CT3000

DUAL BAND VHF / UHF MOBILE TRANSCEIVER

› INSTRUCTION GUIDE

SPECIAL FEATURES

25W Output Power

Flip function 180°

3W Extra loud speaker

MIDLAND®

Index

What's in the box

- 1 CT3000 transceiver with power supply cable;
- 1 microphone;
- 1 mounting bracket;
- Fixing screws;
- 1 protection fuse;

If any item is missing, please verify with your Midland dealer.

Maintenance

CT3000 is an electronic product of exact design and should be treated with care. The suggestions here below will help you to fulfill any warranty obligations and to enjoy this product for many years.

- Do not attempt to open the radio for any reason! The radio's precision mechanics and electronics require experience and specialized equipment; for the same reason, the radio should under no circumstances be realigned as it has been calibrated for maximum performance. Unauthorized opening of the transceiver will void the warranty.
- 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.
- Do not transmit without antenna.
- Do not attempt to configure the transceiver while driving; it is very dangerous.

Main features

- VHF/UHF multi-band
- Operating modes: UHF-VHF, VHF-VHF or UHF-UHF
- Frequency bands (to set according to the country where you operate): 144-146 MHz & 430-440MHz (Rx / Tx).
- VHF and UHF bands displayed
- Channel number or channel number + frequency displayed
- Selectable output power: high (25W) middle (10W) or low (5W)
- Multi-color TFT display
- Flip display 180°
- Power supply 12,6V +/- 10%
- Metal chassis
- Programmable buttons
- Memory channel scan
- Digital automatic squelch adjustable in different levels
- Scan
- Dual watch
- Roger beep
- 200 memory channels
- TOT (time out timer)
- Adjustable backlight
- Automatic turning on/off
- Keypad lock
- Microphone with multi-function keypad and with RJ45 connector
- Software programmable (through the optional programming kit PRG-3000 cod. C1352)
- 1750/2100/1000/1450Hz repeater access tones
- 104 + 104 DCS codes + 51 CTCSS tones
- Bandwidth selectable in 3 different levels 25 kHz/20 kHz/12,5 kHz
- Frequency inversion
- Frequency STEP: 2,5 kHz-5 KHz-6,25 kHz-10 kHz-12,5 kHz-20 kHz-25 kHz-30 kHz-50 kHz
- Frequency offset and offset direction selection
- Tx power level shown in the display

Installing the radio

Installation

Safety and convenience are the primary considerations for mounting any piece of mobile equipment. All controls must be readily available to the operator without interfering with the movements necessary for safe operation of the vehicle. To install the transceiver select a location that will minimize danger to your passengers and yourself while the vehicle is in motion; the location should be well-ventilated and shielded from direct sunlight.

1. Install the mounting bracket in the vehicle using the supplied self-tapping screws and flat washers.
2. Mount the radio onto the bracket into the vehicle using the supplied screws and tighten them properly considering the vibrations caused by the vehicle.

Power supply

Be sure the transceiver is off.
On the rear of the radio you will see a bi-color power supply cable with a fuse holder on the red cable.
This cable is supplied with a connector suitable for the connection to the radio and vehicle's battery or to an optional cigarette lighter plug.
In the direct-voltage power supply, it is very important to observe the polarity even if the unit is protected against the accidental inversion.
Red = positive pole (+)
Black = negative pole (-)
The same colors are present on the battery and in the fuse box of the car.
Correctly connect the cable terminal to the battery.
Be sure to use a 12V vehicle battery that has sufficient current capacity. Never connect the transceiver to a 24V battery.

1. Connect the DC power cable to the regulated DC power supply and ensure that the polarities are correct.
2. Connect the DC power cable to the transceiver.

ATTENTION: To obtain best performances we recommend installing the radio in a position with a good air circulation.

Replacing fuses

If the fuse blows, try to find a cause before replacing it. If necessary, contact a service center for assistance.
The fuse on the rear of the radio has a current rating of 10A

10A 250V FUSE

IN-LINE FUSE HOLDER
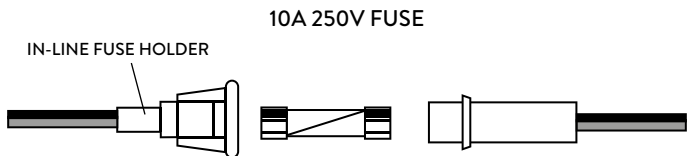
Installing the microphone

Plug-in the microphone into the proper socket on the front panel of the radio. If you prefer, the microphone can also be hung up thanks to its holder supplied in the package.

