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Midland 13-762 Owner's Manual
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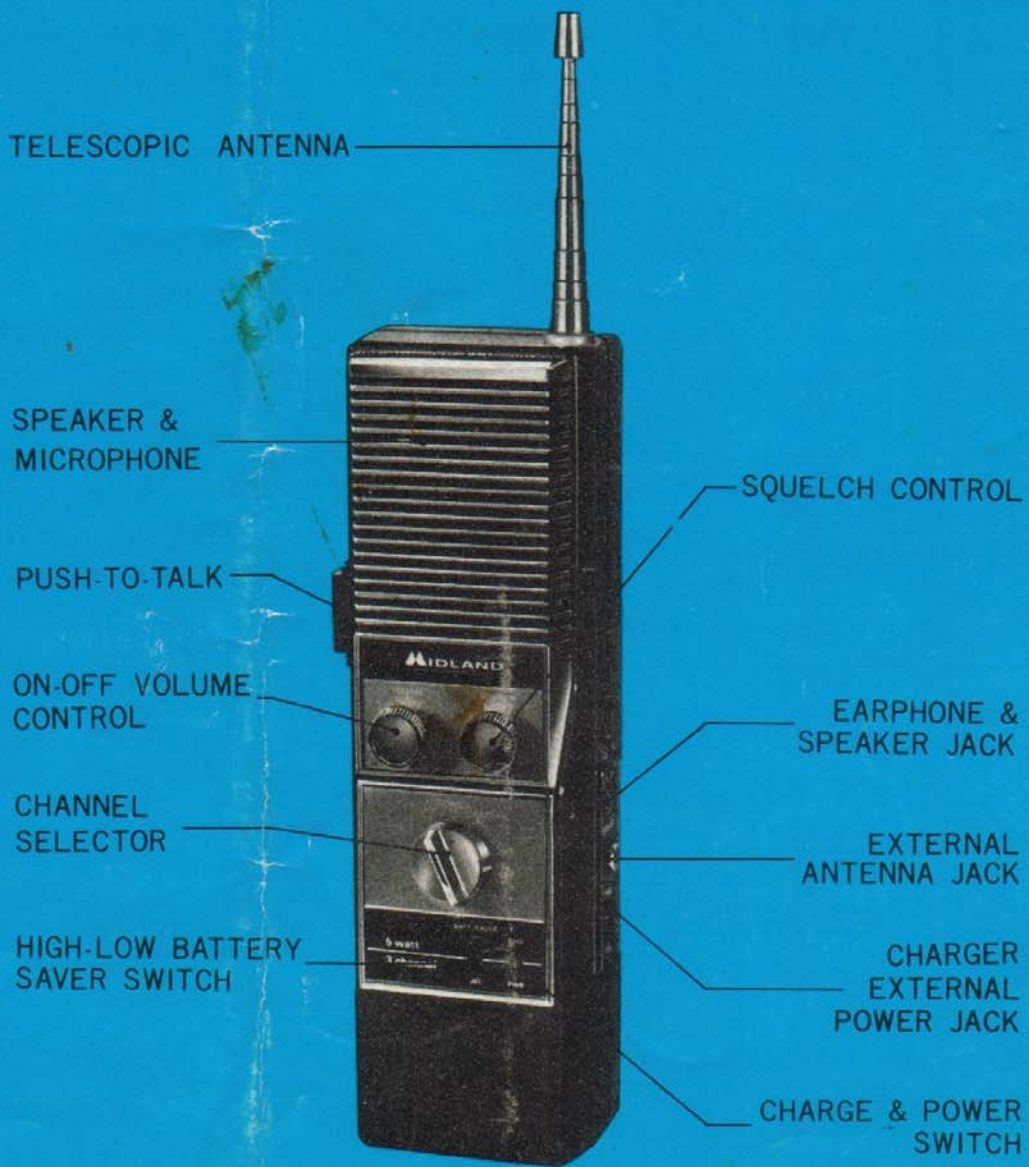
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MIDLAND
ELECTRONICS COMPANY

MODEL 13-762
5 WATT 3 CHANNEL TRANSCEIVER



OWNER'S GUIDE

INTRODUCTION

Your new Midland Model 13-762 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 Volume 6 Part 95 of the F.C.C. regulations prior to operation of this unit.

