MIDLAND®

SpeakEasy ULTRA™

Model 75-517

Owner's Manual

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OPTIONAL ACCESSORIES FOR YOUR RADIO

Accessory Name	Model Number
Ni-cad Battery (single "AA" 3 required)...............……..…18-BATT	
Standard Charger……………...…………………………..…..18-396	
Quick Charger……………...…………………………….....…18-389	
Charger Stand ……………...………………………....…..…18-383	
Lapel Microphone with Ear-bud Speaker…………………………22-405	
Speaker/Microphone……………………………………..…....22-411	
Boom Microphone Headset ……………………………………22-540	

Call 816 241 8500 ext. 200 to order accessories.

THIS RADIO COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE CONDITION THAT THIS DEVICE DOES NOT CAUSE HARMFUL INTERFERENCE.

Your Midland model 75-517 brings the new FRS (Family Radio Service) to your fingertips. The Family Radio Service is provided for by the FCC and is totally license free. For the first time business and the general public can use the quiet UHF FM band for personal communications at no air time charge. The 75-517 uses maximum allowable power for range up to 2 miles. Use for fishing, hunting, picnics, biking, business, or any other activity where communications are needed for convenience or safety. The model 75-517 incorporates all 14 channels with 38 different CTCSS and 83 DCS codes to provide the best in quiet communications. Also this radio offers scan, power save, 9 memory channels and a multifunction back-lighted liquid crystal display. This unit also incorporates VOX (voice operated transmit) that allows hands free use when the radio is equipped with certain accessories.

TIPS FOR GETTING THE MOST FROM YOUR 75-517
Due to the band of operation (462/467 MHz) the 75-517 provides communications that are virtually free of atmospheric interference (skip) that is common on lower frequency bands. Along with this and an antenna system that is very efficient as compared to other unlicensed radio bands, communications range is surprisingly good. Many times the limit to maximum possible range is environmental factors such as blockage caused by trees, buildings, hills, or other obstructions. If you find communication is not possible, many times this can be overcome by moving only a few feet to a new location. Range is greatly reduced while operating from a metal building or from a vehicle. Battery condition also affects range. The 75-517 operates on rechargeable Ni-Cad batteries or alkaline batteries. While this unit has been designed

with gaskets for water resistance and ruggedness it is a precision piece of electronic equipment that should not be exposed to water or handled carelessly. Normal care should result in years of trouble free operation. Do not leave batteries installed over a long period of time as leakage may occur, that can destroy the radio. If you experience problems operating the radio, turn off the radio, press and hold the **"F"** button and turn on the radio.This will cause the radio to return to the factory settings. **<u>Always save your receipt, as it is required for warranty consideration.</u>**

A NOTE ABOUT THE CTCSS or DCS CODES

This radio incorporates 38 CTCSS (**C**ontinuos **T**one **C**oded **S**quelch **S**ystem) codes and 83 DCS (**D**igital **C**oded **S**quelch) codes that, when activated, prevent the user from hearing other radios that do not have the same code. These codes **do not** make <u>your</u> conversation private. If you experience difficulties contacting or hearing other radios in your group make sure the **CTCSS** or **DCS** code is set the same on all radios. If you are using the 75-517 where interference from other radios or electrical devices are present, enabling the **CTCSS** or **DCS** codes will usually mute the interference. Many times interference will be noticed by the presence of loud static from the speaker.

PREPARATION

BATTERIES

75-517 radios operate with 3 AA Alkaline, Ni-Cad (nickel cadmium) or Ni-MH (nickel metal hydride) batteries (optional). Ni-Cad batteries provide about 15 hours of use. Alkaline batteries will provide about 45 hours of use and Ni-MH batteries will provide about 24 hours of use. The 75-517 may be supplied with Ni-Cad batteries and a wall charger. Ni-Cad batteries must be charged prior to use. Charge at least 10 hours with the standard charger. If you are using Ni-MH batteries charge at least 16 hours. **<u>DO NOT</u> attempt to charge any type of Alkaline batteries in this radio.**

To Install Batteries:

Hold the radio face down. Press the latch so it swings away from the cover.
1. Lift the battery cover slightly. Gently slide the cover off the unit.
2. Insert 3 AA batteries observing the proper polarity.
3. Replace the battery cover over the batteries and fasten with the latch.

