

Montgomery Ward & Co.

Model: 93WG602

Chassis:

Year: Pre August 1939

Power:

Circuit:

IF:

Tubes:

Bands:

Resources

Riders Volume 10 - MONT WARD 10-26

Riders Volume 10 - MONT WARD 10-30

Riders Volume 10 - MONT WARD 10-59

MODELS 62-550, 62-1550
62-2550
MODELS 93WG602, 93WG603
Alignment

MONTGOMERY WARD & CO.

MODELS 62-558, 62-1558
62-2558
MODEL 62-653
Alignment, Trimmers

ALIGNMENT PROCEDURE

- Volume control—Maximum all adjustments.
- Connect radio chassis to ground post of signal generator with a short heavy lead.
- Connect dummy antenna value in series with generator output lead.
- Connect output meter across primary of output transformer.
- Allow chassis and signal generator to "heat up" for several minutes.

- The following equipment is required for aligning:
- An all wave signal generator which will provide an accurately calibrated signal at the test frequencies as listed.
 - Output indicating meter.
 - Non-metallic screwdriver.
 - Dummy antenna—1 mf., 200 mmf.
- MODELS 62-550, 62-1550, 62-2550
Series A

BAND	SIGNAL GENERATOR Frequency Setting	Dummy Antenna	Connection to Radio	Variable Condenser Setting	Trimmers Adjusted (In Order Shown)	Trimmer Function	Adjustment
I. F.	465 Kc.	.1 MFD.	Grid of 1D5G I.F. Tube	Rotor full open (Plates out of mesh)	Two trimmers on top (See Fig. 1)	Output I. F.	Adjust to maximum output
	465 Kc.	.1 MFD.	Grid of 1D7G	Rotor full open (Plates out of mesh)	Two trimmers on top (See Fig. 1)	Input I. F.	Adjust to maximum output
BROAD-CAST BAND	1735 Kc.	200 mmf.	Antenna lead	Rotor full open (Plates out of mesh)	Trimmer—Top of rear section of gang (See Fig. 1)	Broadcast Oscillator	Adjust to maximum output
	1400 Kc.	200 mmf.	Antenna lead	Set dial at 1400 Kc.	Trimmer—Top of front section of gang (See Fig. 1)	Antenna Broadcast	Adjust to maximum output
	600 Kc.	200 mmf.	Antenna lead	Set dial at 600 Kc.	B.C. Series Pad (See Fig. 1)	Broadcast oscillator series pad	Adjust to maximum rock dial. (See note "A")

NOTE "A" Turn the dial back and forth slightly (rock) and adjust trimmer until the peak of greatest intensity is obtained.

Attenuate the signal from the signal generator to prevent the leveling-off action of the AVC.

After each band is completed, repeat the procedure as a final check.

FREQUENCY RANGE
55 to 1700 KC.

Power Output—150 Milliwatts Undistorted, 200 Milliwatts Maximum

Intermediate Frequency—455 KC.

ALIGNMENT PROCEDURE

- Volume control—Maximum all adjustments.
- Connect radio chassis to ground post of signal generator with a short heavy lead.
- Connect dummy antenna value in series with generator output lead.
- Connect output meter across primary of output transformer.
- Allow chassis and signal generator to "heat up" for several minutes.

- The following equipment is required for aligning:
- An all wave signal generator which will provide an accurately calibrated signal at the test frequencies as listed.
 - Output indicating meter.
 - Non-metallic screwdriver.
 - Dummy antenna—1 mf., 200 mmf. and 400 ohms.
- MODELS 62-558, 62-1558, 62-2558
Series A, Issue A

BAND	SIGNAL GENERATOR Frequency Setting	Dummy Antenna	Connection to Radio	Position of Band Switch	Variable Condenser Setting	Trimmers Adjusted (In Order Shown)	Trimmer Function	Adjustment
I. F.	465 Kc.	.1 MFD.	Grid of 1N5G 2nd I. F.	Broadcast (Extreme left rotation)	Rotor full open (Plates out of mesh)	Two trimmers on top (See Fig. 1)	Output I. F.	Adjust to maximum output
	465 Kc.	.1 MFD.	Grid of 1N5G 1st I. F.	Broadcast (Extreme left rotation)	Rotor full open (Plates out of mesh)	Two trimmers on top (See Fig. 1)	Interstage I. F.	Adjust to maximum output
	465 Kc.	.1 MFD.	Grid of 1A7G Mixer	Broadcast (Extreme left rotation)	Rotor full open (Plates out of mesh)	Two trimmers on top (See Fig. 1)	Input I. F.	Adjust to maximum output
SHORT WAVE BAND	17 Mc.	400 ohms	Antenna lead	Short Wave (Extreme right rotation)	Set Dial at 17 Mc.	Trimmer C2—Top of front section of gang (See Fig. 1)	Short Wave oscillator	Adjust to maximum output
	17 Mc.	400 ohms	Antenna lead	Short Wave (Extreme right rotation)	Set Dial at 17 Mc.	Trimmer C2 (See Fig. 4)	Short Wave antenna	Adjust to maximum output
	6 Mc.	400 ohms	Antenna lead	Short Wave (Extreme right rotation)	Set Dial at 6 Mc.	Trimmer C2 (See Fig. 4)	Short Wave oscillator series pad	Adjust to maximum rock dial. (See note "A")
BROAD-CAST BAND	1750 Kc.	200 mmf.	Antenna lead	Broadcast (Extreme left rotation)	Rotor full open (Plates out of mesh)	Trimmer C3 (See Fig. 4)	Broadcast oscillator	Adjust to maximum output
	1600 Kc.	200 mmf.	Antenna lead	Broadcast (Extreme left rotation)	Set Dial at 1600 Kc.	Trimmer C3 (See Fig. 4)	Broadcast antenna	Adjust to maximum output
	600 Kc.	200 mmf.	Antenna lead	Broadcast (Extreme left rotation)	Set Dial at 600 Kc.	Trimmer C3 (See Fig. 4)	Broadcast oscillator series pad	Adjust to maximum rock dial. (See note "A")

