

SERVICE BULLETIN



Northern Electric RADIO



Model 5114

5 Tube Table Model

Radio-Phonograph Combination

SERVICE INFORMATION

SPECIFICATIONS

GENERAL: 5-tube Superheterodyne Radio-Phonograph Combination,
housed in Table Model Walnut Veneer Cabinet.

1. FREQUENCY RANGE

Standard Broadcast Band 535 to 1570 K.C.

2. INTERMEDIATE FREQUENCY

455 K.C.

3. TUBES

Type	Function
12SA7	Converter
12SK7	I.F. Amplifier
12SQ7	Detector, A.V.C. and Audio Amplifier
50L6	Audio Output Amplifier
35Z5	Rectifier

4. A.V.C.

On 12SA7 Mixer and 12SK7 I.F. Amplifier

5. POWER SUPPLY

Model 5114A — 117 Volts A.C., 60 Cycles
Model 5114B — 117 Volts A.C., 25 Cycles

6. POWER CONSUMPTION

Radio — 30 Watts
Phonograph — 50 Watts

7. AUDIO POWER OUTPUT

2.1 Watts

8. ANTENNA

Spool of flexible aerial wire permanently attached to set.

9. GROUND

No ground is necessary for operation of this set.

10. AUDIO SYSTEM

Audio portion of 12SQ7 resistance — capacity coupled to 50L6.

11. LOUDSPEAKER

6" Permanent Magnet.

12. CONTROLS

Rear Knob — Tuning
Center Knob — Radio phono and two position tone switch.
Front Knob — Volume Control and "ON-OFF" Switch
Motor Switch — Switches motor on and off.

