



Handheld Two-way Radio

FD-890

Multifunctional Two-way Radio

Dual frequency, dual display and dual standby.
Charging with the cradle or charging directly from the power supply.

FC RoHS CE06780

USER'S MANUAL



Thank you

We are grateful for your purchasing of *FDC* transceivers.

We believe this easy-to-use and stylish transceiver will provide you with dependable and reliable communications.

Transceivers incorporate the latest advanced technology. As a result, we feel strongly that you will be pleased with the quality and features of this transceiver.

www.409shop.com

PRECAUTIONS

The following precautions are recommended for personal safety.

- Refer service to qualified technicians only.
- Do not modify or attempt to adjust this transceiver for any reason.
- Do not expose the transceiver to long periods of direct sunlight; Do not place it close to heating appliances.
- Do not operate the transceiver or charge a battery pack in an explosive atmosphere (gases, dust, fumes, etc).
- Do not place the transceiver in excessively dusty, humid, and/or wet areas nor on unstable surfaces.
- Do not transmit with high output power for extended periods. The transceiver may overheat.
- Do not transmit until all RF connectors are secure and any open connectors are properly terminated.



- ▲ It is important that the operator is aware of, and understands hazards common to the operation of any transceiver. Turn off the transceiver while taking on fuel or while parked in gasoline service.
- ▲ If an abnormal odor or smoke is detected coming from the transceiver, switch OFF the power immediately and remove the battery pack from the transceiver. Contact your authorized **FDC** dealer, customer service, or service station.

UNPACKING AND CHECKING EQUIPMENT -----	1-2
DESCRIPTION OF TRANSCEIVER -----	3
DESCRIPTION OF FUNCTIONS -----	3
GETTING ACQUAINTED -----	4-8
LCD display -----	4
Description of transceiver -----	5-6
Charging Li-ion battery pack -----	7
Quick search -----	7
Single/Dual standby switch -----	7
FREQ mode/FREQ.CH mode switch-----	8
A/B switch -----	8
Side key-----(Emergency alarm/1750Hz burst tone/Flashlight selectable) -----	8
[▲] Up key---(FM Radio/Scan selectable)-----	8
[▼]Down key---(Stopwatch/Monitor selectable)-----	8
SHORTCUT OPERATION SHEET -----	9-11
FUNCTION SETTING -----	12-28
01.Setting squelch level(SQUELCH)----MENU 1 -----	12
02.Setting HI/LOW power(POWER)----MENU 2 -----	12

04. Setting LCD backlight/keypad backlight (LAMP)-----MENU 4 -----	13	23. Setting power saver mode(POWSAVE)-----MENU 23 ---	22
05. Setting keypad lock(KEYLOCK)-----MENU 5 -----	14	24. Setting RESET(RESET)-----MENU 24 -----	22
06. Setting timer-out timer(TOT)-----MENU 6 -----	14	25. Squelch tail elimination(TAIL)-----MENU 25 ---	23
07. Setting VOX(VOX LVL)-----MENU 7 -----	15	26. Setting CTCSS scan(CTCSSCAN)-----MENU 26 -----	22-23
08. Setting receiving CTCSS/DCS(R CTCSS/R DCS)-----MEMU 8 -----	15	27. Setting DCS scan(DCSSCAN)-----MENU 27 -----	23
09. Setting transmitting CTCSS/DCS(T CTCSS/T DCS)-----MEMU 9 -----	16	28. FM radio(RADIO) -----	24
10. Setting LCD backlight colour (COLOUR)-----MENU 10 -----	16	29. Setting frequency -----	25-26
11. Setting frequency step(STEP)-----MENU 11 -----	17	30. Transmitting/Receiving auto switchable ----	26
12. Setting keypad tone(BEEP)-----MENU 12-----	17	31. Call channel indicator-----	26
13. Setting Wide/Narrow bandwidth(WID/NAR)-----MENU 13 -----	17	32. Setting reverse frequency function-----	27
14. Setting power on message(OPN MSG)-----MENU 14 -----	18	33. Low battery alarm-----	27
15. Setting busy channel lockout(BCLO)-----MENU 15 -----	18	34. Transmitting overtime alarm -----	28
16. Setting working mode(CH.MDF)-----MENU 16 -----	18	35. Adding scanning channel -----	28
17. Channel name editing-----MENU 17 -----	19	36. Setting priority scan function-----	28
18. Setting transmitting overtime alarm(TOA)-----MENU 18 -----	20	TROUBLESHOOTING GUIDE -----	29
19. Setting emergency alarm function(ALARM)/1750Hz burst tone(1750Hz)-----MENU 19 -	20	CTCSS/DCS TABLE -----	30
20. Setting stopwatch timer(SECOND)-----MENU 20 -----	21	AFTERSALES SERVICE -----	31
21. Deleting channel(DELETE)-----MENU 21 -----	21		
22. Main channel switch(TDR SET)-----MENU 22 -----	21-22		

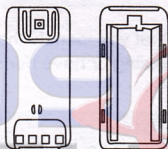
Carefully unpack the transceiver. We recommend that you identify the items listed in the following table before discarding the packing material. If any items are missing or have been damaged during shipment, file a claim with the carrier immediately.