Copies of Volume 6 Part 95, regulations for Citizens Band Radio Service, are available for \$2.00 by writing to the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C. You are also 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. F.C.C. regulations will be violated if you operate this transceiver on the air prior to receipt of your license.

Midland Electronics Company hereby certifies that as of the date of manufacture, this unit has been designed and manufactured in accordance with Volume, 6, Part 95 of the F.C.C. Regulations for Class D Citizens Band Operation.

GENERAL

The 13-762 is a full feature hand held transceiver with controls for volume, squelch, high-low power switch, channel selector, battery charging and comes complete with a texon carry case.

The 13-762 is an extremely versatile unit and this Owner's Guide should be carefully read in order to obtain maximum usage of its many features.

The operating range will vary from 1/2 to several miles depending upon terrain, obstacles, climatic conditions and the other transceiver used.

Battery condition also affects range and fresh batteries will provide far better range than weak ones.

When the 13-762 is used with a base or mobile unit the range will generally be increased.

OPERATING CONTROLS AND FUNCTIONS

CHANNEL SELECTOR

Controls both transmitter and receiver frequencies simultaneously. This transceiver is capable of 3 Channel operation. One set of Channel 11 crystals are installed in the "F1" position in the unit. Additional crystals may be installed (see crystal installation) in the open channels. To operate, set selector to proper channel.

VOLUME ON/OFF

Turns the set on and off and controls the sound output of the speaker. Rotate to the right to turn the set on and increase the volume. This control does not affect the transmitting output.

SQUELCH

Quiets the receiver when signals are not being received. It functions only in the receive position and does not affect the receiver volume when signals are being received. To adjust: When no signals are present, rotate the the squelch control to the right until the receiver is quieted. In coming signals will automatically release the squelch, enabling you to receive normally. Careful adjustment is necessary as settings too far to the right will not allow weaker signals to release the squelch.

R.F. POWER (Battery Saver)

This controls the transmitter output power. This is an important control and when properly used will greatly extend battery life. For short or medium range communications, set this switch to low. For long range use or when maximum power is needed to get through interference, move this switch to high position.

PUSH-TO-TALK BAR

This controls both transmitter and receiver. To transmit, press and hold the bar, to receive-release it.

CHARGER AND POWER SWITCH

This switch is maintained in the PWR (power) position for normal use and is switched to charge only when charging rechargeable batteries that may be installed in the unit. (See Optional Accessories)

EXTERNAL SPEAKER

A jack is provided on the side panel for an external speaker. Attach a plug to a suitable 8 Ohm speaker. When the plug is inserted, the built-in speaker in the set is automatically disconnected and your external speaker will operate. The built-in speaker/mike will still function normally in the transmit position.

CHARGER/EXTERNAL POWER JACK

This side panel jack allows the use of an external power source, (AC adapter or your automobile battery system) or recharging the batteries without removing them. (See Optional Accessories)

EXT ANT (EXTERNAL ANTENNA)

External Antennas, either mobile or base may be plugged into this jack and will increase the unit's range. The built-in antenna is not extended when an external antenna is being used.

BATTERY INSTALLATION

This unit operates on 8 penlight batteries. Standard types may be used, but because of the high power of the unit, Alkaline or rechargeable batteries are desirable.

Open the battery compartment cover plate by sliding the cover plate button up. To Install: Carefully remove the battery holder. It is not necessary to remove the wire connected to the battery holder and care should be taken not to break it. Insert the batteries observing the polarities marked on the holder. Make sure the batteries are properly seated and replace the holder and close the rear cover plate.