Battery Indicator:

The battery Condition indicator in the display will show the amount of charge of your batteries. Replace alkaline or recharge the Ni-Cad batteries as soon as possible after the indicator shows less than 2 segments of the battery lit.

CHARGING THE BATTERIES

Your 75-517 may not include rechargeable batteries and a charger. Install the batteries observing their polarity. If you are using rechargeable batteries and the Midland standard charger (model 18-396), plug the charger into a 115 volt wall socket and the charger plug into the charge jack marked **"CHG"** (item 7 on Page 6 illustration) on the *side* of the radio. Allow the batteries to charge 10 hours for Ni-Cad and 16 hours for Ni-MH prior to use. **Never attempt to charge any type of Alkaline battery in this radio.**

BELT CLIP

The 75-517 comes standard with a belt clip. Attach it to the radio back by sliding the top of the clip up over the two rectangular bosses on the back of the radio until it snaps into place. To detach the belt clip, press the lever inside the top of the clip away from the radio body and slide the clip toward the bottom of the radio.

QUICK USE INSTRUCTIONS:

Install fresh Alkaline or fully charged Ni-Cad or Ni-MH batteries.
Turn the unit on by rotating the ON/OFF Volume control clockwise.
The squelch is factory set and is not adjustable.
Make sure the radio you want to talk to does not have the CTCSS or other codes turned on.

1. To talk, press the **"PTT"** (Push to Talk) button on the side of the radio marked "PTT". Talk into the front of the radio about 6 inches from your mouth.
2. To listen release the "PTT" button.
   🖹   Other functions will be described later.

POWER SAVE CIRCUIT

This part of the operation of the radio is completely automatic and not adjustable. When the radio has not transmitted or received a signal for several seconds it will begin to cycle from a sleep mode to fully on. This occurs several times a minute. If a signal is received or you cause the radio to transmit, the radio will become fully awake. This cycling from sleep to fully on increases the battery life more than 50%. An icon in the upper right of the display flashing "SAVE" will verify this.

RANGE OF FRS RADIOS

The best range between portable FRS radios is achieved when they are operating in open terrain outside of buildings and vehicles. Anyone using a portable unit inside a vehicle will experience a significant loss of range.

FEATURES AND LOCATION OF CONTOLS
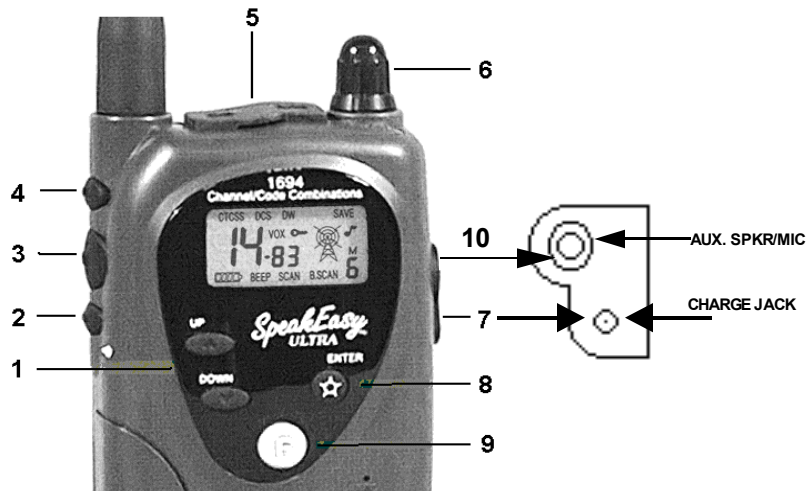
1-Up/Down Buttons   2-Monitor Button   3-Push to Talk Button   4-Call Button
5-Accessory jacks   6-On/Off Volume Control   7-Charge Jack   8-Enter Button
9-Function Button   10-Auxillary Speaker/Mic jack

THE RADIO MUST <u>NOT BE SCANNING</u> AND THE CONTOLS <u>NOT LOCKED</u> BEFORE THE CONTROLS WILL WORK PROPERLY.

