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INTRODUCTION

Your new Midland Model 13-876 is a combination receiver-transmitter designed and engineered for licensed class "D" operation on any of the 23 channels designated as Citizens Band frequencies by the Federal Communications Commission. You are required to read and understand Part 95 of the F.C.C. regulations prior to operation of this unit. Copies of Parts 95 Manual VI covering regulations for Citizens Band Radio Service are available for \$1.25 by writing to the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C. You are required to complete F.C.C. form 505 and submit it to the Federal Communications Commission in order to receive your license to operate this unit. Part 95 of the F.C.C. regulations will be violated if you operate this transceiver on the air prior to receipt of your license.

Midland's new Integrated Circuit is a revolutionary concept in solid state efficiency and dependability.

A complete circuit in the I.F. system consisting of 5 transistors and 2 resistors: Yet, the entire circuit is no larger than a single ordinary transistor.

The most advanced electronics concept since solid state circuitry itself.

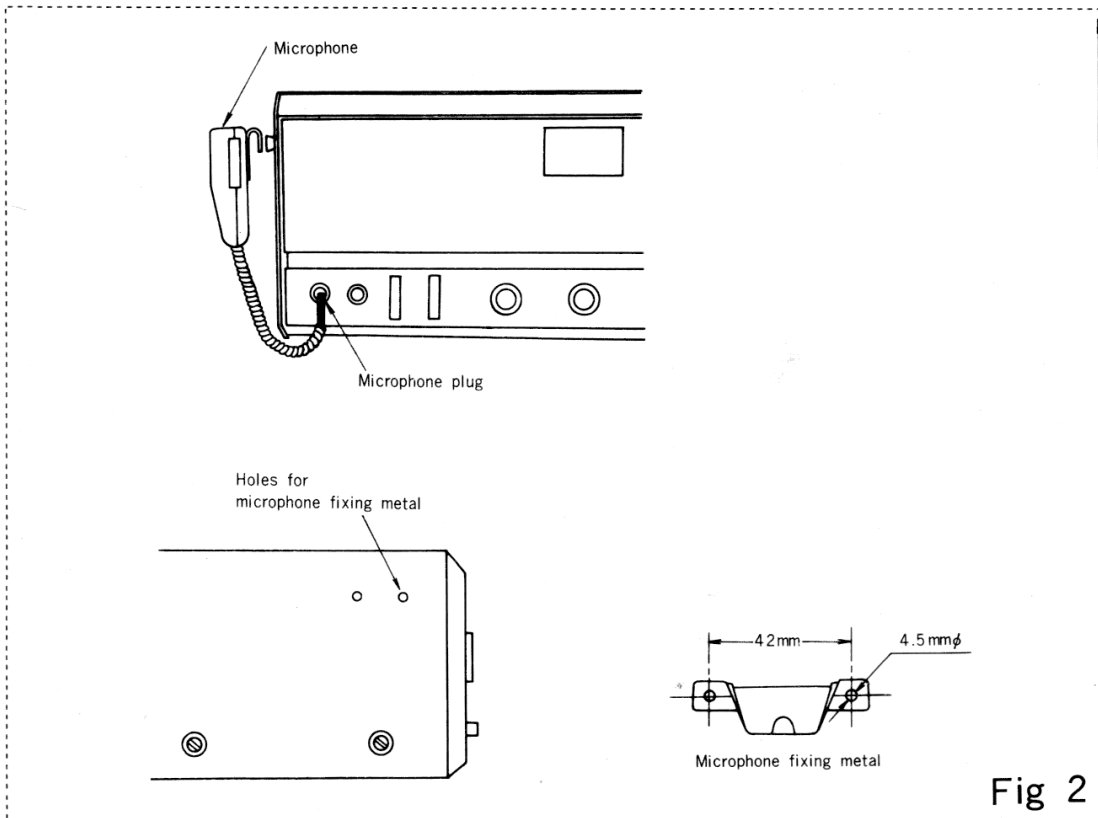
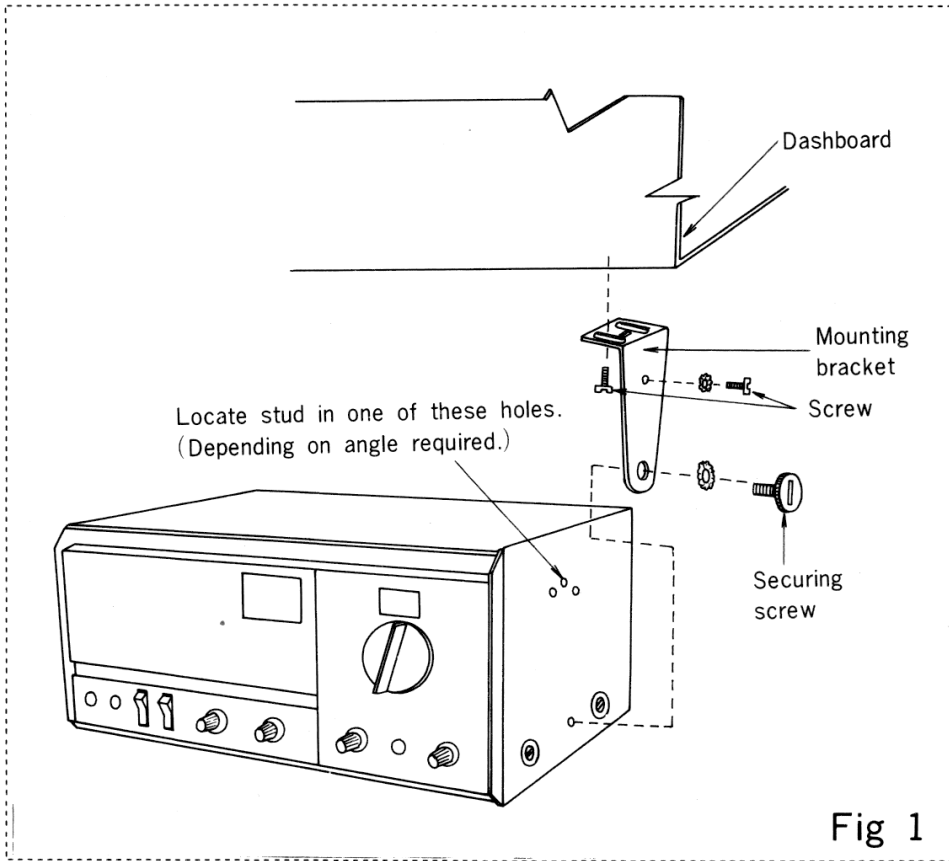
DESCRIPTION

