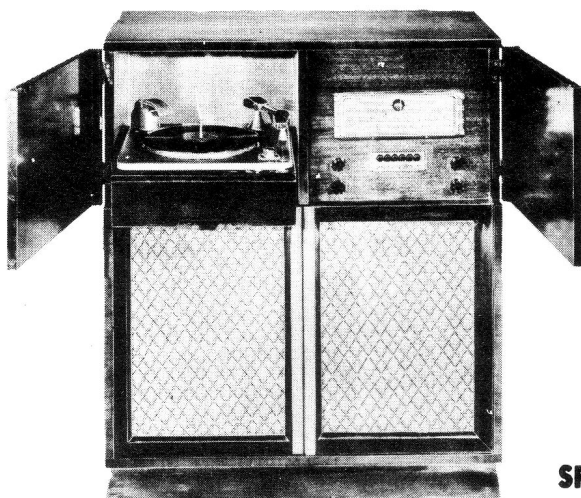


SERVICE BULLETIN



Northern Electric RADIO



MODEL 7105

7 Tube Console Model

RADIO PHONOGRAPH COMBINATION

SERVICE INFORMATION

SPECIFICATIONS

1. General:

The Model 7105 Radio Phonograph combination consists of a 7 tube superheterodyne radio receiver and an automatic record player housed in a console type cabinet. It is designed for domestic use. The 60 cycle model is designated 7105A and the 25 cycle Model 7105B.

2. Frequency Range:

535 kc/s to 1600 kc/s - Broadcast band
9.8 mc/s to 18.5 mc/s - Short wave #1
5.8 mc/s to 10.0 mc/s - Short wave #2

3. Intermediate Frequency:

455 kc/s

4. Tubes:

Circuit Designation	Type	Position
V1	6SK7	R.F.
V2	6SA7	1st Detector and Oscillator
V3	6SK7	I.F.
V4	6SQ7	2nd Detector, AVC and 1st Audio
V5	6V6G	Audio Output
V6	6U5	Tuning Eye
V7	5Y4G	Rectifier

5. Power Supply:

Volts - 110-125
Frequency - 60 c.p.s. (7105A)
25 c.p.s. (7105B)
Power Consumption - Radio - 80 watts
Phonograph - 97 watts

6. A.V.C.:

On R.F., 1st Detector and I.F. tubes.

7. Controls:

Top right hand - On-off Switch
Bottom right hand - Tuning
Top left hand - Tone Control
Bottom left hand - Volume

8. Power Output:

4.5 watts

9. Loudspeaker:

14" Permanent Magnet

10. Pushbuttons:

6, arranged in one row, with following functions:

1	2	3	4	5	6
Phono	Radio	Silent	B.C.	Sw. 1	Sw. 2

11. Dial:

Slide rule type approximately 11" x 4" edge lighted. Characters on front of glass in two colours with white background character behind each on back of glass.

12. Antennae:

Built in loop for broadcast band and capacity antenna for short wave. Screw type terminal provides for connection of outdoor antenna if required.

