LW, MW & SW CAR RF ALIGNMENT

Output of signal generator should be no higher than necessary to obtain an output reading.
Set Volume control to maximum. Set Battery saving switch to "NORMAL".
Set Treble control fully counter-clockwise. Set Power source to 7.5 volt DC.
Set Bass control fully counter clockwise. Set Car-Portable antenna switch to "CAR".

	Band Switch Position	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1	LW	Connect to Car Antenna Terminal through Car dummy antenna.	150kc/s (400∾ Mod.)	150kc/s	Output meter across multi-connector socket. (Refer to Fig. 14)	L_4 (ANT. Coil)	Adjust for maximum output.
2	LW	〃	300kc/s (400∾ Mod.)	300kc/s	〃	C_5 (ANT. Trimmer)	Adjust for maximum output. Repeat steps (1) and (2).
3	MW	〃	550kc/s (400∾ Mod.)	550kc/s	〃	L_5 (ANT. Coil)	Adjust for maximum output.
4	MW	〃	1500kc/s (400∾ Mod.)	1500kc/s	〃	C_6 (ANT. Trimmer)	Adjust for maximum output. Repeat steps (3) and (4).
5	SW	〃	5.95Mc/s (400∾ Mod.)	5.95Mc/s	〃	L_6 (ANT. Coil)	Adjust for maximum output.
6	SW	〃	10Mc/s (400∾ Mod.)	10Mc/s	〃	C_7 (ANT. Trimmer)	Adjust for maximum output. Repeat steps (5) and (6)

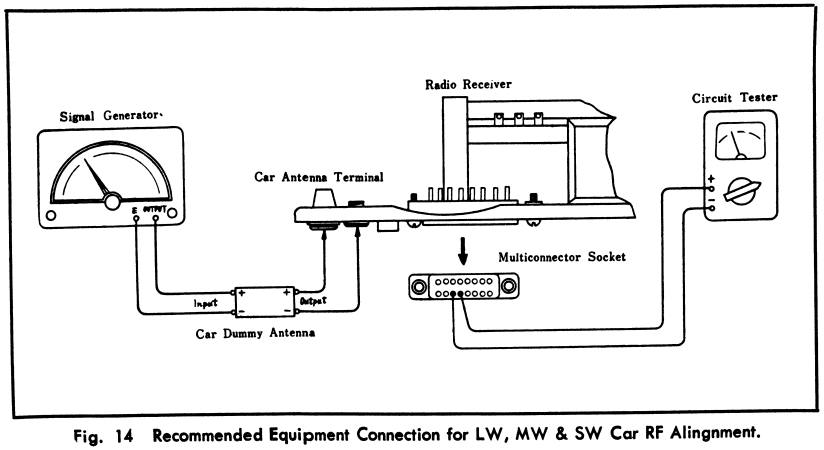

Fig. 14 Recommended Equipment Connection for LW, MW & SW Car RF Alingnment.

FM IF ALIGNMENT WITH OSCILLOSCOPE

Set sweep selector of oscilloscope to "External Sweep". Apply 60∾ sweep signal from sweep generator to horizontal input terminals of oscilloscope.
Signal generator that provides 10.7Mc/s marker.
Sweep generator that provides 10.7Mc/s center frequency and 400kc/s sweep width.
Set band selector switch to FM. Set battery saving switch to "NORMAL".
Set voulme control to minimum. Set power source to 7.5Volt DC.
Set treble control fully counter crockwise.
Set bass control fully counter clockwise. **Note :** Align IF after unsoldering TP_1. When you check the detection wave, unsolder TP_1.
Set AFC switch to "OFF".

	SWEEP GENERATOR COUPLING	SIGNAL GENERATOR COUPLING	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1	High side thru. .001μF to point **TP_1**. Common to chassis.	High side thru. .001μF to point **TP_1**. Common to chassis.	Point of non-interference. (on/about 100Mc/s)	Connect vert. Amp. of scope to **TP_2** (Terminal No.1 of R_{21} Volume Control.) Common to chassis.	T_1 (FM 1st IFT Pri.) T_2 (FM 1st IFT Secon.) T_3 (FM 2nd IFT Pri.) T_4 (FM 2nd IFT Secon.) T_5 (FM 3rd IFT) T_7 (FM 4th IFT)	Adjust for maximum amplitude and symmetrical curve. (Refer to Fig. 15)
2	〃	〃	〃	Connect vert. Amp. of scope to point **TP_2**. Common to chassis.	T_9 (FM 5th IFT)	Adjust T_9 (P) for maximum amplitude and proper linearity between ±100kc/s markers. Adjust T_9 (S) so that 10.7Mc/s marker is at the center. (Refer to Fig. 16)

Note : When aligning the Ratio Detector circuit, the wave form may appear as in Fig. 15 & 16 or upside-down.

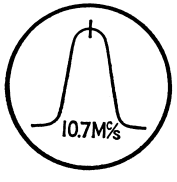

Fig. 15

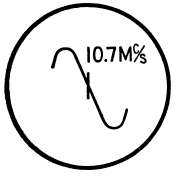

Fig. 16

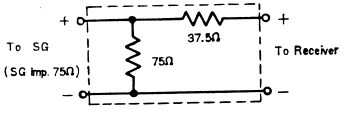

Fig. 17 FM Dummy Antenna

FM RF ALIGNMENT

Output of signal generator should be no higher than necessary to obtain an output reading.
Set volume control to maximum.
Set treble control fully counter clockwise. Set Power source to 7.5Volt DC.
Set bass control fully counter clockwise. Set AFC switch to "OFF".
Set battery saving switch to "NORMAL".

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
3	Connect to TP_1 through Dummy antenna. (Refer to Fig. 17)	90Mc/s (400∾ Mod.)	90Mc/s	Output meter across voice coil.	L_8 (OSC. Coil) L_7 (Collector Coil)	Adjust for maximum output.
4	〃	106Mc/s (400∾ Mod.)	106Mc/s	〃	C_{20} (OSC. Trimmer) C_{14} (ANT. Trimmer)	Adjust for maximum output. Repeat steps (3) and (4)

Note : As three output responses will be present, proper tuning is the center frequency.