

# Cobra®

## microTALK®

Operating Instructions for Your Cobra® microTALK®  
2-WAY RADIO MODEL PR 945 DX

Instrucciones operativas del  
RADIO BIDIRECCIONAL  
MODELO PR 945 DX  
Cobra® microTALK®

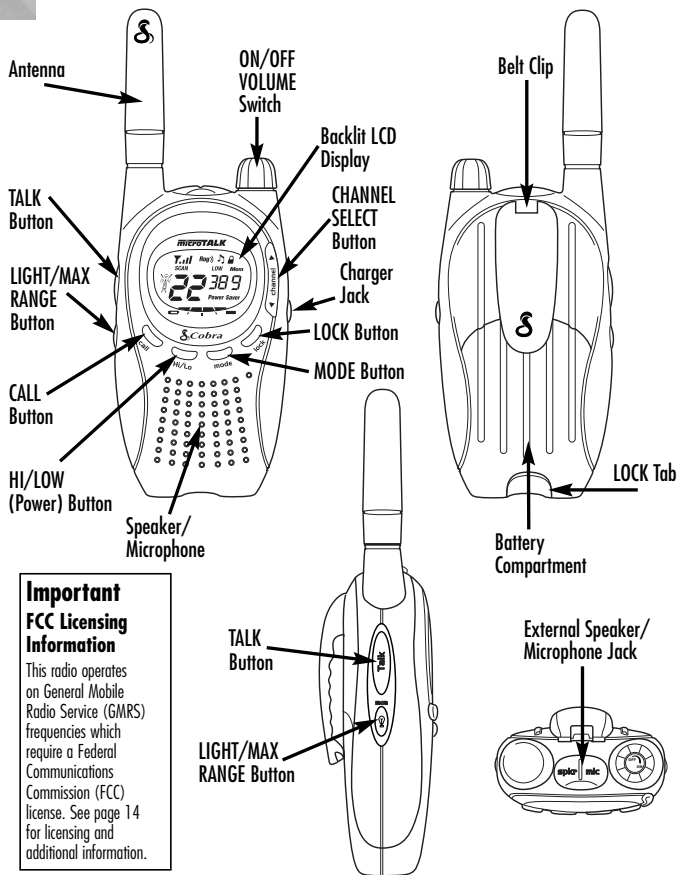


**Nothing** comes close to a Cobra™

**Nada** se compara a Cobra™

English, pages 1-16

Español, páginas 17-34



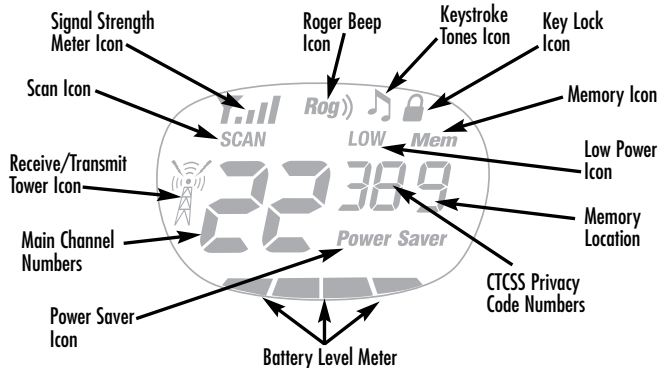
**Important FCC Licensing Information**

This radio operates on General Mobile Radio Service (GMRS) frequencies which require a Federal Communications Commission (FCC) license. See page 14 for licensing and additional information.