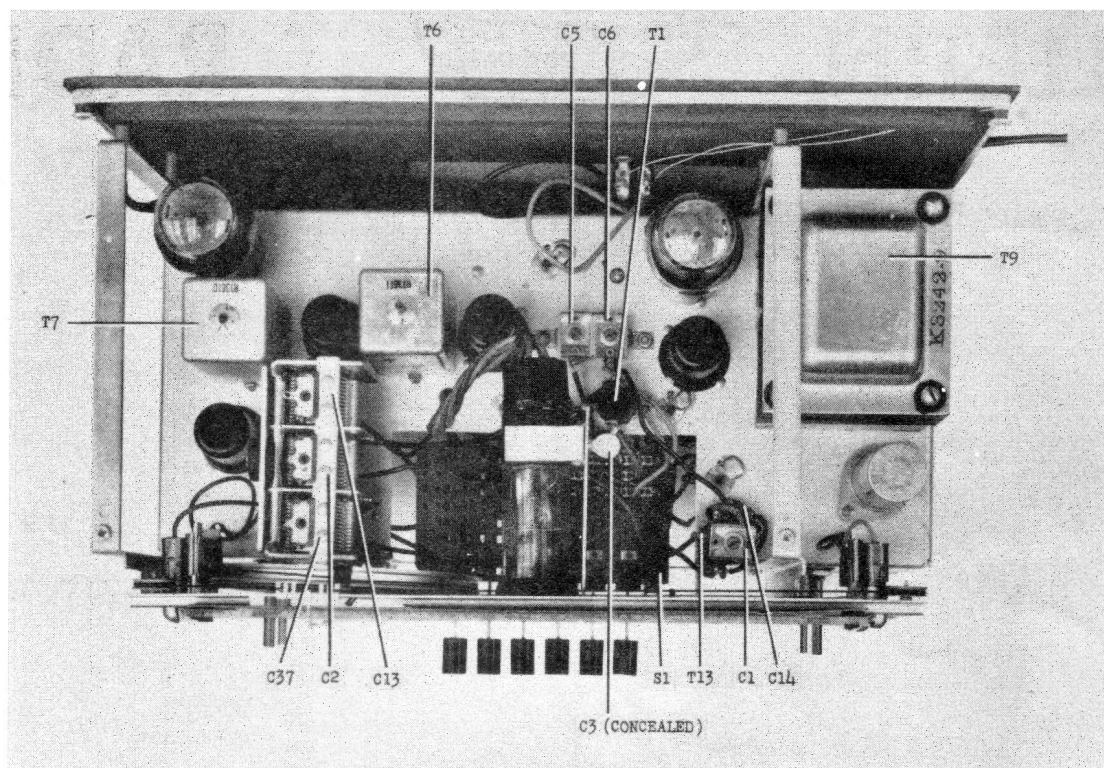
13. Dimensions:

Chassis (including shafts and loop) 15" x 9 1/4" x 9 3/4".

