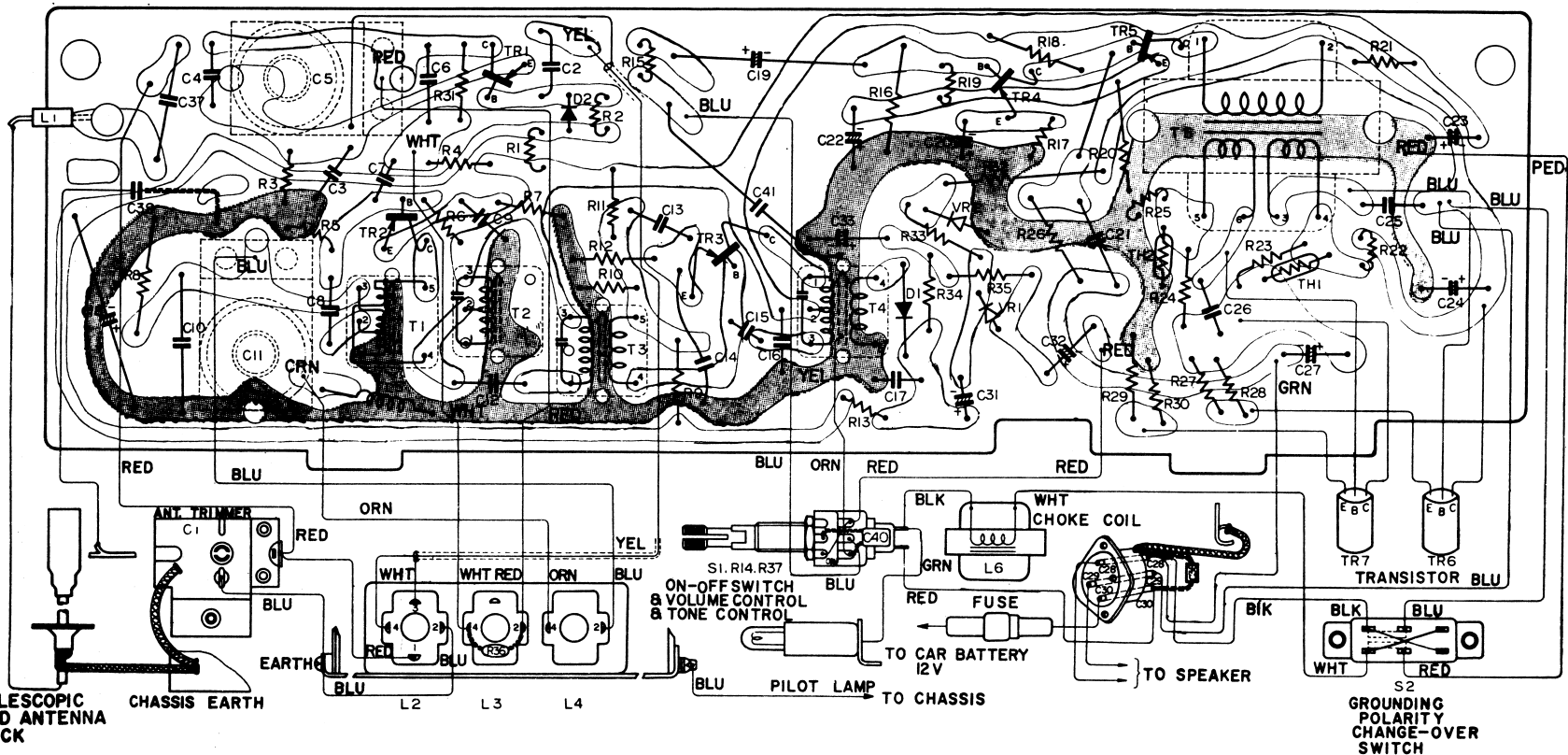


H52

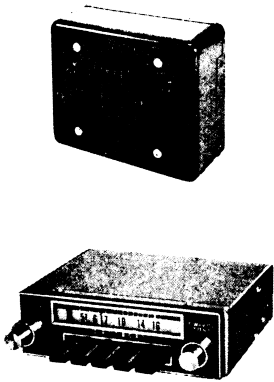
Hitachi TM-705





**7-TRANSISTOR CAR RADIO  
MODEL TM-705**

**SERVICE MANUAL**



**SPECIFICATIONS**

|                              |                              |                              |  |
|------------------------------|------------------------------|------------------------------|--|
| CIRCUIT SYSTEM .....         | 7-transistor superheterodyne | POWER OUTPUT .....           | 3 W (Maximum)  |
| TUNING RANGE .....           | 535~1,605 kc                 |                              | 2 W (Undistorted)  |
| INTERMEDIATE FREQUENCY ..... | 455 kc                       | SPEAKER .....                | 4 $\frac{3}{4}$ " PM   |
| TRANSISTOR COMPONENT         |                              | ANTENNA .....                | Telescopic antenna for car use (sold separately)                       |
| 2SA355 .....                 | R. F. Amp.                   | POWER SOURCE .....           | 12 V battery (Negative or positive grounded battery.)                  |
| 2SA354 .....                 | Frequency Converter          | POWER CONSUMPTION .....      | 150 mA (with no signal)  |
| 2SA353 .....                 | I. F. Amp.                   | DIMENSIONS RADIO CABINET ... | 2*(H), 6 $\frac{5}{16}$ "*(W), 4 $\frac{15}{16}$ "*(D)                 |
| 2SB75 .....                  | A. F. Amp.                   | SPEAKER BOX .....            | 5 $\frac{5}{16}$ "*(H), 6 $\frac{5}{16}$ "*(W), 2 $\frac{9}{16}$ "*(D) |
| 2SB77 .....                  | A. F. Amp.                   | WEIGHT (RADIO) .....         | Approx. 3.3 lbs (1.5kg)  |
| 2SB370 X 2 .....             | Power Amp.                   | ACCESSORIES                  | installation frame for radio   |
| GERMANIUM DIODE              |                              |                              | speaker box and its installation frame                                 |
| 1N34A .....                  | Detector and AGC             |                              | noise eliminating resistor   |
| 1N34A .....                  | Complementary AGC            |                              | noise eliminating capacitor  |
| THERMISTOR                   |                              |                              | spark fuse (1A)  |
| 13D27 X 2 .....              | Temperature Compensator      |                              |  |
| VARISTOR.                    |                              |                              |  |
| HV 16 X 2 .....              | Noise Limiter                |                              |  |