The Midland 13-876 employs all silicon transistors in both the receiver and transmitter to provide reliable communication in the 27 MHz Citizens Band.

Channel selections is easy. A single 23-position channel selector provides simultaneous selection of both transmit and receive frequencies. All receive and transmit crystals for 23-channel are supplied and it is not necessary to buy extra crystals.

Other outstanding features in your new 13-876 are a variable squelch for noise cancellation, automatic gain control, high sensitivity dual conversion receive circuit, 100% modulation, push-to-talk dynamic microphone with coiled retractable cord and compact lightweight construction.

INSTALLATION



EXTERNAL SPEAKER

A speaker jack is provided for use with an external speaker. Use a standard 1/8" two-circuit plug for this jack. When the plug is inserted, the built-in speaker in the set is automatically disconnected and the speaker which you have connected to the plug operates.

NOTE: The external speaker will not work if either terminal is connected to the car body or ground.

ANTENNA INSTALLATION

BASE STATION:

When the 13-876 is used as a base station, any Citizens Band beam, dipole, ground plane or vertical antenna may be used. A ground plane type antenna will provide greater coverage, and since it is essentially non-directional, it is ideal in base station to mobile operation. From base station to base station or point-to-point operation a directional beam will give greater distance even under adverse conditions. The range of the transceiver depends basically on the height of the antenna and, whenever possible, select the highest location within F.C.C. limits. (These regulations limit the antenna height to 20 feet above an existing structure). Generally, a maximum of 26 feet of coax lead-in cable should be used due to line losses, however, a desirable antenna location may justify the loss in extra lead-in length.

MOBILE ANTENNAS:

A vertical whip antenna is best suited for mobile operation. A non-directional antenna must be used for best results in any case. The base-loaded whip antenna will normally provide effective communication, and for greater range and more reliable operation a full quarter-wave whip should be used. Either of these antennas use the metal car body as a ground plane and the shield of the base lead as well as the metal case of the transceiver should be grounded. A standard antenna connector (type SO-239) is provided on the transceiver for easy connection to a standard PL-259 cable termination.

FUNCTION OF CONTROLS

VOLUME CONTROL AND ON-OFF SWITCH :

The volume control varies the sound output of the loud speaker. To turn set on and to increase volume, turn off-on switch clockwise. To turn set off or to decrease volume, turn off-on switch counterclockwise.

CHANNEL SELECTOR :

The channel selector control on the front panel selects both receiver and transmitter frequencies simultaneously. Make sure the switch is set to desired channel.

SQUELCH CONTROL :

The squelch control is designed to reduce excessive noise such as high-line interference, ignition noise, etc. This control must be set when only noise, no signal is heard. Turn the control fully counterclockwise and increase the volume until noise or a signal is heard. When only noise is present, turn the squelch control clockwise until the noise is blanked out.

FINE TUNING :

The fine tuning control has a total range of approximately 4.5 KHz and may be used for reception of a station that is slightly off frequency. Simply tune for best reception and highest "S" meter reading.

NOISE LIMITER :

The noise limiter is designed to reduce excessive noise such as ignition, motor, and electrical interference.

