CT990

DUAL BAND VHF / UHF TRANSCEIVER

› INSTRUCTION GUIDE

SPECIAL FEATURES

10W
Ultra high
output power

IP67
certified

Dead man
function

MIDLAND®

Index

The package includes

- CT990 transceiver
- Belt clip
- Antenna
- Li-Ion battery pack 2800mAh
- Desktop charger
- Wall adaptor
- Wrist belt

If any item is missing, please notify your Midland dealer.

Maintenance

Your Two Way Radio 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.
- Do not use detergents, alcohol, solvents or abrasives to clean the radio. Just use a soft clean cloth.

Main features

- Dual band (VHF/UHF) displayed
- Frequency band (to set according to country/area of use): 144-146 MHz & 430-440MHz (Rx / Tx).
- Working mode: UHF-VHF, VHF-VHF or UHF-UHF
- Ultra high output power: 10W VHF / UHF
- IP67 certified
- High performance antenna
- Ultra clear voice
- Dead Man function
- DQT function (private conversations)
- 257 memory channels
- Wide colorful LCD display
- Li-Ion battery pack 2800mAh
- Repeater tones
- Individual/group selective calls
- Side tone: end transmission noise muffler
- VOX function
- 83 + 83 DCS codes and 38 CTCSS tones
- Voice annoucement "VOICE"
- Selectable channel spacing 25kHz/12,5 kHz
- Channel number, channel number+frequency, channel name displayed
- Reverse frequency
- Scan
- FM radio
- Frequency step: 0.5Khz, 2.5KHz, 5 kHz, 6.25 kHz, 10 kHz, 12.5 kHz, 25 kHz, 37.5KHz, 50 kHz or 100kHz
- Selectable output power: high (10W) or low (5W)
- Frequency offset
- Shift repeater
- "Busy channel lock out" function
- Output power level indicator on the display
- Low battery voice indicator
- Roger Beep
- TOT (time out timer)
- Keypad lock
- Function/channel reset

Main controls and parts of the radio

Radio buttons
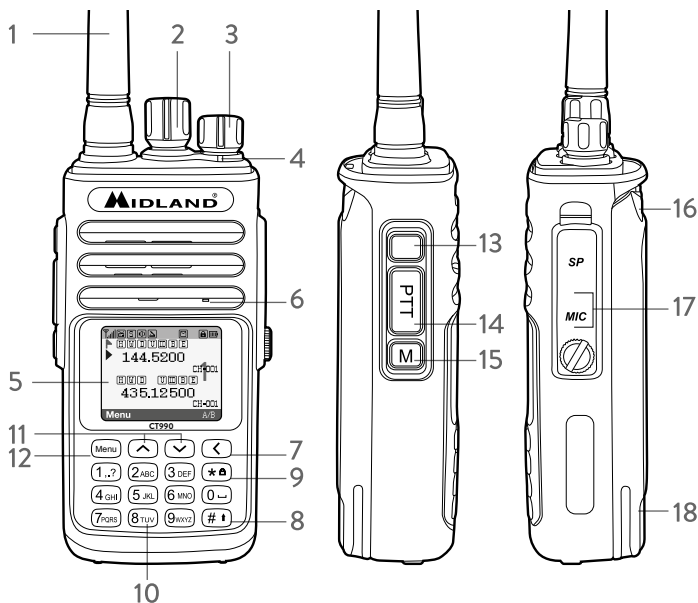
1. **Antenna**
2. **Encoder:** rotate it to select the desired channel
3. **Power / Switch / Volume control:** Rotate to turn on/off CT990 and to adjust the volume
4. **Led:** transmission (red) / **reception** (green)
5. **LCD Display**
6. **Microphone**
7. **< Back:** press to exit the Menu and functions. **A/B** (appears on the display): push to select the desired frequency (VHF or UHF) in the main or secondary display.