TURNING THE RADIO ON OR OFF
Rotate the ON/OFF Volume control (6) clockwise to turn the radio ON. An audible tone will indicate the radio is on. The display will go through a 1 second self test and go to operation mode. Rotate the ON/OFF Volume control counter clockwise to turn the radio off.

LOCKING THE CONTROLS
Press and hold the **"MON"** button (2) for about 3 seconds a beep (if enabled) will be heard and the KEY icon will be displayed. The **"PTT"** and the **"CALL"** are the only buttons active. If any other buttons are pressed 3 quick beeps will be heard.

UNLOCKING THE CONTROLS
Press and hold the **"MON"** button (2) for about 3 seconds a beep (if enabled) will be heard and the KEY icon will **not** be displayed.

SELECTING THE CHANNEL
Press the channel **"UP"** or **"Down"** button (1) to select the desired channel.

ADJUSTING THE VOLUME
Rotate the ON/OFF Volume control (6) clockwise to increase the volume. Rotate the ON/OFF Volume control counter clockwise to decrease the volume.

ADJUSTING THE SQUELCH
Squelch is preset, no adjustment is available.

USING THE CALL FUNCTION
Press and release the **"CALL"** button (4) on the side of the radio.
- This will cause the radio to transmit a tone to alert the other people in your group to listen for a message.

USING THE MONITOR FUNCTION
1. Press and release the **"MON"** button (2) on the side of the radio to open the squelch.
   - This allows you to over ride the squelch and the **"CTCSS"** or **"DCS"** tones. This is useful to monitor the channel before you transmit to ensure there is not someone using the channel when you have **"CTCSS"** or **"DCS"** tones programmed. This is also useful if you suspect someone in your group does not have the proper **"CTCSS"** or **"DCS"** tones programmed.
2. Press and release the **"MON"** button or wait 10 seconds to restore the squelch to normal.

TURNING ON OR OFF THE BUTTON PRESS BEEP
1. With the radio turned off, press and hold the **"ENTER"** button (8) and turn the radio on. The radio will display all segments available on the display and sound the power up tone. Release the **"ENTER"** button when the radio powers up. The display will show **"FF"** or **"on"** depending on the previous setting, and below in smaller letters **"BEEP"**
2. Press and release the **"UP"** or **"DOWN"** button to change the setting.
3. The setting **"on"** is Beep on. The setting **"FF"** is Beep off.
4. Press and release the **"ENTER"** button to return to operating mode.

TURNING ON THE DISPLAY BACKLIGHT
Press and release the **"ENTER"** button (8). A beep will be heard (if enabled). The backlight will stay on for about 5 seconds then turn off.

TURNING THE ROGER BEEP ON OR OFF
Roger beep is a sound the radio transmits when you release the **"PTT"** button (3).
1. With the radio turned off, press and hold the "**ENTER**" button and turn the radio on. The radio will display all segments available on the display and sound the power up tone. Release the **"ENTER"** button when the radio powers up. The

display will show **"FF"** or **"on"** depending on the previous setting, and below in smaller letters **"BEEP"**

2. Press and release repeatedly the **"F"** button (usually twice). An icon of a musical note will be displayed in the upper right corner of the display.
3. Press and release the **"UP"** or **"DOWN"** button to change the setting.
   - 📄 The setting **"on"** is Roger beep on. The setting **"FF"** is Roger beep off.
   - 📄 The Roger beep is the same sound as the Power Up tone
4. Press and release the **"ENTER"** button to return to operating mode.