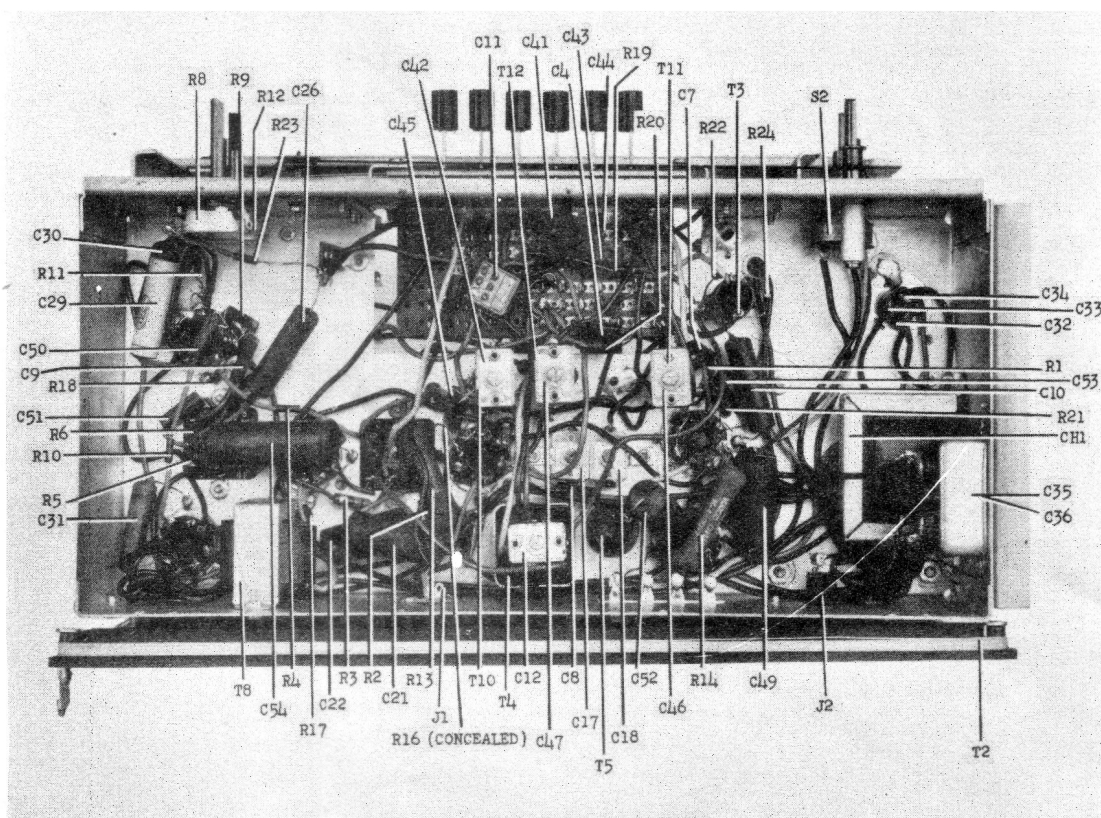
Cabinet

14. Phonograph Unit:

Plays ten 12" or twelve 10" records with automatic change. Last record repeats until unit shut off manually. See Service Bulletin RS115 for service details on Model 800 Changer used in this set.



CHASSIS TOP



CHASSIS BOTTOM

REALIGNING DETAILS

Alignment procedure should be carried out according to the following table:

Generator Frequency	Dummy Antenna	Receiver Connection	Control Setting	Item to be Adjusted for Maximum Output
1. 455 kc/s	.1 mfd	Pin #8 6SA7	Radio E.C. Gang Open	Iron cores on T6 & T7, located at each end of coil shield.
2. 1400 kc/s	100 mmf	Terminal #1	Radio E.C. Gang set a at 1400 kc.	(A) Oscillator trimmer C42 on B.C. oscillator coil T10 under chassis. (E) R.F. Trimmer C12 on R.F. coil T4 under chassis. (C) Ant. trimmer C1, on Ant. coil T13 on top of chassis. Gang to be rocked during (E) & (C) adjustment.
3. 600 kc/s	100 mmf.	Terminal #1	Radio E.C. Gang Set at 600 kc.	(A) E.C. Oscillator iron core on T10 on top of chassis. (B) E.C. R.F. iron core on T4 on top of chassis. (C) B.C. Ant. iron core on T13 under chassis. Gang to be rocked during (E) & (C) adjustment.
4. 1400 kc/s	Repeat #2 above.			
5. 17.0 mc/s	400 ohms.	Terminal #1	Radio SW-1 Gang set to 17.0 mc.	(A) SW-1 oscillator trimmer C47 on osc. coil T12 under chassis. (E) R.F. trimmer C17 on bracket under chassis. (C) Ant. trimmer C5 on bracket on top of chassis.
6. 10.5 mc/s	400 ohms	Terminal #1	Radio SW-1 Gang set to 10.5 mc.	(A) SW-1 oscillator iron core on T12 on top of chassis. (E) R.F. iron core on T3 on top of chassis. (C) Ant. iron core on T1 under chassis. Gang to be rocked during (E) & (C) adjustment.
7. 17.0 mc/s	Repeat #5 above.			
8. 9.5 mc/s	400 Ohms	Terminal #1	Radio SW-2 Gang set to 9.5 mc.	(A) SW-2 osc. trimmer C46 on oscillator coil T11. (E) R.F. trimmer C18 on bracket under chassis. (C) Ant. Trimmer C6 on bracket on top of chassis. Gang to be rocked during (E) & (C) adjustment.
9. 6.0 mc/s	400 ohms	Terminal #1	Radio SW-2 Gang tuned to signal.	Adjust oscillator iron core on T11 on top of chassis while rocking gang for maximum sensitivity.
10. 9.5 mc/s	Repeat #8 above.			