Supplied accessories	ITEM	QUANTITY
	Antenna	1
	Li-ion battery pack	1
	Intelligent charger	1
	AC power adaptor (wall charger)	1
	Belt clip	1
	User's manual	1
Optional accessories	ITEM	
	Headset	
	Programming cable & software	
	Speaker / microphone	
	12V Car charger	

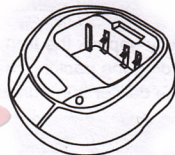
Standard Accessories:



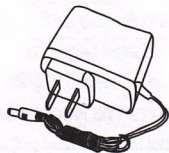
Antenna



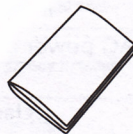
Li-ion battery pack
(1600mAh)



Intelligent charger

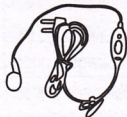


Belt clip

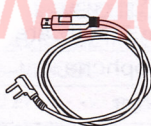


User's manual

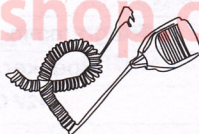
Optional Accessories:



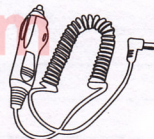
Headset



USB programming cable



Speaker/Microphone



12V Car charger

DESCRIPTION OF FUNCTIONS



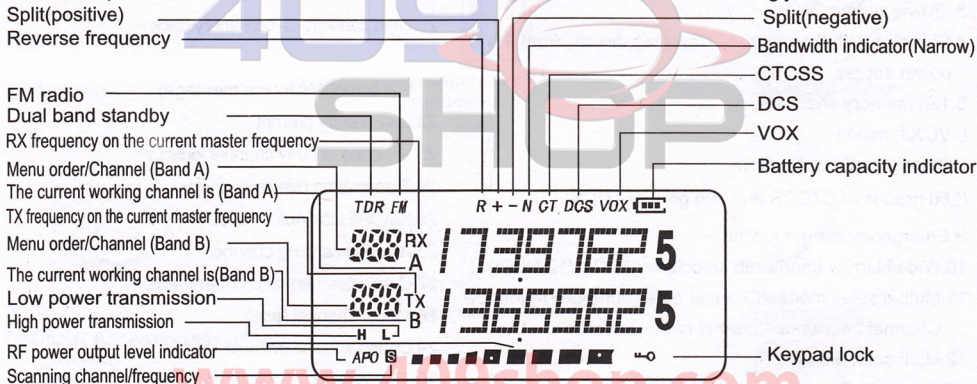
1. Single band, Dual frequency, Dual display and Dual standby
2. Frequency range: VHF :136-174MHz
UHF :400-480Mhz/440-520MHz
3. Power output:5W VHF/4W UHF
4. Charging with the cradle or Charging directly from the power supply.
5. 128 memory channels
6. VOX function
7. Stopwatch timer function
8. 50 groups of CTCSS and 105 group of DCS
9. Emergency alarm function
10. Wide/Narrow bandwidth selectable(25KHz/12.5KHz)
11. Multi-display modes(Channel order number/Frequency/
Channel frequency/Channel name selectable)
12. Multi-scan modes
13. Priority scan
14. LED flashlight function
15. 3 selectable LCD backlight colors
16. FM radio
17. Frequency steps selectable(5/6.25/10/12.5/25KHz)
18. HI/LO power selectable(5W/1W)
19. Power saver function
20. High capacity Li-ion battery pack
21. Power on message selectable(Battery voltage/
Full screen/Welcome message)
22. Low battery prompt
23. 3 modes of busy channel lockout
24. Transmitting overtime alarm
25. Keypad lock(Auto/Manual)
26. Adding scanning channel
27. Computer/manual programmable
28. Menu/Channel reset
29. Channel name editable
30. Reverse frequency function
31. Auto/Manual main channel switch
32. CTCSS/DCS scan
33. 1750Hz burst tone

GETTING ACQUAINTED



LCD display

There are various indicators display on the screen when powering on. You can find that they are very useful. Sometimes, maybe you can not think of the signification of these icons or you do not how to operate the transceiver, please refer to the below table to learn what the indicators stand for accordingly.



Note:

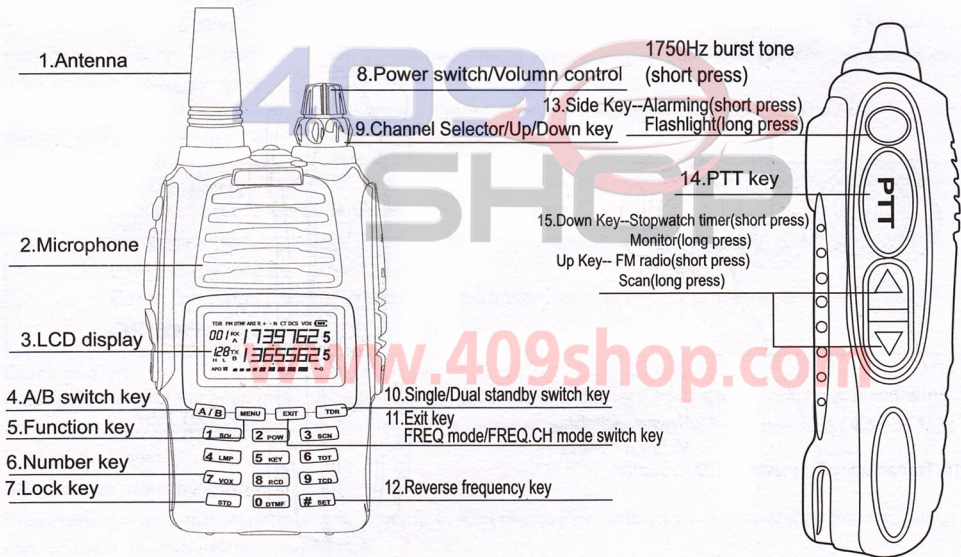
- Full indicator for battery capacity
- Low indicator for battery capacity
- Flashing while charging battery

- Exhausted indicator for battery capacity
- Receiving signal meter
- Keypad lock

