

Adjusted circuit	Using meter and connecting	Step	Dial pointer setting	S. G. output	Adjust for Max. output
AM-IF	signal generator...Connect output terminal of AM signal generator to loop antenna. vacuum tube voltmeter...Connect AC prove of vacuum tube voltmeter to speaker terminals. Adjust as follows to gain maximum on voltmeter (except L ₆)	④	High freq. end	455kc	Remove L ₆ core and adjust T ₈ , T ₇ and T ₆
		⑤			Repeat steps ④
		⑥			L ₆ (I. F. Trap coil) Adjust to gain minimum
FM-RF	signal generator...Connect output terminal of FM signal generator to rod antenna using a dummy antenna as Fig. 9. vacuum tube voltmeter.....Same as AM-IF Adjust as follows to gain maximum on voltmeter.	⑦	Low freq. end	85Mc	L ₅
		⑧	High freq. end	110.5Mc	C ₁₇
		⑨			Repeat steps ⑦ and ⑧
		⑩	90Mc signal	90Mc	L ₂
		⑪	105Mc signal	105Mc	C ₈
		⑫			Repeat steps ⑩ and ⑪
LW-RF	Same as AM-IF Adjust as follows to gain maximum on voltmeter.	⑬	Low freq. end	145kc	L ₁₄
		⑭	High freq. end	360kc	C ₃₅
		⑮			Repeat steps ⑬ and ⑭
		⑯	160kc signal	160kc	L ₁₇
		⑰	330kc signal	330kc	C ₂₈
		⑱			Repeat steps ⑯ and ⑰
MW-RF	Same as AM-IF Adjust as follows to gain maximum on voltmeter.	⑲	Low freq. end	515kc	L ₁₃
		⑳	High freq. end	1,650kc	C ₃₂
		㉑			Repeat steps ⑲ and ⑳
		㉒	600kc signal	600kc	L ₁₂
		㉓	1,400kc signal	1,400kc	C ₂₅
		㉔			Repeat steps ㉒ and ㉓

Alignment as car radio

Operate the receiver as car radio, connect the output of a signal generator to such a dummy antenna as Fig. 10, connect the dummy antenna to the telescopic rod antenna jack for car radio, and make adjustments of the following table.

Align the radio after removing it from the mounting case and confirm the alignment after providing it to the case.

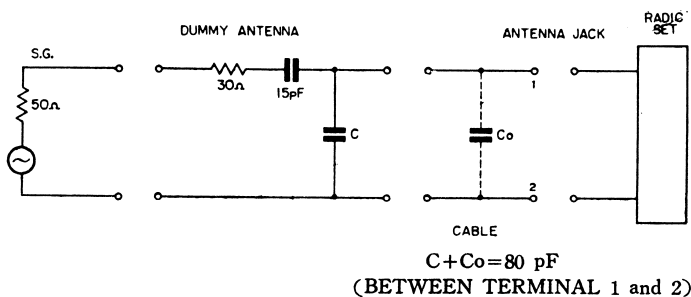


Fig. 10

Adjusted circuit	Using meter and connecting points	Step	Dial pointer setting	Sig. Gen. output	Adjust for Max. output
LW	signal generator.....Connect output terminal of signal generator to such a dummy antenna as Fig. 10.	㉕	160kc signal	160kc	L ₁₁
MW	vacuum tube voltmeter.....Connect AC prove of vacuum tube voltmeter to speaker cord of mounting case.	㉖	600kc signal	600kc	L ₁₀

ALIGNMENT PROCEDURE

alignment as portable radio

- 1) Use batteries having the specified voltage. Voltage, when the switch is turned on (with no signal), must not be less than 5.5V.
- 2) Turn the volume control fully clockwise.
- 3) In case of MW and LW alignment, connect the output of the signal generator (modulated by 400% ±30%) to a loop antenna to the ferrite-core antenna. And connect the voltmeter (AC 3V or less scale) with the speaker terminals. In case of FM-RF alignment, connect the output of signal generator to rod antenna using a dummy antenna as Fig. 9.
- 4) Make the following adjustments to gain maximum on voltmeter.