LISTENING TO WEATHER BROADCASTS
You can listen to current weather data on the 7 National Weather Service VHF Weather broadcast channels.

1. Press and release the **"F"** button. Two digits indicating the channel number of the weather broadcast will appear on the LCD display.
2. Press and release the **"UP"** or **"DOWN"** buttons to select the channel for your area.
3. Press the **"ENTER"** button when you wish to return to FRS communication.

ACTIVATING SCAN FUNCTIONS
The 75-517 has three scan modes. The most popular and most used is the **"BUSY"** channel scan. This allows the radio to stop on a channel that someone is talking on. When the radio stops on a "Busy" channel, the scan will stop and resume after about 5 seconds. The second is the **"OPEN"** channel scan. This allows the radio to stop on channels that are <u>NOT</u> used. This is useful when looking for open channels to use. The third is **"DUAL WATCH"**. This allows you to scan only two channels. This is useful when you want to keep track of two other people.

Busy Channel Scan:
1. Press and release the **"F"** button (9) twice. The "SCAN" icon will begin flashing in the lower center of the display.
2. Press and release the **"UP"** or **"DOWN"** channel button to activate scan. The unit will now begin scanning through the channels.
   - 📄 Pressing the **"UP"** or **"Down"** channel button during scan will determine if the channels are scanned up or down.
   - 📄 Pressing the **"PTT"** (push to talk) button will cause the radio to stop scanning and return to mormal operate mode.
   - 📄 When you enter the program mode with the **"F"** button the radio will go back to operate mode after about 8 seconds if no buttons are pressed.

Open Channel Scan:
1. Press and release the **"F"** button repeatedly (usually 3 times) until the **"B.SCAN"** icon flashes in the lower center of the display.

2. Press and release the **"UP"** or **"DOWN"** channel button to activate scan. The radio will begin to scan for *OPEN* channels.
   - 🖹 Scanning will stop on the first available open channel for about 5 seconds then move to the next channel.
3. Press the **"PTT"** button to stop scanning and talk on that channel.
4. To reactivate scan repeat steps above.
   - 🖹 When you enter the program mode with the **"F"** button the radio will go back to operate mode after about 8 seconds if no buttons are pressed.

ACTIVATING DUAL WATCH
Dual watch is a function that allows you to scan only two channels
1. Select channel one.
2. Press the **"F"** button repeatedly (usually 6 times) until **"DW"** is flashing in the top of the display.
3. Select the second channel to be scanned.
   - 🖹 About 3 seconds after your selection of the second channel is complete the radio will begin switching between the two channels.
   - 🖹 When the radio hears activity on either channel, scanning will stop on that channel for about 5 seconds and then resume scanning.
   - 🖹 If communication is desired on the channel scanning stopped on, press the **"PTT"** button. This will deactivate Dual Watch and allow you to communicate normally.
4. To reactivate Dual Watch repeat steps above.

ACTIVATING "PRIVACY" CODES
To activate "CTCSS" codes
1. Press the **"F"** button repeatedly (usually 4 times) to cause the icon **"CTCSS"** to be displayed in the upper left of the display to flash.
2. Press and release the **"UP"** or **"DOWN"** buttons to select the **"CTCSS"** code you desire.
    - A code of "00" means no code is programmed.
    - You must do this for each of the channels you want **CTCSS** codes on.
    - Activating the "**CTCSS**" code will prevent you from hearing any conversation that is not using the <u>same</u> "**CTCSS**" code. This <u>does not</u> make your conversation private.

The following is a list of frequencies of the CTCSS codes. Different brands of radios may use a different number code for the frequencies. For operation with other brands of radios the selected CTCSS frequency must match.