13. DIMENSIONS

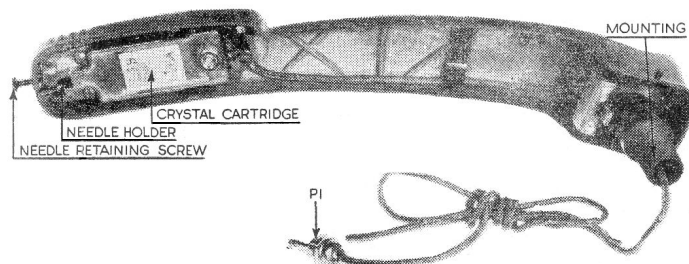
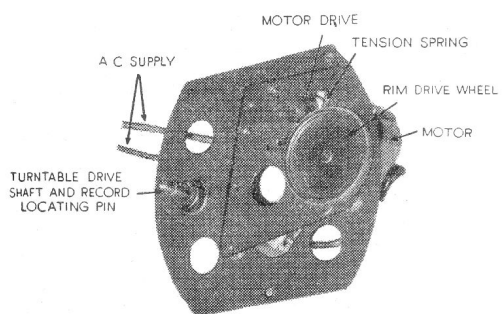
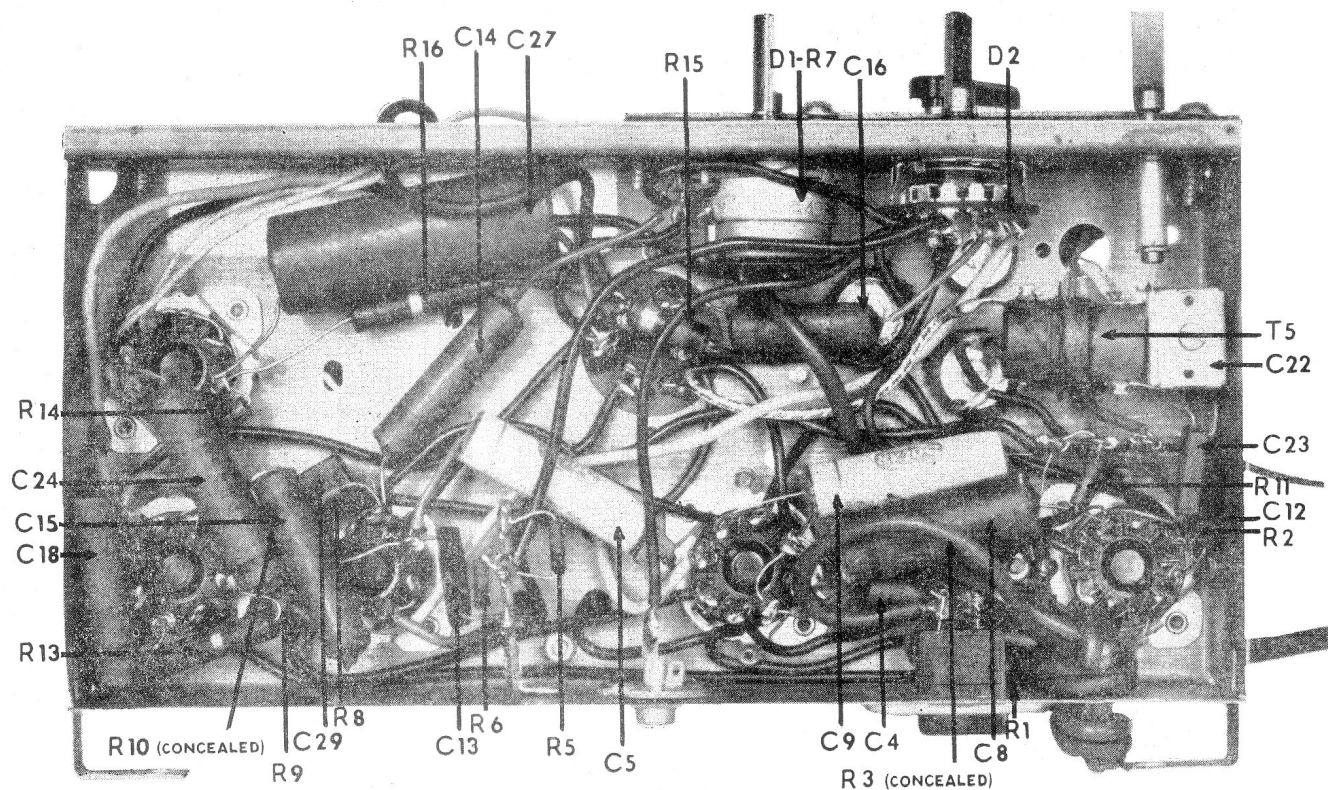