GENERAL OPERATING INSTRUCTIONS

1. Check to see if proper connections have been made on power cables, antenna system, microphone. Be sure that the transceiver is properly grounded if not mounted directly on a metal surface.
2. Select the channel you desire to operate on by rotating the channel selector switch.
3. To transmit, press the push-to-talk switch and hold it down. The illumination lamp at the lower right side of the front panel visually indicates transmitting condition. Release this switch to receive. The easy-to-read combination "S"/RF meter also indicates relative RF output power.
4. Adjust receiver background noise level with the "Squelch Control".

FREQUENCY SYNTHESIZER CRYSTAL COMBINATION LIST

(A) Group 6 pcs.

a : 23.290MHz
 b : 23.340
 c : 23.390
 d : 23.440
 e : 23.490
 f : 23.540

(B) Group 4 pcs.

a' : 14.950MHz
 b' : 14.960
 c' : 14.970
 d' : 14.990

(C) Group 1 pc.

11.275MHz

<u>CHANNEL</u>	<u>FREQUENCY (MHz)</u>	<u>COMBINATION</u>
1	26.965	a+a'-C
2	26.975	a+b'-C
3	26.985	a+c'-C
4	27.005	a+d'-C
5	27.015	b+a'-C
6	27.025	b+b'-C
7	27.035	b+c'-C
8	27.055	b+d'-C
9	27.065	c+a'-C
10	27.075	c+b'-C
11	27.085	c+c'-C
12	27.105	c+d'-C
13	27.115	d+a'-C
14	27.125	d+b'-C
15	27.135	d+c'-C
16	27.155	d+d'-C
17	27.165	e+a'-C
18	27.175	e+b'-C
19	27.185	e+c'-C
20	27.205	e+d'-C
21	27.215	f+a'-C
22	27.225	f+b'-C
23	27.255	f+d'-C

SERVICING YOUR TRANSCEIVER

The technical information, diagrams and charts provided in this manual are supplied for the use of a qualified holder of a first or second-class radiotelephone license in servicing this transceiver. It is the user's responsibility to see that this unit is operating at all times in accordance with the F.C.C. Citizens radio service regulations.

If you install your own transceiver, do not attempt to make any transmitter tuning adjustments. Adjustments are prohibited by the F.C.C. unless you hold a first or second-class radiotelephone license, or are in the presence of a person holding such a license. A Citizens Band or Amateur license is not sufficient.

MIDLAND INTERNATIONAL CORPORATION HEREBY CERTIFIES THAT THIS EQUIPMENT HAS BEEN DESIGNED, MANUFACTURED AND FURNISHED IN ACCORDANCE WITH VOL. 6, PART 95 OF THE FCC RULES AND REGULATIONS AS AMENDED EFFECTIVE JUNE, 1968 FOR CLASS D CITIZENS BAND OPERATION.

SPECIFICATION

Semi-conductors	: Transistor	23 pcs.
	Diode	11 pcs.
	IC	1 pc.
Channel	: 23 channel	
Receiver system	: Double superheterodyne with full variable squelch and noise limiter	
Frequency tolerance	: $\pm 0.005\%$	
Transmitter circuit	: Crystal controlled	
Transmitter power	: 5 watts input power to final amplifier	
Modulation system	: AM	
Intermediate frequency	: 1st	11.275MHz
	2nd	455KHz
Receiver sensitivity	: Less than 1uV at 10 dB S/N	
Squelch sensitivity	: 1uV normal	
Speaker	: 5" \times 3" elliptical PM dynamic	
Antenna impedance	: 50 ohms	
Audio amplifier	: 5 watts	
Dimension	: 11.8" (W) \times 5.2" (H) \times 7.9" (D)	
Weight	: 8 lbs.	
Accessory	: Microphone	1 pc.
	Microphone fixing metal	1 pc.
	Mobil mounting bracket	1 pair.
	AC power line (with plug)	1 pc.
	DC power line (with plug and fuse)	1 pc.
	Fuse 1A (for AC)	2 pcs.
	Fuse 3A (for DC)	2 pcs.
	Pilot lamp	1 ps.
Power supply	: AC 117V	
	DC 12V (Negative earth)	
Power consumption	: AC power supply	40VA max.
	DC power supply	15W max.

WARRANTY POLICY

Midland International Corporation warrants each new Midland product to be free from defects in material and workmanship under normal and service for a period of 90 days after delivery to the ultimate user and will replace or repair the product, at our option, at no charge should it become defective and which our examination shall disclose to be defective and under warranty.

This warranty shall not apply to any Midland product which has been subject to misuse, neglect, accident, incorrect wiring not of our own installation, or to use in violation of instructions furnished by us, nor extended to units which have been repaired or altered outside of our factory.

This warranty does not cover carrying cases, earphones, batteries, antennas, broken or cracked cabinets, or any other accessory used in connection with the product.

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.

Sales receipt must accompany product to validate date of purchase.

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