01=67.0 Hz	11=97.4 Hz	21=136.5 Hz	31=192.8 Hz
02=71.9 Hz	12=100.0 Hz	22=141.3 Hz	32=203.5 Hz
03=74.4 Hz	13=103.5 Hz	23=146.2 Hz	33=210.7 Hz
04=77.0 Hz	14=107.2 Hz	24=151.4 Hz	34=218.1 Hz
05=79.7 Hz	15=110.9 Hz	25=156.7 Hz	35=225.7 Hz
06=82.5 Hz	16=114.8 Hz	26=162.2 Hz	36=233.6 Hz
07=85.4 Hz	17=118.8 Hz	27=167.9 Hz	37=241.8 Hz
08=88.5 Hz	18=123.0 Hz	28=173.8 Hz	38=250.3 Hz
09=91.5 Hz	19=127.3 Hz	29=179.9 Hz	00=OFF
10=94.8 Hz	20=131.8 Hz	30=186.2 Hz	

DCS CODES

There are 83 **"DCS"** codes. These are used in the same manor as the **"CTCSS"** codes.

To activate the DCS Codes

1. Press the **"F"** button repeatedly until the **"DCS"** icon flashes (usually 5 times).
2. Press the **"UP"** or **"Down"** button to select the **"DCS"** code you desire.
3. Press the **"ENTER"** button when you have made your selection.
    - When you enter the program mode with the **"F"** button, the radio will go back to operate mode after about 8 seconds if no buttons are pressed.
    - A code of "00" means no code is programmed.
    - You must do this for all the channels you want **"DCS"** codes on.
    - Turning on the **"DCS"** code will prevent you from hearing any conversation that is not using the same **"DCS"** code. This does not make your conversation private.

The following list contains the values of the **"DCS"** codes. Different brands of radios may use a different codes. For operation with other brands of radios the selected **"DCS"** value must be the same.

01=023 11=071 21=134 31=223 41=306 51=411 61=503 71=631 81=734
02=025 12=072 22=143 32=226 42=331 52=412 62=506 72=632 82=743
03=026 13=073 23=152 33=243 43=315 53=413 63=516 73=654 83=754
04=031 14=074 24=155 34=244 44=331 54=423 64=532 74=662
05=032 15=114 25=156 35=245 45=343 55=431 65=546 75=664
06=043 16=115 26=162 36=251 46=346 56=432 66=565 76=703
07=047 17=116 27=165 37=261 47=351 57=445 67=606 77=712
08=051 18=125 28=172 38=263 48=364 58=464 68=612 78=723
09=054 19=131 29=174 39=265 49=365 59=465 69=624 79=731
10=065 20=132 30=205 40=272 50=371 60=466 70=627 80=732

RESETTING THE RADIO

If the radio stops responding to button presses or otherwise does not function properly in some cases the radio can be reset to restore normal operation.

To reset the radio: With the radio off, press and hold the **"F"** button and turn the radio on. Release the **"F"** button when the radio powers up. (see turning the radio on)
- This operation will reset the radio to factory settings and will erase all memory channels that have been programmed.
- **WARNING** Be sure radio has not been switched to **"VOX"** mode before resetting radio.

OPERATING THE HANDS FREE VOX (VOICE OPERATED TRANSMIT)

Slide the switch on the side of the radio to "**VOX**". Now you only have to talk into the microphone of an <u>optional</u> headset pluged into jack (5) to make the unit transmit. (PTT switch is inactive) The "**VOX**" has two adjustments available. The first setting is the sensitivity level. This is the level of voice needed to activate the transmitter. The second setting is the delay. This is the time that the transmitter stays activated after you stop talking.

Both of these settings have a value from 1 to 6. A setting of 1 in the level is the most sensitive. A setting of 1 in the delay is the least amount of delay. These settings are set to 3 from the factory.

Setting "VOX" Sensitivity Level:

    📄   The sensitivity is adjustable by 6 levels. Level 1 is the most sensitive.

To set the sensitivity level

1. With the radio turned off, press and hold the "**ENTER**" button and turn the radio on. The radio will display all segments available on the display and sound the power up tone. Release the **"ENTER"** button after the radio powers up. The display will show **"FF"** or **"on"** depending on the previous setting, and below in smaller letters **"BEEP"**

2. Press the "**F**" button repeatedly (usually twice) until you see "**LE**" on the display.

    📄   The number next to "**LE**" is the sensitivity level setting.