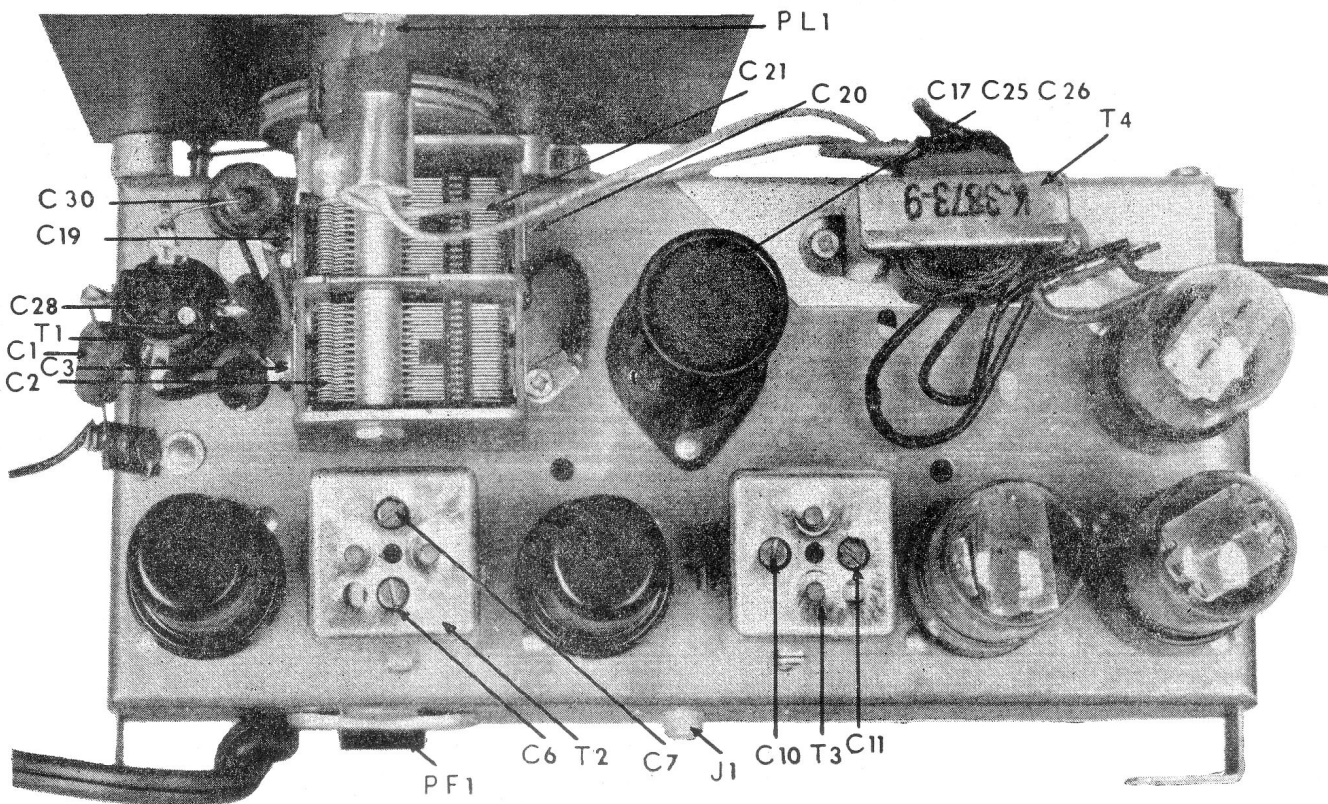
Chassis, assembled (excluding shafts)
Length 9½", Width 5¼",
Height 5¾".
Cabinet
Length 20¾", Width 15⅞",
Height 10⅞".