Installing an antenna:

- Place the antenna as high as possible
- The longer is the antenna, the better will be the performance
- If possible, mount the antenna in the centre of the surface
- Keep the antenna cable away from noise sources, such as the iginition switch, gauges, etc
- Prevent cable damage during antenna installation

Attention: *To prevent damage, never operate your radio without connecting a proper antenna. A periodical control of the cable and of the S.W.R. is recommended.*

External speakers

If you use external speakers, the impedance must be 4 Ω or 8 Ω. The external speaker jack accepts a 3.5mm mono plug.

Controls and display description
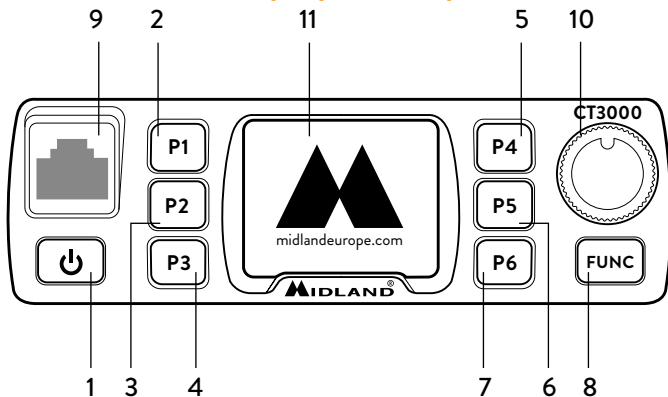
1. **Power ON/OFF control.** Keep pressed to turn on/off the unit. Briefly press to activate/deactivate the speaker.
2. **P1 programmable key**
3. **P2 programmable key**
4. **P3 programmable key**
5. **P4 programmable key**
6. **P5 programmable key**
7. **P6 programmable key**
8. **FUNC key:** function key. By pressing this button you will activate the secondary functions shown on the front keys of the radio. Keep it pressed to enter the radio's menu
9. **MIC:** microphone connector. Plug-in the microphone or the programming cable (optional) into this jack.
10. **Main knob:** keep it pressed to lock/unlock the keypad.
11. In normal conditions turn the knob to adjust the volume: clockwise to increase it, counter-clockwise to reduce it. When you enter the menu, rotate it to look through the menu options; inside the menu rotate it to change the settings and then briefly press it for confirmation.
12. **Multicolor graphic display.**

Display
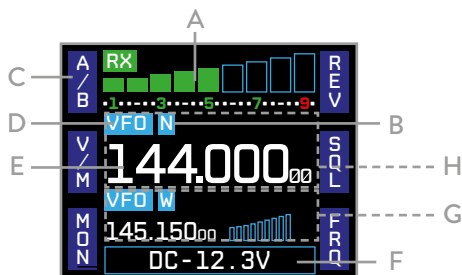
A. **Received signal strength indicator or power level indicator** (in tx mode)
B. **W/N:** selected bandwidth. W: wide, N: narrow.
C. **Functions associated to P1-P6 keys**
D. **Channel or band indicator**
E. **Channel or frequency in use**
F. **Here are located the main parameters** that can be selected through the function keys. By default the power voltage is indicated
G. **Secondary display:** second frequency in use and its signal strength
H. **Main display:** indicates the main frequency in use

Rear panel
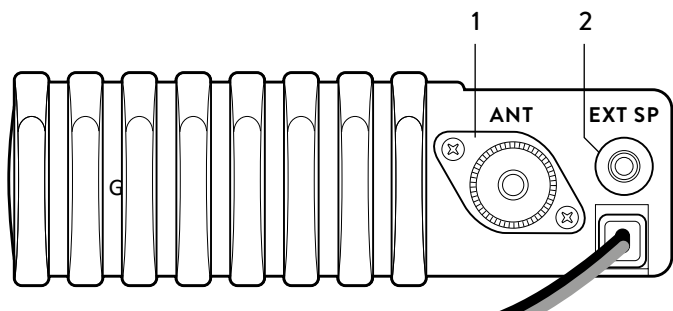
1. **ANT:** SO239 antenna connector.
2. **EXT SPK:** external speaker mike.

