

# CT 710

► Instruction guide



VHF/UHF TRANSCEIVER |



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## Content:

- CT 710 transceiver
- Antenna
- Li-ion battery pack 1600mAh
- Belt clip
- Desktop charger with wall adaptor
- Quick Guide

If any items are missing or have been damaged during shipment, please notify your MIDLAND dealer.

## Maintenance

Your transceiver is an electronic product of exact design and should be treated with care. The suggestions below will help you to fulfill any warranty obligations and to enjoy this product for many years.

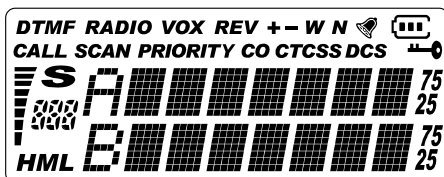
- Do not attempt to open the unit. Non-expert handling of the unit may damage it.
- Do not store the radio under the sunshine or in hot areas. High temperatures can shorten the life of electronic devices, and warp or melt certain plastics.
- Do not store the radio in dusty and dirty areas.
- Keep the radio dry. Rainwater or damp will corrode electronic circuits.
- If it appears that the radio diffuses peculiar smell or smoke, please shut off its power immediately and take off the charger or battery from the radio.
- Do not transmit without antenna.

# Main functions



- Dual band (VHF/UHF) displayed
- Frequency band: 144-146MHz & 430-440MHz (Rx / Tx).
- Working mode: UHF-VHF, VHF-VHF or UHF-UHF
- Output power: 5W VHF /4W UHF
- 128 stored channels
- Scrambler (levels can be programmed via software)
- Compander (programmable via software)
- VOX function
- 210 DCS codes and 50 CTCSS tones
- "VOICE" function
- SOS emergency function
- Channel spacing selectable between 25kHz and 12,5 kHz
- Following options can be shown on the display: channel name + channel number, channel number + frequency, channel number, or frequency
- Inverted frequency function
- Scan function
- FM radio receiver
- Frequency Step: 5 kHz, 6.25 kHz, 10 kHz, 12.5 kHz, 25 kHz,
- Selectable tx power: high (4-5W) or low (1W)
- Li-Ion battery pack 1600mAh
- Frequency Offset: 0-69.950 MHz
- Shift repeater
- "Busy channel lockout" frequency (programmable via software)
- Tx signal strength indicator on the display
- Low battery vocal indication
- Roger Beep tone at the beginning or end transmission
- TOT (Time out timer)
- Keypad lock
- Scan of frequencies with CTCSS/DCS
- Scan priority
- DTMF
- Reset of functions and channels
- 1750 / 1450 / 2315 tone to connect to repeaters (programmable via software)
- Jack for external speaker/mike: **2 Pin KENWOOD type**

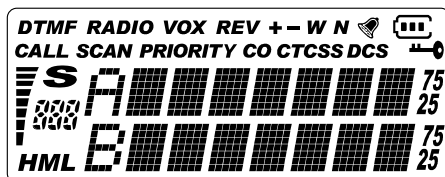
# Description of the device





## LCD display



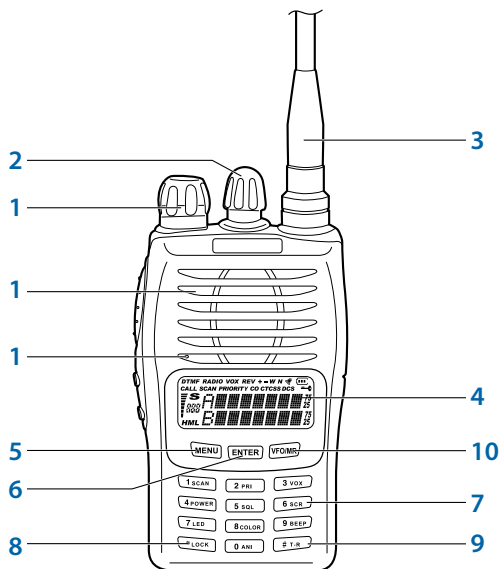
### Indicators:

|   |                              |
|---|------------------------------|
| <b>DTMF</b>   | DTMF codes                   |
| <b>RADIO</b>  | FM radio                     |
| <b>VOX</b>  | Vox function                 |
| <b>REV</b>  | Inverted frequency (reverse) |
| <b>+ -</b>  | Frequency offset +/-         |
| <b>W N</b>  | Channel spacing wide/narrow  |
|   | ID code activation           |
|  | Battery level                |
| <b>CALL</b>   | Emergency call               |
| <b>SCAN</b>   | Scan                         |
| <b>PRIORITY</b>   | Priority scan                |