3. Press the "**UP**" or "**DOWN**" button repeatedly to change the "**VOX**" sensitivity.

4. Proceed to step 2 below if setting the delay is desired.

5. Press and release the **"ENTER"** button to return to the operation mode.

Setting "VOX" Delay.

The Delay is adjustable by 6 levels. Level 1 is the least amount of delay.

1. Refer to step one above.

2. Press and release the "**F**" button repeatedly until "**dL**" is on the display.

    📄   The numbers next to the "**dL**" is the delay setting.

3. Press the **"UP"** or **"DOWN"** button to change the **DELAY** setting.

4. Press and release the **"ENTER"** button to return to operation mode.

Using accessories While in "VOX" mode.

Accessories for private listening are available. Those with a "VOX/PTT" switch built in can be used with the 75-517 in "VOX" mode.

1. Set the accessory VOX/PTT switch to "PTT".

2. Turn on the radio. Set the radio to "VOX". Set the accessory VOX/PTT switch to"VOX".

✍ If you have turned on the radio with the accessory VOX/PTT switch in "VOX" position you may find that the radio is transmitting continuously. Switch the accessory to PTT and back to VOX to stop the radio from transmitting.

✍ Key beep tones may sound very loud when using a headset or earpiece. We advise turning off tones when using accessories.

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SETTING BABY SITTER MODE

1. Choose a channel to be used, set **BOTH** radios to that channel.
2. With the radio off, press and hold the **"ENTER"** button and turn the radio on.
3. Release the **"ENTER"** button when the radio powers up.
4. Press and release the "**F**" button repeatedly until **"bb"** (usually 4 times) is on the display.
5. Press and release the **"UP"** or **"DOWN"** button repeatedly to select the sensitivity level.
   - The two numbers to the right of the **"bb"** is the sensitivity. This can be set from 1 to 6. A sensitivity level of 1 is the most sensitive.
6. Press and release the **"ENTER"** button to activate baby sitter mode.
   - The radio will enter monitor mode after 1 minute waiting to hear sound. If the remote radio hears a sound, the radio will send the call signal for three seconds. After the call is complete the remote radio will transmit for 10 seconds. This allows you to hear the sound. After the 10 seconds of transmit is complete, the remote radio will go to receive for 10 seconds allowing you to transmit to the remote radio. This cycle continues 3 times then the remote radio goes back to monitor mode.
   - To ensure reliable comunications be certain fresh batteries are used.
- **WARNING** This monitoring is NOT intended in any way as a life saving device.

To exit the baby sitter mode
Switch the radio off then on.

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SETTING MEMORY CHANNELS
    ▤   There are 9 memory channels available.

To set Memory Channels

1. Press the **"F"** button repeatedly until the **"M"** is displayed above the flashing memory channel number in the lower right of the display.
2. Select a memory channel by pressing and releasing the **"UP"** or **"DOWN"** channel buttons.
    ▤   If the channel you want to program is the displayed channel when you access the memory program mode, you must change the channel and return to that channel before programming is allowed.
3. Press and release the **"F"** button. The first number (usually will be 0) will flash. Choose a channel by pressing and releasing the **"UP"** or **"DOWN"** button.
    ▤   The next step has three options. **1**. Choosing a **"CTCSS"** tone. **2**. Choosing a **"DCS"** tone. **3.** Choosing no tone at all.
4. Press and release the **"F"** button. The next two numbers (usually will be 00) will flash as well as the **"CTCSS"** in the upper left of the display. If no tone is desired go to step 5. Select a **"CTCSS"** tone desired or press and release the **"F"** button again. The **"DCS"** will begin to flash, select a **"DCS"** tone desired.
5. Press and release the **"ENTER"** button to complete the programming.
    ▤   The **"CTCSS** or **"DCS"** must be flashing when you press the **"ENTER"** button to complete the programming.
    ▤   After pressing the **"ENTER"** button, the radio will go back to normal operating mode.