Microphone
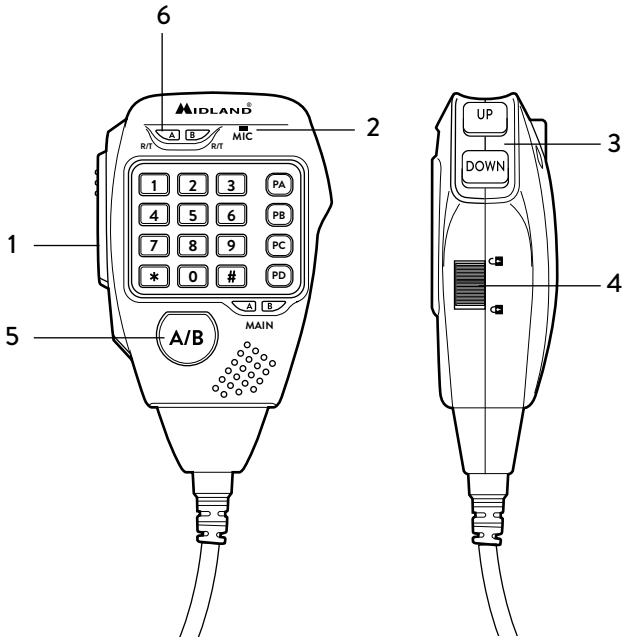
1. **PTT**: push to transmit
2. **MIC**: microphone location
3. **UP/DOWN:** push to change the frequency or to look through the settings
4. **KEY LOCK:** Keypad lock
5. Band selection control
6. Band indicator led

Main operations

CT3000 is equipped with 6 programmable buttons: P1-P2-P3-P4-P5-P6. They can be customised upon your needs; every button can be associated up to 2 functions in 2 different menu at the same time.
By default the two menu are set as shown in the following charts:

Menu 1:

P1	*A/B*	P4	*REV*
P2	*V/M*	P5	*SQL*
P3	*MON*	P6	*FRQ*

Menu 2:

P1	*DIR*	P4	POW
P2	*SFT*	P5	*CDT*
P3	*SCN*	P6	*BND*

The functions associated to controls P1-P2-P3 will appear on the left side of the display, while those activated with controls P4-P5-P6 will be displayed on the right.
It is possible to change the functions associated to the P buttons through the menu or the optional programming software.
To change the menu press **FUNC**.

Turning on and off

Push ⏻ key for 1 second to switch on the radio. Push it again for 2 seconds to turn it off.

Volume adjustment

Rotate the **main knob** clockwise to increase the volume and counter-clockwise to reduce it.

Squelch adjustment

Squelch is used to mute the speaker when no signals are present. With the squelch level set correctly, you will hear sound only while actually receiving a signal. The higher the squelch level selected, the stronger must be the signals in order to hear them.

To adjust the squelch press **P5** of menu 1 or the control associated to *SQL* function. Select the desired level by turning the main knob. You can choose amongst 9 different levels: the most sensitive level is 1, while 9 is the least sensitive one.

To confirm your selection push the **main knob** or wait for 10 seconds.

Selecting a band

The LCD display shows two frequencies: main band (A) and sub-band (B).
Press **A/B** (on the mike or on the radio) to select the desired band, **A** or **B**. Everytime you press **A/B**, the band in use will be displayed in foreground and with bigger font/characters.

Selecting the VHF or UHF band

In frequency mode it is possible to choose the operating band.
Keep pressed the **A/B** button to switch from VHF to UHF band and viceversa.

Switching from frequency to channel mode

When the transceiver is in stand-by mode, push the control associated to *V/M* function to switch from frequency to channel mode. The mode will be changed on the frequency in use (A or B).

In frequency mode *VFO* will appear on the display, while in channel mode the display will show *CH*.

It is possible to use the frequency mode in band A and channel mode in band B or viceversa.