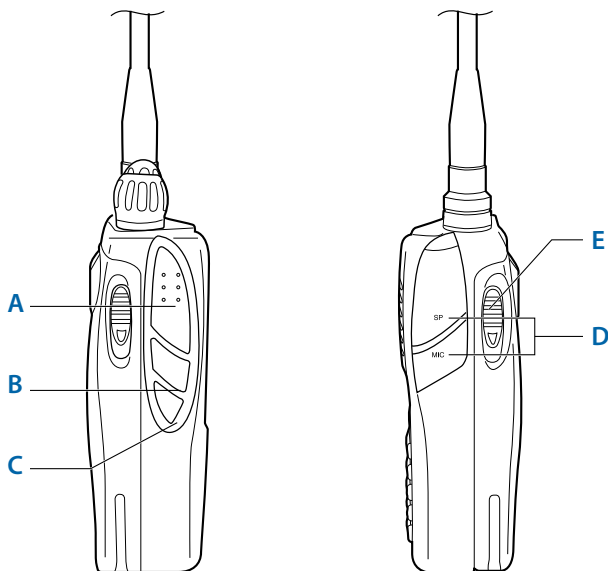
|   |   |
|---|---|
| <b>CO</b>   | Compander                                 |
| <b>CTCSS</b>  | CTCSS tone                                |
| <b>DCS</b>  | DCS code                                  |
|    | Keypad lock                               |
|    | RSSI - Potenza segnale ricevuto/trasmesso |
| <b>S</b>  | Scrambler                                 |
|  | Menu/channel number                       |
| <b>HML</b>  | High/middle/low power transmitting        |
| <b>A</b>  | Band A selected                           |
| <b>B</b>  | Band B selected                           |
|  | Frequency                                 |

## Transceiver



1. **Power switch/volume control**
2. **Encoder Knob**
3. **Antenna**
4. **LCD display**
5. **MENU**
6. **ENTER** (To enter the menu functions and confirm your selections)
7. **Alphanumeric keypad**
8. **LOCK** (keypad lock)
9. **T-R** (Frequency inversion activation)
10. **VFO/MR** (to change the radio modes)





- A **PTT (push to talk) key**
- B **Flank key1: A/B frequency selector - single or dual band -, FM radio**
- C **Flank key2: 1750/1450/2315 tone (programmable) or DTMF (programmable)**
- D **Ext. speaker/microphone jack**
- E **Battery latches**

# Basic operations

## Antenna

Insert the base of the supplied antenna into the SMA connector by rotating the antenna clockwise, then make sure that it has set down. Take out the antenna from the base by counter clockwise rotation until pull out it from SMA connector.

## Turning on and off the power

If you want to turn on the power, rotate the **PWR/VOL** (turning on) knob clockwise until a beep sound is heard. All icons and frequencies appear on the screen. (Due to the automatic squelch function, the speaker will not send out any sound before receiving a call). You can adjust your desired volume by turning the button. If you want to turn off the power, turn **PWR/VOL** knob in counter clockwise rotation until a beep is heard. All icons and frequencies disappear from the display.

## Monitoring function

If you hold down the **ENTER** key for two seconds and adjust your desired volume by **PWR/VOL** knob, you can directly hear a background noise without waiting to receive any signals. If you press the **PTT** key, the squelch will turn off.

## Transmitting

Press the **PTT** key then speak to the radio in ordinary tone. The transmitting indicator lights up red while the **PTT** key is pressed.

If you are too close to the microphone or your voice is too loud, the reception won't sound clear.

Release the **PTT** key so as to listen a response from your partner.

## Select Mode

You can select four different operative modes:

1. Dual-band mode
2. Single band mode
3. Channel mode

#### 4. Frequency mode.

Press **flank key1** for two seconds to enter or exit the dual-band or single-band mode.

### Dual-band mode

When the dual-waiting mode is selected, the display will show two bands A or B. When the band A is displayed, it means that frequency A can receive and transmit, but the other frequencies on the B band can only receive and cannot transmit. Same thing if the band B is displayed. To switch to A or B band press briefly **flank key1**.

Single-band mode

Press **flank key1** for two seconds. The display will show:

R 145.025  
T 145.025

Now the radio works in single band mode only. To switch from one band to another, press **flank key1**.

### Channel Mode

Press the **VFO/MR** key to switch to channel mode. Different options can be displayed:

- **Display the current channel number**

CH-001                      the current channel is the first channel.

