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CONTENTS

1. FUNCTIONS & FEATURES

XT-818 Mobile Radio has nice housing, stoutness & stability, advanced and reliable functions, perfect & valuable. This amateur mobile radio especially designs for drivers and it pursues company philosophy of innovation and practicality.
More functions as follows:

- There are Amateur operation mode and Professional operation mode for option.
- Adopt superior quality material, better technology and high quality radiator to ensure stable and durable operation.
- 199 programmable memorized channels, identified by editing name.
- Various scan functions including CTCSS/DCS Scan function.
- Automatic calling Identification function by CTCSS or DCS signaling.
- Different band width per channel, 25K for wide band, 12.5K for narrow band.
- Frequency Step 2.5K, 5K, 6.25K, 10K, 12.5K, 20K, 25K, 30K, 50K

2. ACCESSORIES

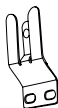## 2.1 Standard Accessories
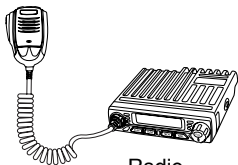
Radio
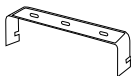
Install bracket

Fuse(5A 250V)

non–slip mat

User Manual

Microphone Hanger

Adjusting screws
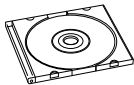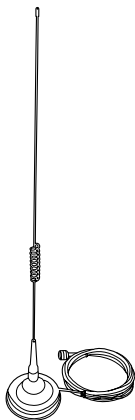
Screws

Pads

2.2 Optional Accessories

PC cable

Regulated Power

8 ohm speaker

Programming Software

Car Antenna

3. INITIAL INSTALLATION

3.1 Mobile Installation

To install the transceiver, select a safe, convenient location inside your vehicle that minimizes danger to your passengers and yourself while the vehicle is in motion. Consider installing the unit at an appropriate position so that knees or legs will not strike it during sudden braking of your vehicle. Try to pick a well ventilated location that is shielded from direct sunlight.

1. Install the mounting bracket in the vehicle using the supplied self-tapping screws (2pcs) and flat washers (2pcs).

Car body — A

Washer (M5)

Tapping screw (M5x20mm)

Mounting bracket
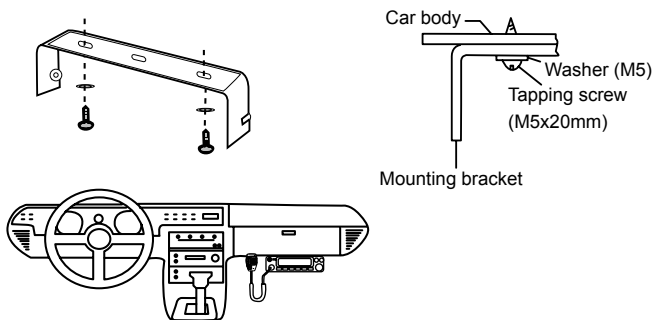
2. Position the transceiver, then insert and tighten the supplied hexagon SEMS screws.

Double check that all screws are tightened to prevent vehicle vibration from loosening the bracket or transceiver.
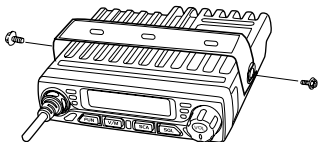
3.2 Intall Microphone Hanger

1. Choose idea location and mark for screw point.
2. Fix the hanger by the srews in accessory list.

3.3 Power Connection

🔊 » *Locate the power input connector as close to the transceiver as*
NOTE *possible.*

Mobile Operation

The vehicle battery must have a nominal rating of 12V. Never connect
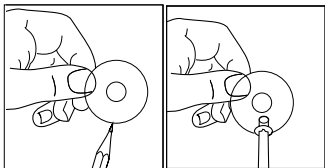the transceiver to a 24V battery. Be sure to use a 12V vehicle battery
that has sufficient current capacity. If the current to the transceiver
is insufficient, the display may darken during transmission, or
transmitting output power may drop excessively.

1. Route the DC power cable supplied with the transceiver directly
to the vehicle's battery terminals using the shortest path from
the transceiver.

- We recommend you do not use the cigarette lighter socket as some
cigarette lighter sockets introduce an unacceptable voltage drop.

- The entire length of the cable must be dressed so it is isolated from
heat, moisture, and the engine secondary (high voltage) ignition
system/ cables.

2. After installing cable, in order to avoid the risk of damp, please
use heat-resistant tap to tie together with fuse box. Don't forget
to reinforce whole cable.

3. In order to avoid the risk of short circuit, please cut down connection with negative (-) of battery, then connect with radio.