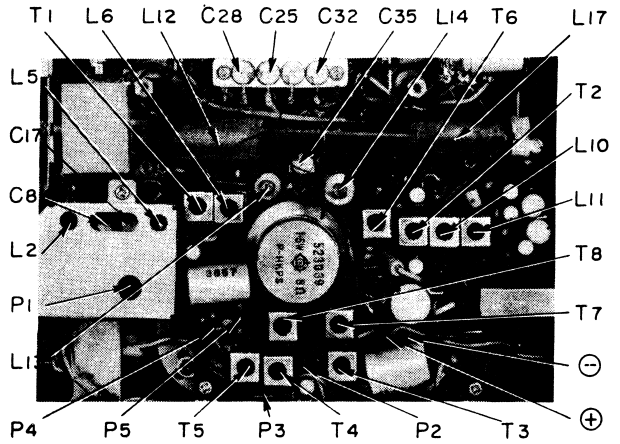


Fig. 6

During alignment, be sure to adjust the output of the signal generator so that the reading on voltmeter may drop to minimum adjustable, as it rises according to adjustment.

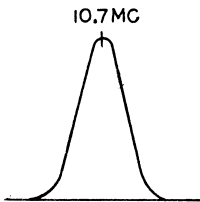


Fig. 7

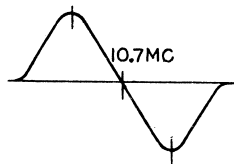
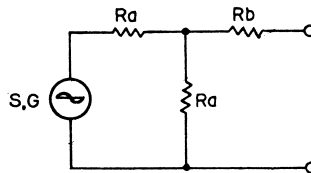


