



1. Antenna
2. External Speaker/
Microphone/Charge Jack
3. **Mode/Power** Button
4. **Scan** Button
5. **Channel Up/Down** Buttons
6. Backlit LCD Display



7. Speaker/Microphone
8. **Volume Up/Down** Buttons
9. **Light/Max Range** Button
10. **Talk** Button
11. **Call/Lock** Button
12. Wrist Strap Connection
13. Belt Clip
14. Battery Compartment
15. Battery Door Latch

TWO-WAY RADIO MODEL MT645VP

Printed in China
Part No. 480-868-P
Version D

Declaration of Conformity (DoC)

We, Cobra Electronics Europe Limited of
Dungar House, Northumberland Avenue
Dun Laoghaire, County Dublin, Ireland

declare under our sole responsibility that the
product: **Private Mobile Radio (PMR 446)**

Model: MT 645

to which this declaration relates is in conformity
with the essential requirements and other relevant
requirements of the R&TTE Directive (1999/5/EC).
The product is in conformity with the following
standards and/or other normative documents:

Health (Article 3.1(a)): **EN 62311 (2008)**

Safety (Article 3.1(a)): **EN 60950-1:2006/A12:2011**

EMC: (Article 3.1(b)): **EN 301 489-1 V1.9.2 (2011-09)**

EN 301 489-5 V1.3.1 (2002-08)

Spectrum (Article 3.2): **EN 300 296-2 V1.3.1 (2010-07)**

This product complies with Commission Regulation
(EC) No 278/2009 of 6 April 2009 implementing
Directive 2009/125/EC of the European Parliament and
of the Council with regard to ecodesign requirements
for no-load condition electric power consumption and
average active efficiency of external power supplies
and is in conformity with Directive 2011/65/EU of the
European Parliament and of the Council of 8 June
2011 on the restriction of the use of certain hazardous
substances in electrical and electronic equipment.

The radio will not comply with the standard at voltage
below 3.4V.

CE0168

DUBLIN, IRELAND 1 July 2013

JEAN-LOUIS POOT
Managing Director

Warranty & Customer Service

For warranty and customer service
information, please contact your
local dealer.

For use in EU countries, subject to local laws and
regulations.

CEEL® is a registered trademark of
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Snake design and microTALK® are registered
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Dungar House, Northumberland Avenue
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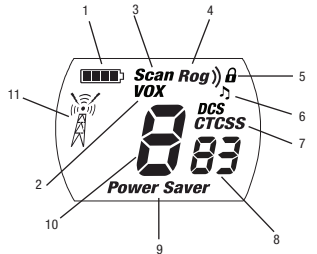
www.cobra.com



Operation

Features

- **8 Channels***
- **121 Privacy Codes**
(38 CTCSS codes/83 DCS codes)
- **Hands-Free Operation (VOX)**
- **Scan**
Channels, privacy codes
- **Backlit LCD Display**
- **Call Alert**
Five selectable tones
- **Button Lock**
- **Speaker/Microphone/ Charge Jack**
- **Roger Beep**
Selectable On/Off
- **Battery/Power Saver**
- **Keystroke Tones**
- **Battery Level Indicator**
- **Auto Squelch**
- **Maximum Range Extender**
- **Belt Clip**



- | | |
|----------------------------|-----------------------------------|
| 1. Battery Level Indicator | 7. DCS/CTCSS Icons |
| 2. VOX Icon | 8. DCS/CTCSS Privacy Code Numbers |
| 3. Scan Icon | 9. Power Saver Icon |
| 4. Roger Beep Icon | 10. Channel Numbers |
| 5. Lock Icon | 11. Receive/Transmit Icon |
| 6. Key Stroke Icon | |

*You are not allowed to use channels 1 and 2 in France. This situation can change; please contact the French radio licensing authority for more information.

Product Information

This microTALK® radio has been manufactured to meet all required standards for radio equipment using PMR 446 frequencies as authorized. The use of this two-way radio product involves the public airways and its use may be subject to local laws or regulations. Contact your radio licensing authority for more information.

Caring for Your Radio

Your microTALK® radio will give you years of trouble-free service if cared for properly. Here are a few suggestions:

- Handle the radio gently.
- Keep it away from dust.
- Never put the radio in water or in a damp place.
- Avoid exposure to extreme temperatures.