4. Confirm the correct polarity of the connections, then attach the power cable to the battery terminals; red connects to the positive (+) terminal and black connects to the negative (-) terminal.

   • Use the full length of the cable without cutting off excess even if the cable is longer than required. In particular, never remove the fuse holders from the cable.

5. Reconnect any wiring removed from the negative terminal.

Red

Black
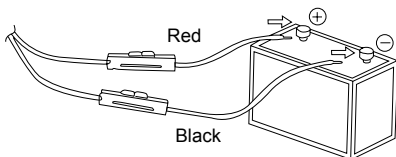
6. Connect the DC power cable to the transceiver's power supply connector.

   • Press the connectors firmly together until the locking tab clicks.

Ext. Power jack

DC power cable
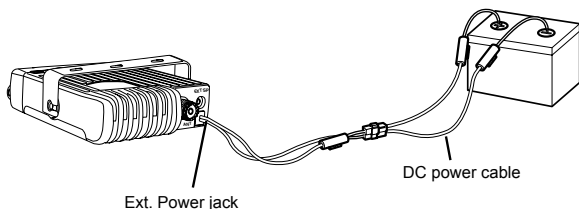
Fixed Station Operation

In order to use this transceiver for fixed station operation, you will need a separate 13.8V DC power supply (not included), power supply(QRP-01) as optional accessories. Please contact local dealer to require.

The recommended current capacity of your power supply is 10A.

1. Connect the DC power cable to the regulated DC power supply and ensure that the polarities are correct. (Red: positive, Black: negative).

   • Do not directly connect the transceiver to an AC outlet.

   • Use the supplied DC power cable to connect the transceiver to a regulated power supply.

   • Do not substitute a cable with smaller gauge wires.

Regulated power supply (QRP-01)

DC power cable with fuse holder (QPL-01)
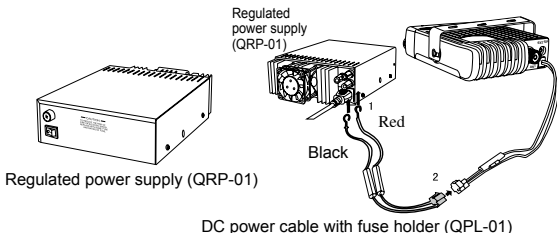
2. Connect the transceiver's DC power connector to the connector on the DC power cable.

NOTE
» *Press the connectors firmly together until the locking tab clicks.*
» *Before connecting the DC power to the transceiver, be sure to switch the transceiver and the DC power supply OFF.*
» *Do not plug the DC power supply into an AC outlet until you make all connections.*

3.4 Fuse Replacement

This radio adopt 5A, 250V fuse.

If the fuse blows, determine the cause, then correct the problem. After the problem is resolved, replace the fuse. If newly installed fuses continue to blow, disconnect the power cable and contact your autho-rized ᑕIᘜᑎᑌᔕ dealer or an authorized ᑕIᘜᑎᑌᔕ servicecenter for assistance.

1. Open the fuse holder
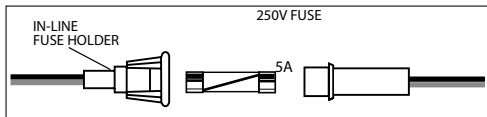
2. Replace the fuse and screw on the holder.
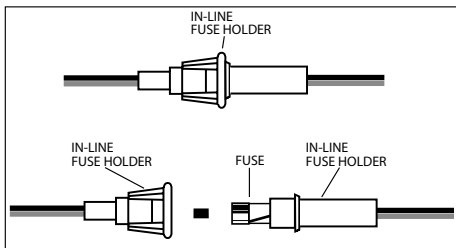
Fuse Location	Fuse Current Rating
Transceiver	5A
Supplied Accessory DC power cable	5A

Only use fuses of the specified type and rating, otherwise the transceiver could be damaged.

🔊 » *If you use the transceiver for a long period when the vehicle*
NOTE *battery is not fully charged, or when the engine is OFF, the battery may become discharged, and will not have sufficient reserves to start the vehicle. Avoid using the transceiver in these conditions.*

3.5 Antenna Connection

Before operating, install an efficient, well-tuned antenna. The success of your installation will depend largely on the type of antenna and its correct installation. The transceiver can give excellent results if the antenna system and its installation are given careful attention.

Use a 50Ω impedance antenna and low-loss coaxial feed-line that has a characteristic impedance of 50Ω, to match the transceiver input impedance. Coupling the antenna to the transceiver via feed-lines having an impedance other than 50Ω reduces the efficiency of the antenna system and can cause interference to nearby broadcast television receivers, radio receivers, and other electronic equipment.