**Product Features**

- TWO-WAY RADIO with up to a six (6) mile (10 km) range
- 22 CHANNELS (seven (7) shared with FRS/GMRS, seven (7) FRS only, eight (8) GMRS only)
- 38 CTCSS PRIVACY CODES
- Selectable HI/LOW POWER Output (on all GMRS channels)
- UHF FM Frequencies
- BACKLIT LCD Display
- EXTERNAL SPEAKER/MICROPHONE Jack
- 10 MEMORY LOCATIONS
- FULL CHANNEL/CTCSS SCAN
- MEMORY SCAN
- SIGNAL STRENGTH Meter
- MAXIMUM RANGE Extender
- 10 CALL SIGNAL Selections
- "ROGER BEEP" Confirmation Tone (selectable On/Off)
- KEYSTROKE TONES (selectable On/Off)
- AUTO SQUELCH
- CALL Button
- BATTERY SAVER Circuitry
- LOCK Button
- BELT CLIP
- WATER RESISTANT

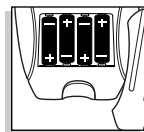
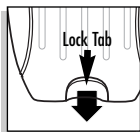
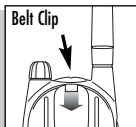
**BACKLIT LCD DISPLAY**



## Batteries

### To install or replace batteries:

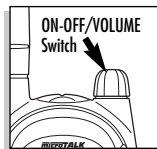
1. Remove belt clip by releasing belt clip latch and sliding clip down.
2. Pull down on the Battery Latch to remove the battery compartment cover.
3. Insert four (4) AAA batteries. (Always use high quality alkaline batteries.) Position batteries according to polarity markings.
4. Replace Battery Compartment cover and belt clip.



(NOTE: Contact your local Cobra® dealer or Cobra® directly for optional charger accessories.)

## Turning On Your microTALK® Radio

1. Rotate the ON-OFF/VOLUME switch clockwise to turn On the radio (and to adjust the volume). An audible tone will indicate the radio is On.



Your microTALK® is now in Standby mode, ready to receive transmissions. The radio is always in Standby mode except when the TALK, CALL, or MODE buttons are pressed.

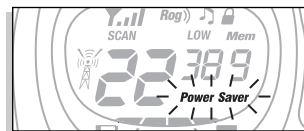
## Battery Low

Battery power is indicated by the segments appearing at the bottom of the LCD. As battery power decreases, fewer segments will be visible. When bA Lo begins to flash, the batteries should be replaced. If you are using rechargeable batteries, they should be recharged.



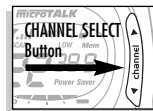
## Auto Battery Save

Your microTALK® radio has a unique circuit designed to extend battery life. If there are no transmissions within ten (10) seconds, the radio will automatically switch to Battery Save mode and POWER SAVER will appear in the display. This will not affect the radio's ability to receive incoming transmissions.



## Selecting a Channel

Channels 1-7 are shared with FRS/GMRS. Channels 8-14 are FRS only. Channels 15-22 are GMRS only. (IMPORTANT: See page 16 for FRS/GMRS frequency allocations and compatibility chart.)



1. With the radio On, select any of the 22 channels by pushing the CHANNEL SELECT button up or down.

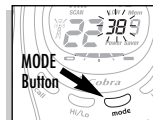
(NOTE: Both radios must be tuned to the same channel to communicate.)

## Selecting a CTCSS Privacy Code

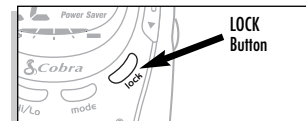
CTCSS (Continuous Tone Coded Squelch System) is an advanced tone coding system allowing you to select one of 38 privacy codes to reduce interference from other users on the channel. (NOTE: If you are using a privacy code, both radios must be tuned to the same channel and privacy code to communicate. Each channel will remember the last privacy code you selected.)

### To select a privacy code:

1. After selecting a main channel, press and release the MODE button. A small number will flash next to the channel in the LCD.



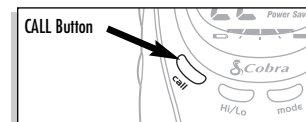
2. Push the CHANNEL SELECT button up or down to select a privacy code. You can hold the button up or down for fast advance.
3. When your desired privacy code is displayed, press and release the LOCK button.



## Calling Another Person

### To alert another person that you are calling:

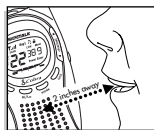
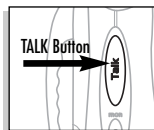
1. Press and release the CALL button. The other person will hear a two (2) second ringing tone. (See page 12 on how to select between ten (10) call tone settings.)



