band. Turn dial pointer and cond. gang to 11.8 Mc/s. Adjust 25 metre band oscil. coil ind. trim. (iron core) for logging and peak 25 metre ant. trans. trim. (iron core) for max. output. Rock cond. gang to and fro through the signal while adjusting.
11. To antenna lead from receiver. 11.8 Mc/s. 400 ohm non-inductive resistor. Turn wave change switch to 19 metre band. Turn dial pointer and cond. gang to 15.2 Mc/s. Adjust 19 metre band oscil. coil ind. trim. (iron core) for logging and peak 19 metre ant. trans. trim. (iron core) for max. output. Rock cond. gang to and fro through the signal while adjusting.
12. To antenna lead from receiver. 15.2 Mc/s. 400 ohm non-inductive resistor. Turn wave change switch to 19 metre band. Turn dial pointer and cond. gang to 15.2 Mc/s. Adjust 19 metre band oscil. coil ind. trim. (iron core) for logging and peak 19 metre ant. trans. trim. (iron core) for max. output. Rock cond. gang to and fro through the signal while adjusting.
13. Check the logging of the shortwave bands on some well-known shortwave stations. If a crystal calibrator is available, check the logging at each 100 Kc/s. mark on the dial.

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, BLUE spot on iron core end of former.