🔊 » *Transmitting without first connecting an antenna or other*
NOTE *matched load may damage the transceiver. Always connect the antenna to the transceiver before transmitting.*
   » *All fixed stations should be equipped with a lightning arrester to reduce the risk of fire, electric shock, and transceiver damage.*

The possible locations of antenna on a car are shown as following:
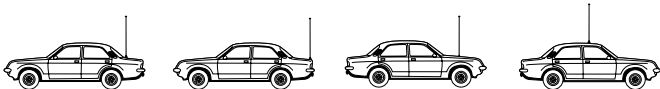
3.6 Accessories Connections

External Speaker

If you plan to use an external speaker, choose a speaker with an impedance of 8Ω. The external speaker jack accepts a 3.5mm (1/8") mono (2-conductor) plug.
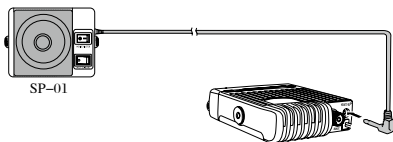
SP-01
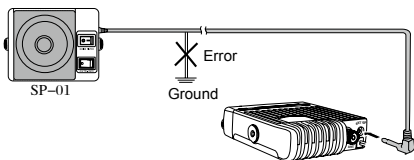
PC Connecting

To utilize the optional XT-818 software, you must first connect the transceiver to your PC then using an optional programming cable . Please use XT-818 software for programming.

NOTE » *Ask your dealer about purchasing a Programming Cable .*

4. GETTING ACQUAINTED

4.1 Front Panel
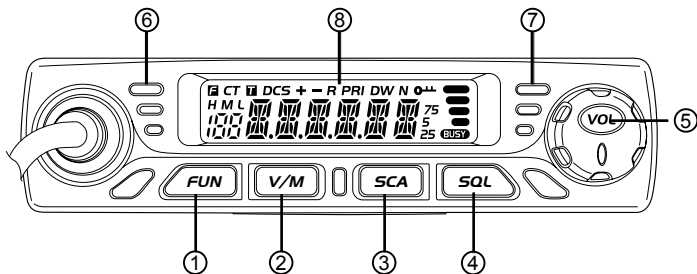
Basic Function

NO.	Knob	Function
1	FUN	Function Menu key
2	V/M	VFO/Memory mode switch key
3	SCA	Scan Key
4	SQL	Squelch key
5	VOL	Power on/off and volume key
6	RX indicator	Light on when squelch valid
7	TX indicator	Light on when TX
8	LCD display	Display channel / frequency / function setting
9	Speaker	Listen to calls

Press Fun key until F icon appears then press following key

NO.	Knob	Function
1	V/M	Channel store
2	SCA	Channel scan delete or add
3	SQL	CTCSS/DCS setting
4	VOL	Keypad lock

Hold Fun key then press following key

NO.	Knob	Function
1	V/M	Delete memory channel
2	SQL	Voltage display function

Keep press following key

NO.	Knob	Function
1	FUN	Enter setting mode after hold it for 2 seconds
2	SQL	Turn monitor

4.2 Rear Panel
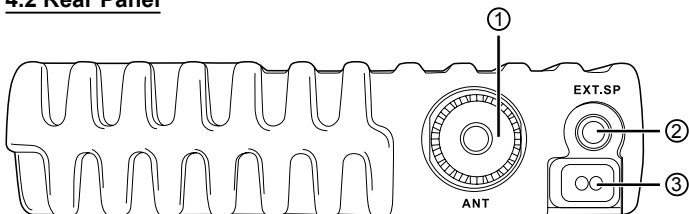
NO.	Knob	Function
1	Antenna connector	Connect a 50Ω antenna
2	External Speaker jack	Connect optional SP01 external speaker
3	Power cable	Connect a standard DC power cable

4.3 Display
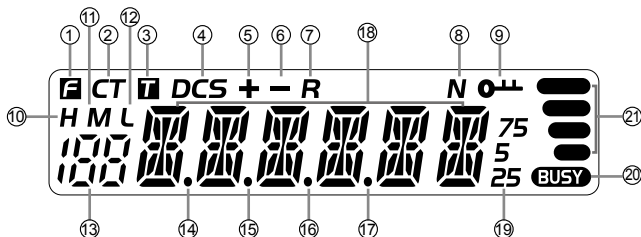
1.**F**: Display when press FUN key

2.**CT**: Display when setting CTCSS

3.**T**: Display when setting TX CTCSS

4.**DCS**: Display when setting DCS

5.**+**: Display when setting positive offset direction

6.**-**: Display when setting negative offset direction

7.**R**: Display when turn on reverse frequency function

8.**N**: Display when setting narrow band

9.**o┵**:Display when setting keypad lock function

10.**H**: Display when setting high power

11.**M**: Display when setting middle power

12.**L**: Display when setting low power

13.**188**: Display memory channel number in memory mode

14.Decimal point: Display when store channel indicate empty channel

15.Decimal point: Display this icon when setting channel scan skip

16.Decimal point: Indicates the decimal point of frequency and the scanning function

17.Decimal point: Display this icon when setting CTCSS/DCS scan

18.*888888*: Indicate frequency or memory channel name

19.**25/5/75**: Display this icon when indicates the end of the frequency.