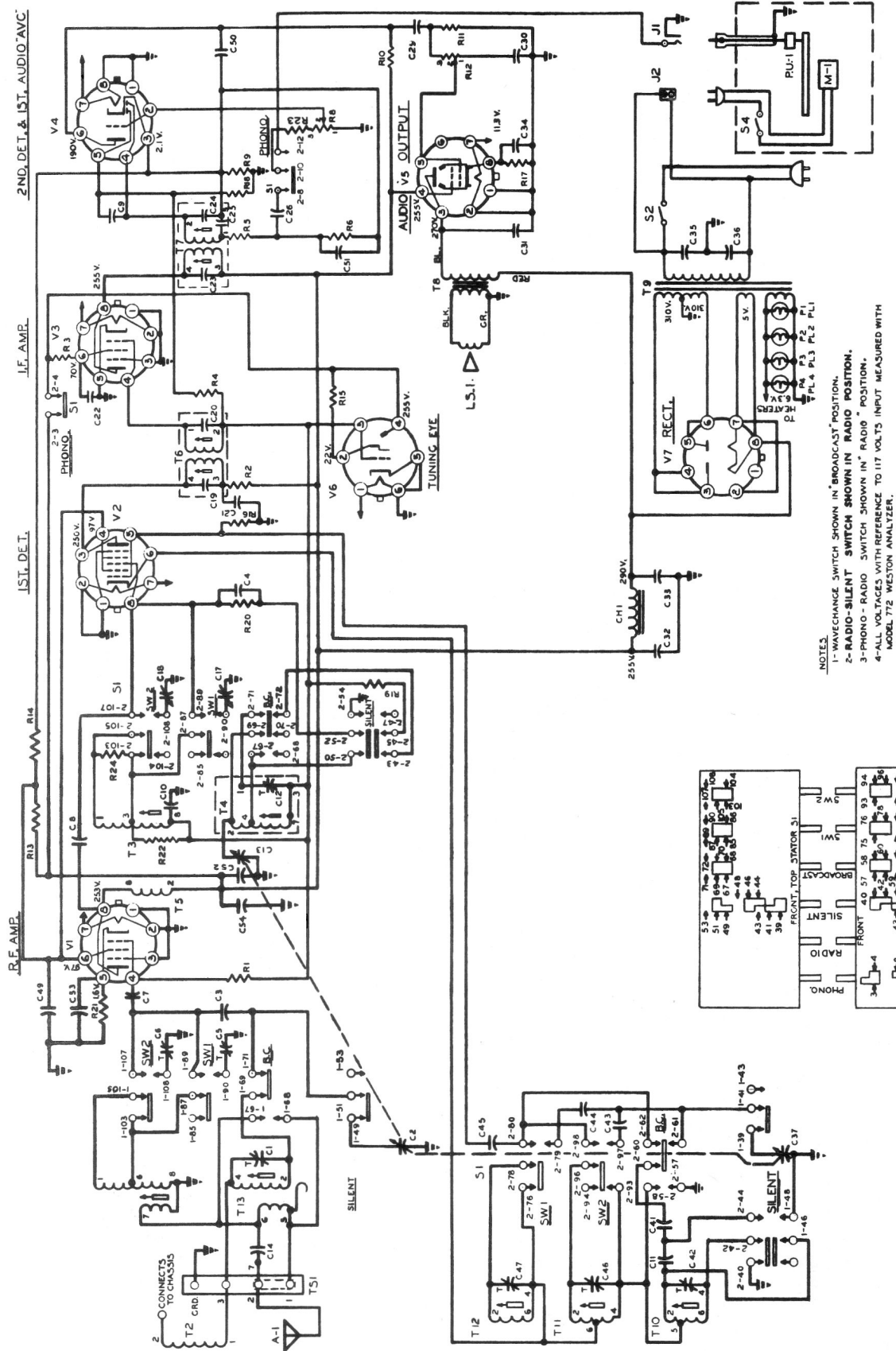
REPLACEMENT PARTS LIST

ITEM	DESCRIPTION	PART NO.	ITEM	DESCRIPTION	PART NO.
A1	Ant. SW Assembly	R13849-3	R1	Resistor, 1 Meg. 1/2 Watt	K10000C-105
C1	Capacitor, Trimmer 1.5 - 10 uuf	K1458-5	R2	Resistor, 1000 ohm 1/2 Watt	K10000C-102
C2	Capacitor, Gang, Antenna Sec., 10-530 uuf, part of	R13657	R3	Resistor, 68,000 ohm 1/2 Watt	K10000F-683
C3	Capacitor, Mica 360 uuf 500 V.W.	K10134A-361	R4	Resistor, 2.2 Meg. 1/2 Watt	K10000C-225
C4	Capacitor, Mica 360 uuf 500 V.W.	K10134A-361	R5	Resistor, 47,000 Ohm 1/2 Watt	K10000C-473
C5	Capacitor, Trimmer, 10-55 uuf, part of	R13823	R6	Resistor, 470,000 Ohm 1/2 Watt	K10000C-474
C6	Capacitor, Trimmer, 10-55 uuf, part of	R13823	R7	Resistor, 10,000 Ohm 1/2 Watt	K10000C-103
C7	Capacitor, Mica 1000 uuf 300 V.W.	K10134C-102	R8	Resistor, (Volume Control) 2 Meg.	R16471
C8	Capacitor, Mica 100 uuf 500 V.W.	K10134C-101	R9	Resistor, 220 Ohm 1/2 Watt	K10003C-221
C9	Capacitor, Mica 100 uuf 500 V.W.	K10134C-101	R10	Resistor, 220,000 Ohm 1/2 Watt	R10000C-224
C10	Capacitor, Paper .05 uf 400 V.W.	K10129-503	R11	Resistor, 220,000 Ohm 1/2 Watt	K10000C-224
C11	Capacitor, Mica 3000 uuf 500 V.W.	K10133B-302	R12	Resistor, (Tone Control) 1/4 Meg.	R14084-2
C12	Capacitor, Trimmer 3-25 uuf	K1458-6	R13	Resistor, 7000 Ohm 10 Watt	K4300-3
C13	Capacitor, Gang, Detector Sec., 10-530 uuf, part of	R13657	R14	Resistor, 10,000 Ohm 10 Watt	K4300-7
C14	Capacitor, Mica 100 uuf, 500 V.W.	K10134C-101	R15*	Resistor, 1 Meg. 1/2 Watt	K10000C-105
C17	Capacitor, Trimmer 10-55 uuf, part of	R13823	R16	Resistor, 22,000 Ohm 1/2 Watt	K10000C-223
C18	Capacitor, Trimmer, 10-55 uuf, part of	R13823	R17	Resistor, 270 Ohm 1 Watt	K10004F-271
C19	Capacitor, Mica 100 uuf 500 V.W.	K10134A-101	R18	Resistor, 1 Meg. 1/2 Watt	K10000C-105
C20	Capacitor, Mica 100 uuf 500 V.W.	K10134A-101	R19	Resistor, 12,000 Ohm 1/2 Watt	K10000E-123
C21	Capacitor, Paper .1 uf 400 V.W.	K10129-104	R20	Resistor, 470,000 Ohm 1/2 Watt	K10000C-474
C22	Capacitor, Paper .1 uf 400 V.W.	K10129-104	R21	Resistor, 100 Ohm 1/2 Watt	K10003C-101
C23	Capacitor, Mica 100 uuf 500 V.W.	K10134A-101	R22	Resistor, 1500 Ohm 1/2 Watt	K10000C-152