- **Display the current channel name and channel name**

CH-001                      current channel name in use  
                                    (in this case channel 1).  
                                    The name is programmable via software.  
001                              current channel

- **Display the receive / transmit frequency and the current channel**

R 145.025                      receive frequency  
T 145.025                      transmit frequency  
001                              current channel.

## Frequency Mode

'SINGLE BAND'

R 430.02500

receive frequency

T 430.02500

transmit frequency

'DUAL BAND'

A 145.025

B 430.025

Press **flank key 1** for two seconds to enter or exit the dual-band or single-band mode.

## Radio Function

This radio comes with the FM function.

Press **MENU** and then **flank key 1 or 2** to enter the radio status.

To select your favorite radio frequency to listen directly, turn the **encoder**.

Radio stations can be programmed by software and push the **VFO/MR** to switch to the programmed radio frequencies.

To exit the radio **encoder**, press the **MENU** and then **flank key 1 or 2**.

## The Flank Key Definition

By using the programming software, you can define the flank key 2 as:

1. DTMF code call
2. send 1450Hz code
3. send 1750Hz code
4. send 2315Hz code

When defined as one of the above, push the **flank key** to activate the selected function.

## DTMF Code

This radio has the DTMF function.

In the transmitting status, press the numbers on the keypad or the flank keys and the corresponding DTMF code will be issued. The DTMF code issued by the key buttons are as follows:

**MENU** stands for **A**, **ENTER** stands for **B**, **VFO/MR** stands for **C**, **FM** stands for **D**.

MENU → 

VFO/MR → 

ENTER → 

Tasto laterale 2 → 

## DTMF programmed by software

(see the instructions of the Programming software)

Once the optional call signaling DTMF function is programmed on the desired channels, press the **flank key2** and the display will show DTMF.

Now you can input the 8-digit DTMF codes.

If the input number is wrong and you want to change it, rotate the **encoder**.

Counterclockwise rotation delete one by one, clockwise to exit the DTMF function. Input your desired number, press **PTT** key to make a call. When your partner receives the correct code, the programmed DTMF function or the radio identification will be done.

## ANI PTT-ID Operation

ANI means Automatic Numbering Identification.

You can set an automatic number identifier visible from the radio's display of your partner each time you send a call signal. This function must be activated on both radios and must be programmed by software (see the instructions of the Programming software).

## Shortcuts Operation

|                 |  |
|-----------------|--|
| <b>MENU + 0</b> | ANI setting                            |
| <b>MENU + 1</b> | scan mode                              |
| <b>MENU + 2</b> | priority scan mode (only in VFO mode)  |
| <b>MENU + 3</b> | VOX Sensitivity setting                |
| <b>MENU + 4</b> | output power setting                   |
| <b>MENU + 5</b> | SQ adjust                              |
| <b>MENU + 6</b> | scrambler on/off setting               |
| <b>MENU + 7</b> | backlight on/off setting               |
| <b>MENU + 8</b> | backlight color setting                |
| <b>MENU + 9</b> | beep on/off                            |
| <b>MENU + #</b> | receive and transmit CTCSS/DCS setting |
| <b>MENU + *</b> | S-D +/- potential difference setting   |

## Cloning Function

This function allows to copy all data/settings (programming) from a radio to another one, without using PC. Turn off both radios and connect the optional cloning cable to the radio 'master' (radio to be copied) and to the radio 'slave' (radio to program). Turn on the radio 'master' while keeping pressed the PTT button at the same time. The display will show CLONE?. Press PTT once. Turn on the radio 'slave' within 10 seconds. The display of the radio 'slave' will show PC and the led on the front will start flashing green. At the end of this procedure, the radio 'slave' will be rebooted and will turn on with the new programmed data. During the programming, the radio 'master' will show CLONE on the display and the green led will blink. When all data have been copied, END will appear on the display. Repeat the same procedure for further programming procedures.

# Menu function

## Menu Operation

To enter the Menu functions, follow this procedure:

Press **MENU** to enter the menu mode.

Turn the **encoder** to select the menu.

Press **ENTER** into the menu mode to set the desired function: you can press the number key directly, but for some functions (such as TOT, Voice, Frequency offset) you have to rotate the **encoder** to find the desired option. Press **ENTER** to confirm the selected setting.

When you have completed all the setting, press **VFO/MR** to exit the **Menu** mode.