20.**BUSY**: Display when receive the signal or turn on the monitor function

21.**RSSI**: Display TX/RX signal strength

5. WORKING MODE AND MENU FUNCTION

According to practical application, you can set the radio works as Amateur Transceiver mode or Professional Transceiver mode. There are also 2 levels operation menu to set functions as you need. It is easy and convenient (From No.1 to No. 10 are channel function setup, From No.11 to No.20 are general setting setup).

5.1 Working Mode

A. By programming software: In PC software's "**General Setting**" menu, choose "**Display Mode**" to select Amateur Transceiver mode or Professional Transceiver mode.

B. By manual setup: Please refer to "**Display Mode**" in Page 23.

5.2 Amateur Transceiver Mode

Except setting as "**CH**" mode, others considered as Amateur transceiver mode. Under this mode, press **[V/M]** key to switch between Channel mode and VFO mode.

A. Frequency + Channel mode: When set display as "**FR**", it enters into Frequency+ Channel mode. Under this mode, new setting of channel operation and shortcut operation can be temporarily used by user. Once the radio is turned off or switched to another channel, the temporary setting will be erased and back to initial settings. If the program software's channel store is valid, the Shortcut operation and channel setting will be changed & stored as the latest value permanently. Once the radio is turned off or changed to new VFO frequency, the latest setting is remained until next change.

B. Channel+ Name Tag Mode: When set display as "**NM**", it enters into Channel +Name Tag mode. At this mode, it will display corresponding channel name when the current channel is edited with name. Otherwise, it will display frequency + channel. Its operations are the same as frequency + channel mode.

C. VFO Mode(Frequency mode): Under this mode, the Shortcut operation and channel setting will be changed & stored as the latest value permanently. Once the radio is turned off or changed to new VFO frequency, the latest setting is remained until next change.

5.3 Professional Transceiver Mode

When set display mode as "**CH**", it enters into Professional Transceiver mode. At this mode, except scan, other shortcut operation can't operate. And from No.1-10 menu in function setting will be auto hidden. They should be set by PC software. If there is corresponding name for current channel, the LCD will display current channel name Otherwise, it shows current channel number.

🔊 » *If transceiver programmed as professional transceiver mode*
NOTE *and locked, you can't return to amateur transceiver mode by manual operation from general setting.*

5.4 Under Every Mode

From No. 11-20 menu in general setting can be changed and saved.

6. BASIC OPERATION

6.01 Switching the Power On/Off

When the transceiver in power off, press **[VOL]** key to power on or base on function menu APO set as power on once connect the power, then hold **[VOL]** key for 2 seconds to power off.

6.02 Power Voltage Display Function

After the transceiver connect the power cable, press **[FUN]** key and **[SQL]** key same time for 1 second can confirm current power voltage, then you can see the voltage data from the LCD display. The LCD display voltage will change once the power voltage has changed.

🔊 » *The display voltage range is from 9V to 17V, the display data is*
NOTE *a rough data, if you need exactly data pls use the voltmeter to test.*

6.03 Adjusting the Volume

When the transceiver in power on, turn VOL knob, the LCD display **VOL-XX**, **XX** means volume level, can increase or decrease the volume, turn clockwise VOL knob can increase the volume, turn anticlockwise VOL knob to decrease volume. When set the volume as 1st level, then the transceiver in mute status.

6.04 Switch Between VFO and Channel Mode

In standby, press V/M until LCD appears **M**. this indicates the radio is in channel mode. Repeate above operation to switch between frequency mode(VFO) and channel mode.

6.05 Adjusting Frequency/Channel

1. In frequency mode, Short press **[UP]** or **[DN]** key to increase or decrease frequency. Hold **[UP]** or **[DN]** to fast increase or decrease frequency. Short press **[VOL]**, the MHz will flash, hold **[UP]** or **[DN]** key will change the frequency move by 1 MHz. Press **[VOL]** key again, the MHZ will flash, hold **[UP]/[DN]** key will change the frequency move by 10MHZ, press any key exit this mode.

🔊 » *2.5K, 5K, 6.25K, 10K, 12.5K, 20K, 25K, 30K and 50K total nine*
NOTE *step size available for this radio.*

2. In channel mode, short press **[UP]** or **[DN]** key to increase or reduce channel by one step. Hold **[UP]** or **[DN]** key to fast increase or reduce channel.