CRYSTAL INSTALLATION

In order to insure proper operation, only crystals designed for this units circuit should be used. Midland 18-000 crystals are recommended, however, crystals from other manufacturers may be used provided they are the proper type.

This unit has been adjusted for maximum performance in the middle of the citizens band channels and will operate properly across the entire band without further adjustment. If you desire, this unit may be readjusted for maximum performance at either the high or low end of the band. This will, however, result in reduced performance at the opposite end. All adjustments of this type MUST be made by a qualified and LICENSED technician.

To install crystals, remove the back cover by removing the 5 screws located on the top and sides of the cabinet and refer to the crystal socket diagram on the inside of the back cover for proper crystal placement.

Plug the crystals you desire into the sockets being careful to place transmit crystals into the transmit sockets and receive crystals into the receive sockets. Replace the back cover.

OPERATING INSTRUCTIONS

1. Extend the antenna to its full length or connect an external antenna.

NOTE: TRANSMITTING WITHOUT ANY ANTENNA MAY CAUSE DAMAGE TO THE OUTPUT TRANSISTORS.

2. Set the channel selector to the desired channel (F1 position if you have not installed other crystals).
3. Check to be sure the PWR/CHG Switch is in the proper position.
4. Turn the power on and adjust the volume and squelch controls.
5. To transmit, press and hold the push-to-talk bar and talk into the speaker/microphone grill. Use a normal tone of voice and hold the unit about 2 to 3 inches from your mouth. To receive, release the push-to-talk bar.

For best transmission and reception when using the built in antenna, it should be held in a vertical position.

MOBILE OPERATION

Your 13-762 may be used in a vehicle, drawing its power from the car or boat battery system and using a mobile antenna installed on the vehicle.

An auxiliary power cord for this is listed under optional accessories.

NOTE: THIS UNIT IS DESIGNED TO OPERATE PROPERLY WITH ANY STANDARD 12 VDC SYSTEM. VOLTAGES OTHER THAN 12V MAY CAUSE DAMAGE TO THE UNIT OR RESULT IN POOR OPERATION.

BASE STATION OPERATION

Your 13-762 may also be used as a base station with a base station power supply, (See optional accessories), and a suitable base station antenna.

SPECIFICATIONS:

Circuitry	: 14 transistors, 4 diodes, 1 varistor, 1 thermistor
Frequency Control	: $\pm 0.005\%$ crystal
Channels	: 3-Channel 11 (27.085 MHz) crystals supplied
Controls	: On/off/volume, variable squelch, power/charge push-to-talk, battery saver, channel selector
Jacks and Connections	: Battery charger/power supply, external antenna, earphone/extension speaker
Power Source	: 12 volts, DC
Optional Power Supply Systems:	8 "AA" penlight cells; rechargeable Nicad pack (Model 20-112), 12 volt base station power supply (Model 18-143C), 12 volt DC automobile cable (Model 18-141)
Speaker/Microphone	: 2-1/2" dynamic
Antenna	: 13 section, 60" telescopic 50-ohm antenna output matches standard CB antenna
Unit Size	: 9-1/2" high \times 3-1/4" wide \times 2" deep
Unit Weight	: 3-1/2 lbs.
Accessories Included	: Texon carrying case, shoulder strap, earphone

RECEIVER

Receiving System	: Superheterodyne with tuned RF
Sensitivity	: 1.5 uv for 10 db (S+N)/N
Squelch	: Variable, 1.0 uv sensitivity