C24	Capacitor, Mica 200 uuf 500 V.W.	K10134A-201	R23	Resistor, 47,000 Ohm 1/2 Watt	K10000C-473
C25	Capacitor, Mica 200 uuf 500 V.W.	K10134A-201	R24	Resistor, 680 Ohm 1/2 Watt	K10000C-681
C26	Capacitor, Paper .02 uf 600 V.W.	K10128-203	S-1	Switch, Wavechange	R13693
C29	Capacitor, Paper .02 uf 600 V.W.	K10128-203	S-2	Switch, On-Off	R13645-2
C30	Capacitor, Paper.003 uf 600 V.W.	K10128-302	T1	Coil, (S.W. Ant.)	R14119
C31	Capacitor, Paper.003 uf 600 V.W.	K10128-302	T2	Loop, (B.C.)	R14164-2
C32	Capacitor, Electrolytic 20 uf, 450 V.W. part of	K4470	T3	Coil, (S.W., R.F.)	R13510
C33	Capacitor, Electrolytic, 20 uf, 450 V.W. part of	K4470	T4	Coil, (B.C. R.F.)	R14122
C34	Capacitor, Electrolytic, 20 uf, 25 V.W. part of	K4470	T5	Coil, R.F. (Choke)	R14163
C35	Capacitor, Euffer, .025 uf, part of	K5073	T6	Transformer, 1st I.F.	R13611
C36	Capacitor, Puffer, .025 uf, part of	K5073	T7	Transformer, 2nd I.F.	R13610
C37	Capacitor, Gang, Oscillator Sec., 10-530 uuf part of	R13657	T-8	Transformer, Output	K4046-7
C41	Capacitor, Mica 620 uuf 500 V.W.	K10134A-621	T-9	Transformer, Power 25-60 cps.	K3242-8
C42	Capacitor, Trimmer 3-25 uuf	K1458-6	T-9	Power Transformer, 60 cps.	K3242-9
C43	Capacitor, Mica 300 uuf 500 V.W.	K10134A-301	T-10	Coil, E.C. Osc.	R14123
C44	Capacitor, Mica 330 uuf 500 V.W.	K10134A-331	T-11	Coil, SW 2 Osc.	R14118
C45	Capacitor, Mica 51 uuf 500 V.W.	K10134C-510	T-12	Coil, SW 1 Osc.	R13511
C46	Capacitor, Trimmer 10-55 uuf	K1458-3	T-13	Coil, E.C. Ant.	R14304
C47	Capacitor, Trimmer 10-55 uuf	K1458-3	TS-1	Terminal Strip	K5497
C49	Capacitor, Paper .1 uf 200 V.W.	K10130-104	TS-2	Terminal Strip	K5547-1
C50	Capacitor, Mica 100 uuf 500 V.W.	K10134C-101			
C51	Capacitor, Mica 100 uuf 500 V.W.	K10134C-101			
C52	Capacitor, Paper .1 uf 400 V.W.	K10129-104			
C53	Capacitor, Mica 560 uuf 500 V.W.	K10134C-561			
C54	Capacitor, Paper .25 uf 400 V.W.	K10129-254			
CH-1	Choke, Filter	K4315-3			
J-1	Socket, Phono	K5893-1			
J-2	Socket, 110 V	K5894			
LS-1	Speaker	R16245			
P-1	Socket, Pilot Lamp	K5723-4			
P-2	Socket, Pilot Lamp	K5723-4			
P-3	Socket, Pilot Lamp	K5723-5			
P-4	Socket, Pilot Lamp	K5723-5			
PL-1	Lamp, Pilot	K2589-3			
PL-2	Lamp, Pilot	K2589-3			
PL-3	Lamp, Pilot	K2589-3			
PL-4	Lamp, Pilot	K2589-3			