6.06 Receiving

When the channel you are operating being called, the screen shows **BUSY** icon and field strength. The green RX indicator light on, in this way you can hear the calling.

🔊 » *If the transceiver has set at higher squelch level, it may fail to*
NOTE *hear the calling.*

If the transceiver LCD display **BUSY** icon and field strength, the green LED Rx indicator flashes, but can not hear the calling, it means has receive matching carrier but with unmatching signaling (Pls reference CTCSS/DCS encode and decode for operation).

6.07 Transmitting

Hold **[SQL]** key to monitor for a while, to confirm the current channel is not busy, then release **[SQL]** key and back to standby state . Hold **[PTT]** key and speaker into microphone. Hold the microphone approximately 2.5-5.0cm from your lips and speak into the microphone in your normal speaking voice to get best timbre.

🔊 » *Hold PTT key, the LED lights red and power strength show in*
NOTE *the screen, indicates it is transmitting, release PTT to receive.*

6.08 Channel Edit

1. In VFO mode, press **[UP]**/**[DN]** or **[VOL]** to choose wanted frequency.
2. Press **[FUN]** key+ **[SQL]** to enter CTCSS/DCS setup. Press **[UP]** / **[DN]**or **[VOL]** to select desired signaling.
3. Enter channel menu No 1-10 and choose related setup.
4. Press **[FUN]** key, the LCD displays **F** icon, if the channel number flash means current channel number is valid. If **M** icon flashes means current channel number is empty.
5. Press **[UP]** / **[DN]** key or turn VOL knob choose wanted channel number.
6. Press **[V/M]** key store the channel, the decimal point icon disappear, the channel number no flash and emit a prompt, it means the channel stored success.

6.09 Channel Delete

1. In channel mode, press **[UP]** / **[DN]** to choose a unwanted channel.
2. Hold **[FUN]** and **[V/M]** key for over 1 second, the current channel will be deleted, the radio emit a prompt and jump to next working channel.

7. SHORTCUT OPERATION

7.01 Squelch Off / Squelch Off Momentary

SQL key programmed as Squelch Off or Squelch Off Momentary to monitor the weak signal.

1. Squelch Off: Press [SQL] key to disable squelch, press [SQL] key again to resume squelch.
2. Squelch Off Momentary: Press [SQL] key to disable squelch, release key to resume squelch.

🔊 » *The above functions should be set in program software.*
NOTE

7.02 Squelch Level Setup

This function use for setting RX signal strength, the calling will be heard only when reach set level, otherwise the radio will keep mute.

1. In standby, hold [SQL] key, then short press [UP]/[DN] or turn VOL Knob, the LCD displays current squelch level.
2. Press [UP]/[DN] or turn VOL knob to choose wanted squelch level.
3. Press any key to confirm and exit.

7.03 Frequency Scan

In frequency (VFO) mode, this function is designed to monitor signal of all frequency points under each step size.

1. In VFO mode, short press [SCA] to start frequency scan.
2. Short press [UP] or [DN] to change scan direction.
3. Short press [UP]/[DN] key or any other key except the volume knob to exit scan.

7.04 Channel Scan

In channel mode, this function is used to monitor signal in all channels.

1. In channel mode, Press [SCA] key start channel scan.
2. Short press [UP]/[DN] key to change scan direction.
3. Short press [UP]/[DN] key or any other key except the volume knob to exit scan.

7.05 Scan Skip

In channel mode, separately short press [FUN] key and [SCA] key to add or delete a scan channel.

1. Decimal point between frequency's ten digit and unit digit disappears, the current channel added to scan list. this channel will be scanned when scan function start.
2. Decimal point display between frequency's ten digit and unit digit, the current channel is deleted from scan list, this channel will not be scanned when start scan function.

7.06 CTCSS/DCS Encode and Decode Setup

Separately short press [FUN] key and [SQL] key to enter CTCSS/DCS encode/decode menu, repeatedly short press [SQL], to set CTCSS/DCS encode/decode for current channel.

1. When the LCD displays **T** , means current channel set with CTCSS encode, press [UP]/[DN] key or turn VOL knob to choose wanted encode.
2. When the LCD displays **CT**, means current channel set with CTCSS encode/decode, press [UP]/[DN] key or turn VOL knob to choose wanted CTCSS decode.
3. When the LCD displays **DCS**, means current channel set with DCS encode/decode, press UP/DN key or turn VOL knob to choose wanted DCS encode/decode.
4. CTCSS code: 62.5-254.1 total 51 groups. DCS code: 000N-777I total 1024 groups, N is positive code, I is inverse code. Press V/M to choose positive code or inverse code.
5. Press [UP]/[DN] key or any other key except volume knob to exit.