8. **VFO/MR:** push to switch from channel to frequency mode or viceversa.
9. ***/🔒:** press for 2 seconds to lock the keypad
10. **Alphanumerical keypad**
11. **▲/▼ keys:** push to select functions / Menu
12. **Menu:** press to enter the Menu functions and to confirm your selections.
13. **Side-key CALL:** Selective call/Transmission on the secondary frequency. This control is useful to send out the selective call or the 1750Hz repeater tone.
14. **PTT**
15. **Side key MON:** Keep pressed to activate the Monitor feature .
16. **Holes for the belt clip**
17. **MIC/SP:** external speaker/mike jack 2 Pin Kenwood.
18. **2800mAh Li-Ion battery oack.**

LCD Display
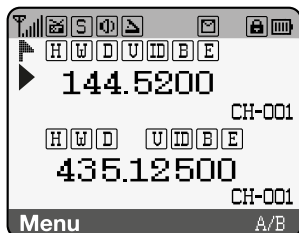
▶	This icon indicates where the radio is operating, in which frequency or function. The arrow is displayed close to the frequency band in use.
144.5200	Frequency set in the main display (this frequency is only indicative)
435.12500	Frequency set in the secondary display (indicative frequency)
CH-001	Memory channel
Menu	Menu
A/B	icon relevant to Back control
📶	Operating band signal
📻	FM radio
S	Battery save function enabled
🔊	Beep on
⅃	Man Down function activated
✉	DTMF message received
🔒	Keypad lock activated
▥	Battery level indicator

▶	Operating band
SCAN	Scan function activated
H	High power indicator; in case the low power is selected, the display will show L
W	Bandwidth. W = wide; N = narrow
D	DCS code enabled; or "C " will appear on the display if a CTCSS tone is activated
U	VOX function enabled
ID	identification code
B	Busy channel lockout function activated
E	End tone (end transmission noise muffler) activated

Working modes available

CT990 has 2 operating modes available: **Frequency mode** and **Channel mode**.
In channel mode, the display can show:

- Channel number
- Frequency
- Channel name

Switching from frequency mode to channel mode can be manually done by pressing the # key or through the optional programming software.

Battery recharge - How to use the desktop charger

Insert the AC plug into the 240V socket. The charger's led starts blinking, indicating that it is in stand-by mode.
The desktop charger can charge either the complete radio or the battery pack only.
Insert the transceiver (swtiched off) or the battery pack into the proper charger cradles.
The led turns on red indicating that the battery pack is being charged. Once the led turns green, the battery pack is fully charged.
A complete recharge requires 5/6 hours, depending on the battery level.

NOTE: If the radio is fully discharged, the red led will be blinking for 10/20 minutes, then it will be steady red. Once the led turns green, the battery is totally charged.

Functions and Menu

CT990 displays 2 frequency bands at the same time: a "Master frequency" for transmission and it is indicated on the display with an arrow ► close to it and a "Secondary frequency" for receiving only.

In both Channel and Frequency modes, press ◄ to choose the master frequency between the two displayed.

Menu list

The **Menu** list can change depending on the mode you selected.
Some functions are included in channel mode only; they will be described at the end of this chapter.

Frequency Mode Menu
1. squelch level
2. tx power
3. step
4. shift dir
5. offset
6. bandwidth
7. rx qt/dqt
8. tx qt/dqt
9. rx/tx qt/dqt
10. dqt mode
11. seek qt
12. seek dqt
13. vox function
14. vox level
15. vox delay
16. tot
17. roger beep
18. tx priority
19. rx save
20. scan mode
21. dual watch
22. key tone
23. voice
24. fm interrupt
25. Back light
26. brightness
27. id verification
28. ptt id
29. busy lock
30. lock mode
31. side tone
32. power on tone
33. power on display
34. power on msg
35. voltage
36. man down

Channel Mode Menu
1. squelch level
2. tx power
3. bandwidth
4. rx qt/dqt
5. tx qt/dqt
6. rx/tx qt/dqt
7. dqt mode
8. seek qt
9. seek dqt
10. vox function
11. vox level
12. vox delay
13. tot
14. roger beep
15. tx priority
16. rx save
17. scan mode
18. scan list
19. scan priority
20. dual watch
21. key tone
22. voice
23. fm interrupt
24. Back light
25. brightness
26. id verification
27. ptt id
28. busy lock
29. lock mode
30. side tone
31. power on tone
32. power on display
33. power on msg
34. ch display
35. ch name
36. voltage
37. man down

Squelch level (Squelch-Level) - Menu Utilities 1

This function turns on the Squelch when the signal is strong; the Squelch will stay off when the signal is weak.

