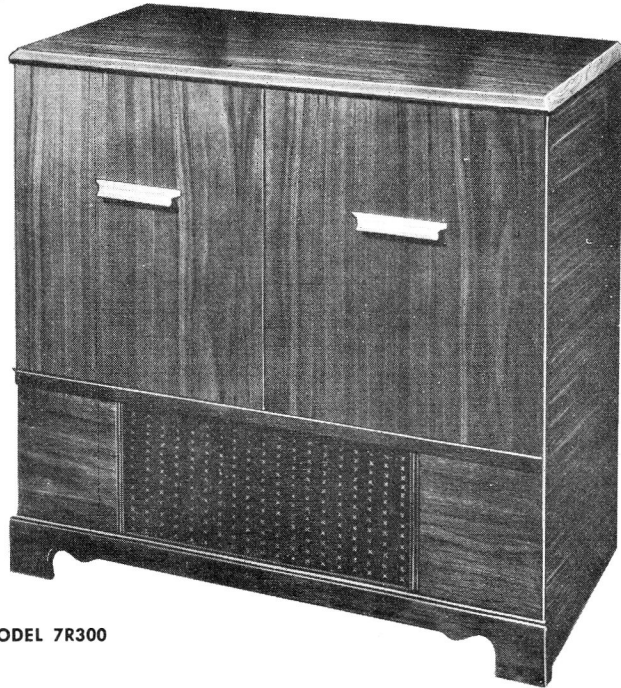


# the hallicrafters Canada Limited

MANUFACTURERS OF RADIO, TELEVISION AND ELECTRONIC EQUIPMENT

## SERVICE INSTRUCTIONS

Model 7R300 Radio-Phonograph Combination



MODEL 7R300

### TUBE COMPLEMENT

| Type        | Function                              |
|-------------|---------------------------------------|
| 6BA6        | R.F. Amplifier                        |
| 6BE6        | Converter                             |
| 6BA6        | I.F. Amplifier                        |
| 6SQ7        | Detector, AVC &<br>1st A.F. Amplifier |
| (2) 6K6GT's | Power Output P.P.                     |
| 5Y3GT       | Rectifier                             |

### GENERAL DESCRIPTION

**TYPE:** 7-tube, single band, Superheterodyne.

**FREQUENCY RANGE:** 540 to 1620 kc.

**INTERMEDIATE FREQUENCY:** 455 kc.

**POWER SUPPLY:** a.c. 25 and 60 cycle.

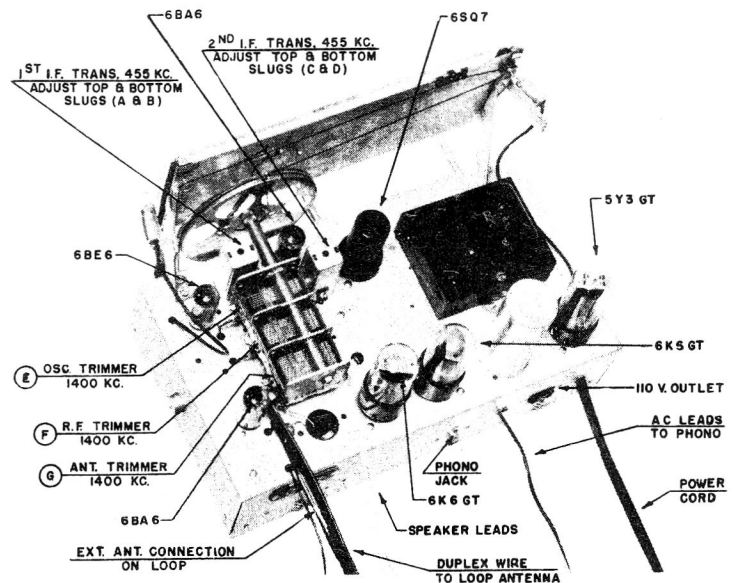
**VOLTAGE RATING:** 105-125 volts.