14. PHONOGRAPH MOTOR

Speed 78 R.P.M.
Specify 5114A for 60 cycle operation
and 5114B for 25 " "

15. PHONOGRAPH PICKUP

Crystal pickup to work into 0.5 megohm load.



ALIGNMENT

Alignment procedure should be carried out according to the following table and in the order shown:

Alignment Frequency	Dummy Antenna	Receiver Connection	Items to be adjusted for maximum output and their location.
I.F. 455KC	.1 Mfd Paper	Antenna Section Gang	I.F. Trimmers, items C6, C7, C10 and C11, on I.F. Transformers (tuning gang open)
B.C. 1400KC	100 Mmf Mica	Antenna Terminal	(a) Oscillator trimmers on gang, C19 and C20 (b) Antenna trimmer on gang C3.
B.C. 600KC	100 Mmf Mica	Antenna Terminal	Oscillator lag trimmer C22
Recheck at 1400 KC			

MODIFICATION

A certain number of these receivers upon being tested before shipping showed a tendency to break into oscillation when the antenna was completely wound in. To off-set this on the receivers concerned, a 47000 ohm. 1/2 W resistor (K10000C-473) was connected across the antenna coil.

REPLACEMENT PARTS LIST

Circuit Designation	Description	Part No.	Circuit Designation	Description	Part No.
C1	Capacitor, Paper, .003 Mfd 600 V.....	K10128-302	R6	Resistor, 47,000 Ohm 1/2 W.....	K10000C-473
C2	Capacitor, Gang, Antenna Section 420 Mmf, Part of.....	R12734	R7	Volume Control, .5 Meg.....	K10323-2
C3	Capacitor, Trimmer, 1.5-20 Mmf, Part of.....	R12734	R8	Resistor, 10 Meg. 1/2 W.....	K10000C-106
C4	Capacitor, Paper, .01 Mfd 600 V.....	K10128-103	R9	Resistor, .22 Meg. 1/2 W.....	K10000C-224
C5	Capacitor, Paper, .02 Mfd 600 V.....	K10128-203	R10	Resistor, .47 Meg. 1/2 W.....	K10000C-474
C6	Capacitor, Trimmer, 20 — 150 Mmf, Part of.....	R15373	R11	Resistor, 10 Meg. 1/2 W.....	K10003C-106
C7	Capacitor, Trimmer, 20 — 150 Mmf, Part of.....	R15373	R13	Resistor, 150 Ohm 1 W.....	K10004B-151
C8	Capacitor, Paper, .05 Mfd 600 V.....	K10128-503	R14	Resistor, 33 Ohm 1/2 W.....	K10003C-330
C9	Capacitor, Paper, .02 Mfd 600 V.....	K10128-203	R15	Resistor, 2,700 Ohm 1 W.....	K10001C-272
C10	Capacitor, Trimmer, 20 — 150 Mmf, part of.....	R15373	R16	Resistor, 330 Ohm 1 W.....	K10004C-331
C11	Capacitor, Trimmer, 20 — 150 Mmf, Part of.....	R15373	T1	Transformer, Antenna.....	R13376
C12	Capacitor, Mica, 390 Mmf 500 V.....	K10134C-391	T2	Transformer, 1st I.F.....	R15375-1
C13	Capacitor, Mica, 390 MMf 500 V.....	K10134C-391	T3	Transformer, 2nd I.F.....	R15375-1
C14	Capacitor, Paper, .01 Mfd 600 V.....	K10128-103	T4	Transformer, Output.....	K3873-9
C15	Capacitor, Paper, .01 Mfd 600 V.....	K10128-103	T5	Transformer, Oscillator.....	R16104
C16	Capacitor, Paper, .002 Mfd 600 V.....	K10128-202	Miscellaneous		
C17	Capacitor, Electrolytic, 20 Mfd 25 V., Part of.....	R12730		Antenna Spool and Wire Assembly.....	R13379
C18	Capacitor, Paper, .01 Mfd, 600 V.....	K10128-103		Indicator Knob Assembly.....	R14958-2
C19	Capacitor, Trimmer, 1.5-20 Mmf, Part of.....	R12734		Plain Knob Assembly.....	R14958-1
C20	Capacitor, Trimmer, 1.5-20 Mmf, Part of.....	R12734		Dial Cord.....	K10301
C21	Capacitor, Oscillator Section, 420 Mmf, Part of.....	R12734		Dial Scale.....	R16136
C22	Capacitor, Trimmer, 225-750 Mmf (Part of R13472).....	K1458-13		Tuning Drive Shaft.....	R12727
C23	Capacitor, Mica, 51 Mmf, 500 V.....	K10134B-510		Octal Tube Socket.....	K10145-36
C24	Capacitor, Paper, .025 Mfd. 600 V.....	K10128-253		"C" Washer.....	K2895
C25	Capacitor, Electrolytic, 40 Mfd 150 V, Part of.....	R12730		Pilot Lamp Socket.....	K5517
C26	Capacitor, Electrolytic, 40 Mfd 150 V, Part of.....	R12730		Gang Mounting Stud.....	K10298-3
C27	Capacitor, Electrolytic, 40 Mfd 150 V.....	K10124-16		Rubber Grommet.....	K10329-4
C28	Capacitor, Mica, 51 Mmf, 500 V.....	K10134B-510		Dial Drive Spring.....	R13898
C29	Capacitor, Mica, 390 Mmf 500 V.....	K10134C-390		Cabinet.....	R16239-21
C30	Capacitor, Paper, .05 Mfd 600 V.....	K10128-503		Base Plate.....	R8233-26
D1	Switch, A.C., Part of.....	K10323-2		Dial Drive Bushing.....	R12511
D2	Switch, 3 Pole, 4 Position.....	R16101		Terminal Strip, Single.....	K10120-1
J2	Jack, Phono.....	K5893-1		Terminal Strip, Triple, One lug grounded..	K10120-6
LS	Loudspeaker.....	R14914		Terminal Strip, Triple.....	K10120-10
P1	Plug, Phono.....	K5893-2		Electrolytic Mounting Plate.....	R15102
PF1	Receptacle, A.C.....	K5894		Trimmer and Bracket Assembly (including C22).....	R13472
PL1	Pilot Lamp 6.3 V, 25 ma.....	K2589-3		Dial Indicator Assembly.....	R8233-23
R1	Resistor, .22 Meg 1/2 W.....	K10000C-224		Phono Switch.....	R16438
R2	Resistor, 1 Meg. 1/2 W.....	K10000C-105		Cartridge, Crystal.....	R14339
R3	Resistor, 22,000 Ohm 1/2 W.....	K10000C-223		Turntable, Phonograph.....	R14340
R5	Resistor, 2.2 Meg. 1/2 W.....	K10000C-225		Motor (60 Cy.) Model 5114A.....	R14341A
				Motor (25 Cy.) Model 5114B.....	R14341B
				Wheel, Rim Drive.....	R14342
				A.C. Cord and Plug Assembly.....	K10320-11