Fig. 8

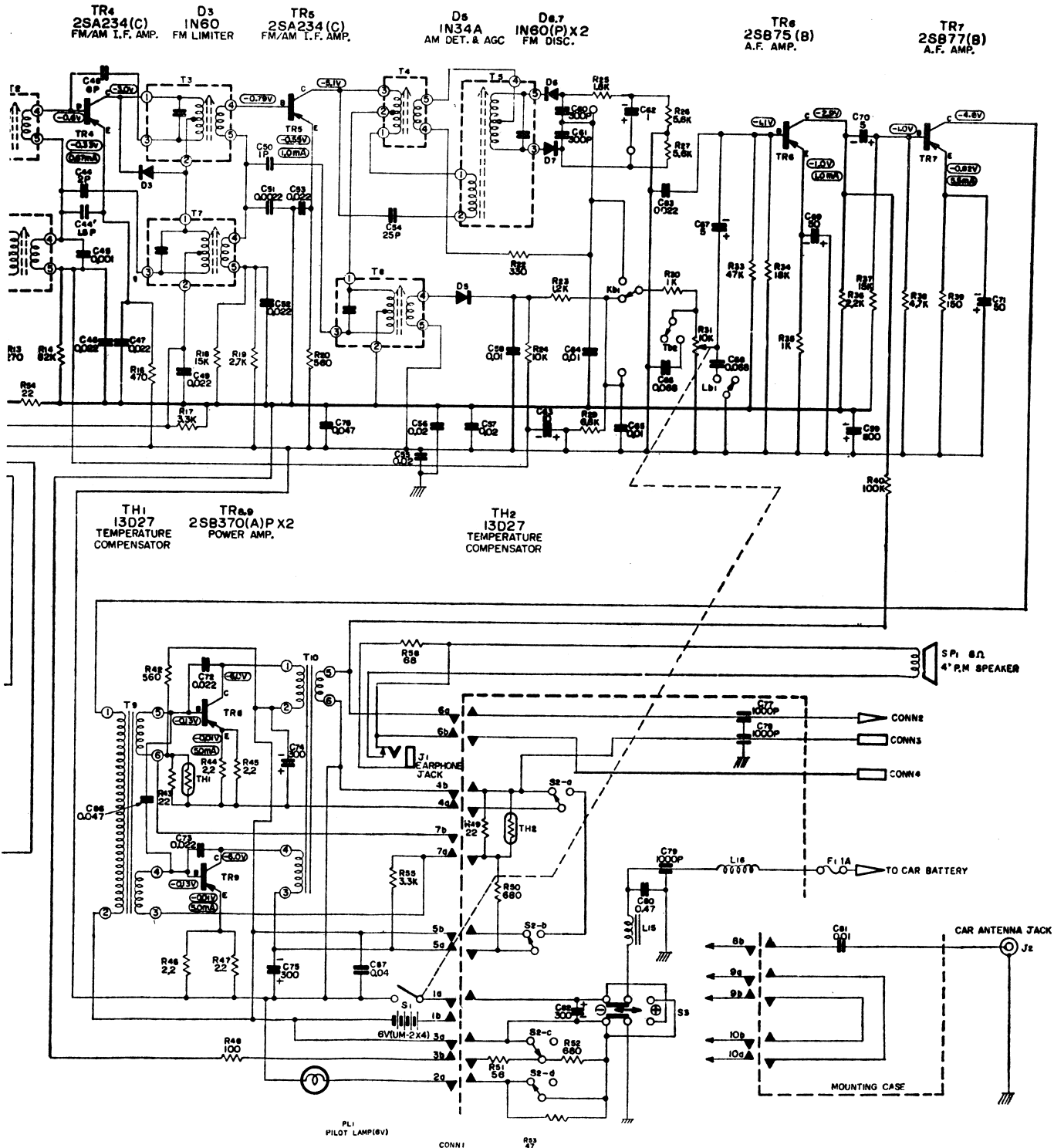


Ra.....Signal generator's output impedance

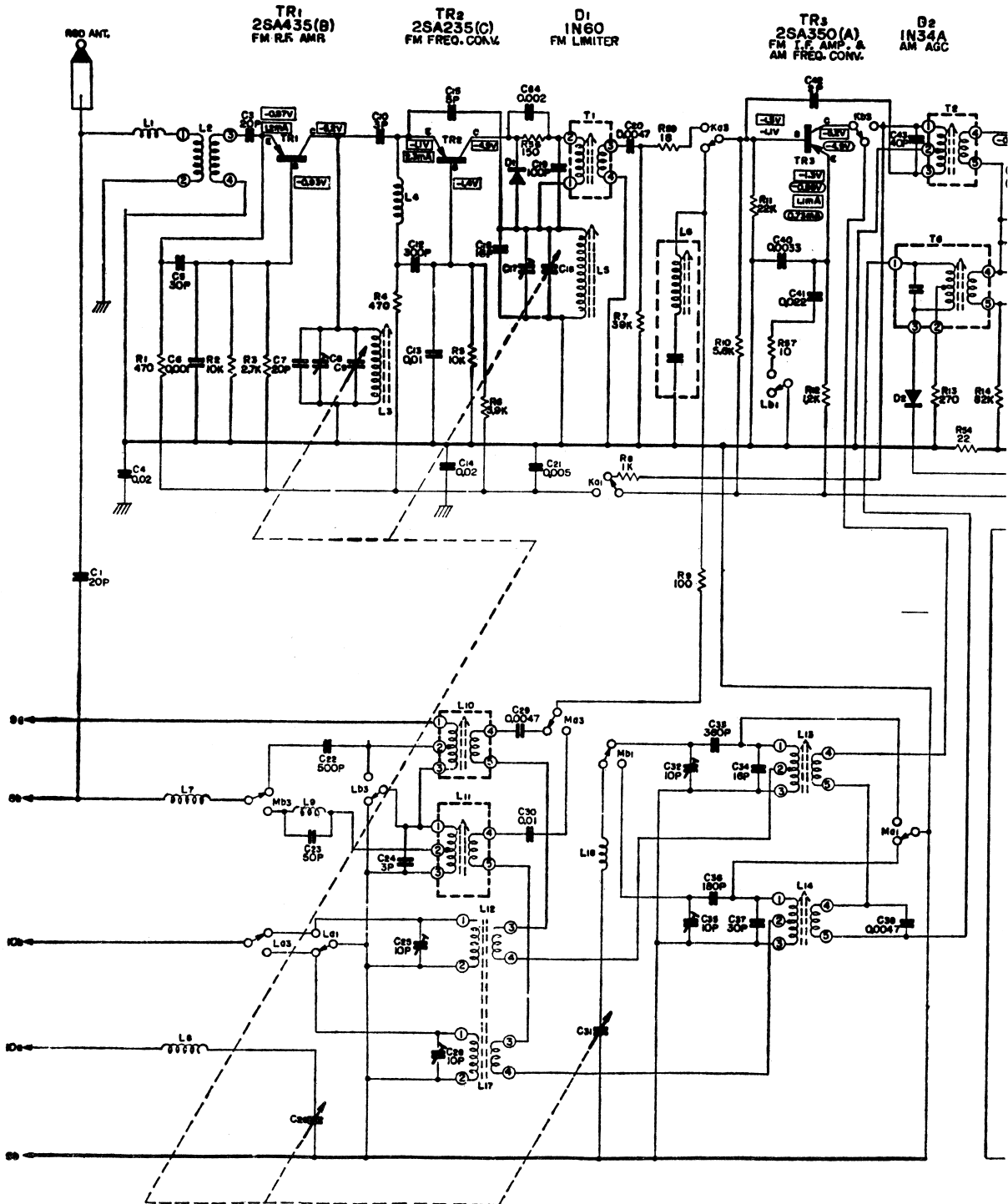
Rb..... $(75 - \frac{Ra}{2})$ ohms

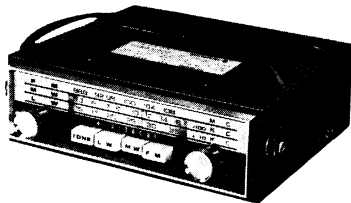
Fig. 9

Adjusted circuit	Using meter and connecting	Step	Dial pointer setting	S. G. } M. G. } output	Adjust for Max. output
FM-IF	oscilloscope.....Connect VERT. terminal of oscilloscope to P ₄ after disconnecting C ₆₂ from P ₄ . sweep generator...Connect to P ₁ . Be sure to cut off direct current by putting suitable capacitor between sweep generator and P ₁ . marker generator...Connect to P ₁ . Then, adjust as follows until the waveform shown in Fig. 7 is obtained.	①	High freq. end	10.7Mc ± 1Mc sweep	Remove T ₅ core and adjust T ₄ , T ₃ , T ₂ and T ₁
		②			Repeat step ①
FM-DISC	oscilloscope...Connect to P ₃ after soldering C ₆₂ to P ₄ . sweep generator...Same as FM-IF marker generator...Same as FM-IF Then, adjust as follows until the waveform shown in Fig. 8 is obtained.	③	High freq. end	10.7Mc ± 1Mc sweep	Adjust T ₅ core for waveform centered at 10.7Mc marker Adjust T ₅ core until waveform maximum and minimum point are at the same distance from horizontal line as figured in Fig. 8, and until maximum and minimum points and 10.7Mc point on waveform are on a straight line.



H55 Hitachi KM-900T





FM-AM 9-TRANSISTOR CAR RADIO

MODEL KM-900T