**POWER OUTPUT:** 4.7 watt maximum.

**POWER CONSUMPTION:**

Changer 20 watts

Radio 65 watts



THE **hallicrafters** CANADA LIMITED  
DON MILLS ROAD  
P.O. BOX 27 - POSTAL STATION R  
TORONTO 17, ONT

## ALIGNMENT PROCEDURE

1. Connect an output meter across the speaker voice coil.
2. The r.f. signal input from the signal generator should be connected as indicated in the alignment chart.
3. Turn the volume control on full and adjust the signal generator output to produce approximately midscale deflection of the output meter, but maintain signal generator output as low as possible to prevent AVC action in the receiver.

## ALIGNMENT NOTES

1. Receiver output must not exceed 0.5 watt, reduce signal generator input to receiver when necessary.
2. Rock gang while adjusting R.F. and antenna trimmers for max. sensitivity.
3. Antenna trimmer must be realigned at 1400 KC. after chassis is installed in its cabinet. A weak signal must be used so that the trimmers can be adjusted to maximum receiver sensitivity.

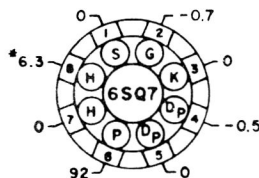
## ALIGNMENT CHART

Alignment adjustment locations are shown on page 1, "CHASSIS, TOP VIEW."

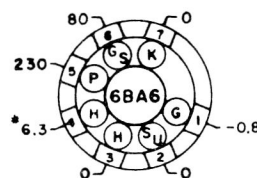
| Alignment Sequence | Signal Generator Output |                |                                     | Position of Dial pointer | Adjust for Maximum Output |
|--------------------|-------------------------|----------------|-------------------------------------|--------------------------|---------------------------|
|                    | Frequency in KC         | In Series with | To                                  |                          |                           |
| 1.                 | 455 kc                  | .05 mfd        | Stator plates of CIB center section | Gang open                | A & B (See Note 1.)       |
| 2.                 | 455 kc                  | .05 mfd        | Stator plates of CIB center section | Gang open                | C & D (See Note 1.)       |
| 3.                 | 1400 kc                 | 200 mmf        | Ext. Ant. Term                      | 1400 kc                  | E (See Notes 1 & 2.)      |
| 4.                 | 1400 kc                 | 200 mmf        | Ext. Ant. Term                      | 1400 kc                  | F (See Notes 1 & 2.)      |
| 5.                 | 1400 kc                 | 200 mmf        | Ext. Ant. Term                      | 1400 kc                  | G (See Notes 1, 2, & 3.)  |

## NOTES

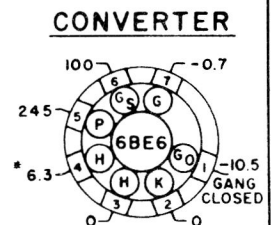
1. BOTTOM VIEW OF TUBE SOCKETS
2. VOLTAGE MEASURED WITH AN ELECTRONIC VOLTMMETER FROM SOCKET LUG TO CHASSIS (GROUND)
3. LINE VOLTAGE - 117 V
4. N.C. = NO CONNECTION
5. W.J. = WIRING JUNCTION
6. \* = A.C. VOLTAGE
7. SOCKET VOLTAGE TOLERANCE  $\pm 10\%$



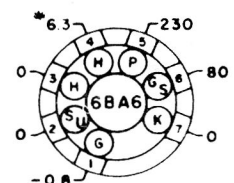
DET.-AVC.-1<sup>ST</sup> AUDIO AMPL.



