OPERATING INSTRUCTIONS FOR

Mitchell

ADVENTURER

3-WAY, 2-BAND PORTABLE RADIO RECEIVER

MODEL No. 1287

R-1127 GTU

This new Radio receiver of yours incorporates the latest developments and refinements that radio engineers have devised. In order to realize the advantages to the fullest extent you must thoroughly understand its operation and use. **Please read these instructions all the way through before attempting to use the receiver.**

POWER SUPPLY: This receiver is designed to operate on self-contained batteries or on either an AC or DC power supply. The receiver will operate on either AC (50 to 60 cycles) with a voltage of 110 to 120 or DC with a voltage from 110 to 120.

This receiver will accommodate any of the batteries listed below: (No preference is intended by the order of listing.)

MANUFACTURER	MANUFACTURER'S TYPE NUMBER		
National Carbon (Eveready)	*753	or	756
General Dry Battery	*271	or	362
Ray-O-Vac	*AB929		
Burgess Battery	*F6A60	or	T6Z60

* LARGER BATTERY FOR MORE SERVICE

BATTERY INSTALLATION: Before installing new batteries or replacing old ones, turn the volume control to the extreme left or "OFF" position.

1. Unlatch hinged back of cabinet.
2. Place battery, on its side, in lower compartment of the cabinet with battery sock to the right and facing you.
3. Insert connector in socket of battery.

BATTERY OPERATION: To operate this receiver on battery, insert one prong of power cord in the slot on the rear right side of the chassis.

CARE OF RECEIVER: Never leave dead batteries in receiver or store receiver with batteries in place for long periods of time as the batteries are apt to swell or leak and damage other components.

Do not place receiver near hot objects such as stoves, radiators, etc., or store in closed car during the summer months, as the excessive heat may damage the internal components of the receiver and cabinet, and reduce the battery life.

AC/DC OPERATION: Insert the line cord plug into a convenient power outlet. When operating on DC, reverse the line cord plug if the radio does not operate after having been turned on. On DC the set will operate only with the plug in one position.

TUNING RANGE: This receiver is designed to operate over the Standard Broadcast Band which extends from 540 to 1620 Kilocycles (KC) and the Short Wave range from 5.8 to 18.3 Megacycles (MC).

DIAL CALIBRATIONS: The upper scale is the Standard Broadcast Band and is calibrated in Kilocycles. To convert the dial reading to Kilocycles simply add a zero to the figures on the scale. The lower scale is the Short Wave portion of the scale and is calibrated in Megacycles (MC). For your convenience, the principal Short Wave stations of the world are clearly marked on the dial.

ANTENNA: This receiver has a built-in "loop" aerial for Standard Broadcast. Its excellent design is such as to increase pick-up from stations having wide variations in signal strength. The receiver also has a built-in "telescopic" aerial for Short Wave reception. This telescopic antenna should be fully extended for best results. For added sensitivity in weak signal areas, two terminals are provided on the back of the loop antenna for an external antenna and

ground connection. An outside antenna 30 to 60 feet long (ordinary copper wire) may be necessary if the receiver is used in a difficult reception locality. When the receiver is battery operated a ground is necessary. Ground the receiver by connecting a wire from the Ground Terminal to a cold water pipe or to a metal ground rod.

TUBES: Five tubes (plus a selenium rectifier) are used. Type numbers and locations are shown in the tube location diagram printed on the back of the loop antenna.

CAUTION: Do Not Replace Tubes or Batteries Unless the Switch on the Volume Control is Turned Off.

TUNING:

1. Turn the receiver on by rotating the "OFF-VOLUME" knob clockwise.
2. Set the "BC-SW" knob to BC for standard broadcast reception or to SW for shortwave reception.
3. Turn the "TUNING" knob until the station is received with maximum volume and clarity. Then readjust the volume control knob to the proper level.
4. The "TONE" knob permits tonal regulation to meet individual musical appreciation. When this knob is turned to the right the high notes or treble are emphasized. When the knob is turned to the left, the treble is diminished and the bass notes predominate.
5. To turn the receiver off, rotate the "OFF-VOLUME" knob counter-clockwise until a click is heard.