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Frequency/channel adjustment

In frequency mode you can change the frequency number with the main knob: clockwise to increase the value and counter-clockwise to reduce it.

Each "clic" you hear from the knob corresponds to an increase or decrease of the frequency (it is the same as the set *STEP*).

The desired frequency can also be manually set thanks to numeric keypad on the microphone. If the frequency does not match with the current frequency *STEP*, it will be automatically selected the nearest available frequency.

In channel mode it is possible to change the channel by turning the main knob.

Note: it is possible to adjust the frequency or the channel through the **UP/DOWN** *keys on the microphone.*

Frequency STEP selection:

The correct frequency *STEP* allows you to select the exact rx frequency through the **main knob** or the **UP/DOWN** buttons (if they are set for the frequency mode).

The following frequency steps can be selected: 2,5 kHz - 5 KHz - 6,25 kHz - 10 kHz - 12,5 kHz - 20 kHz - 25 kHz - 30 kHz - 50 kHz.

To set the desired frequency *STEP* press **FUN** for 2 seconds, select the option *FUNCTION MENU* and then *STEP*. Now select the desired frequency *STEP* by turning the **main knob** or the **UP/DOWN** controls.

To confirm push **PTT** or wait for 5 seconds.

Receiving

When the radio is turned on it immediately receives incoming signals; the received signal strength is shown with the green bar in the upper side of the display.

Make sure you set the proper frequency mode (VHF or UHF)!

Note: To immediately mute the speaker, press ⏻. ***Audio: MT*** *will appear in the lower part of the display. Press* ⏻ *again to enable the audio; now the display will show* ***AUDIO: Esc***.

Transmitting

Before transmitting on the frequency or channel you have set, please check they are not busy.
Press **PTT** and speak towards the microphone.
While you are transmitting, *TX* will appear on the display as well as the indicator of the output power signal strength. Release the **PTT** to receive.

Output power selection

You can set three different output power levels: **high** (25W), **middle** (10W), **low** (5W).
Press **POW** on the front panel of the radio. Everytime **POW** is pressed, the output power indicator in the lower part of the display will show: *POW:HI* (high power) , *POW:LO* (low power) , *POW:MI* (middle power).
The output power can be selected also with the microphone: press PC on the mike; at every pressure, the output power will change.

Note: you can set different output powers for the two bands A and B.

Keypad lock

To lock the keypad keep pressed the **main knob** for 2 seconds. *Key Lock* will appear in the lower side of the display.
Now all controls (radio and mike) will be locked except **PTT**.
To unlock the keypad keep presssed the **main knob** for 2 seconds again.

Menu settings

The menu allows you customize the radio functions and channels.

With **FUNC** key and **main knob** you can browse the menu and change its parameters.

The **main knob** in fact is not only a selector but also lets you enter the menu and confirm the settings.

Menu access

1. Push **FUNC** button on the front panel for 2 seconds;
2. To select the desired function rotate the main knob;
3. Press the **main knob** to enter the option of the selected function;
4. Rotate the knob or press **UP/DOWN** on the mike to selecte the desired option;
5. Confirm by pushing the knob.
6. To return back to the previous menu level press **P3** - *BACK* on the radio.
7. Push **P3** - *BACK* or wait for 5 seconds to exit the menu and to return to stand-by condition.

Menu:

- **FUNC MENU** (to change the general settings of the radio)

  1. BEEP
  2. STEP
  3. DSP
  4. SQL
  5. VOL
  6. PWD
  7. SCM
  8. SCT
  9. AOP
  10. RDW
  11. DIM
  12. TOT
  13. APO
  14. RPTone
  15. DIR
  16. SPK
  17. RTDF
  18. RST

- **CHAN MENU** (to modify the settings of the channel in use)

  1. RCDT
  2. TCDT
  3. POW
  4. 5TENC
  5. T-DEC
  6. SIGNAL
  7. BAND
  8. REV
  9. TALK
  10. OFFSET
  11. LOCK
  12. TX
  13. OWNID

- **MINI KEY** (To customize P1-P6 controls)

  1. HAND KEY
  2. H-DIM
  3. H-PA
  4. H-PB
  5. H-PC
  6. H-PD

- **DTMF MENU** (to change the settings of DTMF codes)