**ADJUSTMENT AFTER INSTALLATION**

When the antenna is mounted, preceding to mounting of the radio unit, connect the battery to the radio and turn on the switch to adjust the antenna trimmer in the following procedures.

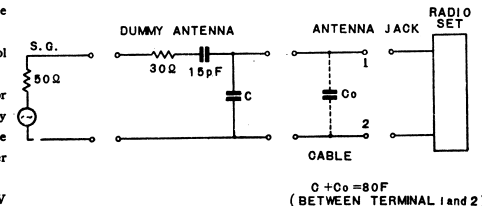
1. Pull up the telescopic antenna to its full length.
2. Set the dial indicator near 1,400 kc where any broadcast is not obtained.

3 Adjust the trimmer under the radio unit with a screwdriver until the noise comes to be its maximum.

When the adjustment is completed, disconnect each wire and mount the radio unit on the car. When the radio is mounted, connect the wires again to the proper positions respectively.

**ALIGNMENT PROCEDURE**

1. When the radio is turned on (with no signal), the voltage should be kept in 13.2V.
2. Turn the volume control knob and tone control knob fully clockwise.
3. Connect the output terminal of signal generator (modulated by 400%  $\pm$ 30%) to such the dummy antenna as the following Fig. 8 and connect the earth terminal of signal generator to the receiver chassis.
4. Connect the vacuum tube voltmeter (with AC 3V or less scale) to each end of the voice coil of the speaker.
5. In alignment, be sure to adjust the output of the signal generator so that the reading on voltmeter may drop to minimum as it rises according to adjustment.



**Fig. 8**

| Adjusted circuit | Step | Sig. Gen. output                   | Dial Pointer Setting                 | Adjustment-for Max. Output |
|------------------|------|------------------------------------|--------------------------------------|----------------------------|
| AM-IF            | 1    | 455kc                              | Quiet point at the highest frequency | T4, T3 and T2              |
|                  | 2    | Repeat step 1 for few times        |                                      |                            |
| AM-RF            | 3    | 520kc                              | The lowest frequency                 | T1                         |
|                  | 4    | 1,650kc                            | The highest frequency                | C11                        |
|                  | 5    | Repeat steps 3 and 4 for few times |                                      |                            |
|                  | 6    | 1,400kc                            | 1,400kc signal                       | C1                         |
|                  | 7    | 1,400kc                            | 1,400kc signal                       | C5                         |
|                  | 8    | Repeat steps 6 and 7 for few times |                                      |                            |