SERVICE MANUAL

SPECIFICATIONS

CIRCUIT SYSTEM ...FM/AM 9-transistor superheterodyne

TUNING RANGE.....FM 86.5~108Mc

MW 530~1, 605kc

LW 150~350kc

INTERMEDIATE FREQUENCY.....FM 10.7Mc

AM 455kc

TRANSISTOR COMPONENT

2SA435FM R. F. Amp.

2SA235FM Frequency Converter

2SA350FM I. F. Amp.
& AM Frequency Converter

2SA234FM/AM I. F. Amp.

2SA234FM/AM I. F. Amp.

2SB75A. F. Amp.

2SB77A. F. Amp.

2SB370 × 2Class-B Push-pull Power Amp.

GERMANIUM DIODE

1N60FM Limiter

1N34AAM AGC

1N60FM Limiter

1N34AAM Det. & AGC

1N60 × 2FM Discriminator

THERMISTOR

13D27 × 2Temperature Compensator

POWER OUTPUT ...(P) 1.5W (Maximum)

1W (Undistorted)

(C) 2W (Maximum)

1.5W (Undistorted)

LOUDSPEAKER4" P. M (8Ω)

POWER SOURCE.....(P) 6V (1.5V × 4 JIS "UM-2", or
STANDARD "C" CELL or PERTRIX
"222" or EQUIVALENT)

(C) 12V/6V, Negative or positive
grounded battery

ANTENNA(P) Built-in ferrite-core antenna and
telescopic rod antenna

(C) Telescopic rod antenna for car
use (RO-10 or RO-50 is recom-
mended)

CURRENT CONSUMPTION (with no signal)

(P) 35mA

(C) 190mA

DIMENSION(P) 7½" (Width), 2¾" (Height),
6¾" (Depth)

(C) 7¾" (Width), 2¼" (Height),
8" (Depth)

WEIGHTRadio.....3 lbs. including batteries

Mounting case.....1.65 lbs.

ACCESSORIES

1. Mounting case
2. Mounting Brackets for Mounting case
3. 1A spare fuse

NOTE: (P) means portable radio.

(C) means car radio.