GETTING ACQUAINTED



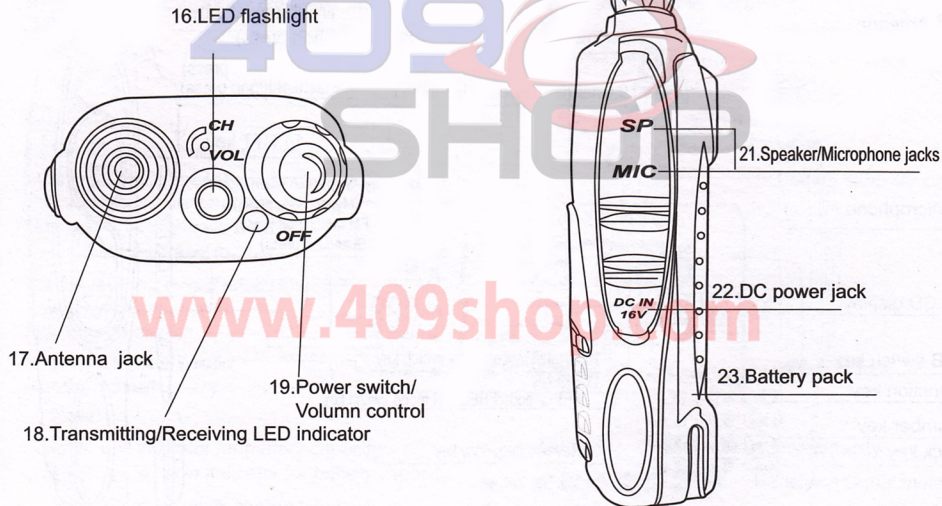
Description of transceiver



GETTING ACQUAINTED



Description of transceiver



Charging Li-ion battery pack

Battery packs are not charged when they are made, pls charge them before use.

You can charge the battery or transceiver separately via charger. You can charge the transceiver by turning the transceiver off or on. The transceiver can be charged directly via AC adaptor or car charger. The transceiver can work normally when charging.

When using FM radio/scan/stopwatch/emergency alarm function, the transceiver will stop charging. After these operations, charging will be resumed automatically.

NOTE

- Please only use the **FDC** supplied battery and charger. Or it may cause the life of the battery pack to shorten or the battery pack may be damaged.
- The battery pack life is over when its operation time decreases even though it is fully and correctly charged. Replace the battery pack.
- When the battery power is too low, the transceiver can not be powered on. Please switch OFF the transceiver with the battery before charging.

Quick search

Press [**MENU**] to enter the main menu, then rotate channel selector or press [**▲**] or [**▼**] key one time to search the desired function or parameter when setting for each function or parameter, while keeping pressing [**▲**] or [**▼**] key to quickly search.

Single/Dual standby switch

Press [**TDR**] to set single standby or dual standby, in dual standby mode, the screen shows [**TDR**], the transceiver can receive in the two different frequencies.

GETTING ACQUAINTED



Frequency mode(FREQ)/Frequency+channel number mode(FREQ.CH) switch

FREQ mode ← Press [EXIT] → FREQ.CH mode(In frequency mode/FREQ.CH mode)

A/B switch

Press[**A/B**]to select the master frequency. The master frequency (band A/band B) can be switched automatically or manually when receiving a signal. When it is receiving in band A, then band A is the master frequency, there shows "A" in the screen, and LCD displays the current working frequency and channel. The transceiver can transmit and receive on the master frequency, but ONLY receives in the sub frequency.

Side key----(Emergency alarm/1750Hz burst tone/Flashlight selectable)

1. When emergency alarm function (See page 21) is set to "ON", short press the Side key to activate emergency alarm function, and start transmitting and send the alarm signal to companions or systems. Press PTT key to exit from this function or the transceiver will stop alarming automatically after 60 seconds.
2. When 1750Hz burst tone function (See page 21) is activated, in standby, short press the Side key to transmit 1750Hz burst tone, short press the Side key again or press PTT key to finish transmitting 1750Hz burst tone or the transceiver will finish transmitting automatically after 4 seconds.
3. Long press the Side key for 2 seconds to turn ON/OFF flashlight function.

[▲]Up key---(FM Radio/Scan selectable)

Short press [▲]key to turn ON/OFF FM Radio function, while keeping press for 2 seconds to activate Scan function. Press any key to exit from scanning.

[▼]Down key---(Stopwatch/Monitor selectable)

When stopwatch timer function (maximum 999 seconds) is set to "ON", short press [▼] key to start counting/pause, while keeping press for 2 seconds to activate monitor function.

SHORTCUT OPERATION SHEET



Function order	Function name	Enter function set	Screen display	Select parameter	Selectable parameter explanation	Confirm	Exit
1	Squelch level	MENU → 1SQL	1 SQUELCH 5	Rotate channel selector or press ▲ / ▼ key to select parameter	Squelch level from 0 to 9	MENU	EXIT
2	Transmitting power	MENU → 2POW	2 POWER HIGH	Rotate channel selector or press ▲ / ▼ key to select parameter	HIGH:High power LOW:Low power	MENU	EXIT
3	Scan mode	MENU → 3SCN	3 SCAN MD TO	Rotate channel selector or press ▲ / ▼ key to select parameter	TO:Time scanning mode CO:Carrier mode 1 scan SE: Carrier mode 2 scan	MENU	EXIT
4	LCD/Keypad backlight	MENU → 4LMP	4 LAMP MD AUTO	Rotate channel selector or press ▲ / ▼ key to select parameter	AUTO/ON/OFF	MENU	EXIT
5	Keypad lock	MENU → 5KEY	5 KEYLOCK MANUAL	Rotate channel selector or press ▲ / ▼ key to select parameter	AUTO/MANUAL	MENU	EXIT
6	TOT	MENU → 6TOT	6 TOT 30 S	Rotate channel selector or press ▲ / ▼ key to select parameter	OFF:Turn off TOT TOT has 9 levels in steps of 30 secs., between 30 and 270 secs..	MENU	EXIT
7	VOX	MENU → 7VOX	1 VOX LVL OFF	Rotate channel selector or press ▲ / ▼ key to select parameter	VOX has levels from 1 to 9 OFF:Turn off VOX function	MENU	EXIT
8	Receiving CTCSS/DCS	MENU → 8RCD	8 R CTCSS OFF	Rotate channel selector or press ▲ / ▼ key to select parameter	OFF:Turn off CTCSS/DCS CTCSS:50 groups of CTCSS DCS:105 groups of DCS	MENU	EXIT