## Menu Function List

| Menu | display | Instruction   |
|------|---------|---|
| 1    | SCAN    | Channel or frequency scan                                 |
| 2    | PRI     | Priority Channel Scan                                     |
| 3    | VOX     | VOX Sensitivity   |
| 4    | POW     | Transmission power  |
| 5    | SQL     | Squelch threshold setting                                 |
| 6    | SCRM    | Scrambler   |
| 7    | LED     | Backlight On/Off setting                                  |
| 8    | LIGHT   | Backlight color select                                    |
| 9    | BEEP    | Beep  |
| 10   | ANI     | Automatic number identification programmable via software |
| 11   | KEYBO   | Keypad lock   |
| 12   | TOT     | Time Out Timer  |
| 13   | SCANS   | Scan selection  |
| 14   | VOICE   | Voice prompts   |
| 15   | DIFFR   | Offset  |
| 16   | C-CDC   | Receiving and transmitting CTCSS/DCS                      |
| 17   | R-CDC   | Receiving CTCSS/DCS                                       |
| 18   | T-CDC   | Transmitting CTCSS/DCS                                    |
| 19   | S-D     | Potential difference                                      |
| 20   | STEP    | Channel stepping  |
| 21   | N/W     | Narrow/wide bandwidth                                     |
| 22   | ROGER   | Roger Beep  |



---

**Setting contents**

---

CHANNEL OR FREQUENCY SCAN

---

PRIORITY CHANNEL SCAN

---

OFF~9

---

HIGH/LOW

---

0~9

---

OFF/ON

---

OFF/ON/AUTO

---

BLUE/ ORANGE/PURPLE

---

OFF/ON

---

OFF/ON

---

MANUAL/AUTO

---

OFF~270

---

CO/TO/SE

---

OFF/ENG

---

0-38.000(VHF) - 0-69.950(UHF)

---

OFF-254.1/D023-D754 I/N

---

OFF-254.1/D023-D754 I/N

---

OFF-254.1/D023-D754 I/N

---

+/-/0

---

5K/10K/6.25K/12.5K/25K

---

WIDE/NARROW

---

ROG ON/ROG OFF

---

# Menu Function introduction and setting

## Emergency Alarm

There are two types of alarms:

1. Press **flank key 2** and **flank key 1** at the same time: the radio will go to emergency alarm and will send out, at the same time, the alarm sound and **ANI** to your partner (if programmed). The alarm stays active till the **PTT** is pressed.
2. By means of the programming software, an emergency channel can be specially set. To activate it, press briefly **#T/R**: now you can transmit on the selected emergency frequency. To exit, press **VFO/MR**.

## Setting Reverse Frequency Function

In channel/Frequency mode, hold down **#** for two seconds until **"T\*R?"** appears. When **"REV"** is displayed on the LCD, the Reverse frequency function is enabled. To deactivate this function, hold down **#** for two seconds.

## Scanning

The Scan version is very useful to monitor the channels before transmitting.

### Select scan type

Press **MENU** and rotate the **encoder** to item **13**, the screen will display **"013 SCANS?"**.

Press **ENTER**: now you are into the scanning mode selection.

You have three types of scanning to choose amongst: **TO**, **CO**, **SE**.

#### Time-operated scan (TO)

When the radio detects a signal it will stop scanning; the status will remain about 5 seconds but the radio will continue to scan even if the signal is still there.

#### Carrier-operated scan (CO)

The radio will stop scanning when detects a signal and remains on the same frequency until the signal is missing.

#### Search Scan (SE)

When the radio detects a signal, it remains on that channel and stop

scanning.

### Frequency or channel scan

In channel /frequency mode, press **MENU** and **1SCAN**: the radio will scan from current channel through all the channels and, whenever any signal is detected, the radio will stop scanning for 8 seconds. Then press **PTT** to transmit: it will then continue to scan after 8 seconds.

Press any key except **PTT** to end scanning: the radio will return to the channel or frequency in use before starting the scan function.

### Priority channel scan

Priority scan means that the radio starts scanning from the priority channel first and then scans the other channels. For example, if the priority channel is 1, the scan will be 1-2;1-3;1-4;.....

*Procedure:*

In channel mode ,press **MENU** and **2PRI**: the radio will scan priority channel, whenever any signal is detected, the radio will suspend the scan for 8 seconds, then press **PTT** key to transmit. It will then continue to scan after 8 seconds.

Press any key except **PTT** key to end scanning.

## VOX Sensitivity Setting

This function allows hand-free communications: you activate the transmission when you speak to the microphone without pressing the **PTT** button. It stops transmitting automatically once you stop speaking. The sensitivity can be adjusted in different levels that can be set upon your needs.

*Procedure:*

In Frequency mode, press **MENU** and **3VOX** keys: the screen will display "000 VOX?".