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 10 (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.

In standby mode, press **Menu Utilities + 1**; the screen displays "*Squelch level*". Press **Menu** to enter the function. Press the ▲/▼ buttons or rotate the encoder knob to select the desired Squelch level, then press **Menu** to confirm. To return to the standby mode press **Back**.

High/low power selection (TX Power) - Menu Utilities 2

You can choose between 10W (**High**) or 5W (**Low**) output power.
In frequency mode, press **Menu Utilities + 2**; the display will show "*TX Power*". Press **Menu** to enter the function. Press the ▲/▼ keys or rotate the encoder to select **High** or **Low** power, then press **Menu** to confirm your selection.
To return to the standby mode press **Back**.

Step di Frequenza (Step) - Menu Utilities 3

In Standby mode, press **Menu Utilities + 3**; the display will show "*STEP*".
Press **Menu** to enter the function and then the ▼/▲ keys to select the desired frequency step.
Confirm your selection by pushing **Menu**.
To return to standby mode press **Back**.
CT990 has 10 frequency steps available: 0.5KHz, 2.5KHz, 5.00KHz, 6.25KHz, 10.00KHz, 12.50KHz, 25.00KHz, 37.5KHz, 50.00KHz and 100KHz.

Frequency shift direction (ShiftDIR) - Menu Utilities 4

In Standby mode press **Menu Utilities + 4**; "*SHIFTDIR*" will appear on the display.
Press **Menu** to enter the function. Use the ▼/▲ keys or rotate the encoder to select **+/-/OFF**, then push **Menu** again for confirmation.
To return to standby mode press **Back**.

+   **(positive offset)** the tx frequency is higher than rx frequency
-       **(negative offset)** the tx frequency is lower than rx frequency.
OFF   frequency shift direction not enabled.

NOTE: if the frequency offset is out of the allowed frequency band, the radio cannot transmit. So please make sure that the frequency offset and the rx frequency are within the allowed frequency range.

Frequency offset (Off-Set) - Menu Utilities 5

The offset is the frequency difference between transmission and reception.
The frequency offset of this radio is between 0 and 99.995 MHz.
In standby mode, press **Menu Utilities + 5**. The screen will display "*OFFSET*".
Press **Menu** to enter the function. Press the ▲/▼ buttons or rotate the encoder to select the frequency offset or you can manually digit the offset with the keypad. Press **Menu** to confirm.
To return to standby mode press **Back**.
With the frequency offset, it is possible to transmit and receive in two different frequencies.

Wide/narrow bandwidth (Bandwidth) - Menu Utilities 6

In standby mode, press **Menu Utilities + 6.** The display will show "*NARROW-WIDE*".
Press **Menu** to enter the function. Press the ▲/▼ keys or rotate the encoder to select **Wide/Narrow** (25/12,5KHz) bandwidth, then press **Menu** to confirm.
To return to the standby mode press **Back**.

Receiving with CTCSS/DCS (RX QT/DQT) - Menu Utilities 7

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

In frequency mode, press **Menu Utilities + 7**. The screen displays "RX QT/DQT".

Press **Menu** to enter the function. Press the ▲/▼ buttons or rotate the encoder to turn off this function or to select a CTCSS tone from 67.0Hz to 254.1Hz.

Press **Menu** to confirm and **Back** to return to standby mode.