  1. CALL
  2. SPEED

List of the menu functions

On the display	Menu N.	Function	Selectable options
		FUNC MENU	
BEEP	1	Enabling the keypad tones	ON 1,2,3,4,5 OFF
STEP	2	Channel spacing selection	12.5, 20, 25, 30, 50, 2.5, 5, 6.25, 10
DSP	3	Selection of the displayed mode	CH,FRQ
SQL	4	Selection of the squelch level	OFF,1,2,...,9
VOL	5	Setting of the speaker volume	1,2,3,...,36, 1,...
PWD	6	Enabling the password (default password: 123456)	ON, OFF
SCM	7	Scan mode selection	TO, CO, SE
SCT	8	Scan pause selection	5, 10, 15 sec.
AOP	9	Automatic turning on	ON, OFF
RDW	10	Dual band/frequency enabling	ON, OFF
DIM	11	Setting of the display and controls backlight level	1, 2, 3
TOT	12	Time Out Timer	OFF, 1, 2, ..., ... , 30 min.
APO	13	Automatic turning on	OFF, 30, 60, 120 min.
RPTone	14	Repeater Tone	1750, 2100, 1000, 1450
DIR	15	To rotate 180° the display	STAN, FAIL
SPK	16	Selecting the speaker in use	M&H, HAND, MAIN
RTDF	17	Repeater mode	ON, OFF
RST	18	Reset	OPT, ALL
		CHAN MENU	
RCDT	1	Enabling the CTCSS and DCS tones in RX	OFF, CTC, DCS
TCDT	2	Enabling the CTCSS and DCS tones in TX	OFF, CTC, DCS
POW	3	Power level selection	HI, LO, MI
5TENC	4	Enabling the PTT ID tones	OFF, BEGIN, END, BEGIN AND END
T-DEC	5	Selecting the tones to send out	OFF, DT, 5T
SIGNAL	6	Rx mode selection	SQ, CDT
BAND	7	Bandwidth selection	NAR, MID, WID

REV	8	RX/TX frequencies inversion	**OFF, ON**
TALK	9	Activation of the talk around function	**OFF, ON**
OFFSET	10	Frequency offset selection	**OFF, VHF : +/- 0 – 38 MHz UHF : +/- 0 – 90 MHz**
LOCK	11	Enabling the BCLO	**OFF, BU**
TX	12	Enabling/disabling the transmission	**ON, OFF**
OWNID	13	DTMF radio id	**Through the optional programming software**
MINI KEY			
In this menu it is possible to set the functions associated to keys P1-P6			

Note: the option list may vary in case of modifications done with the optional programming kit.

Operating with repeaters and setting of CTCSS or DCS tones

Setting the frequency offset and its direction

1. Select the rx frequency on the **A** or **B** band.
2. Set the offset direction: press the **FUNC** button for 3 seconds. Select the desired offset with the **main knob** or by the **UP/DOWN** controls on the microphone: *CHANNEL MENU -OFFSET SET* . The offset set by default is 5 MHz.
3. When the offset frequency is displayed press **FUN**. The display will show **-**: this means that an offset with negative direction has been set, therefore the tx frequency will be lower than the rx frequency. If you want to set an offset with positive direction, press **FUN** again. Now **+** will appear on the display and the tx frequency will be higher than the rx one.
4. For confirmation press the **main knob**.

Setting the CTCSS and DCS tones in TX:

1. Keep pressed **FUNC** on the front panel of the radio to access the radio menu;
2. Select *CHAN MENU*;
3. Now select *TCDT*;
4. Select *CTC* o *DCS* with the **main knob**;
5. Set the desired *CTCSS* tone or *DCS* code by keeping pressed the **main knob** for a few seconds
6. Turn the **knob** to select the desired tone; press it to set the tone.
7. Press **P3**-*Back* to exit the menu and return to stand-by mode.

Setting a CTCSS or DCS tone in RX

1. Push **FUNC** on the front panel to enter the radio menu;
2. Select *CHAN MENU*;
3. Select *RCDT*;
4. Now select *CTC* or *DCS* with the **main knob**;
5. Set the desired CTCSS tone or DCS code by keeping pressed the **main knob** for a few seconds
6. Turn the **knob** to select the desired tone; press it to set the tone.
7. Press **P3**-*Back* to exit the menu and return to stand-by mode.