You cannot send or receive transmissions during the two (2) second call tone.

## Talking to Another Person

1. Press and hold the TALK button.
2. With the microphone about two (2) inches (5 cm) from your mouth, speak in a normal voice.
3. Release the button when you're finished talking and listen for a response. You cannot receive incoming calls while pressing the TALK button.



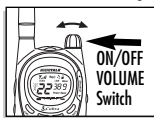
## “Roger Beep” Confirmation Tone

Your listener will hear an audible tone when you release the TALK button. This alerts the other party that you are finished talking and it is OK for them to speak. (**NOTE:** The Roger Beep can be turned Off and On, see page 10.)

## Listening for a Response

### When you are finished talking:

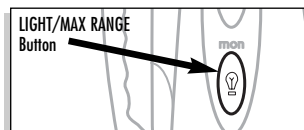
1. Release the TALK button to receive incoming transmissions. Your microTALK® is always in listening mode while the TALK button is not pressed.



2. Adjust the volume by rotating the ON/OFF/VOLUME switch.

## Illuminating the Display

1. Press and release the LIGHT/MAX RANGE button to illuminate the display for ten (10) seconds.



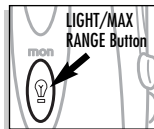
## Auto Squelch/Maximum Range

Your microTALK® radio is equipped with Auto Squelch, which automatically shuts Off weak transmissions and unwanted noise due to terrain, conditions, or if you've reached your maximum range limit.

You can temporarily turn Off Auto Squelch or turn On Maximum Range Extender, allowing all signals to be received and extending the maximum range of your radio.

### To temporarily turn Off Auto Squelch:

1. Press the LIGHT/MAX RANGE button less than five (5) seconds.
- If you hear two (2) beeps, you have turned the Maximum Range Extender On (see page 6).



### To turn Maximum Range Extender On:

1. Press and hold the LIGHT/MAX RANGE button for at least five (5) seconds until you hear two (2) beeps which indicates the Maximum Range Extender is On.

### To turn Maximum Range Extender Off:

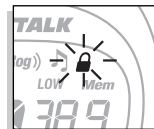
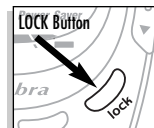
1. Press and release the LIGHT/MAX RANGE button or change channels.

## Using the Lock Function

The Lock function locks the CHANNEL, MODE and HI/LOW POWER buttons to prevent accidental operation.

### To use the Lock function:

1. While in Standby mode, press and hold the LOCK button for one (1) second. The Lock icon will blink when the radio is locked. Buttons that are NOT locked are the CALL, LOCK, LIGHT/MAX RANGE, TALK buttons, and ON-OFF/VOLUME switch which are all fully functional while the radio is locked.
2. To “unlock” buttons, press and release the LOCK button again. The Lock icon disappears and all buttons will be unlocked.

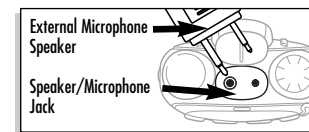


## External Speaker/ Microphone Jack

Your microTALK® radio can be fitted with an external speaker/microphone, freeing your hands for other tasks. (See page 16 for optional accessories.)

### To attach an external speaker/microphone:

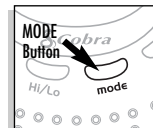
1. Open the SPKR/MIC tab on top of the radio.
2. Insert the plug into the SPKR/MIC jack.



(**CAUTION:** Do not use an external speaker/microphone with common ground circuits with this radio. Damage can result. We recommend using only Cobra® authorized accessories.)

## Using the MODE Button

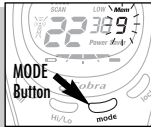
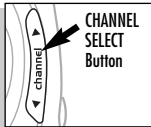

The MODE button allows you to use and program the various functions of your microTALK® radio. If you press and hold the MODE button, the LCD will cycle through the different functions.