NOTE: To quickly access the tones, press 1 for CTCSS, 2 for DCS (normal) and 3 for DCS (inverted).

Transmitting with CTCSS tones (TX QT/DQT) - Menu Utilities 8

In Standby mode press **Menu Utilities + 8**; the display will show "*TX QT/DQT*".
Press **Menu** to enter the function. Push the ▼/▲ controls or turn the encoder to disable the function (OFF), to select a CTCSS/DCS tone between 67.0Hz and 254.1Hz or between D023N and D754I.
Confirm by pushing **Menu** and **Back** to return in stand-by condition.

Receiving and transmitting with the same CTCSS/DCS tone - Menu Utilities 9

In Standby mode push **Menu Utilities + 9**; "*RX/TX QT/DQT*" will appear on the display.
Press **Menu** to enter the function. Press ▼/▲ or rotate the encoder to disable the function (OFF) , select a CTCSS/DCS tone included between 67.0Hz and 254.1Hz or between D023N and D754I.
Push **Menu** for confirmation and then **Back** to return in standby condition.

DQT mode - Menu Utilities 10

The DQT mode guarantees privacy in your conversations.
To use this function, also the radio of the other part must be supplied with DQT and must be tuned on the same DCS code.
In Standby mode press **Menu Utilities + 10** to enter DQT.
By default Normal is activated. Select Special to enable privacy in your conversations.
Press **Menu** to confirm the setting and then **Back** to return in standy condition.

Scan of frequencies with CTCSS (Seek QT) - Menu Utilities 11

The function allows to scan the frequencies with CTCSS tone enabled.
In standby mode, press **Menu Utilities + 11**; "*SEEK QT*" will appear on the display.
Press **Menu** and the scan of CTCSS tones will start.

NOTES
The function cannot be activated when the radio is set in Channel mode.
The Scan will start only when the receiving band will detect a signal.

Scan of frequencies with DCS (Seek DQT) - Menu Utilities 12

This function allows to scan the frequencies with DCS code enabled.
In standby mode, press **Menu Utilities + 12**; the display will show "*SEEK DQT*".
Press **Menu** and the scan of DCS codes will start.

NOTES:
The function cannot be activated when the radio is set in Channel mode.
The Scan will start only when the receiving band will detect a signal.

VOX (VOX function) - Menu Utilities 13

The VOX feature allows hands-free conversations without using the PTT button. Just speak towards the microphone and the communication will be automatically activated.
To enable or disable the VOX, follow these steps:
in Standby mode press **Menu Utilities + 13**; the display will show "*VOX FUNCTION*".
Press **Menu** to enter the function. Push the ▼/▲ controls or turn the encoder to select **ON** or **OFF**. Confirm by pushing **Menu** and return to standby mode by pressing **Back**.

VOX sensitivity (VOX Level) - Menu Utilities 14

In this **Menu** it is possible to select the VOX sensitivity level.
In Standby mode press **Menu Utilities + 14**; the display will show "*VOX LEVEL*".
Press **Menu** to enter the function. Push the ▼/▲ keys or rotate the encoder to select the desired sensitivity level (1-9); then push **Menu** again for confirmation. To return to standby mode, press **Back**.

NOTE: Level 1 is the least sensitive, while level 9 is the most sensitive.

When the radio is in Scan or FM radio mode, the VOX feature is not enabled.

VOX Delay - Menu Utilities 15

There's a brief delay between when you finish talking and the radio returns to tx mode; this delay can be adjusted.

In standby mode press **Menu Utilities + 15**; "*VOX DELAY*" will appear on the display.

Press **Menu** to enter the function. The display will show different options: select the desired delay time with the ▼/▲ buttons or rotate the encoder.

Push **Menu** for confirmation and return to standby mode by pushing **Back**.

TOT function (Time Out Timer) - Menu Utilities 16

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. When a transmission exceeds the pre-set time, you will hear a warning sound to remind you that the transmission time is almost finished.

The transmission time can be set in 60 levels with 15 seconds each (between 15 and 600 seconds).