Press **ENTER** and the display will show "VOX OFF".

To adjust the desired sensitivity level, press any number key (0-9) on the keypad or rotate the **encoder**.

To confirm your selection press **ENTER** and **VFO/MR** to exit.

## Power Setting (high or low)

With this function you can select the power level, you can choose between **High** (H) and **Low** (L).

In channel/frequency mode, press **MENU** and **4PWR**: the screen will display "004 POW?".

Press **ENTER** and the display will show "POW L" (low power) or "POW H" (high power): turn the **encoder** knob to select the desired power level.

To confirm your selection press **ENTER** and **VFO/MR** to exit.

## Squelch Threshold Setting

This function turns on the Squelch when the signal is strong; the Squelch will stay off when the signal is weak. Set the same DCS codes of your group and turn on the squelch.

By setting the level too high, you may not receive the weak signals; while by setting it too low you may receive noises or undesired signals.

### NOTE:

This transceiver has ten (0~9) available levels: 0 means that the Squelch is turned on. From level 1 to level 9 you will have different levels of noises reduction. The higher is the level, the louder will be the Squelch.

#### *Procedure:*

Press **MENU** and **5SQL**: the screen will show "005 SQL?".

Press **ENTER** and the display will show "SQL 5" (Factory Settings "SQL 5").

Press any number (0-9) on the keypad or rotate the **encoder** to select the desired squelch level.

Press **ENTER** as confirmation and press **VFO/MR** to exit.

## Scrambler Setting

The scrambler is designed to protect communications.

This feature prevents parties of other networks from hearing and understanding voice communications.

#### *Procedure:*

Press **MENU** and **6SCR** key and the display will show "006 SCRM?".

Press **ENTER**: you will see on the display "ON" (scrambler on), "OFF" (scrambler off).

Turn the **encoder** to select on/off and press **ENTER** to confirm; press **VFO/MR** to exit.

## Backlight On/Off Setting

In channel/frequency mode, press **MENU** and **7LED**.

The screen will show "007 LED?". Press **ENTER** and you will see on the display "ON" (backlight on). Turn the **encoder** to select "ON" "OFF" "AUTO".

Press **ENTER** to confirm, and **VFO/MR** to exit.

## Backlight Color Selection

In channel/frequency mode, press **MENU** and **8COLOR**: the display will show "008 LIGHT?".

Press **ENTER** and by turning the **encoder**, you have the color options: "ORANGE", "PURPLE", "BLUE".

Press **ENTER** to confirm the desired backlight color and **VFO/MR** to exit.

## Beep On/Off

If you enable this function, every time a button is pressed, you will hear a Beep tone.

In channel/frequency mode, press **MENU** and **9BEEP**: "009 BEEP?" will appear on the display.

Press **ENTER**: "ON" means beep on, "OFF" means beep off; turn the **encoder** to choose one of the two options. Press **ENTER** to confirm and **VFO/MR** to exit.

## Keypad Lock Function Setting

This function is useful to lock the keypad and so, avoid any accidental pressure of the buttons.

Press **MENU** and turn the **encoder** to item 11: the screen will display "011 KEYBO?".

This transceiver has 2 types of Keypad lock available: Auto-lock and Manual-lock.

Press **ENTER**: the display will show "AUTO" (keypad lock turns on automatically).

Turn the **encoder** to select "MANUAL/AUTO", then press **ENTER** to confirm and **VFO/MR** to exit.

You can also press **\*LOCK**: the display will show "LOCK?".

If you want to lock the keypad hold down **\*LOCK** for 2 seconds. To unlock the keypad, press **\*LOCK** again for 2 seconds: the keypad will be unlocked.

## Transmitting TOT Setting

The TOT function is used to prevent a too long transmission. This function temporarily blocks transmissions if the radio has been used beyond the maximum time permitted. Once reached the preset timer, the radio will be forced in reception mode.

This unit can set OFF/30-270 seconds continued transmitting limit, it will send out warning sound when the limit transmitting time is coming.

*Procedure:*

Press **MENU** and turn the **encoder** to item 12: "012 TOT?" will be displayed. Press **ENTER**: the display shows "OFF" (TOT off). Turn the **encoder** to choose "OFF~270", then press **ENTER** to confirm and **VFO/MR** to exit.

## Voice Function (only in English)

With this function, you activate a voice that informs about any operation/selection you are doing.

Press **MENU** and turn the **encoder** to menu item 14: the display will show "014 VOICE?". Press **ENTER**.