TRANSMITTER

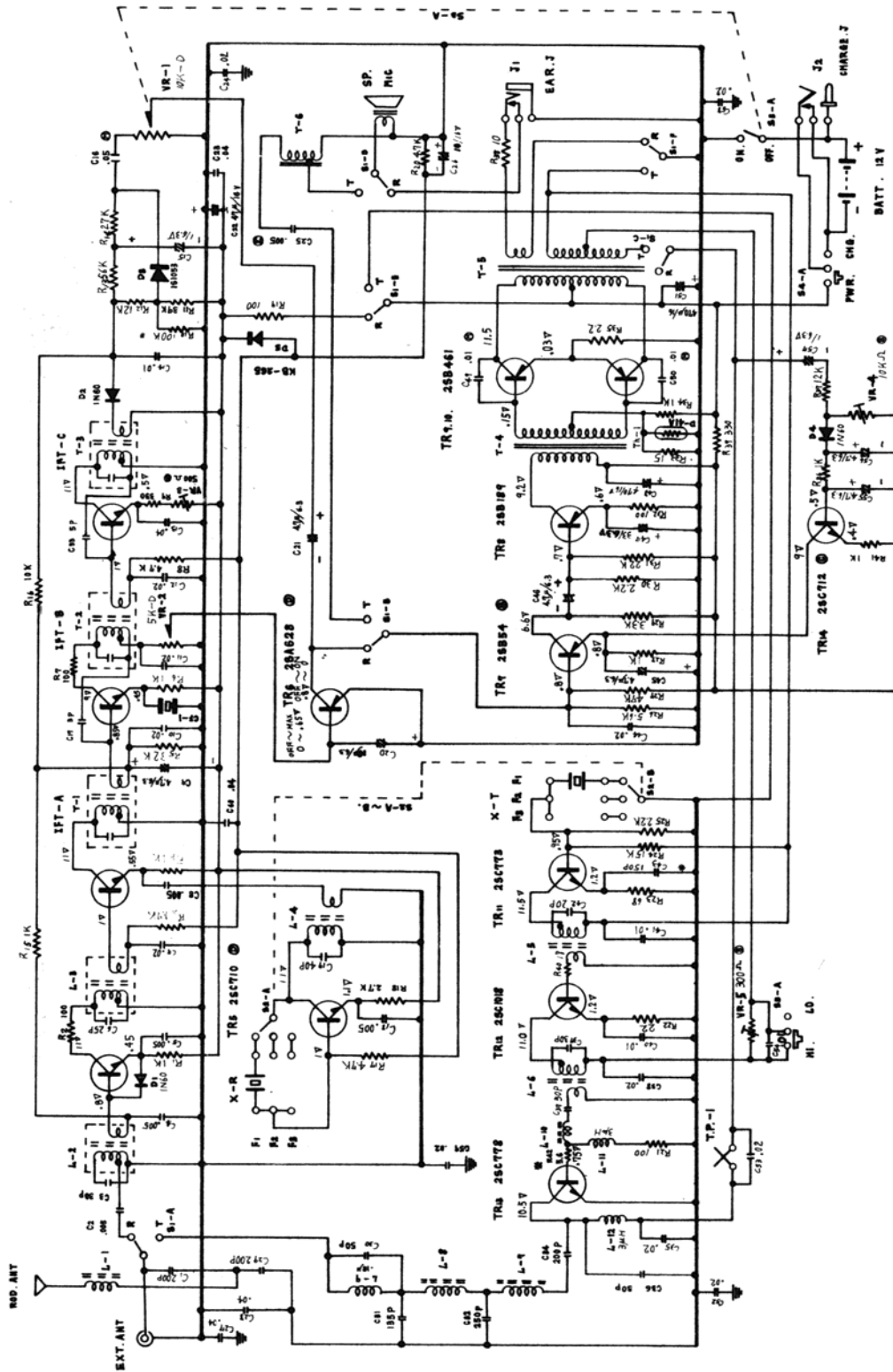
Modulation:	: High level Class B
RF Input Power	: 5 watts
Low Power Position	: 2 watts input