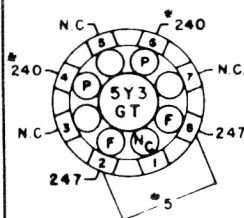
### I.F. AMPLIFIER



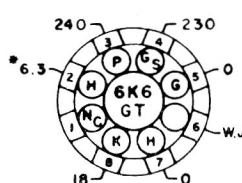
### R.F. AMPLIFIER



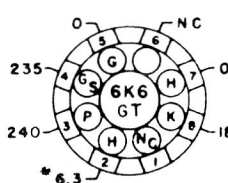
RECTIFIER

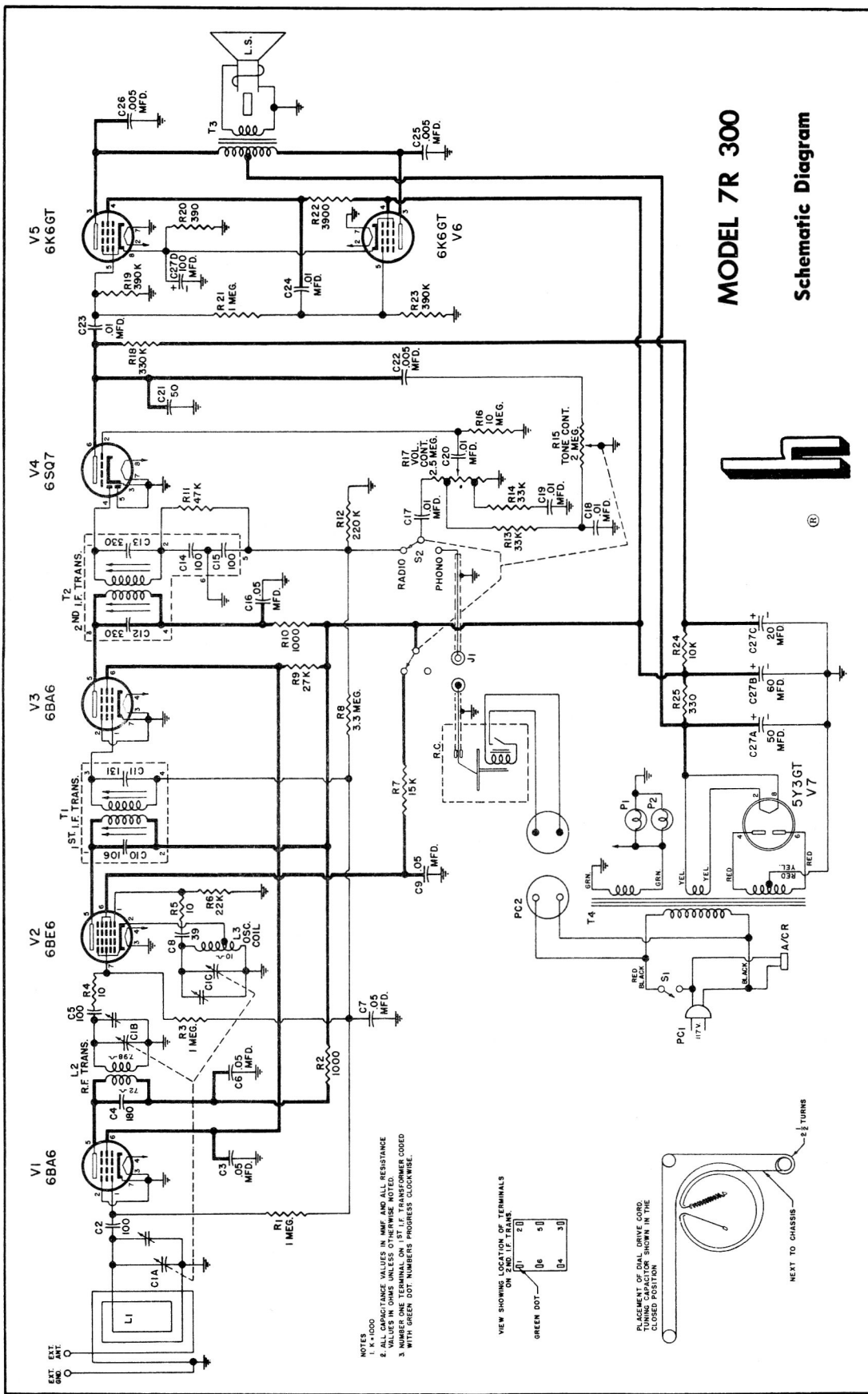


## AUDIO OUTPUT



## AUDIO OUTPUT





# SERVICE PARTS LIST

7R300

| Schematic Symbol              | Description               | Hallcrafters Part Number | Schematic Symbol                  | Description                         | Hallcrafters Part Number |
|-------------------------------|---------------------------|--------------------------|-----------------------------------|-------------------------------------|--------------------------|
| <b>CAPACITORS</b>             |                           |                          | <b>RESISTORS</b>                  |                                     |                          |
| C 1A }<br>C 1B }<br>C 1C }    | Capacitor & Pulley        | 13172                    | R 1                               | 1. Meg. $\frac{1}{2}$ w. 20%        | 23X20X105M               |
| C 2                           | Ceramic 100 MMF. 500 W.V. | 47X20UK101K              | R 2                               | 1,000 ohms $\frac{1}{2}$ w. 20%     | 23X20X103M               |
| C 3                           | Tub. .05 MFD. 400 W.V.    | 46AW503J                 | R 3                               | 1. meg. $\frac{1}{2}$ w. 20%        | 23X20X105M               |
| C 4                           | Ceramic 180 MMF. 500 W.V. | 12215-10                 | R 4                               | 10 ohms $\frac{1}{2}$ w. 20%        | 23X20X100M               |
| C 5                           | Ceramic 100 MMF. 500 W.V. | 47X20UK101K              | R 5                               | 10 ohms $\frac{1}{2}$ w. 20%        | 23X20X100M               |
| C 6                           | Tub. .05 MFD. 400 W.V.    | 46AW503J                 | R 6                               | 22,000 ohms $\frac{1}{2}$ w. 20%    | 23X20X223M               |
| C 7                           | Tub. .05 MFD. 200 W.V.    | 46AU503J                 | R 7                               | 15,000 ohms $\frac{1}{2}$ w. 10%    | 23X40X153K               |
| C 8                           | Ceramic 39 MMF. 500 W.V.  | 12215-8                  | R 8                               | 3.3 meg. $\frac{1}{2}$ w. 20%       | 23X20X335M               |
| C 9                           | Tub. .05 MFD. 400 W.V.    | 46AW503J                 | R 9                               | 27,000 ohms $\frac{1}{2}$ w. 10%    | 23X30X273K               |
| C 10                          | 106 MMF. (Part of T1)     |                          | R 10                              | 1,000 ohms $\frac{1}{2}$ w. 20%     | 23X20X102M               |
| C 11                          | 131 MMF. (Part of T1)     |                          | R 11                              | 47,000 ohms $\frac{1}{2}$ w. 20%    | 23X20X473M               |
| C 12                          | 330 MMF. (Part of T2)     |                          | R 12                              | 220,000 ohms $\frac{1}{2}$ w. 20%   | 23X20X224M               |
| C 13                          | 330 MMF. (Part of T2)     |                          | R 13                              | 33,000 ohms $\frac{1}{2}$ w. 20%    | 23X20X333M               |
| C 14                          | 100 MMF. (Part of T2)     |                          | R 14                              | 33,000 ohms $\frac{1}{2}$ w. 20%    | 23X20X333M               |