Turn the **encoder** to choose "ENG"; press **ENTER** as confirmation and **VFO/MR** to exit.

## OFFSET DIFFR

This function is used to determine the difference (Potential Difference) between sending frequency and receiving frequency.

In frequency mode, press **MENU** and turn the **encoder** to item 15; the display will show "015 DIFFR?". Press **ENTER** to set the frequency with the keypad or by rotating the **encoder**.

The VHF range is 00.000-38.000(MHz) and the UHF range is 00.000-69.950(MHz).

Press **ENTER** to confirm and **VFO/MR** to exit.

This function can only be enabled in VFO mode. The maximum offset depends on the selected frequency range.

## Selecting the CTCSS tones and DCS codes

Set the CTCSS tones to ignore unwanted signals from other users of the same frequency.

CTCSS tones enable the radio to communicate with the users that are tuned on the same channel and have set the same CTCSS tone.

The CTCSS tones available are 50, while DCS codes are 105I and 105N.

#### *Procedure:*

Press **MENU** and **#T-R** keys, the display will show "016 C-CDC?".

Press **ENTER** and turn the **encoder** to select desired CTCSS (OFF-254.1).

Press **\*** to switch CTCSS and DCS. The DCS range is OFF-D754N.

Press **ENTER** to confirm and **VFO/MR** to exit.

### Setting the receiver CTCSS/DCS (R-CDC)

Press **MENU** and turn the **encoder** to select "017 R-CDC?".

Press **ENTER** and turn the **encoder** to select desired CTCSS (OFF-254.1).

Press **\*** to switch CTCSS and DCS. The DCS range is OFF-D754N.

Press **ENTER** to confirm and **VFO/MR** to exit.

### Setting the transmitting CTCSS/DCS (T-CDC)

Press **MENU** and turn the **encoder** to select "018 T-CDC?".

Press **ENTER** and turn the **encoder** to select desired CTCSS (OFF-254.1).

Press **\*** to switch CTCSS and DCS. The DCS range is OFF-D754N.

Press **ENTER** to confirm and **VFO/MR** to exit.

#### **Note:**

when you set the Menu of DCS codes, press **[#]** and you can select OFF-D754I (Inverted).

### +/- Frequency shift direction (for communications through repeaters)

This function can only be enabled in VFO (frequency) mode.

In frequency mode, press **MENU** and **\***: the display will show "019 S-D?".

Press **ENTER** and the display shows "S-D 0" (same frequency); turn the **encoder** and you can select "S-D+" or "S-D-". Press **ENTER** to confirm and **VFO/MR** to exit.

### Selecting the Frequency Step

This function can only be enabled in VFO (frequency) mode.

In frequency mode, press **MENU** and turn the **encoder** to item 20: "020 STEP?" will be displayed.

Press **ENTER** and turn the **encoder** to select the frequency stepping: **5k, 10k, 6.25k, 12.5k, 25k**. Press **ENTER** to confirm and **VFO/MR** to exit.

## Wide/Narrow Band

In channel/frequency mode, press **MENU** and turn the **encoder** to item 21: "021 N/W?" will be displayed. Press **ENTER** and the display will show "WIDE" (wide band).

Turn the **encoder** to select "NARROW/WIDE" and confirm by pressing **ENTER**. Press **VFO/MR** to exit.

## Roger Beep

In channel/frequency mode, press **MENU** and turn the **encoder** to item 22: "022 ROGER?" will be displayed.

Press **ENTER** and you will see on the display "ROGER" (roger beep off); turn the **encoder** to select "OFF /ON"; press **ENTER** to confirm and **VFO/MR** to exit.

## To Save/delete a channel

- **Saving a channel**

In frequency mode select the desired frequency or any other items (like CTCSS, DCS, potential difference, frequency difference direction). Press **MENU** and then **VFO/MR** keys.

The channel to store blinks on the left bottom of the display. Turn **encoder** or select the number (from 1 to 128).

Press **VFO/MR** key to complete the channel storage, and return to the state of the frequency mode.

- **Deleting a channel**

*Delete one programmed channel*

Turn off the radio. Turn it on again while keeping pressed the **VFO/MR** key at the same time.

"001 DEL?" will be displayed. Turn the **encoder** to delete the channel number (from 1 to 128).

Select the channel number that must be deleted (rotate **encoder**).

Press the **ENTER** key and the display shows: "001 YES?".

If you really want to delete this channel, press **ENTER** to confirm; if you don't want to delete it, press **VFO/MR** to exit.

- **Reset**

*Delete the parameters of frequency mode (Reset VFO)*

Turn on the radio while keeping pressed the **MENU** key at the same



time. The display will show "RESET?".