ACCESSING MEMORY CHANNELS

1. Press and release the **"F"** button repeatedly (usually 6 times) until the display shows a number in the lower right of the display.
    ▤   This will be the location **without** the **"M"** above the number.
    ▤   If the number is flashing this indicates the memory channel is not programmed.
2. Press and release the **"UP"** or **"DOWN"** button to select a **"Memory Channel"** previously programmed.
    ▤   To exit the **"Memory Channel"** mode, press and release the **"ENTER"** button or press the **"F"** button twice.
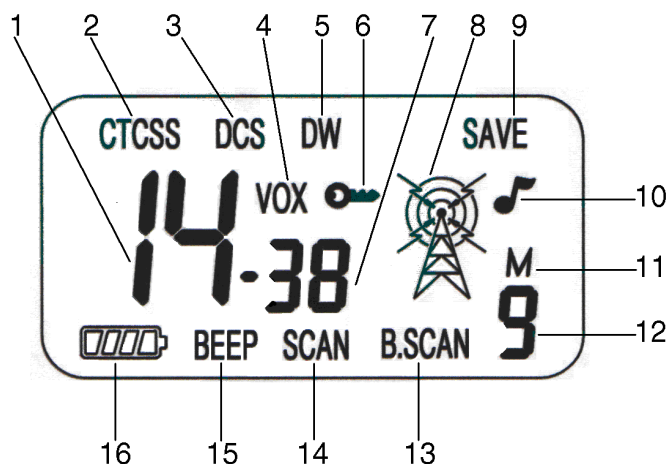
CAUTION: DON'T EXPOSE THE DISPLAY TO EXTREME HOT OR COLD TEMPERATURE

1. **Channel number:** Displays FRS channel number 1-14 or Weather channel 00-09.
2. **CTCSS Code Symbol:** Indicates **"CTCSS"** are active
3. **DCS Symbol:** Indicates that Digital Coded Squelch mode is on.
4. **VOX Symbol:** Indicates **"VOX"** is activated
5. **DW Symbol:** Indicates Dual Watch channel selection is active.
6. **Key Symbol** indicates when the keypad has been locked. Only the **"PTT"** and **"CALL"** buttons are active when this indicator is on.
7. Shows the **"CTCSS"** or **"DCS"** code you have selected. When this is on, other radios you talk to must be set to the same code.
8. **BUSY/TX Symbol:**

   When the radio is transmitting the icon will look like this:

   When the radio is receiving the icon will look like this:

   When the radio is in standby the icon will look like this:
9. **SAVE Symbol:** Flashes indicating battery save is active.
10. **Musical note** indicates **ROGER BEEP** is on.
11. **M Symbol:** Indicates a memory channel is active.
12. **Number** indicates memory channel in use.(when programmed)
13. **B.SCAN** indicates the scan mode B is in use
14. **SCAN** indicates the normal scan mode is in use
15. **BEEP** indicates the button press tone is active.
16. **Battery symbol** shows the battery condition. Replace or recharge the batteries when this indicator displays 2 or fewer segments of the battery.

TROUBLESHOOTING

PROBLEM	SOLUTION
No Power	1. Check battery installation and/or replace batteries
Cannot Receive Messages	1. Make sure the volume is set high enough. 2. Confirm the radios have the same channel and or CTCSS/DCS code settings. 3. Change your location, you may be out of range. 4. Install batteries properly or replace.
Range is Short	1. Operating the radio from a vehicle or from a metal building will decrease the range. If possible operate outside of vehicles or buildings. 2. Carrying the radio so that the antenna is very near the body will decrease the range. Hold the radio in the open for the best range.
Interference/Static	1. Using the CTCSS should stop you from hearing interference from other users and computers.
Radio is not responding to button presses	1. Make sure radio is not in "VOX" mode. 2. Make sure key lock is not on. See To lock the controls 3. Make sure radio is not transmitting. 4. Radio might need to be reset, See Resetting Radio. 5. Ensure accessory microphone is set properly (see Page 12).