🔊 » *Under channel mode, this operation can be temporarily used*
NOTE *by user. Once the radio is turned off or switched to another channel, the temporary setting will be erased. If the channel setting programmed for valid, the temporary setting will keep valid until next change, turn off radio or switch to another channel, the temporary setting will not changed.*

7.07 CTCSS Scan

Separately short press [FUN] key and [SOL] key to enter CTCSS/DCS encode/decode menu, repeatedly short press [SQL] key until LCD displays **CT**, short press [SCA] key can enter CTCSS scan mode. Short press [UP] or [DN] key can change the scan direction, Once finding a matching CTCSS signaling, it will stop for 5S then scan again. Press any key to exit.

7.08 DCS Scan

Separately short press [FUN] key and [SQL] key to enter CTCSS/DCS encode/decode menu, repeatedly short press [SQL] key until LCD displays **DCS**, short press [SCA] key to enter DCS scan mode. Short press [UP] or [DN] key can change the scan direction. Once finding a matching DCS signaling, it will stop for 5S then scan again. Press any key to exit.

7.09 Keypad Lockout

Avoiding unintentional operation, this function will lock the keys except [PTT] key and [FUN] key.
1. Short press [FUN] key the LCD displays **F** icon, press [VOL] key again the LCD displays Lock means the keypad is locked.
2. Repeate above operation, when Lock icon disappears, means the keypad is unlocked.

7.10 Function Menu

1. Hold [FUN] key for over 2S to enter function menu.
2. Short press [UP]/[DN] or turn VOL knob to switch menu option.
3. Short press [VOL] key to enter 2nd level menu setup
4. Short press [UP]/[DN] key or turn VOL knob to choose current setting.
5. Short press any key to store and exit.

🔊 » *There are 2 part of function menu: part 1, Menu No. 1-10*
NOTE *channel function menu. part 2 Menu No. 11-20 function menu. Part 1 will automatically hide in channel mode by program software.*

7.11 Signaling Combination Setup

Enter No. 01 function menu, the LCD displays "**SKP**". This function can improve the level of blocking irrelative signals.

SQ: You can hear the calling when receive a matching carrier.

CTC: You can hear the calling when receive a matching carrier and CTCSS/DCS signaling.

Default: SQ

◁)) » *This setting is valid only when CTCSS/DCS signaling added.*
NOTE

7.12 HIGH/MID/LOW Power Selection

Enter No. 02 function menu , the LCD displays "**POW**". This function use to control transmit power level.

HI: Transmit with high power.

MI: Transmit with middle power.

LO: Transmit with low power.

Default: HI.

7.13 Band-width Selection

Enter No 03 function menu , the LCD displays "**BNAD**".
Select suitable bandwidth in accordance with different local conditions

WIDE: band width is 25k(Wide band)

NAR: band width is 12.5k(Middle band)

Default: WIDE.

7.14 Busy Channel Lockout

Enter No 04. function menu , the LCD displays "**BUSY**".
BCLO is to disable transmitting while RX signal is received. Once the channel is busy and you press [PTT], the radio will beep as warning and get back to receiving.

BU: Enable BCLO, Carrier lockout, transmitting is inhibited when current channel receives a matching carrier; press [PTT] to emit error voice prompt and back to receiving mode.

RL: Enable BTLO, transmitting is inhibited when current channel receives a matching carrier but dis-matching CTCSS/DCS. Press [PTT] key to emit error voice prompt and back to receiving mode.

OFF: BCLO is disabled. It can transmit in any receiving status.

Default: OFF.

7.15 Editing Channel Name

Enter No.05 function menu , the LCD displays "**NAME**".

1. Press [UP]/[DN] or turn VOL knob to choose character for present cursor location.
2. Press [V/M] key to confirm and move to next character edit.
3. Press [FUN] key to return to last character edit.

📢》 » *In Frequency (VFO) mode ,this function will be auto-hidden.*
NOTE

7.16 TX OFF

Enter No.06 function menu , the LCD displays:"**TX**".
This function use to disable the transmitting for current channel.
ON: TX allowed, press [PTT] to transmit.
OFF: TX not allowed, press [PTT] will emit a wrong report.
Default: ON.

7.17 Reverse Frequency

Enter No.07 function menu , the LCD display "**REV**".
When turn on this function, the TX frequency turns to RX frequency & RX frequency changes to TX frequency. The signaling will reverse if CTCSS/DCS signaling existed in this channel.
ON: Turn on reverse function
OFF: Turn off reverse function
Default: OFF.