Press the **ENTER** key, the LCD will show "VF0?".

Press **ENTER** to confirm and all the settings of frequency mode will be deleted.

*Delete all contents of frequency mode and channel mode (Reset FULL)*

Turn on the radio while keeping pressed the **MENU** key at the same time. The display will show "RESET?".

Press the **ENTER** key, the LCD will show "VF0?".

Rotate the **encoder** and choose "FULL?", then press **ENTER** as confirmation. All settings of channel and frequency mode will be deleted.

## CTCSS tone table: 50 tones

| No | Freq.(Hz) | No | Freq.(Hz) | No | Freq.(Hz) |
|----|-----------|----|-----------|----|-----------|
| 01 | 67.0      | 18 | 118.8     | 35 | 183.5     |
| 02 | 69.3      | 19 | 123.0     | 36 | 186.2     |
| 03 | 71.9      | 20 | 127.3     | 37 | 189.9     |
| 04 | 74.4      | 21 | 131.8     | 38 | 192.8     |
| 05 | 77.0      | 22 | 136.5     | 39 | 196.6     |
| 06 | 79.7      | 23 | 141.3     | 40 | 199.5     |
| 07 | 82.5      | 24 | 146.2     | 41 | 203.5     |
| 08 | 85.4      | 25 | 151.4     | 42 | 206.5     |
| 09 | 88.5      | 26 | 156.7     | 43 | 210.7     |
| 10 | 91.5      | 27 | 159.8     | 44 | 218.1     |
| 11 | 94.8      | 28 | 162.2     | 45 | 225.7     |
| 12 | 97.4      | 29 | 165.5     | 46 | 229.1     |
| 13 | 100.0     | 30 | 167.9     | 47 | 233.6     |
| 14 | 103.5     | 31 | 171.3     | 48 | 241.8     |
| 15 | 107.2     | 32 | 173.8     | 49 | 250.3     |
| 16 | 110.9     | 33 | 177.3     | 50 | 254.1     |
| 17 | 114.8     | 34 | 179.9     |    |           |

## DCS: Digital code 105 tones

| No | DCS code | No | DCS code | No | DCS code | No  | DCS code |
|----|----------|----|----------|----|----------|-----|----------|
| 01 | 023      | 31 | 165      | 61 | 356      | 91  | 627      |
| 02 | 025      | 32 | 172      | 62 | 364      | 92  | 631      |
| 03 | 026      | 33 | 174      | 63 | 365      | 93  | 632      |
| 04 | 031      | 34 | 205      | 64 | 371      | 94  | 645      |
| 05 | 032      | 35 | 212      | 65 | 411      | 95  | 654      |
| 06 | 036      | 36 | 223      | 66 | 412      | 96  | 662      |
| 07 | 043      | 37 | 225      | 67 | 413      | 97  | 664      |
| 08 | 047      | 38 | 226      | 68 | 423      | 98  | 703      |
| 09 | 051      | 39 | 243      | 69 | 431      | 99  | 712      |
| 10 | 053      | 40 | 244      | 70 | 432      | 100 | 723      |
| 11 | 054      | 41 | 245      | 71 | 445      | 101 | 731      |
| 12 | 065      | 42 | 246      | 72 | 446      | 102 | 732      |
| 13 | 071      | 43 | 251      | 73 | 452      | 103 | 734      |
| 14 | 072      | 44 | 252      | 74 | 454      | 104 | 743      |
| 15 | 073      | 45 | 255      | 75 | 455      | 105 | 754      |
| 16 | 074      | 46 | 261      | 76 | 462      |     |          |
| 17 | 114      | 47 | 263      | 77 | 464      |     |          |
| 18 | 115      | 48 | 265      | 78 | 465      |     |          |
| 19 | 116      | 49 | 266      | 79 | 466      |     |          |
| 20 | 122      | 50 | 271      | 80 | 503      |     |          |
| 21 | 125      | 51 | 274      | 81 | 506      |     |          |
| 22 | 131      | 52 | 306      | 82 | 516      |     |          |
| 23 | 132      | 53 | 311      | 83 | 523      |     |          |
| 24 | 134      | 54 | 315      | 84 | 526      |     |          |
| 25 | 143      | 55 | 325      | 85 | 532      |     |          |
| 26 | 145      | 56 | 331      | 86 | 546      |     |          |
| 27 | 152      | 57 | 332      | 87 | 565      |     |          |
| 28 | 155      | 58 | 343      | 88 | 606      |     |          |
| 29 | 156      | 59 | 346      | 89 | 612      |     |          |
| 30 | 162      | 60 | 351      | 90 | 624      |     |          |