Installing Batteries

To install or replace batteries:

Remove Belt Clip



Pull Up Lock Latch



Insert Batteries



Radio Charger Jack



1. Remove belt clip by releasing belt clip latch and sliding clip up.
 2. Pull up on the battery door latch to remove the battery compartment cover.
 3. Insert the supplied three AA rechargeable batteries or non-rechargeable alkaline batteries. Position batteries according to polarity markings.
 4. Replace battery compartment cover and belt clip.
- Do not attempt to charge alkaline batteries.
 - Do not mix old and new batteries.
 - Do not mix alkaline, standard (carbon-zinc), or rechargeable (Ni-Cd, Ni-MH, etc.) batteries.

Caution – Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

To charge batteries in radio:

1. Check to see that the batteries have been inserted properly.
2. Insert the cable into the charge jack located at the top of the radio.
3. Plug the cable into USB-compatible power port.

Use only the supplied rechargeable batteries and charger for recharging your Cobra microTALK radio. The radio is not intended to be used while being charged. Non-rechargeable alkaline batteries can also be used in your radio. Maximum/Minimum Operating Range: -20°C to +45°C.

Quick Start

1. Press and hold the **Mode/Power** button to turn on your radio.
2. Press the **Channel Up** or **Channel Down** button to select a channel.

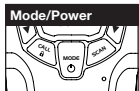


Both radios must be tuned to the same channel/privacy code to communicate.

3. Press and hold the **Talk** button while speaking into the microphone.
4. When finished talking, release the **Talk** button and listen for a response.

Using Your Radio

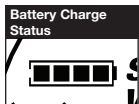
Turning on Your microTALK® Radio



Press and hold the **Mode/Power** button until you hear a series of audible tones indicating the radio is **on**.

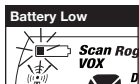
Your microTALK® radio is now in **Standby** mode, ready to receive transmissions. The radio is always in **Standby** mode except when the **Talk**, **Call** or **Mode/Power** buttons are pressed.

Battery Status Indicator



The battery charge status is shown on the display. Four bars indicates fully charged.

Battery Low

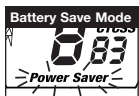


When battery power is low, the final bar in the **Battery Low** icon will blink and an audible tone will sound twice before the radio shuts off. Your batteries should be replaced or recharged, if using rechargeable batteries.



The radio will display flashing battery icon while charging if the radio is on.

Auto Battery Save



If there are no transmissions within 10 seconds, the radio will automatically switch to **Power Save** mode and the **Power Saver** icon will flash in the display. This will not affect the radio's ability to receive incoming transmissions.

Using Your Radio

Communicating with Another Person



1. Press and hold the **Talk** button.
2. With the microphone about two inches (5 cm) from your mouth, speak in a normal voice.
3. Release the **Talk** button when you are finished talking and listen for a response.

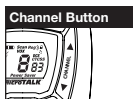


You cannot receive incoming calls while pressing the **Talk** button.



Both radios must be tuned to the same channel to communicate.

To Select a Channel



With the radio **on**, select any of the 8 channels by pressing the **Channel Up** or **Channel Down** button.



Both radios must be tuned to the same channel to communicate.



Listening for a Response



Release the **Talk** button to receive incoming transmissions. Your microTALK® radio is always in **Standby** mode while the **Talk** or **Call** buttons are not pressed.

Using Your Radio

To Adjust Volume

Volume Button



Press the **Volume Up** or **Volume Down** button. A double beep sound is used to indicate the minimum and maximum volume levels (1 through 8).

Volume Level



Call Button

Call Button



Press and release the **Call** button.

The other person will hear a two second call tone. This tone is used only to establish voice communications.



See page 13 on how to select between five call tone settings.

To Illuminate Display

Light/Max Range



Press and release the **Light/Max Range** button to illuminate the display.

Auto Squelch/Maximum Range

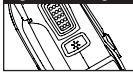
Your microTALK® radio will automatically shut **off** weak transmissions and unwanted noise due to terrain, conditions or if you've reached your **Maximum Range** limit.

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.

Using Your Radio

Auto Squelch/Maximum Range continued

Light/Max Range



To temporarily turn off auto squelch: Press the **Light/Max Range** button for less than five seconds.

To turn maximum range extender on:

-Press and hold the **Light/Max Range** button for at least five seconds until you hear two beeps which indicates the maximum range extender is **on**.

To turn maximum range extender off:

-Press and release the **Light/Max Range** button or change channels.