7.18 Talk Around

Enter No.08 function menu , the LCD displays "**TALK**".
This function enable direct communication with other radios in case the repeater is not activated or when out of the repeater range. The transceiver will transmit by RX frequency with its CTCSS/DCS signaling.
ON: Turn on talk around function
OFF: Turn off talk around function
Default: OFF.

7.19 Offset Direction Setup

Enter NO.09 function menu, the LCD display "**SHIFT**".

Repeater receives a signal(UP-LINK) on one frequency and retransmits on another frequency(DOWN-LINK). The difference between

these two frequencies is called the offset frequency. If the UP-LINK frequency is higher than DOWN-LINK frequency, the direction is positive, If it is lower, the shift direction is negative.

+: it indicates positive offset, which means transmitting frequency higher than receiving frequency.

-: it indicates negative offset, which means transmitting frequency lower than receiving frequency.

OFF: Turn off offset direction function

Default: OFF.

7.20 Offset Frequency Setup

Enter NO.10 function menu, the LCD displays "**OFFSET**"

0-90: Total 90MHZ frequency range available

Default: 5.0MHz

🔊 » *The offset frequency change base on the frequency step*
NOTE *setting.*

7.21 Frequency Step Size Setup

Enter No.11 function menu , the LCD displays "**STEP**".

This function is valid only in frequency (VFO) mode, input frequency or frequency scanning are restricted by frequency step size.

Total 9 frequency step size available: 2.5K, 5K, 6.25K, 10K, 12.5K, 20K, 25K, 30K and 50K.

Default: 25K

🔊 » *This function is auto-hidden in memory mode.*
NOTE

7.22 Display Mode Setup

Enter No.12 function menu , the LCD displays "**DSP**".

This radio has 3 different dispaly modes:

FRQ: Frequency+Channel mode (Amateur transceiver mode)

CH: Channel mode

NM: Channel+Name Tag mode (Amateur transceiver mode), if channel not named (Amateur transceiver mode), it displays Frequency+Channel mode.

Default: FRQ.

🔊 » *This function will be auto-hidden if channel mode locked.(Refer*
NOTE *to programming software).*

7.23 BEEP Prompt Setup

Enter No.13 function menu, the LCD displays "**BEEP**".

The prompt function is confirm the transceiver's operation, it will emit BEEP prompt sound when with wrong operation.

ON: Turn on BEEP prompt function

OFF: Turn off BEEP prompt function

Default: ON.

7.24 TOT(Time Out Timer)

Enter No.14 function menu , the LCD displays "**TOT**".

The time-out timer limits continuous transmitting time. When transmit time exceed programmed value, the transmitting will stop and emit a prompt.

1-30: 1-30 minutes range available by 1 minute/step

OFF: Turn off TOT function.

Default level: 03.

7.25 APO Setup

Enter No.15 function menu , the LCD displays "**APO**".

Once APO is activated, the radio will be automatically switched off when the preset timer is running to end.

30: Auto power off after 30m

60: Auto power off after 1h

120: Auto power off after 2h

OFF: Disable Auto power off

Default: OFF.

7.26 Squelch Level Setup

Enter No.16 function menu , the LCD displays "**SQL**"

This function use for setting RX signal strength, the calling will be heard only when reach set level, otherwise the radio will keep mute.

OFF-09: Total 10 levels, OFF is lowest value(Open)

Default: 03

🔊 » *If the transceiver has set at higher squelch level, it may fail to*
NOTE *hear the calling. If set at lower squelch level, the radio will be interfered.*

7.27 Scan Dwell Time Setup

Enter No.17 function menu , the LCD displays "**SCAN**"

This radio has 3 kinds of Scan Dwell Time way.

SE: It stops once scanning a matching signal.

TO: It pauses 5s once scanning a matching signal, then resume scan.

CO: It pauses once scanning a matching signal, signal disappeared then resume scan.

Default: TO.

7.28 Power On Method Setup

Enter NO.18 function menu, the LCD displays "**AOP**"

After turn off this function, the transceiver will be power on only by manually pressing VOL key.

ON: Auto-power on

OFF: Power on by manual

Default: ON.

7.29 Mic Gain Setup

Enter No.19 function menu, the LCD displays "**MIG**".

1-16: total 16 levels for optional

Default: 6

7.30 Reset Factory Default

Enter No.20 function menu , the LCD displays "**RESET**".

If your radio seems to be malfunctioning, resetting the microprocessor may solve the problem.

FACT: All channel, signaling function setup resume factory default.

SETUP: No.10-20 function menu setup resume factory default.