WARRANTY

The Mitchell Manufacturing Company warrants this Portable Radio to be free from defective material and workmanship and agrees to remedy any such defect or to furnish a new part in exchange for any part of any unit of its manufacture which under normal installation, use and service discloses such defect, provided the unit is delivered by the owner to us or to our authorized dealer or wholesaler from whom purchased, intact, for our examination, with all transportation charges prepaid to our factory, within ninety days from the date of sale to original purchaser and provided that such examination discloses in our judgment that it is thus defective.

This warranty is void if unit has been subjected to misuse, neglect, accident, incorrect wiring not our own, improper installation, or to use in violation of instructions furnished by us. It does not extend to units which have been repaired or altered outside of our factory, nor to accessories used therewith not of our own manufacture.

Any part of a unit approved for remedy or exchange hereunder will be remedied or exchanged by the authorized dealer or wholesaler without charge to the owner.

This warranty is in lieu of all other warranties expressed or implied and no representative or person is authorized to assume for us any other liability in connection with the sale of our products.

NOTICE

Should your Portable Radio become inoperative after the 90 day warranty period, it can be serviced by your local radio dealer. If not send the Portable Radio to us by express prepaid (Not Parcel Post) with check or money order for $7.50. It will be reconditioned, exclusive of cabinet and battery replacement, by our Service Department and returned to you in first class condition via express collect.

MITCHELL MANUFACTURING COMPANY
2525 N. Clybourn Ave.,
Chicago, Ill. U.S.A.

SERVICE DATA

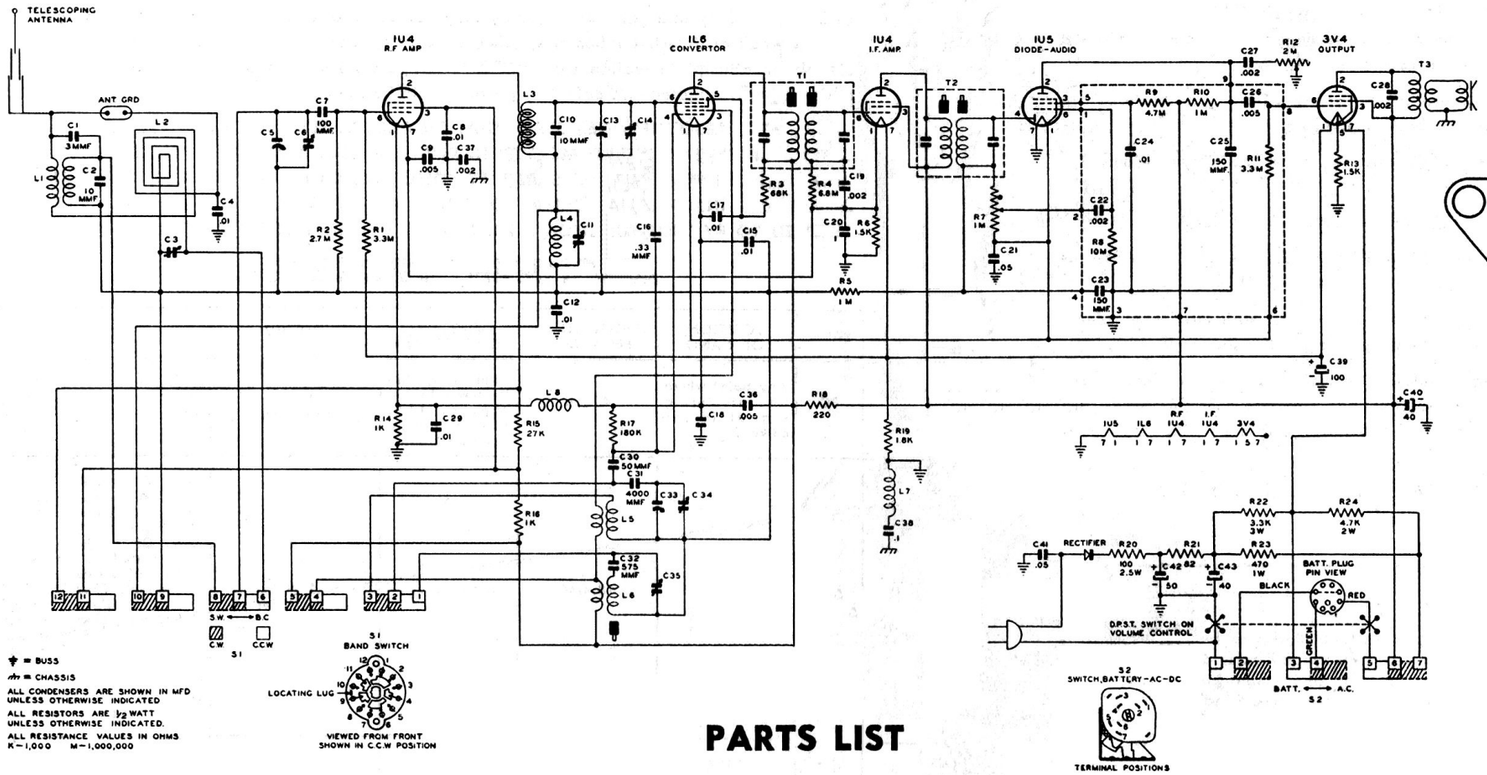
(For Professional Service Men Only)