CARE OF RECHARGEABLE NI-CAD BATTERIES

ALWAYS DISPOSE OF BATTERIES PROPERLY

Always follow the battery manufactures recommendations for
Charging and disposing of Ni-cad batteries.

The following is meant as general information regarding Ni-cad batteries.

1. Occasionally allow the batteries to fully discharge before recharging. The battery indicator showing less than two segments will indicate full discharge.

2. Always allow the battery to fully charge before using. This requires 10 hours with the approved charger. (Ni-MH batteries require 16 hours for full charge.)

3. The above will prevent the batteries from developing "memory" which effectively reduces their capacity.

4. It is better to store Ni-cad batteries that are discharged rather than charged.

Note: **Do not charge any type of alkaline batteries in this unit.**

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SERVICE:

If you have a problem which you believe requires service, please call first and speak with a service technician. Many problems can be remedied over the phone without returning the unit for service.

If it ever becomes necessary to return your unit for service:

1. Pack the unit in its original box and packing.

2. Pack the original box in a suitable shipping carton. Improper packing will result in damage during shipment.

3. Include a photocopy of the bill of sale showing the date of purchase.

4. Include a brief description of the problem you are having.

5. Include a <u>DAYTIME</u> telephone number.

6. Include a money order or Visa or Master Card credit card number for $7.50 to cover shipping and handling. No personal checks please.

7. You do not need to return accessory unless they maybe directly related to the problem.

8. This information <u>must </u>be included before Warranty Service can be considered. Failure to include these items will delay the repair of the radio until these items are received.

TECHNICAL SPECIFICATIONS*

GENERAL
Frequency range...462/467 MHz
Channels..14
Modulation type... FM
Antenna impedance ....50 Ohm
Loud-speaker..........……...8 Ohm 0.5W
Microphone..…electronic type
Power supply...3 AA Ni-cads or Alkaline(3.6/4.5VDC)
RECEIVER
Sensitivity at 12dB Sinad...0.35µV
Selectivity...50 dB
Squelch range...…….Automatic
Audio output power.......................................0.25W @ 8 Ohm (10% distortion)
Distortion at 500 mV...7%
Audio frequency response...400-2400 Hz
TRANSMITTER
RF Output Power..................................…...........nominal 500 mW @ 4.5VDC
Frequency Tolerance...0.00025%
Harmonic Suppression...more than 50 dB
Modulation..FM +/- 2.5 kHz
WEATHER RECEIVER
Sensitivity at 12dB Sinad...1.0 µV

*Specifications are nominal and subject to change
FRS CHANNEL FREQUENCIES (Megahertz)

01=462.5625	05=462.6625	09=467.5875	13=467.6875
02=462.5875	06=462.6875	10=467.6125	14=467.7125
03=462.6125	07=462.7125	11=467.6375	
04=462.6375	08=467.5625	12=467.6625	

WEATHER CHANNEL FREQUENCIES (Megahertz)

01=162.550	04=162.450	07=162.525	00=163.275
02=162.400	05=162.450	08=161.650	
03=162.475	06=162.500	09=161.775	

LIMITED WARRANTY

Midland Consumer Radio Inc. will repair or replace, at its option without charge, any Midland FRS transceiver which fails due to a defect in material or workmanship within ONE YEAR following the initial consumer purchase.

This warranty does not include any carrying cases, earphones, or antennas, which may be a part of or included with the warranted product.

Performance of any obligation under this warranty may be obtained by returning the warranted product, freight prepaid, along with proof of purchase date, to Midland Consumer Radio Inc., Warranty Service Department, 1670 North Topping Avenue, Kansas City, Missouri 64120.

Warranty information may be obtained by writing Midland Consumer Radio, Warranty Service Department at the above address.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Note: The above warranty applies only to merchandise purchased in the United States of America or any of the territories or possessions thereof, or from a U.S. Military exchange.

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