In standby mode, press **Menu Utilities + 16**; the screen will display "*TOT*".

Push **Menu** to enter the function. Press the ▲/▼ buttons or rotate the encoder to select the desired TOT level, then press **Menu** to confirm.

To return to the standby mode press **Back**.

Roger Beep, end transmission tone (ROGER BEEP) - Menu Utilities 17

Roger Beep can be enabled/disabled:

OFF: Roger Beep disabled

ON: Roger Beep tone at the end of transmission

In Standby mode press **Menu Utilities + 17**; the display will show "*ROGER BEEP*".

Press **Menu** to enter the function.

Select **ON/OFF** with the ▼/▲ controls or rotate the encoder. Push **Menu** to confirm your selection and then **Back** to return in standby condition.

TX priority - Menu Utilities 18

TX priority allows to select the frequency band to use for transmission.
You can choose between two options:

BUSY: the radio transmits on the latest band which has received a signal
EDIT: transmission on the band currently in use.

The option set by default is **EDIT**.

In Standby mode press **Menu Utilities + 18**; the display will show "*TX PRIORITY*".

Press **Menu** to enter the function.

Select the desired option with the ▼/▲ controls or rotate the encoder. Push **Menu** to confirm your selection and then **Back** to return in standby condition.

Power save (RX SAVE) - Menu Utilities 19

To save battery power, this function can turn off the radio when no signal is received.

In Standby mode push **Menu Utilities + 19**; "*RX SAVE* " will be displayed.

Press **Menu** to enter the function.

Press the ▲/▼ buttons or rotate the encoder to select **ON/OFF**, then press **Menu** to confirm.

To return to the standby mode press **Back**.

SCAN (SCAN MODE) - Menu Utilities 20

CT990 is supplied with 3 Scan modes:

CO **Carrier-operated Scan**
   Whenever a signal is detected, the radio will stop scanning. It will resume to scan once the signal is no longer heard.

TO **Time - operated Scan**
   The scan will stop when the radio detects a signal on a busy channel; the scan will resume after 5 seconds even though the signal is still present.

SE **Search Scan**
   The radio will stop scanning on a busy channel and exit the scan mode.

In Standby mode press **Menu Utilities + 20**; the display will show "*SCAN MODE*".

Push **Menu** to enter the function.

Press ▼/▲ or turn the encoder to select the desired scan mode. Push **Menu** to confirm your selection and then **Back** to return in standby condition.

To start scanning, select **Menu/Scan**.

Dual Watch function (DUAL WATCH) - Menu Utilities 21

Dual watch allows to monitor two channels at the same time.
To activate/deactivate the function:
In Standby mode press **Menu Utilities + 21**; the display will show "*DUAL WATCH*".
Push **Menu** to enter the function. Press ▼/▲ or rotate the encoder to select **ON/OFF**.
Confirm your selection with the **Menu** button and press **Back** to return to standby mode.

Beep tone (BEEP) - Menu Utilities 22

When this feature is enabled, everytime a button is pressed you will hear a beep tone.
In Standby mode press **Menu Utilities + 22**; the display will show "*KEY TONE*".
Push **Menu** to enter the function. To activate/deactivate the beep tone press ▼/▲ or turn the encoder, then confirm your selection by pushing **Menu**. To return to standby mode, push **Back**.

Voice function (VOICE) - Menu Utilities 23

In Standby mode press **Menu Utilities + 23**; the display will show "*VOICE*".
Push **Menu** to enter the function. Press ▼/▲ or rotate the encoder to select **ON/OFF.**
Confirm your selection with the **Menu** button and press **Back** to return to standby mode.

FM radio interruption (FM INTERRUPT) - Menu Utilities 24

When this function is enabled, as soon as CT990 detects a signal in VHF/UHF the FM radio will be interrupted to listen to VHF/UHF frequencies.
FM radio will resume some seconds after the signal disappears.
In Standby mode press **Menu Utilities + 24**; the display will show "*FM INTERRUPT*".
Push **Menu** to enter the function. Press ▼/▲ or rotate the encoder to select **OFF/ON**; Confirm your selection with the **Menu** button and press **Back** to return to standby mode.