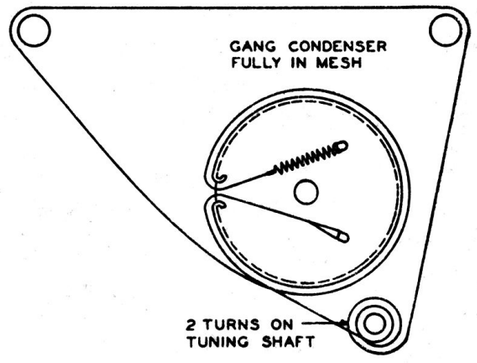
Lack of sensitivity and poor tonal quality may be due to any one or a combination of causes such as weak or defective tubes or speaker, open or grounded bias resistor, bypass condenser, etc. Never attempt to realign set until all other possible sources of trouble have been first thoroughly investigated and definitely proved not to be the cause.

NOTE: IT IS ABSOLUTELY NECESSARY THAT AN ACCURATELY CALIBRATED TEST OSCILLATOR WITH SOME TYPE OF OUTPUT MEASURING DEVICE BE USED WHEN ALIGNING THE RECEIVER AND THAT THE PROCEDURE BE CAREFULLY FOLLOWED, OTHERWISE THE RECEIVER WILL BE INSENSITIVE AND THE DIAL CALIBRATION WILL BE INCORRECT. THE TRIMMERS WILL BE REFERRED TO BY THEIR FUNCTION AS INDICATED ON THE PARTS DIAGRAM.

ALIGNMENT PROCEDURE

STEP No.	BAND	POSITION OF GANG	SIGNAL GEN. FREQUENCY	GENERATOR CONNECTION	DUMMY	ADJUSTMENT
1	BC	Any point where no interfering signal is received.	455KC	High side thru Dummy to pin #6, of 1L6, Low side to Common Neg.	.1 MFD Condenser	I.F. Slugs at top and bottom of T1 and T2, for maximum output, use peak obtained when slugs are farthest out of coils.
2	SW	Open (Minimum Capacity)	18.4MC	Same as above	.1 MFD Condenser	Set C14 (SW. RF. Trimmer) and C6 (SW. Ant. Trimmer) near maximum capacity. With Generator signal at 18.4MC, peak C34 (SW. OSC. Trimmer) for maximum signal use peak obtained when C34 screw is farthest out of trimmer. Check for image frequency by increasing generator signal and tuning generator frequency approximately 0.9MC higher. If signal does not appear at this frequency, return generator to 18.4MC and decrease capacity of C34 until signal is received. Re-check for image.
3	SW	15MC	15MC	High side to DUMMY Low side open	3 feet of hook-up wire connected to high side of Generator and placed approximately 1 foot from extended SW rod antenna.	SW. RF. Trimmer C14 for Maximum output. Check for image.
4	SW	15MC	15MC			SW. Antenna trimmed C6 for maximum output.
5	SW	6.5MC	6.5MC			Check sensitivity at 6.5MC to determine if the coils and Mica pad are not defective.
6	BC	Open maximum cap.	1620KC	Across DUMMY	2 turns of hook-up wire, 6" in diameter placed approximately 1 foot from BC loop and same axis as BC loop.	BC oscillator trimmer C35 for maximum output.
7	BC	1400KC	1400KC			BC. RF. Trimmer C11 for maximum output.
8	BC	1400KC	1400KC			BC antenna trimmer C3 for maximum output.
9	BC	600KC	600KC			Slug in BC oscillator coil L6 for maximum output while rocking gang.
10	BC					Repeat steps 6, 7, and 8.