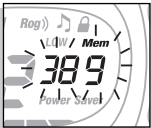
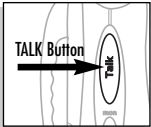
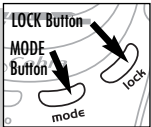


## Programming Memory Locations

Your microTALK® radio has ten (10) memory locations (0-9) for storing your most frequently used channels and privacy codes.

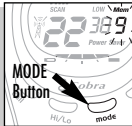
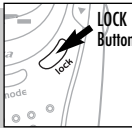
### To program locations:

1. Press the MODE button until the Memory icon and the memory location flashes. 
2. Select the memory location you wish to change by pushing the CHANNEL SELECT button up or down. 
3. Press and release the MODE button again. The Memory icon and the main channel number will flash. 
4. Select the main channel you wish to store by pushing the CHANNEL SELECT button up or down.

5. Press the MODE button again to store the main channel in memory and move to privacy code selection. The privacy code number begins flashing and the Memory icon continues to flash. 
6. Select the privacy code (00-38) you wish to store by pushing the CHANNEL SELECT button up or down.
7. Press the LOCK button to program your selection. You may also press the TALK button to transmit your selected channel and privacy code, which will be stored into the memory location you are using. (NOTE: To "unprogram" a memory location you programmed previously, select 00 for both the main channel and privacy code in steps 4 through 6.) 
8. Press and release the LOCK button to return to Standby mode at your new memory location, or press and release the MODE button to save the memory location and proceed to other functions. 

## Recalling Memory Locations

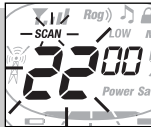
To recall a channel you have stored in a memory location:

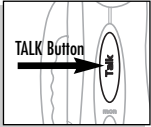
1. Press the MODE button until the Memory icon and a memory location flashes. 
2. Select your desired memory location by pushing the CHANNEL SELECT button up or down. Your radio will stay at this memory location until you exit Memory Function mode by pressing the LOCK button. 
3. Repeat steps 1 and 2 to recall other memory locations.

## Using the Scan Function

Your microTALK® radio can automatically scan main channels (1-22), the privacy codes (00-38) within one main channel, or memory locations.

To scan main channels:

1. Press the MODE button until the Scan icon and main channel number flashes. 

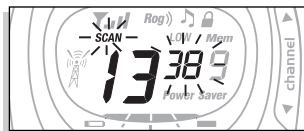
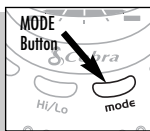
2. Push the CHANNEL SELECT button up or down and the radio will begin scanning the main channels. (NOTE: The radio "ignores" privacy codes while scanning main channels.)
  3. The radio will continue to scan all main channels and stop if an incoming transmission is detected. The radio will remain on that channel for ten (10) seconds. During that time you can:
    - a) Press and hold the TALK button and talk. The radio will remain on that channel and return to Standby mode. 
    - b) Push the CHANNEL SELECT button up or down to resume scanning main channels.
    - c) Press the MODE button to proceed to privacy code scanning (see following page).
- If you do not press any button within ten (10) seconds, the radio will automatically resume scanning main channels.

## Using the Scan Function (continued)

### To scan privacy codes:

1. While in Standby mode, press the CHANNEL SELECT button up or down to choose the main channel you wish to scan.

2. Press the MODE button until the Scan icon and the privacy code number flashes.

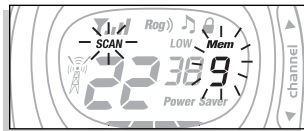


3. Push the CHANNEL SELECT button up or down and the radio will begin scanning privacy codes within the main channel you selected.
4. The radio will continue to scan privacy codes and stop if an incoming transmission is detected. The radio will remain on that code for ten (10) seconds. During that time you can:
  - a) Press and hold the TALK button and talk. The radio will remain on that channel and privacy code, then return to Standby mode.
  - b) Push the CHANNEL SELECT button up or down to resume scanning privacy codes.

- c) Press the MODE button to proceed to memory location scanning (see below). If you do not press any button within ten (10) seconds, the radio will automatically resume scanning privacy codes.