Display Backlight (Backlight)- Menu Utilities 25

In Standby mode press **Menu Utilities + 25**; "*BACKLIGHT*" will appear on the display.

Push **Menu** to enter the function. Press ▼/▲ or rotate the encoder to select **ON/OFF**, then **Menu** to confirm your selection. Push **Back** to return to standby condition.

Backlight brightness (Brightness) - Menu Utilities 26

With this function you can set the brightness level of the display backlight.
You can choose amongst 6 levels; level 1 is the least bright.
Follow these steps:
In standby mode press **Menu Utilities + 26**; the display will indicate "*BRIGHTNESS*".
Press **Menu** to enter the function.
Push ▼/▲ or turn the encoder to select the desired brightness level.
Confirm with the **Menu** button and push **Back** to return to standby mode.

ID (ID VERIFICATION) - Menu Utilities 27

The ID identification feature allows to identify the parts that are transmitting or being received; this code will be shown in the display of the radio.
ID is a code and of course, has to be set from both users.
In standby mode press **Menu Utilities + 27**; the display will show "*ID VERIFICATION*".
Press **Menu** to enter the function.
Push ▼/▲ or turn the encoder to select the desired brightness level.
Confirm with the **Menu** button and push **Back** to return to standby mode.

Transmitting the ID code (PTT-ID) - Menu Utilities 28

With this function you can decide when sending the ID code while the radio is in tx mode.
The possible options are 3:
BOT   the code is sent when you press the PTT
EOT   the code is sent when the PTT is released
BOTH   the code is sent when you press and release the PTT.
Press **Menu Utilities + 28**; the display will show "*PTT-ID*".
Press **Menu** to enter the function.
Select the desired option by pushing ▼/▲ or rotate the encoder.
Confirm with the **Menu** button and push **Back** to return to standby mode.

Busy channel lockout (BUSY LOCK) - Menu Utilities 29

When this function is enabled, it prevents other radios' interferences.

If the selected channel is busy, when you press the PTT the radio cannot transmit.

In standby mode press **Menu Utilities + 29**; the display will show "***BUSY LOCK***".

Press **Menu** to enter the function.

Push ▼/▲ or rotate the encoder to select ON or OFF.

Confirm the setting by pushing **Menu** and press **Back** to return to standby mode.

Keypad lock (LOCK MODE) - Menu Utilities 30

The keypad lock can be activated in two modes: Automatic and Manual.

In Standby mode press **Menu Utilities + 30**; "***KEYPAD LOCK***" will appear on the display.

Press **Menu** to enter the function. Push the ▼/▲ keys or rotate the encoder to select **ON/OFF**; press **Menu** again to confirm your selection.

Return in standby condition by pushing **Back**.

The keypad lock can be manually activated/deactivated through the keypad: keep pressed * 🔒.

Side tone (Side Tone) - Menu Utilities 31

The side tone (end tone) allows to eliminate the bothersome tone heard at the end of transmission.

Side tone can be enabled/disabled.

In Standby mode press **Menu Utilities + 31**; the display will show "***SIDE TONE***".

Press **Menu** to enter the function.

Push the ▼/▲ keys or rotate the encoder to select **ON/OFF**. Press **Menu** again to confirm your selection.

Press **Back** to return in standby condition.

Power on tone (Power on Tone) - Menu Utilities 32

In this **Menu** you set the tone you will hear when the radio is turned on.
The options available are 3:
NONE (default message)
TONE (beep tone)
VOICE (voice indicating that the radio is switched on)
In Standby mode push **Menu Utilities + 32**; the display will show "*POWER ON TONE*".
Push **Menu** to enter the function. Press the ▼/▲ controls or rotate the encoder to select the desired option and confirm by pushing **Menu**. To return in standby condition, press **Back**.