DIAL STRINGING

PARTS LIST

REFERENCE No.	PART No.	DESCRIPTION
		RESISTORS
R1	R-1109	3.3 Megohms ½W. 10%
R2	N-8027	2.7 Megohms ½W. 10%
R3	N-5693	68,000 OHMS ½W. 10%
R4	N-4028	6.8 Megohms ½W. 20%
R5	N-1262	1.0 Megohm ½W. 20%
R6, R13	N-7398	1,500 OHMS ½W. 10%
R7	R-1081	Volume Control W/Switch 1.0 Megohm
R8, R9 R10, R11		Parts of R-1119 Pendet
R12	R-1082	Variable Tone Control 2.0 Megohm
R14	N-3341	1,000 OHMS ½W. 10%
R15	N-4451	27,000 OHMS ½W. 10%
R16	N-1694	1,000 OHMS ½W. 20%
R17	N-7003	180,000 OHMS ½W. 10%
R18	N-5348	220 OHMS ½W. 20%
R19	N-4281	1,800 OHMS ½W. 10%
R20	R-1152	Fuse Resistor 100 OHMS 7.5%
R21	N-5857	82 OHMS ½W. 10%
R22	R-1151	Wirewound Resistor 3300 OHMS 3W. 5%
R23	N-4421	470 OHMS 1W. 10%
R24	N-7018	4,700 OHMS 2W. 10%

REFERENCE No.	PART No.	DESCRIPTION
		CONDENSERS
C1	R-1104	Ceramic 3 MMFD. 500 V.
C2, C10	N-9048	Ceramic 10 MMFD. 500 V.
C3, C11, C35	R-1083	3 Section Trimmer
C4, C8, C12, C15, C17, C29	N-9062	Ceramic .01 MFD. 400 V.
C5, C13, C33	R-1062	Gang Tuning Condenser
C6, C14, C34		Gang Trimmers
C7	N-6015	Ceramic 100 MMFD. 500 V.
C9, C36	N-6272	Ceramic .005 MFD. 500 V. (GMV)
C16	R-1154	Molded Capacitor .33 MMFD. 500 V.
C18, C20, C38	N-1351	Paper .1 MFD. 200 V.
C19, C27, C28, C37	R-1105	Ceramic .002 MFD. 500 V.
C22, C23, C24, C25, C26		Parts of R-1119 Pendet
C30	N-6375	Ceramic 50 MMFD. 500 V.
C31	N-1690	Mica 4,000 MMFD. 500 V.
C32	R-1106	Silver Mica 575 MMFD. 500 V.
C21	N-1345	Paper .05 MFD. 200 V.
C39, C40 C42, C43	R-1095	Electrolytic 100 MFD. 15 V. 40 MFD. 150 V. 50 MFD. 150 V. 40 MFD. 150 V.
C41	N-1346	Paper .05 MFD. 400 V.

REFERENCE No.	PART No.	DESCRIPTION
		TRANSFORMERS & COILS
T1, T2	N-7981	1st & 2nd I.F. Coils
T3	R-1080	Output Transformer
L1	R-1097	Shortwave Antenna Coil
L2	R-1086	Broadcast Loop Coil & Back Assembly
L3	R-1098	Shortwave RF. Coil
L4	R-1101	Broadcast RF. Coil
L5	R-1099	Shortwave Oscillator Coil
L6	R-1102	Broadcast Oscillator Coil
L7	R-1160	Choke Coil
L8	R-1172	Choke Coil
		MISCELLANEOUS
S1	R-1049	Band Change Switch
S2	R-1103	Battery AC-DC Switch
	R-1116	Speaker, 5" PM
	R-1120	Telescopic Antenna
	N-8331	Selenium Rectifier
	N-5157	Battery Connector Plug