Attenuate the signal from the signal generator to prevent the leveling-off action of the AVC. NOTE "A" Turn the dial back and forth slightly (rock) and adjust trimmer until the peak of greatest intensity is obtained.

After each band is completed, repeat the procedure as a final check.

ALIGNMENT PROCEDURE Model 62-653

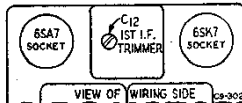


Fig. 6—Location of 1st I.F. Trimmer in Tuning Unit

Remove grille and speaker from speaker unit.

Remove the chassis from tuning unit case in accordance with the article under "General Installation Items" in this manual.

Set the signal generator for 456 KC and connect the output of the signal generator through a .05 mf. condenser to the control grid of the 6SA7 1st detector tube (prong No. 8). Connect the ground lead of the signal generator to the tuning unit chassis. Set the volume control at maximum and the Local-Distance

switch to the distance position. Attenuate the signal from the signal generator to prevent the leveling off action of the AVC.

Then adjust the 4 I.F. trimmers until maximum output is obtained. Three of the trimmers are in the speaker unit—See Fig. 2. One trimmer is at the top of the tuning unit—See Fig. 6.

Insert the antenna cable plug in the antenna socket on the tuning unit. The total capacity of the antenna cable and dummy antenna should be 60 mmf. If the cable, for example, has a capacity of 25 mmf., use a 35 mmf. condenser for a dummy antenna. Connect the other end of the antenna cable through the dummy antenna capacity to the output of the signal generator.

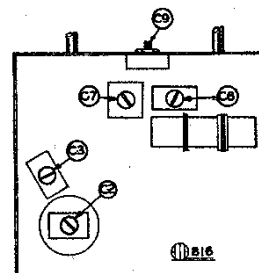
Set the signal generator for 1500 KC. Turn the tuning knob until the iron cores are as far out of the tuning coils as they will go. Then adjust the oscillator trimmer C6

(Fig. 1) until maximum output is obtained.

Set the signal generator for 1000 KC. Turn the tuning knob until maximum output is obtained. Adjust interstage trimmer C7 and antenna trimmer C2 for maximum output—See Fig. 1.

Reassemble the radio and install it in the automobile. Insert the car antenna cable. Tune in a weak signal near 1000 KC and readjust the antenna trimmer C2 for maximum output.

Calibration—If it is necessary to calibrate the radio, remove the chassis from the tuning unit case—See article on that subject in this manual. Accurately tune in a signal of known frequency near 1000 KC. Loosen the set screw of the large gear that drives the dial drum. Turn the dial drum until the indicator line is at the frequency of the station tuned in. Tighten the set screw and reassemble.



MODELS 62-558, 62-1558
62-2558
Series A

ALIGNMENT PROCEDURE Models 93WG602 and 93WG603

Volume Control—Maximum All Adjustments. Allow Chassis and Signal Generator to "Heat Up" for several Minutes. Connect Ground Post of Signal Generator to B—(12SK7—Prong No. 3) in Chassis.

SIGNAL GENERATOR FREQUENCY SETTING	CONNECTION AT RADIO	DUMMY ANTENNA	CONDENSER SETTING	ADJUST TRIMMERS TO MAXIMUM (See Trimmer Illustration)
456 KC	Signal Grid of 1st Det. Connect at Stator of Large Gang Section.	.1 mf.	Turn Rotor to full open	1st I.F. (C7) & (C8) 2nd I.F. (C9) & (C10)
1730 KC	Signal Grid of 1st Det.	.1 mf.	Turn Rotor to full open	Oscillator (C2)
1500 KC	None—See Note		Turn Rotor to max. output	Antenna (C3)

CALIBRATION—If it is necessary to calibrate the radio, remove the back cover. Turn the tuning control drum until the 2 set screws on the dial hub near the volume control can be reached with a screwdriver. Loosen the 2 set screws by turning them about 1/8th turn in a counter-clockwise direction. Tune in an 800 KC signal. Hold the tuning control motionless and at the same time turn the dial drum until the dial is in calibration. Then slowly turn the tuning control drum until the 2 set screws can be reached and re-tightened with a screwdriver. Check to see that the dial has remained in calibration.

Dummy Antenna—.1 mf.
NOTE—Connect a loop approximately one foot in diameter across the antenna and ground posts of the signal generator. Secure the back in place on the cabinet. Place radio approximately 3 feet from loop so as to pick up signal. Radio should not be in proximity to any metal (metal bench, etc.).