Power on image (POWER ON DISPLAY) - Menu Utilities 33

With this function you set the image displayed at the turning on of the radio.
Choose amongst the following options:
NONE   (no logo)
VOLTAGE   (the power voltage is momentarily displayed)
MESSAGE   (welcome message)
PICTURE   (Midland brand. Default setting)
MODEL NAME (the model name of the radio will be displayed)
In Standby mode press **Menu Utilities + 33**; the display will show "*POWER ON DISPLAY*".
Push **Menu** to enter the function.
Press ▼/▲ or rotate the encoder to choose the desired option and then press **Menu** for confirmation.
To return in standby condition, push **Back**.

Welcome message (POWER ON MSG) - Menu Utilities 34

With this **Menu** you can customize the welcome message that appears on the display when the radio is switched on.
In Standby mode press **Menu Utilities + 34**; the display will show "*POWER ON MSG*".
Press **Menu** to enter the function. Now you can edit your message with the keypad buttons.
Confirm the message by pushing **Menu**. Press **Back** to return to standby mode.

Battery voltage (VOLTAGE) - Menu Utilities 35

When this feature is enabled, the display will show the battery level.

In Standby mode press **Menu Utilities + 35**; "*VOLTAGE*" will appear on the display.

Press **Menu** to enter the function. The current battery voltage will be displayed.

Push **Menu** again for confirmation and then **Back** to return in standby condition.

Man down (MAN DOWN) - Menu Utilities 36

The Man Down function constantly monitors the radio status; if it is tipped on its side for more than a pre-set time, this can indicate that a person may have fallen.

This feature is using a tilt-sensor inside the radio which can detect and alarm in case of accidental fall or sudden injury and is very useful in many situations, especially if the user is alone or isolated.

When this function is activated, as soon as the radio is positioned in a different angle than usual, it will beep to warn other people tuned on the same frequency.

In detail:

to prevent false alarms, at first CT990 will beep to warn the user that the alarm signal will be sent if the radio won't be positioned upright again within a few seconds;

for the following 10 seconds the alarm will beep to alert other users that the person is in trouble; then the radio will switch to rx mode again.

Enabling/disabling the feature:

in Standby mode press **Menu Utilities + 36**; the display will show "*MAN DOWN*".

Push **Menu** to enter the function. Select **ON/OFF** with the ▼/▲ keys or by rotating the encoder.

Press **Menu** again to confirm the setting and then **Back** to return to standby condition.

Functions enabled in channel mode only

Adding a channel to scan (SCAN LIST) - Menu Utilities18

It it possible to add a channel to the scan channel list. To enable it, you must first set the radio to CH mode.
In Standby mode press **Menu Utilities + 18**; the display will show "*SCAN-LIST*".
Push **Menu** to enter the function. Press ▼/▲ or turn the encoder to activate and confirm by pushing **Menu**.
To return in standby condition, press **Back**.

Setting the priority channel (SCAN PRIORITY) - Menu Utilities 19

The priority channel can be set with the optional programming software.
The SCAN PRIORITY feature is related to the scan function; the options available are two: OFF/ON.
In Standby mode press **Menu Utilities + 19**; "*SCAN PRIORITY*" will be displayed.
Press **Menu** to enter the function. With the ▼/▲ keys or by turning the encoder you can select the channel; then confirm with **Menu**. Push **Back** to return in standby condition.
The radio will alternately scan the channels and the priority channel.

Working modes (CH-Freq + CH-Display) - Menu Utilities 34

CT990 has 4 working modes available:
· **Frequency mode (FREQ)**
   In channel mode the following modes can be set:
   · *Channel mode (CH).*
   · *Frequency + channel number (CH FREQ)*
   · *Channel name (NAME)*
· **In Standby condition** press **#** to select the desired working mode.