CTCSS tone chart

CTCSS tones				
62,5	94,8	136,5	177,3	218,1
67,0	97,4	141,3	179,9	225,7
69,3	100,0	146,2	183,5	229,1
71,9	103,5	151,4	186,2	233,6
74,4	107,2	156,7	189,9	241,8
77,0	110,9	159,8	192,8	250,3
79,7	114,8	162,2	196,6	254,1
82,5	118,8	165,5	199,5	
85,4	123,0	167,9	203,5	
88,5	127,3	171,3	206,5	
91,5	131,8	173,8	210,7	

DCS codes chart

DCS codes (Normal and Inverted)							
23	25	26	31	32	36	43	47
51	53	54	65	71	72	73	74
114	115	116	122	125	131	132	134
143	145	152	155	156	162	165	172
174	205	212	223	225	226	243	244
245	246	251	252	255	261	263	265
266	271	274	306	311	315	325	331
332	343	346	351	356	364	365	371
411	412	413	423	431	432	445	446
452	454	455	462	464	465	466	503
506	516	523	526	532	546	565	606
612	624	627	631	632	654	662	664
703	712	723	731	732	734	743	754

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Transmitting a repeater access tone RPT TONE

1. Press **PTT** and **DOWN** at the same time to transmit a repeater access tone. The tone set by default is 1750 Hz.
2. If you want to change the tone frequency follow these steps:
3. Press **FUNC** on the front panel to enter the radio menu;
4. Select option no. 1 *FUNC MENU*;
5. Select *RPTONE*;
6. Now you can choose amongst these options:
    1750 Hz - 2100 Hz - 1000 Hz - 1450 Hz
7. Push the **knob** to confirm your selection;
8. Press **P3** twice to exit the menu and return to standby condition.

Activating the frequency inversion

The frequency inversion can be activated only if a frequency offset (positive or negative) is enabled.
1. Keep pressed **FUNC** to enter the radio menu;
2. Select option n. 2 *CHAN MENU*;
3. Select option n. 8 *REV*;
4. Now select *ON* with the main knob.

"Talk around" function

This function can be activated only if a frequency offset (positive or negative) is enabled.
1. To activate the "talk around" keep pressed **FUNC** and then select option no.9 *TALK*.
2. The icon *A* will be shown on the display.
3. Now you can communicate with the other users without using a repeater. When the Talk Around function is activated, the frequency offset will be disabled and the radio will transmit on the rx frequency.

Memory channels

CT3000 allows you to store up to 200 channels.
The channels let you store the frequency and data. So that you don't have to re-program the same data repeatedly and you can immediately tune on the desired channels.

Storing a channel and its settings:

1.   Select the channel you want to store
2.   Set all the desired parameters
3.   Keep pressed the **P** control associated to **V/M** for 2 seconds, the display will show the channel number. If the channel blinks blue it means that the memory is empty and you can store the desired settings; while if it blinks red the channel is already busy but the settings can be overwritten.
4.   Rotate the **main knob** to select the channel in which you want to overwrite the settings
5.   Press **V/M** for 2 seconds for confirmation.

To recall a channel

1.   Press the **P** button associated to the **V/M** function to enter the radio memories
2.   Turn the **main knob** to select the desired memory channel.

Note: In case you use the keypad you have to edit all 3 digits: for example, channel 1, you will edit "0","0", "1".

Deleting a channel:

1.   Press the button associated to **V/M** function to enter the radio memories.
2.   Select the channel you want to delete.
3.   Keep pressed **FUNC** and the button associated to **V/M** function for 2 seconds.

This function is available only in frequency mode.

Scan function

CT3000 has 3 types of scanning:
- **TO - Time-Operated scan**: everytime a signal is detected, the radio will stop scanning for a few seconds, then it will start scanning again on the other frequencies even though the signal is still present.
- **CO - Carrier-Operated scan**: whenever a signal is detected, the radio will stop scanning and will resume only after the signal disappears.
- **SE - Search scan**: the radio will stop scanning once a signal is picked up.
1. To select the desired type of scan, access the radio menu and follow these steps: **MENU→FUNC MENU→SCN**
2. Select the desired parameter.
3. To start scanning press the **P3** of menu 2 or the button associated to **SCN** function.
4. To invert the scan direction use the **main knob**.
5. To stop scanning press any key on the front panel or **PTT**.