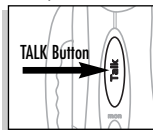
### To scan memory locations:

1. Press the MODE button until the Scan icon, Memory Location icon and memory location number flashes.



2. Push the CHANNEL SELECT button up or down and the radio will begin scanning memory locations.
3. The radio will continue to scan all memory locations and stop if an incoming transmission is detected. The radio will remain on that location for ten (10) seconds. During that time you can:

- a) Press and hold the TALK button and talk. The radio will remain on that memory location channel and return to Standby mode.



- b) Push the CHANNEL SELECT button up or down to resume scanning memory locations.



- c) Press the MODE button to proceed to other functions.

If you do not press any button within ten (10) seconds, the radio will automatically resume scanning memory locations.

You must have at least two (2) memory locations programmed in order to scan memory locations.

**(NOTE:** If you want to reduce the number of memory locations being scanned you need to "unprogram" all unwanted locations by changing both the main channel and privacy code to 00. See Programming Memory Locations, page 8.)

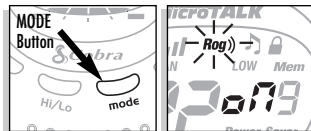
### "Roger Beep" Confirmation Tone

Your listener will hear an audible tone when you release the TALK button. This alerts the other party that you are finished talking and it is OK for them to speak. This feature can be turned On or Off.

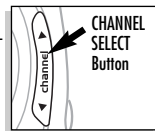
### To turn "Roger Beep" On or Off:

When turning On your microTALK® radio for the first time, "Roger Beep" will be On.

1. Press the MODE button until the "Roger Beep" icon flashes on the LCD. The current On or Off setting is displayed.



2. Press the CHANNEL UP or CHANNEL DOWN button to select "Roger Beep" On or Off.



3. a) Press the MODE button to enter the new setting and proceed to other functions.
  - b) Press the LOCK button to enter the new setting and return to Standby mode.
  - c) Do not press any buttons for 15 seconds to enter the new setting and return to STANDBY MODE.

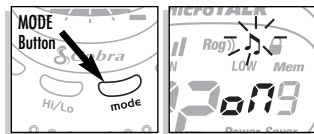
The setting you select will be saved when you turn your radio Off and On again. When the "Roger Beep" is On, the "Roger Beep" icon will be displayed.

## Keystroke Tones

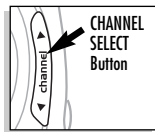
With Keystroke Tones turned On, your radio will sound beeps each time you press a button or change a setting.

### To change Keystroke Tones:

1. Press the **MODE** button until the Keystroke Tones icon flashes on the LCD. The current On or Off setting is displayed.



2. Press the **CHANNEL UP** or **CHANNEL DOWN** button to turn Keystroke Tones On or Off.



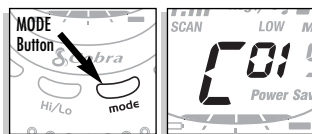
3. a) Press the **MODE** button to enter the new setting and proceed to other functions.  
b) Press the **LOCK** button to enter the new setting and return to **STANDBY MODE**.  
c) Do not press any buttons for fifteen (15) seconds to enter the new setting and return to **STANDBY MODE**.

## 10 Call Tone Settings

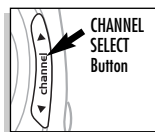
You can choose between ten (10) different call tone settings to transmit a unique call alert.

### To change a Call Tone Setting:

1. Press the **MODE** button until the letter "C" and the current call tone number (1 through 10) is displayed. The current call tone will sound for one (1) second.



2. Press the **CHANNEL UP** or **CHANNEL DOWN** button to hear the other call tone settings.



3. a) Press the **MODE** button to enter the new setting and proceed to other functions.  
b) Press the **LOCK** button to enter the new setting and return to **STANDBY MODE**.  
c) Do not press any buttons for fifteen (15) seconds to enter the new setting and return to **STANDBY MODE**.

## High/Low Power

When in close proximity to another party, or during favorable conditions, you can switch from High to Low Power to extend battery life. **(NOTE:** This feature applies to GMRS channels 1 through 7 and 15 through 22 only. Channels 8 through 14 operate exclusively on low power.)