Channel name (CHName) - Menu Utilities 35

To set the channel name, you can use 26 letters (A-Z) and 10 numbers (0-9).
The channel name is composed of 8 characters max.
If you leave an empty space, the character will be blank.
Procedure:
Press the # button to set the channel mode.
Select the desired channel and press **Menu Utilities + 35 + Menu**. The display will show 8 empty spaces "_". Edit the desired channel name with the keypad and confirm with the **Menu** key. Press **Back** to exit the function and return to standby mode. The screen displays the channel name and its number.
To delete a character press **T**.

Reset

CT990 has 3 types of Reset: FULL, VFO and CH.

RESET FULL all functions, including channels, will return to the default settings.

RESET VFO all settings, excluding channels, will return to the default settings.

RESET CH only memory channels will be reset.

Procedure:
with the radio switched off, keep pressed **PTT** and **Menu** at the same time and turn it on.
Press **Menu** to enter the *DATA-RESET* section. The 3 possible options will be displayed: *FULL, VFO, CH*.
Select the desired type of reset and push **Menu**. Push it again for confirmation.

Troubleshooting

PROBLEM	SOLUTION
The radio doesn't switch on	The battery may be exhausted. Recharge it.
	Uncorrected installation. Re-install it.
Battery recharge doesn't last long	The battery pack is over. Change it with a new one. Battery pack is not completely charged.
Reception led turns on but no sound heard	Make sure the volume is not too low. Make sure to have the same CTCSS and DCS codes of your group
The keypad doesn't work	Keypad lock function hasn't been enabled
Reception of other group signal while transmitting	Change another CTCSS/DCS for your group

Technical specifications

Frequency bands	144-146MHz & 430-440MHz (Rx / Tx)
Memory channels	257
Power supply	Li-Ion battery pack 7.4V/2800 mAh
Operating temperature	-25°C to + 55°C
Working mode	monoband/dualband
Output power	10W VHF/ UHF
Modulation	F3E(FM)
Max frequency deviation	≤ ±5KHz
Spurious emissions	< -60dB
Frequency stability	±2.5 ppm
Rx sensitivity	< 0.2uV
Audio output power	≥ 500mW
Dimensions	140 x 60 x 35mm
Weight	310g

Specifications are subject to change without notice.

WARNING: *Direct plug-in ac/dc power supply must be used for disconnecting the transceiver from the mains; the desktop charger must be positioned close to the unit and easily accessible.*

INFORMAZIONE AGLI UTENTI: Ai sensi dell'art. 13 del decreto legislativo 25 luglio 2005, n.151 "Attuazione delle Direttive 2002/95/CE, 2002/96/CE e 2003/108/CE, relative alla riduzione dell'uso di sostanze pericolose nelle apparecchiature elettriche ed elettroniche, nonché allo smaltimento dei rifiuti". Il simbolo del cassonetto barrato riportato sull'apparecchiatura indica che il prodotto alla fine della propria vita utile deve essere raccolto separatamente dagli altri rifiuti. L'utente dovrà, pertanto, conferire l'apparecchiatura giunta a fine vita agli idonei centri di raccolta differenziata dei rifiuti elettronici ed elettrotecnici, oppure riconsegnarla al rivenditore al momento dell'acquisto di una nuova apparecchiatura di tipo equivalente, in ragione di uno a uno. L'adeguata raccolta differenziata per l'avvio successivo dell'apparecchiatura dismessa al riciclaggio, al trattamento e allo smaltimento ambientalmente compatibile contribuisce ad evitare possibili effetti negativi sull'ambiente e sulla salute e favorisce il riciclo dei materiali di cui è composta l'apparecchiatura. Lo smaltimento abusivo del prodotto da parte dell'utente comporta l'applicazione delle sanzioni amministrative di cui al dlgs. n.22/1997 (articolo 50 e seguenti del dlgs. n.22/1997).

All articles displaying this symbol on the body, packaging or instruction manual of same, must not be thrown away into normal disposal bins but brought to specialised waste disposal centres. Here, the various materials will be divided by characteristics and recycles, thus making an important contribution to environmental protection.

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