| C 15                          | 100 MMF. (Part of T2)     |                          | R 15                              | Control Tone                        | 11716                    |
| C 16                          | Tub. .05 MFD. 400 W.V.    | 46AW503J                 | R 16                              | 10 meg. $\frac{1}{2}$ w. 20%        | 23X20X106M               |
| C 17                          | Tub. .01 MFD. 400 W.V.    | 46AW103J                 | R 17                              | Control Volume                      | 11717                    |
| C 18                          | Tub. .01 MFD. 400 W.V.    | 46AW103J                 | R 18                              | 330,000 ohms $\frac{1}{2}$ w. 10%   | 23X20X334K               |
| C 19                          | Tub. .01 MFD. 400 W.V.    | 46AW103J                 | R 19                              | 390,000 ohms $\frac{1}{2}$ w. 10%   | 23X20X394K               |
| C 20                          | Tub. .01 MFD. 400 W.V.    | 46AW103J                 | R 20                              | 390 ohms $\frac{1}{2}$ w. 10%       | 23X20X391K               |
| C 21                          | Ceramic 50 MMF. 500 W.V.  | 47X20UJ500K              | R 21                              | 1 meg. $\frac{1}{2}$ w. 20%         | 23X20X105M               |
| C 22                          | Tub. .005 MMD. 600 W.V.   | 46AY502J                 | R 22                              | 3,900 ohms. $\frac{1}{2}$ w. 10%    | 23X20X392K               |
| C 23                          | Tub. .01 MFD. 400 W.V.    | 46AW103J                 | R 23                              | 390,000 ohms. $\frac{1}{2}$ w. 10%  | 23X20X394K               |
| C 24                          | Tub. .01 MFD. 400 W.V.    | 46AW103J                 | R 24                              | 10,000 ohms. $\frac{1}{2}$ w. 20%   | 23X20X103M               |
| C 25                          | Tub. .005 MFD. 600 W.V.   | 46AY502J                 | R 25                              | 330 ohms. 1 w. 10%                  | 23X30X331K               |
| C 26                          | Tub. .005 MFD. 600 W.V.   | 46AY502J                 |                                   |                                     |                          |
| C 27A                         | Elect. 50 MFD. 350W.V.    |                          | <b>SWITCHES PLUGS AND SOCKETS</b> |                                     |                          |
| C 27B                         | Elect. 60 MFD. 350W.V.    |                          | S 1                               | Switch off-on (Part of R17)         |                          |
| C 27C                         | Elect. 20 MFD. 350W.V.    | 11894                    | S 2                               | Switch Phono-Radio (Part of R15)    |                          |
| C 27D                         | Elect. 100 MFD. 25W.V.    |                          | J 1                               | Connector Phono                     | 11502                    |
|                               |                           |                          | A/CR                              | Socket A/C (Aldon 502P with leader) | 11720                    |
| <b>COILS AND TRANSFORMERS</b> |                           |                          | <b>MISCELLANEOUS PARTS</b>        |                                     |                          |