## Table of solutions

| PROBLEM  | SOLUTION   |
|--|--|
| The radio doesn't switch on                          | The battery may be exhausted. Recharge it.<br>Uncorrected installation. Re-install it.                         |
| Battery recharge doesn't last long                   | The battery pack is over. Change it with a new one.<br>Battery pack is not completely charged.                 |
| Reception led turns on but no sound heard            | Make sure the volume is not too low<br>Make sure to have the same CTCSS and DCS codes of your group            |
| The keypad doesn't work                              | The keypad lock function hasn't been enabled.  |
| In standby, the radio transmits without pressing PTT | VOX level has been set too low. Adjust it.   |
| Some functions cannot be stored                      | Ensure to be on Channel mode. In Channel mode some functions can be set only through the programming software. |
| Reception of other group signal while transmitting   | Select another CTCSS/DCS for your group  |

# Technical Specification

## General

|                       |                          |
|-----------------------|--------------------------|
| Frequency range       | 144-146MHz / 430-440MHz  |
| Operative temperature | -20° +55°C               |
| Operating voltage     | 7.4V 1600mAh             |
| Operating mode        | mono band / dual band    |
| Dimensions            | 95(H) x 55(L) 31(D) mm   |
| Weight                | 230gr (antenna included) |
| Antenna impedance     | 50Ω                      |
| Duty cycle            | 5/5/90                   |

## Transmitter

|                         |                             |
|-------------------------|-----------------------------|
| Frequency stability     | ±2.5ppm                     |
| Output power            | VHF: 5W / UHF: 4W           |
| Max frequency deviation | ±5KHz                       |
| Audio distortion        | ≤ 3%                        |
| Adjacent Channel Power  | within European legal terms |
| Spurious Radiation      | within European legal terms |
| Occupied Bandwidth      | within European legal terms |

## Receiver

|                              |                             |
|------------------------------|-----------------------------|
| RF sensitivity               | <0.2μV                      |
| Audio distortion             | ≤ 3%                        |
| Audio response               | 300Hz ÷ 3KHz                |
| Adjacent Channel Selectivity | within European legal terms |
| Intermodulation Rejection    | within European legal terms |
| Blocking                     | within European legal terms |

*Specifications are subject to change without notice.*

Prodotto o importato da:

**CTE INTERNATIONAL s.r.l.**

Via. R.Sevardi 7- 42124 Reggio Emilia Italia

**www.cte.it - www.midlandradio.eu**

L'uso di questo apparato può essere soggetto a restrizioni nazionali. Prima dell'uso leggere attentamente le istruzioni. Se il prodotto contiene batterie: non gettare nel fuoco, non disperdere nell'ambiente dopo l'uso, usare gli appositi contenitori per la raccolta.

Produced or imported by:

**CTE INTERNATIONAL s.r.l.**

Via. R.Sevardi 7 42124 Mancasale Reggio Emilia Italy

Imported by:

**ALAN - NEVADA UK**

Unit 1 Fitzherbert Spur Farlington Portsmouth Hants.

P06 1TT - United Kingdom

**www.nevada.co.uk**

The use of this transceiver can be subject to national restrictions. Read the instructions carefully before installation and use. If the product contains batteries: do not throw the battery into fire. To disperse after use, throw into the appropriate containers.

Importado por:

**ALAN COMMUNICATIONS, SA**

C/Cobalt, 48 - 08940 Cornellà de Llobregat Barcelona España Tel: +34 902 384878 Fax: +34 933 779155

**www.midland.es**

El uso de este equipo puede estar sujeto a la obtención de la correspondiente autorización administrativa. Lea atentamente las instrucciones antes de usar el equipo. si el producto contiene pilas o baterías no las tire al fuego ni las disperse en el ambiente después de su uso, utilice los contenedores apropiados para su reciclaje.

Vertrieb durch:

**ALAN ELECTRONICS GmbH**

Daimlerstraße 1K - D-63303 Dreieich Deutschland

**www.alan-electronics.de**

Die Benutzung dieses Handfunkgerätes ist von den landesspezifischen Bestimmungen abhängig. Vor Benutzung Bedienungsanleitung beachten. Bei Verwendung von Batterien beachten Sie bitte die Umweltbestimmungen. Batterien niemals ins offene Feuer werfen, und nur in dafür vorgesehene Sammelbehälter entsorgen.

**WWW.MIDLANDRADIO.EU |**