Scan resume time

It it possible to change the scan resume time. It goes from 5s up to 15s.
1. Enter the radio menu and follow this path:
   MENU→FUNC MENU→SCT
2. Press the **main knob** to enter the options
3. Turn it to select the desired level.
4. Confirm your choice by pushing the **main knob**.

Selective call

You may sometimes want to hear calls from only specific persons or groups. In this case, use the selective call function. This transceiver is equipped with CTCSS tones and DCS codes. These selective calls allow you to ignore (not hear) unwanted calls from other persons who are using the same frequency. The transceiver unmutes only when it receives the signal having the same CTCSS tone or DCS code.
CTCSS and DCS do not make your conversation private or scrambled. It only relieves you from listening to unwanted conversations.

DTMF functions

CT3000 can store up to 16 DTMF codes with 16 digits.
The DTMF code memories can be changed with the optional programming software.

Transmitting a DTMF code

1. Keep pressed **PTT**.
2. In tx mode press the controls corresponding to your *DTMF* code. You will hear the code from the speaker of the radio.

Transmitting a memory DTMF code

This function is enabled only if you set your DTMF code by means of the programming software.
1. Select the desired customised *DTMF* code
2. Access the radio menu and follow these steps:
3. **MENU→ DTMF MENU→ 🖐ALL**
4. Select the desired *DTMF* code and confirm with the main knob.
5. Press the control associated to the **CALL** function (previously set in HAND KEY menu)

Changing a memory DTMF code and the tx time of DTMF codes

These functions can be enabled by means of the optional programming software.

Selective calls with DTMF codes

CT3000 can answer selective calls and open the squelch only in case you received a call with your DTMF code (DTMF ID or 5 Tone ID).
This function can be enabled through the programming software.

Note: DTMF settings can be changed only with the optional programming software.

Other functions

Activating/deactivating the keypad tones:

1. Enter the radio menu and follow these steps:
    MENU→FUNC MENU→BEEP
2. Press the **main knob** to enter the options of the desired menu
3. Rotate the knob to select *ON* (keypad beep activated) or *OFF* (deactivated).
4. Confirm and save by pressing the **knob**.

Setting the Time Out Timer:

The Time Out Timer (TOT) automatically switches the radio in reception if you talk for too long, after a pre-set time that can change from 1 minute up to 30 minutes.

Before stopping the transmission, CT3000 emits an acoustic alarm to warn you and TOT OVER will appear on the display.

We suggest you keeping this function enabled, also because it is very useful to prevent overheating of the radio.

1. Access the radio menu and follow this procedure:
    MENU→FUNC MENU→TOT
2. Set the desired time and confirm by pushing the **main knob**.

Activating/deactivating the keypad lock:

Keep pressed the **main knob** for 3 seconds to lock/unlock the keypad.

Display backlight

The display backlight can be adjusted in 3 different levels: level 1 is the least bright while level 3 is the brightest one.

1. Access the radio menu and select:
    MENU→FUNC MENU→DIM
2. Set the desired level and confirm by pushing the main knob.

Auto power-off

You can set the automatic turning off for CT3000.
1.   Enter the radio menu and follow this procedure:
     MENU→ FUNC MENU→APO
2.   Set the desired level: 30/60/120 minutes and confirm by pushing the **main knob**.
3.   Press **P3** to exit the menu and return in stand-by mode.

Squelch opening

CT3000 automatically sets the squelch opening rules according to parameters that you set, such as for example CTCSS/DCS tones or DTMF codes.
If you want to modify the squelch opening rules, follow this procedure:
1.   Enter the radio menu and follow these steps:
     MENU→CHAN MENU→SIGNAL
2.   Set the desired value and confirm by pushing **MENU** or **PTT**.
3.   Press **FUN** to exit the menu and return in stand-by mode.