### To switch from high to low power:

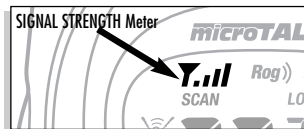
1. Press and release the **HI/LOW** button.

When in low power, and when using channels 8 through 14, the **LOW** icon will be visible in the LCD display.



## Signal Strength Meter

Your microTALK® radio is equipped with a signal strength meter that shows the strength of your incoming or outgoing transmissions. The ascending bars next to the signal strength indicate the strength of the signal. The greater the number of bars visible, the stronger the signal. The fewer number of bars visible, the weaker the signal.



## microTALK® Range

Your microTALK® radio has a range of up to six (6) miles (10 km) when using GMRS channels on HI power. In LOW power and on channels 8 through 14, your radio's range is up to two (2) miles (3 km). Your range will vary depending on terrain and conditions. In flat, open country your radio will operate at maximum range.



Buildings and foliage in the path of the signal can reduce the range.



Dense foliage and hilly terrain will further reduce the signal.



Remember, you can achieve maximum range by using Maximum Range Extender. See page 5 for details.

## General Specifications

## A. FRS/GMRS FREQUENCY ALLOCATION AND COMPATIBILITY

**Important:** Please note that Cobra® GMRS models with 15 channels may designate different channel numbers for the same frequency. For example, a Cobra® 15 channel GMRS model would need to be tuned to channel 11 in order to communicate with a 22 channel GMRS tuned to channel 15. Please refer to the chart below for channel/ frequency number compatibility.

A = Channel No. For 22 Channel GMRS Models

B = Channel No. For 15 Channel GMRS Models

C = Type of Radio Service

D = Frequency in MHz

E = Power in Watts

a = 2.0/0.5 (selectable)

b = 0.5

| A  | B  | C        | D        | E |
|----|----|----------|----------|---|
| 1  | 1  | FRS/GMRS | 462,5625 | a |
| 2  | 2  | FRS/GMRS | 462,5875 | a |
| 3  | 3  | FRS/GMRS | 462,6125 | a |
| 4  | 4  | FRS/GMRS | 462,6375 | a |
| 5  | 5  | FRS/GMRS | 462,6625 | a |
| 6  | 6  | FRS/GMRS | 462,6875 | a |
| 7  | 7  | FRS/GMRS | 462,7125 | a |
| 8  |    | FRS      | 467,5625 | b |
| 9  |    | FRS      | 467,5875 | b |
| 10 |    | FRS      | 467,6125 | b |
| 11 |    | FRS      | 467,6375 | b |
| 12 |    | FRS      | 467,6625 | b |
| 13 |    | FRS      | 467,6875 | b |
| 14 |    | FRS      | 467,7125 | b |
| 15 | 11 | GMRS     | 462,5500 | a |
| 16 | 8  | GMRS     | 462,5750 | a |
| 17 | 12 | GMRS     | 462,6000 | a |
| 18 | 9  | GMRS     | 462,6250 | a |
| 19 | 13 | GMRS     | 462,6500 | a |
| 20 | 10 | GMRS     | 462,6750 | a |
| 21 | 14 | GMRS     | 462,7000 | a |
| 22 | 15 | GMRS     | 462,7250 | a |

## B. RECEIVER

|                                  | RADIO  | NOMINAL |
|----------------------------------|--------|---------|
| 1. SENSITIVITY                   |        |         |
| FOR 12 DB SINAD                  | dBm    | -121    |
| FOR CALL SIG DETECTION           | dBm    | -121    |
| 2. MAX. AUDIO OUTPUT @10% THD    | mW     | 200     |
| 3. MAX. S/N RATIO @ 1mV RF INPUT | dB     | 50      |
| 4. SQUELCH                       |        |         |
| a) SENSITIVITY                   | dB m   | -121    |
| b) ATTACK TIME                   | mS     | 150     |
| c) CLOSING TIME                  | mS     | 200     |
| 5. AUDIO FREQUENCY RESP.         |        |         |
| @ 300 HZ                         | dB     | -3      |
| @ 2500 HZ                        | dB     | -10     |
| 6. SIGNAL DISPLACEMENT BW        | +/-KHZ | 5       |
| 7. ADJACENT CH. REJECTION        | dB     | 60      |
| 8. INTERMODULATION REJECTION     | dB     | 65      |
| 9. SPURIOUS RESPONSE REJECTION   | dB     | 55      |