SHORTCUT OPERATION SHEET



- 9 Transmitting CTCSS/DCS **MENU** → **9 TCD** → **9 T CTCSS OFF** → **MENU** → Rotate channel selector or press **▲ / ▼** key to select parameter → OFF: Turn off CTCSS/DCS
CTCSS: 50 groups of CTCSS
DCS: 50 groups of DCS → **MENU** → **EXIT**
- 10 LCD backlight colour **MENU** → **1 SQL** → **0** → **10 COLOUR LIGHT 1** → **MENU** → Rotate channel selector or press **▲ / ▼** key to select parameter → 3 kinds of colours: Light 1
Light 2
Light 3 → **MENU** → **EXIT**
- 11 Frequency step **MENU** → **1 SQL** → **1 SQL** → **11 STEP 5KHZ** → **MENU** → Rotate channel selector or press **▲ / ▼** key to select parameter → 5 kinds of steps
5K/6.25K/10K/12.5K/25K → **MENU** → **EXIT**
- 12 Keypad tone **MENU** → **1 SQL** → **2 POW** → **12 BEEP ON** → **MENU** → Rotate channel selector or press **▲ / ▼** key to select parameter → ON: Turn on keypad tone
OFF: Turn off keypad tone → **MENU** → **EXIT**
- 13 Bandwidth **MENU** → **1 SQL** → **3 SCN** → **13 WID/NAR WIDE** → **MENU** → Rotate channel selector or press **▲ / ▼** key to select parameter → WIDE: 25KHz
NARROW: 12.5KHz → **MENU** → **EXIT**
- 14 Power on message **MENU** → **1 SQL** → **4 LMP** → **14 ON MSG OFF** → **MENU** → Rotate channel selector or press **▲ / ▼** key to select parameter → OFF: Full screen display
DC VOLT: The current battery VOLT display
Message: WELCOME → **MENU** → **EXIT**
- 15 Busy channel lockout **MENU** → **1 SQL** → **5 KEY** → **15 BCLD OFF** → **MENU** → Rotate channel selector or press **▲ / ▼** key to select parameter → Carrier: Turn on BCL when carrier is same.
QT/DT: Turn on BCL when QT/DT is same.
OFF: Turn off BCL. → **MENU** → **EXIT**
- 16 Working mode **MENU** → **1 SQL** → **6 TOT** → **16 CH.MDF FREQ** → **MENU** → Rotate channel selector or press **▲ / ▼** key to select parameter → FREQ: channel mode
CHANNEL: channel mode
FREQ+CH: channel + channel number
NAME: channel name → **MENU** → **EXIT**
- 17 Channel name editing **MENU** → **1 SQL** → **7 VOX** → **17 CH.NAME** → **MENU** → Rotate channel selector or press **▲ / ▼** key to select parameter → The name can be made up of 256 digits.
The name should be no more than 7 digits. → **MENU** → **EXIT**

SHORTCUT OPERATION SHEET




- 18 Transmitting overtime alarm MENU → 1SQL → 8RCD → 18 TOA OFF → MENU → Rotate channel selector or press ▲ / ▼ key to select parameter → OFF: Turn off TOA 1 to 9 levels with 1 second each → MENU → EXIT
- 19 Emergency alarm/1750Hz burst tone MENU → 1SQL → 9TCD → 19 ALARM ON → MENU → Rotate channel selector or press ▲ / ▼ key to select parameter → ON: Turn on alarm OFF: Turn off alarm 1750Hz: Activate 1750Hz burst tone function → MENU → EXIT
- 20 Stopwatch timer MENU → 2POW → 0 → 20 SECOND ON → MENU → Rotate channel selector or press ▲ / ▼ key to select parameter → ON: Turn on stopwatch function OFF: Turn off stopwatch function → MENU → EXIT
- Screen display Selecting parameter Confirm Confirm**
- 21 Deleting channel MENU → 2POW → 1SQL → 21 DELETE CH.001 → MENU → 21 DEL ? → Rotate channel selector or press ▲ / ▼ key to select parameter → A/B → A/B → The channel is deleted successfully. → EXIT
- 22 Master frequency mode switch MENU → 2POW → 2POW → 22 TOR SET AUTOMAT → MENU → Rotate channel selector or press ▲ / ▼ key to select parameter → AUTOMAT: Automatic mode MANUAL: Manual mode → MENU → EXIT
- 23 Power saver mode MENU → 2POW → 3SCN → 23 POWSAVE ON → MENU → Rotate channel selector or press ▲ / ▼ key to select parameter → ON: Turn on save function OFF: Turn off save function → MENU → EXIT
- 24 Reset MENU → 2POW → 4MP → 24 RESET ALL → MENU → 24 YES ? ALL → ALL: All reset VFO: VFO reset → MENU → A/B → Reset is done → EXIT
- 25 Spelch tail elimination (STE) MENU → 2POW → 5KEY → 25 TAIL ON → MENU → Rotate channel selector or press ▲ / ▼ key to select parameter → ON: Turn on STE OFF: Turn off STE → MENU → EXIT
- 26 CTCSS scan MENU → 2POW → 6TOT → 26 CTCSSCAN → MENU → Start scanning CTCSS → EXIT
- 27 DCS scan MENU → 2POW → 7VOX → 27 DCSSCAN → MENU → Start scanning DCS → EXIT

FUNCTION SETTING



01.Setting squelch level(SQUELCH)----MENU 1

Squelch level is about when the signal is strong enough to turn on the squelch function, and when it is weak enough to turn off the squelch function. When the squelch is on, there is voice from the loudspeaker for all of the signaling set by the transceiver. When the squelch level is set too high, the weaker signals may be missed, while the squelch level is set too low, the transceiver may be disturbed by some noise or other needless signals.