Lock Function

Lock Button



The **Lock** function locks the **Channel Up**, **Channel Down**, **Volume Up**, **Volume Down** and **Mode/Power** buttons to prevent accidental operation.

To turn the lock on or off:

- Press and hold the **Lock** button for two seconds.

A double beep sound is used to confirm your lock **on** or **off** request.

When in **Lock** mode, the **Lock** icon will be displayed.

Lock Icon



MicroTALK® Range

Your range will vary depending on terrain and conditions.

Maximum Range



In flat, open country your radio will operate at maximum range.

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

Reduced Range



Dense foliage and hilly terrain will further reduce the range of the radio.

On FRS Channels 8 through 14, your radio automatically switches to low power, which will limit the range the radio can communicate.

Reduced Range



Remember, you can achieve maximum range by using maximum range extender. See page 6 for details.

Using Your Radio

External Speaker/Microphone/Charge Jack



Your microTALK® radio can be fitted with an optional external speaker/microphone (not included), freeing your hands for other tasks.

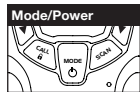
To attach an external speaker/microphone or charger:

1. Open the charge tab at the top of the radio.
2. Insert the plug into the jack.

NOTE: Excessive sound pressure from earphones and headphones can cause hearing loss.

Scrolling Through the Mode Function

By scrolling through the **Mode** function, you will be able to select or turn on preferred features of your microTALK® radio. When scrolling through the **Mode** function, your radio features will be displayed in the same predetermined order:



- Set CTCSS Privacy Codes
- Set DCS Privacy Codes
- Set Vox On/Off
- Set Vox Sensitivity
- Set Channel Scan
- Set CTCSS Privacy Code Scan
- Set DCS Privacy Code Scan
- Set Call Tones
- Set Roger Beep On/Off
- Set Key Stroke On/Off

Privacy Codes

Your microTALK radio incorporates two advanced coded squelch systems that can help to reduce interference from other users on any given channel. CTCSS (Continuous Tone Coded Squelch System) provides 38 privacy codes and DCS (Digitally Coded Squelch) provides 83 privacy codes. This provides a total of 121 Privacy Codes. Either system can be used on all channels, but both systems cannot be used on the same channel at the same time.

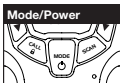


To successfully communicate using a privacy code, both the sending and receiving radios must be tuned to the same channel and to the same privacy code system (CTCSS or DCS) and privacy code number. Each channel will remember the last privacy code system and number you select.

The privacy code 00 is not a privacy code, but allows all signals to be heard on a channel that is set to 00 on both the CTCSS and DCS systems.

Using Your Radio

Set CTCSS Privacy Codes



To select a CTCSS privacy code:

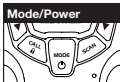
1. After selecting a channel, press the **Mode/Power** button until the **CTCSS** icon appears and the small numbers next to the channel number flash on the display.



If DCS is turned **on** at the channel selected, the display will flash the **CTCSS** icon and "OFF." To switch from DCS to CTCSS, press the **Channel Up** or **Channel Down** button while the display is flashing "OFF." The display will then show the small numbers flashing and you will then be able to proceed to step 2.

2. Press using the **Channel Up** or **Channel Down** button to select a privacy code. You can hold the **Up** or **Down** button for fast advance.
3. When your desired CTCSS privacy code is displayed, choose one of the following:
 - a. Press the **Mode/Power** 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.

Set DCS Privacy Codes



To select a DCS privacy code:

1. After selecting a channel, press the **Mode/Power** button until the **DCS** icon appears and the small numbers flash on the display (01 through 83).



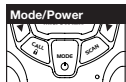
If CTCSS is turned **on** at the channel selected, the display will flash the **DCS** icon and "OFF." To switch from DCS to CTCSS, press the **Channel Up** or **Channel Down** button while the display is flashing "OFF." The display will then show the small numbers flashing and you will then be able to proceed to step 2.

2. Press using the **Channel Up** or **Channel Down** button to select a DCS privacy code. You can hold the **Up** or **Down** button for fast advance.
3. When your desired DCS privacy code is displayed, choose one of the following:
 - a. Press the **Mode/Power** 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.

Using Your Radio

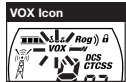
Voice Activated Transmit (VOX)

In **VOX** mode, your microTALK® radio can be used “hands-free,” automatically transmitting when you speak. You can set the **VOX** sensitivity level to fit the volume of your voice and avoid transmissions triggered by background noise.