SERVICING YOUR TRANSCEIVER

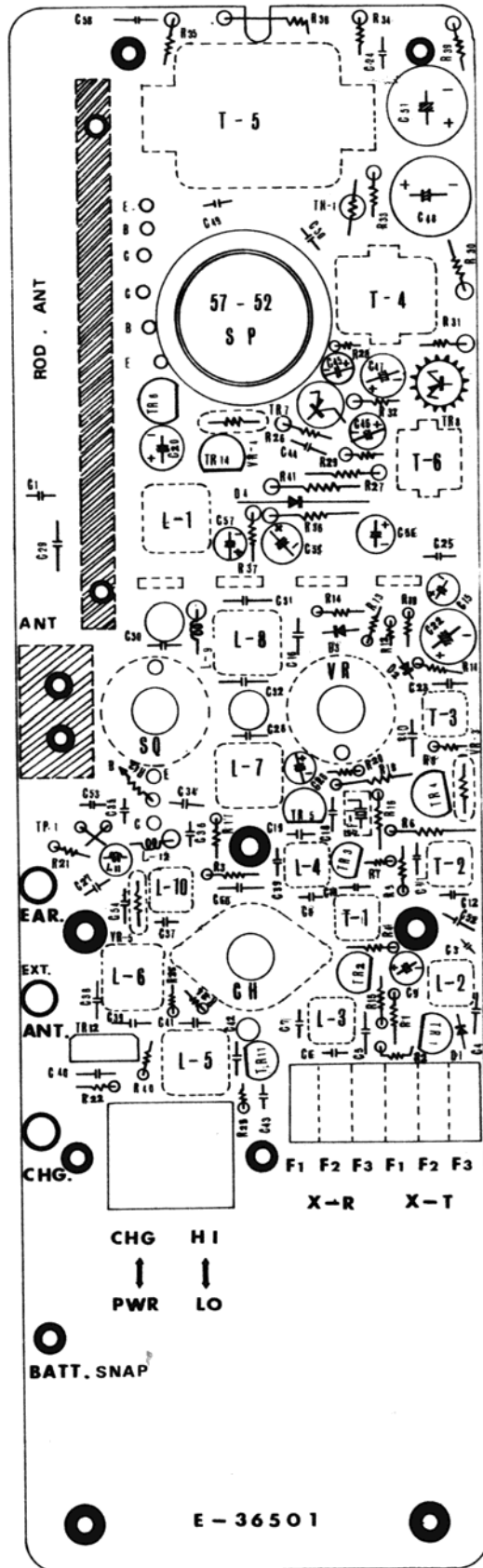
The technical information, diagrams and charts provided in this manual are supplied for the use of a qualified holder of a first or second class radio/telephone license in servicing this transceiver. It is the user's responsibility to see that this unit is operating at all times in accordance with the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

If you service 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 radio/telephone license or are in the presence of a person holding such a license. A Citizens Band or Amateur license is not sufficient.

SCHEMATIC DIAGRAM



CIRCUIT BOARD ASSEMBLY



OPTIONAL ACCESSORIES

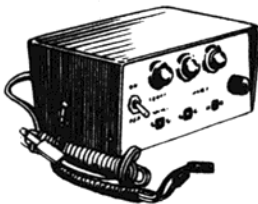
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12 Volt Battery Cable (18-141)



141
18-141

For use with 12-volt automobile negative ground.



18-143C

AC Power Supply (18-143C)

To operate 13-762 on 110-volts AC and to charge rechargeable batteries. For base station operation.

External Battery Pack (18-137)

Cowhide case (5 1/2" high x 6" wide x 2" deep) with shoulder strap and 35" lead with plug.

Accommodates 8 flashlight "D" cells, (Eveready 950, NEDA 813 or Midland 20-813)



18-137



18-210

External Antenna (18-210)

Loaded coil base station antenna with all mounting hardware and 20 feet of coaxial cable. For mobile or base station use. Requires 25-411 adaptor to plug directly into antenna jack.



18-138

External Microphone (18-138)

Specially designed for use with 13-760 as base station. Gives sharp, clear voice response. Attractive gray case and cable equipped with plug to fit 13-762.

WARRANTY POLICY

Midland Electronics Company warrants each new Midland product to be free from defects in material and workmanship under normal use 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 this 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 the date of purchase.

MIDLAND ELECTRONICS COMPANY

North Kansas City, Missouri 64116

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