In standby, press [MENU] + [1SQL], the screen displays .

Press [MENU] to enter, press [▲]/[▼] to select the desired squelch level, then press [MENU] to confirm, finally press [EXIT] to return to standby.

NOTE

- The squelch level for this transceiver has 0-9 levels selectable, and level 0 is to turn off the squelch function.
- The higher level the squelch is set, the stronger receiving signal is needed.

02. Setting HI/LOW power(POWER)----MENU 2

In Standby, press [MENU] + [2POW], the screen displays .

press [MENU] to enter, press [▲]/[▼] to select HIGH/LOW power, then press [MENU] to confirm, finally press [EXIT] to return to standby.

NOTE

- This transceiver has HIGH and LOW transmitting power selectable:
VHF: HIGH: 5W LOW: 1W
UHF: HIGH: 4W LOW: 1W

03. Setting scan mode (SCAN MD)----MEMU 3

This transceiver has three scan modes:

TO:The transceiver continues scanning if there are no any operations for 5 seconds after receiving signals.

CO:The transceiver pauses scanning when receiving signals,and continues scanning 3 seconds after receiving signals.

SE:The transceiver stops scanning when receiving signals.

In standby mode, press[MENU] + [3scn],the screen displays  .

Press[MENU]to enter, press [▲]/[▼]to select TO/CO/SE scan mode, then press [MENU] to confirm, finally press [EXIT]to return to standby.

04.Setting LCD backlight/keypad backlight (LAMP)----MENU 4


This transceiver has 3 backlight settings(AUTO/ON/OFF selectable).

AUTO:In standby, if there are no any operations for 8 seconds, this function will not be activated automatically.

Otherwise,operating on the keypad will activate this function.

OFF:Turn off this function.

ON:Turn on this function.

In standby,press [MENU]+[4LMP],the screen displays  .

Press [MENU] to enter,press[▲]/[▼] to select AUTO/ON/OFF.Then press [MENU] to confirm,finally press[EXIT] to return to standby.


05.Setting keypad lock(KEYLOCK)----MENU 5

This transceiver has automatical lock and manual lock selectable.

AUTO----Automatical lock:There are no operations within 28seconds,the transceiver will be locked automatically.

Press [**STD**] for 2 seconds to unlock the keypad.


MANUAL---Manual lock:In standby,press [**STD**] for 2 seconds to lock the keypad,and press[**STD**] for 2 seconds again to unlock it.

In standby, press [**MENU**]+[**KEY**],the screen displays . Press[**MENU**] to enter,press[**▲**]/[**▼**] to select AUTO/MANUAL.Then press [**MENU**] to confirm,finally press [**EXIT**]to return to standby.

06.Setting timer-out timer(TOT)----MENU 6

This function is to prevent the transceiver from transmitting for too long time.When the transceiver is exceeding the preset time limit,the transceiver will stop transmitting with an overtime alarm.To stop the alarm,release the PTT switch.

This transceiver can be set in 9 levels with 30 seconds each,between 30 and 270 seconds.

In standby, press [**MENU**]+[**TOT**],the screen displays . Press [**MENU**] to enter, press[**▲**]/[**▼**]to select TOT.Then press [**MENU**] to confirm,finally press [**EXIT**] to return to standby.

FUNCTION SETTING



07.Setting VOX(VOX LVL)----MENU 7

VOX operation allows you to transmit hands-free. When the VOX system, you do not need to press PTT key to transmit. Flashes red while transmitting a signal. The transmitting operation will somewhat be delayed, and the voice signal information may be not transmitted at the first beginning, since there needs some time for the VOX circuit to detect the voice signal.

In standby, press [**MENU**]+[**7VOX**], the screen displays . Press [**MENU**] to enter, press [**▲**]/[**▼**] to turn OFF VOX function or select VOX level (1-9). Then press [**MENU**] to confirm, finally press [**EXIT**] to return to standby.


NOTE

- The lower level of VOX is set, the higher volume is needed.
- In SCAN and RADIO modes, the VOX function is not available.


08.Setting receiving CTCSS/DCS(R CTCSS/R DCS)----MEMU 8

This transceiver has 50 groups of CTCSS and 105 groups of DCS.

Using the CTCSS/DCS can be used for you to receive the specified individual or group calls, and avoid the unnecessary callings from others with the same frequency. Only receiving the same CTCSS/DCS signals.

In frequency mode, press [**MENU**]+[**8 RCD**], the screen displays . Press [**MENU**] to enter, press [**▲**]/[**▼**] to turn OFF this function or select CTCSS/DCS code. (Press [**STD**] to select R CTCSS/R DCS) Then press [**MENU**] to confirm, finally press [**EXIT**] to return to standby.

09. Setting transmitting CTCSS/DCS (T CTCSS/T DCS)----MENU 9


In frequency mode, press [MENU] + [9TCB], the screen displays . Press [MENU] to enter, press [▲] / [▼] to turn OFF this function or select CTCSS/DCS code. (Press [9STD] to select T CTCSS/T DCS) Then press [MENU] to confirm, finally press [EXIT] to return to standby.

NOTE

- In DCS selections, press [FSET] to select DCS Normal/Inverse.
- DXXXN (from D023N to D754N) means POSITIVE code, while DXXXI (from D023I to D754I) means NEGATIVE code.
- Keep pressing [▲] / [▼] to quickly search parameter, release the key to return to normal.

10. Setting LCD backlight colour (COLOUR)----MENU 10

This transceiver has 3 LCD backlight colours selectable.