## C. TRANSMITTER

|                             | RADIO | NOMINAL |
|-----------------------------|-------|---------|
| 1. POWER                    |       |         |
| Hi (GMRS only)              | W     | 2       |
| Low (GMRS /FRS)             | mW    | 500     |
| 2. CARRIER FREQ. STABILITY  | ±Hz   | 500     |
| 3. MODULATION LIMITING      | KHz   | 2.5     |
| 4. CARRIER ATTACK TIME      | mS    | 30      |
| 5. AUDIO FREQUENCY RESPONSE |       |         |
| @ 300 HZ                    | dB    | -10     |
| @ 2500 HZ                   | dB    | 4       |
| 6. AUDIO DISTORTION         | %     | 3       |
| 7. HUM NOISE                | dB    | 38      |
| 8. TRANSIENT FREQ. BEHAVIOR |       |         |
| a) TX ON                    | mS    | 30      |
| b) TX OFF                   | mS    | 5       |

## D. POWER SUPPLY

|                                 |    |           |
|---------------------------------|----|-----------|
| 1. BATTERY LIFE (1.1:1.8 RATIO) | HR | 24        |
| 2. BATTERY OPERATING RANGE      | V  | 4.0 - 6.0 |

## IMPORTANT NOTICE: FCC LICENSE REQUIRED

This two-way radio operates on GMRS (General Mobile Radio Service) frequencies which require an FCC (Federal Communications Commission) license. A user must be licensed prior to operating on channels 1 through 7 or 15 through 22, which comprise the GMRS channels of this radio. Serious penalties could result for unlicensed use of GMRS channels, in violation of FCC rules, as stipulated in the Communications Act's Sections 501 and 502 (amended). Licensed users will be issued a call sign by the FCC, which should be used for station identification when operating this radio. GMRS users should also cooperate by engaging in permissible transmissions only, avoiding channel interference with other GMRS users, and being prudent with the length of their transmission time.

For licensing information and application forms, please call the FCC Hotline at 800-418-FORM. Request form #159 and form #605. Questions regarding the license application should be directed to the FCC at 888-CALL-FCC. Additional information is available on the FCC's website at [www.fcc.gov](http://www.fcc.gov).

## Safety Information for microTALK® Radios

Your wireless handheld portable transceiver contains a low power transmitter. When the Talk button is pushed, it sends out radio frequency (RF) signals. The device is authorized to operate at a duty factor not to exceed 50%. In August 1996, the Federal Communications Commissions (FCC) adopted RF exposure guidelines with safety levels for handheld wireless devices.

## Important:

To maintain compliance with the FCC's RF guidelines, hold the transmitter at least 2 inches (5 centimeters) from your face and speak in a normal voice, with the antenna pointed up and away. If you wear the headset on your body while using the headset accessory, use only the Cobra® supplied belt clip for this product and ensure that the antenna is at least 1 inch (2.5 centimeters) from your body while transmitting. If the distance between the antenna and the body is LESS THAN 1.0 inch (2.5 cm), DO NOT USE THIS DEVICE IN THE BODY WORN CONFIGURATION. Use only the supplied antenna. Unauthorized antennas, modifications, or attachments could damage the transmitter and may violate FCC regulations.

## Normal Position:

Hold the transmitter approximately 2 inches (5 cm) from your face and speak in a normal voice, with the antenna pointed up and away.

## Note:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## FCC Warnings:

Replacement or substitution of transistors, regular diodes or other parts of a unique nature, with parts other than those recommended by Cobra® may cause a violation of the technical regulations of part 95 of the FCC Rules, or violation of type acceptance requirements of part 2 of the Rules.