* = Part of Tuning Eye Socket

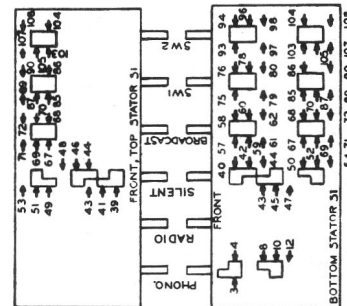
MISCELLANEOUS PARTS

Plug, Phone	K5893-2
Pulley	K5717
Shaft, Tuning	R13576
Stud	K5651-3
Knob, P.E.	K10201-2
Scale, Dial	R8146-29
Eack, Dial Scale	R8146-37
Clamp	R13546
Liner	K6061
Slider & Indicator Assembly	K13650
Socket, Tuning Eye	K14037
Clamp, Tuning Eye	K3899
Thumb Screw, Tuning Eye	K3900
Spring Nut	K5754
Cord, Dial	K10301
Shield, Pilot Lamp	K5925
Shield, Tuning Eye	K4231
Knob Assembly	R15348-3
Escutcheon, Dial	R13554-2
Escutcheon, P.E.	R13552
Designation, P.E.	R8146K-33
Socket, Tube	K10145-36
Standoff	K10120-10
Strap	K3291-2



NOTES:
 1-WAVELENGTH SWITCH SHOWN IN "BROADCAST" POSITION.
 2-RADIO-SILENT SWITCH SHOWN IN "RADIO" POSITION.
 3-PHONO-SILENT SWITCH SHOWN IN "PHONO" POSITION.
 4-ALL VOLTAGES WITH REFERENCE TO 117 VOLTS INPUT MEASURED WITH MODEL 772 WESTON ANALYZER.

SCHEMATIC DIAGRAM FOR MODEL 7105



TOP STATOR CONTACTS SHOWN AS 1-68, 1-69 ETC.
 BOTTOM STATOR CONTACTS SHOWN AS 2-68, 2-69 ETC.

Northern Electric
 COMPANY LIMITED

HAULFAX MONCTON QUEBEC CHICOUTIMI THREE RIVERS SHERBROOKE MONTREAL OTTAWA VAL D'OR
 KINGSTON TORONTO HAMILTON LONDON WINDSOR KIRKLAND LAKE TIMMINS SUDBURY
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