In standby, press [MENU] + [1SOL] + [0], the screen displays . Press [MENU] to enter, press [▲] / [▼] to select LIGHT 1/LIGHT 2/LIGHT 3. Then press [MENU] to confirm, finally press [EXIT] to return to standby.

FUNCTION SETTING




11. Setting frequency step(STEP)----MENU 11


This transceiver has 5 steps selectable(5KHz/6.25KHz/10KHz/12.5KHz/25KHz).

In standby, press [MENU]+[1 SQ], the screen displays . Press [MENU] to enter, press [▲]/[▼] to select the desired step. Then press [MENU] to confirm, finally press [EXIT] to return to standby.

12. Setting keypad tone(BEEP)----MENU 12

In standby, press [MENU]+[1 SQ]+[2 POW], the screen displays . Press [MENU] to enter, press [▲]/[▼] to select ON/OFF. Then press [MENU] to confirm, finally press [EXIT] to return to standby.

13. Setting Wide/Narrow bandwidth(WID/NAR)----MENU 13

In standby, press [MENU]+[1 SQ]+[3 SCH], the screen displays . Press [MENU] to enter, press [▲]/[▼] to select WIDE/NARROW bandwidth. Then press [MENU] to confirm, finally press [EXIT] to return to standby.

NOTE

- Wide :The channel spacing is 25KHz.
- Narrow :The channel spacing is 12.5KHz.

FUNCTION SETTING



14. Setting power on message(OPN MSG)----MENU 14

This transceiver has 3 display modes selectable for the power on message as follow:

OFF:display the full screen

DC VOLT:display the current battery voltage

MESSAGE----display "WELCOME"

In standby,press [MENU] + [1 SQL] + [4 LUP],the screen displays

Press [MENU] to enter,press [▲]/[▼] to select OFF/DC VOLT/MESSAGE.Then press [MENU] to confirm,finally press [EXIT] to return to standby.

15. Setting busy channel lockout(BCLO)----MENU 15

This function is to prevent the interference from other communicating channels.When the selected channel is occupied by others,the transceiver can not transmit by pressing PTT key.

In standby,press [MENU] + [1 SQL] + [5 KEY],the screen displays . Press [MENU] to enter,press [▲]/[▼] to select Carrier/OFF or QT/DQT this function.Then press [MENU] to confirm, finally press [EXIT] to return to standby.

Carrier:Turn on BCL when carrier is same.

QT/DQT:Turn on BCL when QT/DQT is same.

OFF:Turn off BLC.

16. Setting working mode(CH.MDF)----MENU 16

This transceiver has 2 options for the working mode as follow:

1. FREQ----- Frequency mode 2.CHANNEL----Channel mode

There are 3 channel display selections in channel mode as follow:

FUNCTION SETTING



1.Channel

2.FREQ.CH---- Frequency mode+Channel number

3.NAME-----Channel name

In standby,press [MENU]+[1 SQW]+[6 TOT],the screen displays . Press [MENU] to enter,press[▲]/[▼] to select FREQ/CHANNEL/FREQ.CH/NAME.Then press [MENU] to confirm,finally press [EXIT] to return to standby.

NOTE

It is available to switch between the frequency mode and the channel mode.At least one channel is stored ahead into the transceiver.So that the above settings for the mode switch is workable.

17. Channel name editing----MENU 17

When editing the channel name,please aware:

- 1.You can edit the channel name via FD-880 programming software or directly through the keypad manually.
- 2.Channel name can be made up of 26 letters(A to Z ;a to z), 10 digital numbers(0 to 9) and other characters(up to 256 characters) .Channel name can have a length of 7 bits or you can edit the bits from 1 to 7.
3. Store at least one channel into the transceiver ahead.
4. Set in the channel name mode.
- 5.Press[▲]/[▼]to select character,press[A/B]to select the next digit,press [TDR] to delete the digit.

FUNCTION SETTING



Operation:

1. In the channel name mode, select the desired channel. Press [MENU] + [1 SOL] + [7 VOX], the screen displays “CH.NAME”. Press [MENU] key to enter, the screen displays “_” cross bar.
2. Press [▲]/[▼] or rotate the channel selector to select characters and press [A/B] to select the next digit, then press [▲]/[▼] again to select another digits.
3. After finishing editing the desired name, press [MENU] to confirm, finally press [EXIT] to return to standby.


NOTE:

- The screen displays with the edited channel name and there also shows the channel number on the top right corner.
- Keep pressing [▲]/[▼] to quickly search characters, release the key to return to normal.


18. Setting transmitting overtime alarm (TOA) --- MENU 18

This alarm is the pre-alert time when the transmitting time is nearly up to TOT preset time. When the time is up, a tone will sound (once every 1 second). This transceiver can be set from 1 to 9 TOA level with 1 second each.

Level 1 means that the prompt 1 second ahead when the transmitting time is up to the TOT preset time.

In standby, press [MENU] + [1 SOL] + [8 RCD], the screen displays . Press [MENU] to enter, press [▲]/[▼] to select OFF/1-9 level. Then press [MENU] to confirm, finally press [EXIT] to return to standby.

19. Setting emergency alarm function (ALARM)/1750Hz burst tone (1750Hz) --- MENU 19

In standby, press [MENU] + [1 SOL] + [9 TCD], the screen displays . Press [MENU] to enter, press [▲]/[▼] to select ALARM ON/OFF or 1750Hz. Then press [MENU] to confirm, finally press [EXIT] to return to standby.

20.Setting stopwatch timer(SECOND)-----MENU 20

When stopwatch timer is ON,Press [] to start counting,press[] again to pause.

OFF:Turn off this function.

ON:Turn on this function.