To turn VOX mode on and off:

1. Press the **Mode/Power** button until the VOX icon flashes on the display. The current **On** or **Off** setting is displayed).
2. Press using the **Channel Up** or **Channel Down** button to turn **VOX On** or **Off**.
3. Choose one of the following:
 - a. Press the **Mode/Power** button to enter the selected **On** or **Off** setting and proceed to other functions.
 - b. Press the **Lock** button to enter the selected **On** or **Off** setting and return to **Standby** mode.



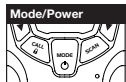
To set VOX sensitivity:

1. Press the **Mode/Power** button until the **VOX** icon flashed and the current sensitivity level is displayed.



The current VOX sensitivity level is displayed with letters “L” and a Number 1 through 5, with Number 5 being the most sensitive level and Number 1 being the least sensitive level.

2. Press using the **Channel Up** or **Channel Down** button to enter the selected setting and proceed to other functions.
3. Choose one of the following:
 - a. Press the **Mode/Power** button to enter the selected setting and proceed to other functions.
 - b. Press the **Lock** button to enter the selected setting and return to **Standby** mode.



Using Your Radio

Channel Scan

Your microTALK® radio can automatically scan channels.



To scan channels:

1. Press the **Scan** button until the **Scan** icon and the channel numbers appear on the display.
2. Press using the **Channel Up** or **Channel Down** button to begin scanning channels.



The radio ignores specific privacy codes while scanning.



The **Scan** icon will continue to be displayed when scan is **on**. Your radio will continue to scan all channels and stop if an incoming transmission is detected.

During scanning (while receiving an incoming transmission), you can choose from the following:

- a. Press and hold the **Talk** button to communicate on that channel. Your radio will remain on that channel and return to **Standby** mode.
- b. Press the **Channel Up** or **Channel Down** button to resume scanning channels.
- c. Press the **Lock** button to return to **Standby**.

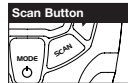
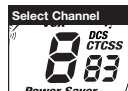
During scanning (while receiving an incoming transmission), you can choose from the following:

- a. Press and hold the **Talk** button to communicate on that channel/privacy code. Your radio will remain on that channel/privacy code and return to **Standby** mode.
- b. Press the **Channel Up** or **Channel Down** button to resume scanning privacy codes. If you do not press any button within 10 seconds, your radio will automatically resume scanning privacy codes.
- c. Press the **Lock** button to return to **Standby**.

Using Your Radio

Privacy Code Scan

Your microTALK radio can automatically scan the **Privacy Codes** (either CTCSS 01 through 38 or DCS 01 through 83) within one channel. Only one set of privacy codes (CTCSS or DCS) can be scanned at a time.



To scan privacy codes:

1. While in **Standby** mode, press the **Channel Up** or **Channel Down** button to choose the channel on which you wish to scan privacy codes.
2. Press the **Scan** button until either the CTCSS or the DCS icon appears on the display and the privacy code numbers flash on the display.
3. Press the **Channel Up** or **Channel Down** button to begin scanning privacy codes within the channel you selected.

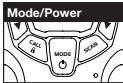
During scanning (while receiving an incoming transmission), you can choose from the following:

- a. Press and hold the **Talk** button to communicate on that channel/privacy code. Your radio will remain on that channel/privacy code and return to **Standby** mode.
- b. Press the **Channel Up** or **Channel Down** button to resume scanning privacy codes. If you do not press any button within 10 seconds, your radio will automatically resume scanning privacy codes.
- c. Press the **Lock** button to return to **Standby**.

Using Your Radio

Five Call Tone Settings

You can choose between five different **Call Tone** Settings to transmit a call alert.

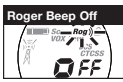
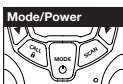


To change a **call tone setting**:

1. Press the **Mode/Power** button until the letter "C" and the current call tone number (01 through 5) is displayed. The current call tone will sound for three seconds.
2. Press the **Channel Up** or **Channel Down** button to hear the other call tone settings.
3. Choose one of the following:
 - a. Press the **Mode/Power** button to enter the new setting and proceed to other functions.
 - b. Press **Talk** or **Call/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.

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.



To turn roger beep on and off:

1. Press the **Mode/Power** button until the **Roger Beep** icon flashes. 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. Choose one of the following:
 - a. Press the **Mode/Power** button to enter the new setting and return to **Standby** mode.
 - b. Press the **Lock** button to enter the new setting and return to **Standby**.