Selecting frequency mode, channel name mode, channel number mode:

1.   Access the menu and follow these steps:
     MENU→FUNC MENU→DSP
2.   You can choose amongst the following options:
     • **FRQ Mode:** the radio will be set in frequency mode; to switch to channel mode press **V/M**.
     • **CH Display Mode**: channel mode. The channel number will be shown in the display. It is not possible to switch to frequency mode through the **V/M** button.
     • **MR Display Mode:** the radio will be set to channel mode but the channel name will appear in the display. To switch to channel mode press **V/M**.
3.   Set the desired mode and confirm your selection by pushing the **main knob.**
4.   Press **P3** to exit the menu and return in stand-by mode.

Setting a password

It is possible to set a password that will be required at the turning on of the radio.

1. Access the menu and follow this path:
    MENU→FUNC MENU→PWD
2. Now select the desired option:
    *   **ON** (everytime the radio is turned on a password will be required)
    *   **OFF** (no password required)
3. Select the option and confirm by pushing the **main knob**.
4. Press **P3** to exit the menu and return in stand-by condition.

Note: The password set by default is "000000". The password can be changed through the optional programming software.

Inhibiting transmission

In CT3000 the transmission can be inhibited: when this function is enabled, the pressure of **PTT** won't have any effect.

1. Enter the radio menu and follow this path:
    MENU→CHAN MENU→TX
2. Choose one of these options:
    *   **Tx ON**: to enable the transmission
    *   **Tx OFF**: to disable the transmission.
3. Select the desired mode and confirm by pushing the **main knob**.
4. Exit the menu and return to stand-by mode by pressing **P3**.

*Note: The selected option can differ from frequency to channel mode and from **VFO A** to **VFO B**.*
*Note1: when the transmission is inhibited, if you press the **PTT** the radio won't transmit and will emit a warning tone. The display will show "FORBID TX".*

Dual Watch function

This functions allows to monitor two channels at the same time.

1. Enter the radio menu and follow this procedure:
    MENU→FUNC MENU→RDW
2. Select **ON** and confirm by pushing the **main knob**.
3. The dual watch function is activated and the radio will start monitoring the two channels.
4. Everytime the radio detects a signal, the monitoring will stop and will resume once the signal disappears.

Flip function

Thanks to this function, the unit can be rotated 180° and the information on the display will be properly shown.

To enable this function:
1.   Keep pressed **FUNC**.
2.   With the **main knob** access: **FUNC** →**MENU**
3.   Rotate the knob until option No.15 *DIR*.
4.   Select it by pushing the **knob**.
5.   Rotate and the current setting will turn green. You can change it by turning the **knob**.
6.   Press it to confirm and exit by pushing **P3**.

Reset

1.   Access the radio menu and follow this path:
     MENU→**FUNC MENU**→**RST**
2.   Now choose between:
     •   **ALL:** to make a complete reset (settings and memories)
     •   **OPT:** to reset the settings only.
3.   Set the desired option and confirm by pushing the **main knob**.

Troubleshooting

PROBLEM	SOLUTION
The radio does not turn on	Power supply cable disconnected or defective. Check its status.
	Fuse broken. Check the status of the fuses in the radio and in your vehicle.
The display shows RX but the radio does not receive	Verify the volume level is not too low!
	Check that you have set the same CTCSS tones and DCS codes of your group.
The keypad does not work	The keypad lock is activated
While you are communicating with your group, you receive interferences from other groups	Change the CTCSS tone or DCS code of your group

Technical specifications

Frequency band	144-146MHz & 430-440MHz (Rx/Tx)
Memory channels	200
Power supply	12,6V DC ± 10%
Operating temperature	-25°C to + 55°C
Operating mode	monoband/dualband
Selectable output power	25W/10W/5W
Modulation	F3E(FM)
Tones	51 CTCSS / 208 DCS
Duty cycle	TX 5% / RX 5% / Stand-by 90%
Max frequency deviation	≤ ±5KHz
Spurious emissions	-13dBm
Frequency stability	±1.0 ppm
Rx sensitivity @12dB SINAD	< 0.3uV
Output power	≥ 3W
Dimensions	115x43x125 (LxAxP)
Weight (mike included)	925g

Specifications are subject to change without notice.

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