In standby,press []+[]+[],the screen displays . Press [] to enter,press[]/[] to select OFF/ON this function.Then press [] to confirm,finally press [] to return to standby.

21.Deleting channel(DELETE)----MENU 21

In standby,press []+[]+[],the screen displays . Press [] to enter,the screen displays , press []/[] to select the desired channel.Then press []twice to confirm,when a beep sounds,the channel is deleted successfully.Finally press [] to return to standby.

22.Master frequency mode switch(TDR SET)----MENU 22

In standby,press[]+[]+[],the screen displays . Press [] to enter, press[]/[]to select AUTOMAT/MANUAL,then press [] to confirm,finally press[] to return to standby.

Automatic mode

The master frequency can be switched automatically when band A/ band B receiving signal.

When it is receiving in band A,then band A is the master frequency,there shows "A" on the screen.

When it is receiving in band B,then band B is the master frequency,there shows "B" on the screen.

FUNCTION SETTING




Manual mode

When band A is the master frequency, band B is receiving a signal, select the master frequency in band B by [A/B] key.



When band B is the master frequency, band A is receiving a signal, select the master frequency in band A by [A/B] key.

23. Setting power saver mode(POWSAVE)-----MENU 23

When the power saver function is ON, the receiver will be cut off for the moment, and then re-activate to detect the signals for a while, in order to reduce the power consumption and extend battery life.

In standby, press [MENU]+[2POW]+[3SCN], the screen displays . Press [MENU] to enter, press [▲]/[▼] to select ON/OFF. Then press [MENU] to confirm, finally press [EXIT] to return to standby.

24. Setting RESET(RESET)----MENU 24

In standby, press [MENU]+[2POW]+[4LMP], the screen displays . Press [MENU] to enter, press [▲]/[▼] to select VFO/ALL. Press [MENU] again to confirm, the screen displays . Then press [A/B] to confirm, finally press [EXIT] to return to standby.

NOTE:


- Please turn ON/OFF RESET function via FD-880 programming software. When RESET function is set ON, this function works.
- In order to avoid the faulty operations, we suggest that you use ALL RESET function carefully.

25. Squelch tail elimination(TAIL)-----MENU 25


This function is to eliminate the annoying audio caused by carrier wave disappearing after the transmitter ends the communication. If you want to communication via repeater, you should disable this function.

FUNCTION SETTING




In standby, press [MENU]+[2^{POW}]+[5^{KEY}], the screen displays . Press [MENU] to enter, press [▲]/[▼] to select ON/OFF. Then press [MENU] to confirm, finally press [EXIT] to return to standby.

26. Setting CTCSS scan(CTCSCAN)-----MENU 26

In standby, press [MENU]+[2^{POW}]+[6^{10T}], the screen displays . Press [MENU] to start scanning for the incoming CTCSS code, when the transceiver detects the correct CTCSS code, it will halt on that code, and the screen displays the current CTCSS code. Press [EXIT] to exit to normal operation.



27. Setting DCS scan(DCSCAN)-----MENU 27

In standby, press [MENU]+[2^{POW}]+[7^{VOX}], the screen displays . Press [MENU] to start scanning for the incoming DCS code, when the transceiver detects the correct DCS code, it will halt on that code, and the screen displays the current DCS code. Press [EXIT] to exit to normal operation.

NOTE:

- CTCSS/DCS scan function only works in the master frequency.
- Only when the transceiver detects the CTCSS/DCS signals from outside, this function can start scanning the CTCSS/DCS code, and stop scanning at the matching CTCSS/DCS code with the transmitting CTCSS/DCS code.
- If there is no CTCSS/DCS signal or the CTCSS/DCS signal interrupts, the transceiver will halt the scan, "WAIT" will appear on the display. If signal appears in scan mode, CTCSS/DCS scan will normally resume.

28.FM radio(RADIO)

- A.Turning on the FM radio: In standby,short press [**▲**] to turn on.The screen displays  .
- B.Tuning the FM radio station:In radio mode,press [**STD**]or [**#SET**],the screen displays , at this time the radio keeps tuning the stations automatically.Once the transceiver gets tuned,it stops at this radio station and starts the listening.Press [**STD**] or [**#SET**] again to skip that radio station and resume searching.
- C.Rotate the channel selector to allow for fine-tuning the radio station.Or you can input the radio frequency directly through the keypad manually.
- D.Storing radio station:After detecting a radio station,press [**MENU**]+the number key(0 to 9 key),the detected radio station will be stored into your transceiver for future use.There is 10 memory radio stations numbered 0 to 9 to store your desired radio stations.
- E.In radio mode,press [**TOR**] + the number key(0 to 9 key)to select the stored stations to accordingly listen to.
- F.Exiting from the radio mode:Press [**▲**]or [**EXIT**] to exit from the radio mode.

NOTE: When the FM radio is working,the current frequency or channel is in standby.Once detecting the receiving signals,the transceiver will automatically switch to receiving/transmitting mode.10 seconds after the signal disappears,the transceiver will switch back to the radio mode.


In FM radio mode,press PTT to transmit.10 seconds after transmission, the transceiver will switch back to the radio mode. Press[**▲**] or [**EXIT**] to exit from the radio mode and back to receiving/transmitting mode.

29. Setting frequency: Co-frequency (Common frequency) and Dis-frequency (Different frequency)

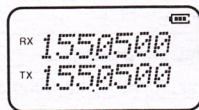
In frequency mode, it is available to store the desired frequencies.

In single standby mode:

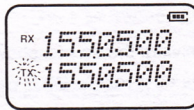
1. In standby mode, for example, the current RX frequency is 155.6250MHz, the TX frequency is 139.9500MHz.