| T 1                           | Transformer 1st I.F.      | 11794                    | PC 1                              | Line Cord                           | 11713                    |
| T 2                           | Transformer 2nd I.F.      | 11718                    | PC 2                              | Cord - Phono Motor - 502FC          | 11714                    |
| T 3                           | Transformer Output        | 11719                    | P 1                               | Pilot Light No. 47                  |                          |
| T 4                           | Transformer Power 60 cy   | 11745                    |                                   | 6-8 Min. Bayonet                    | 39A004                   |
|                               | Transformer Power 25 cy   | 11746                    | P 2                               | Pilot Light No. 47                  |                          |
| L 1                           | Antenna Loop              | 11725                    |                                   | 6-8 Min. Bayonet                    | 39A004                   |
| L 2                           | Transformer R.F.          | 11722                    | L.S.                              | Speaker 10" PM                      | 13261                    |
| L 3                           | Coil B.C. OSC.            | 11721                    |                                   | H. Medallion                        | 7B384                    |
|                               |                           |                          |                                   | Name - Hallcrafters                 | 13C1042                  |
|                               |                           |                          |                                   | Dial Escutcheon                     | 13255                    |
|                               |                           |                          |                                   | Dial Scale                          | 13254                    |
|                               |                           |                          |                                   | Dial Spring                         | 75A012                   |
|                               |                           |                          |                                   | Dial Pointer                        | 13168                    |
|                               |                           |                          |                                   | Cabinet Blonde                      | 13251-1                  |
|                               |                           |                          |                                   | Cabinet Mahogany                    | 13251-2                  |
|                               |                           |                          |                                   | Cabinet Walnut                      | 13251-3                  |
| <b>RECORD CHANGER</b>         |                           |                          |                                   |                                     |                          |
| VM No. 950                    | 25 or 60 cycles           |                          |                                   |                                     |                          |