See figure: 

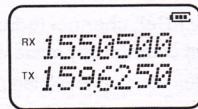
2. RX is receiving frequency, TX is transmitting frequency. Firstly, input the receiving frequency (e.g.: 155.0500MHz), and the transmitting frequency will be 155.0500MHz. Press PTT key to confirm. The current frequency (155.0500MHz) is CO-frequency. If you need to store as different frequency, input the transmitting frequency (e.g.: 400.0500) when "TX" flashes, it will confirm automatically and "TX" stops flashing, which means different receiving frequency (155.0500MHz) and transmitting frequency (159.6250MHz) are stored as Dis-frequency.



Press PTT to
confirm



Input TX frequency
159.6250MHz



In dual standby mode:


Press [A/B] to choose BAND A, set the desired RX/TX frequency. Please refer to the above operations (In single standby mode) accordingly.

Press [A/B] again to choose BAND B, set the desired RX/TX frequency. Please refer to the above operations (In single standby mode) accordingly.

NOTE

It is switchable between BAND A and BAND B by [A/B] key, when the [A/B] indicator shows in BAND A, all the operations are based on BAND A. While the indicator shows in BAND B, all the operations are based on band B.

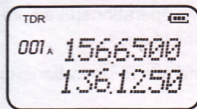
30. Setting channel memory

1. Set in the frequency mode.
2. Set the desired frequency. Please refer to "29. Setting frequency" accordingly.
3. Press [MENU] + [TDR], the screen displays .
4. Press [▲] / [▼] (rotate the channel selector or input "017") to select channel number. (e.g.: 017)
5. Press [TDR] to confirm and return to standby. After the channel is successfully stored, a beep will sound.

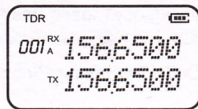
31. Call channel indicator

In dual standby mode, when BAND A is receiving, the screen shows "A" and also display the channel frequency and related parameter. 2 seconds after receiving, if you do not press PTT key to transmit a signal, the transceiver will return to dual standby.

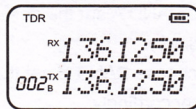
IN DUAL BAND STANDBY



IN BAND A



IN BAND B



32. Setting reverse frequency function

When using the reverse frequency function, please aware:

1. Set transmitting frequency and receiving frequency as dis-frequency. Please refer to “29. Setting frequency” accordingly.
2. Press [**TDR**] to set in single band.
3. Set the frequency mode as the working mode.

Operation:

In standby mode, press [**#SET**] to activate this function, while press [**#SET**] again to switch it off.

NOTE

- When using the reverse frequency function, the transmitting and receiving frequencies of this transceiver will be interchanged, together with all settings for CTCSS/DCS setting.
- In channel mode, it is invalid to set reverse frequency function.

33. Low battery alarm

When the battery power is too low, there is a beep sound to alarm you to charge the battery or fit a new one.

34. Transmitting overtime alarm

When the transmitting time is exceeding the preset time, there will be a alarm to remind of the overtime transmitting, and transmitting will be paused. If you want to continue transmitting, please press PTT to resume transmitting. Please see MENU 6 about the Timer-out timer (TOT).

35. Adding scanning channel

Please program scanning channel via FD-880 programming software.

When the transceiver starts scanning, only the added scanning channels are contained in the scan sequence.

36. Setting priority scan function

If you want to monitor the other frequency and check the certain preferred frequency at the same time, you can set priority scan function.

E.g.: Scan six channels: Set CH1, CH2, CH3, CH4, and CH5 as the common scanned channels, and CH6 as the priority scanned channel, then the scanning order is as followings:

→ CH1 → CH6 → CH2 → CH6 → CH3 → CH6 → CH4 → CH6 → CH5 → CH6

NOTE

- When this transceiver detects signal on the priority channel when scanning, it will call on its frequency.
- Please program the priority channel via FD-880 programming software.

TROUBLESHOOTING GUIDE



Problem	Solution
No power.	<ol style="list-style-type: none">1.The battery may be dead.Recharge or replace the battery.2.The battery may not be installed correctly.Remove the battery and install it again.
Battery power dies shortly after charging.	<ol style="list-style-type: none">1.The battery life is finished.Replace the battery with a new one.2.The battery is not fully charged.
Cannot talk to or hear other members in your group.	<ol style="list-style-type: none">1.Make sure you are using the same frequency and Quiet Talk tone as the other members in your group.2.Other group members may be too far away.Make sure you are within range of the other transceiver.
Other voices(besides group members) are present on the channel.	Change the CTCSS/DCS tone.Be sure to change the tone on all transceivers in your group.
The keypad does not work.	<ol style="list-style-type: none">1.Make sure the keypad is lock or not.2.Make sure the keypad is not stuck.
Some functions can not be stored normally.	If the transceiver is working in the channel mode,since some functions are only set in frequency mode.

CTCSS/DCS TABLE



67.0	85.4	107.2	136.5	165.5	186.2	210.7	254.1
69.3	88.5	110.9	141.3	167.9	189.9	218.1	
71.9	91.5	114.8	146.2	171.3	192.8	225.7	
74.4	94.8	118.8	151.4	173.8	196.6	229.1	
77.0	97.4	123.0	156.7	177.3	199.5	233.6	
79.7	100.0	127.3	159.8	179.9	203.5	241.8	
82.5	103.5	131.8	162.2	183.5	206.5	250.3	
50 groups of CTCSS (Hz)							

023	065	132	205	255	331	413	465	612	723
025	071	134	212	261	332	423	466	624	731
026	072	143	223	263	343	431	503	627	732
031	073	145	225	265	346	432	506	631	734
032	074	152	226	266	351	445	516	632	743
036	114	155	243	271	356	446	523	*645	754
043	115	156	244	274	364	452	526	654	
047	116	162	245	306	365	454	532	662	
051	122	165	246	311	371	455	546	664	
053	125	172	251	315	411	462	565	703	
054	131	174	252	325	412	464	606	712	
104+1 groups of DCS									