8. PROGRAMMING SOFTWARE INSTALLING AND STARTING (IN WINDOWS XP SYSTEM)

1. Double click "XT-818-Setup.exe", then follow the installing instruction.
2. Click start menu in computer, under "ALL PROGRAMS" menu, choose and click "USB To Com port" in XT-818 program, install "USB To Com port" driver by indication.
3. Connect the optional USB Programming cable to USB port in PC with transceiver.
4. Double click XT-818 shortcut or click XT-818 inprocedure index of start menu, choose serial com port as indicated then click OK to start programming software.
5. According to instruction, select correct "COM Port, then click "OK" to start programming software.

🔊 **NOTE** » *Even in same computer, the selective COM Port is different when USB cable connects with different USB port.*

You shall install software before connecting the USB cable line. Switch on transceiver before writing frequency. You had better not switch on or off the power supply of transceiver when it is connected with computer, otherwise, it will make transceiver unable to read or write frequency. In this case, you have to turn off programming software, pull out USB cable. then reinsert USB cable and open software, then rechoose COM Port, it will turn into normal operation. Therefore, please connect transceiver with computer after switching on the transceiver. Don't restart transceiver power when it is connected with computer.

9. MAINTENANCE

9.1 Default Setting after Resetting

XT-818		
Frequency	**VHF**	**UHF**
VFO Frequency	145.000MHz	435.000MHz
Memory CH 1-199	CH1: 145.000MHz	CH1: 435.000MHz
Offset Direction	--	--
Offset Frequency	600KHz	5MHz
Channel Step	12.5KHz	25KHz
CTCSS Encode/Decode	--	--
CTCSS Frequency	88.5Hz	88.5Hz
DCS Encode/Decode	--	--
DCS Code	023N	023N
Power Output	HI	HI
TOT	3	3
Squelch Level	3	3
Volume	28	28

9.2 Trouble Shooting

NO.	Problem	Possible Causes and Potential Solutions
1	Power is on, nothing appears on Display	+ and - polarities of power connection are reversed. Connect red lead to plus terminal and black lead to minus terminal of DC power supply.
2	Fuse is blown	Check and solve problem resulting in blown fuse and replace fuse with new fuse.
3	No sound comes from speaker.	•Squelch is muted. Decrease squelch level. •Tone or CTCSS/DCS squelch is active. Turn CTCSS or DCS squelch off
4	Key and Dial do not function	Key-lock function is activated. Cancel Key-lock function
5	No Scan	Did not list the channel in the scan when programmed.
6	The whole band with noise after programmed	The squelch has opened during programmed
7	Communication range was short, bad sensitivity	a. Check the antenna is well or not, and check the antenna port whether well connected. b. Antenna connector has debris or damaged. Whether set Low power
8	Can not talk with other members within the group	a. Frequency/channel different, pls modify b. CTCSS/DCS different, pls reset c. Out of the communication range

10. SPECIFICATIONS

GENERAL	
Frequency Range	VHF:136-174MHz; UHF:400-490MHz
Number of Channels	199 channels
Channel Spacing	25KHz(Wide Band); 12.5KHz(Narrow Band)
Phase-locked Step	2.5K,5K,6.25K,10K,12.5K,20K,25K,30K,50K
Operating Voltage	13.8V DC ±15%
Squelch	Carrier/CTCSS/DCS
Frequency Stability	±2.5ppm
Operating Temperature	-20~+60C
Dimensions	
Weight	

TRANSMITTER		
	Wide Band	Narrow Band
Sensitivity (12dB SINAD)	≤0.25μV	≤0.35μV
Adjacent Channel Selectivity	≥60dB	≥60dB
Intermodulation	≥60dB	≥60dB
Spurious response	≥60dB	≥60dB
Audio Response	+1~-3dB(0.3~3KHz)	+1~-3dB(0.3~3KHz)
Hum & Noise	≥45dB	≥40dB
Audio Distortion	≤5%	
Audio Power Output	>2W@16R	

Transmitting		
	Wide Band	Narrow Band
Power Output	15W / 10W / 5W	
Modulation	16KΦF3E	11KΦF3E
Adjacent Channel Power	≥70dB	≥60dB
Hum & Noise	≥40dB	≥36dB
Spurious Emission	≥60dB	≥60dB
Audio Response	+1~-3dB(0.3~3KHz)	+1~-3dB(0.3~3KHz)
Audio Distortion	≤5%	

10.1 51 groups CTCSS Tone Frequency(Hz)

No.	Freq.(Hz)	No.	Freq.(Hz)	No.	Freq. (Hz)	No.	Freq. (Hz)	No.	Freq. (Hz)
1	62.5	12	94.8	23	136.5	34	177.3	45	218.1
2	67.0	13	97.4	24	141.3	35	179.9	46	225.7
3	69.3	14	100.0	25	146.2	36	183.5	47	229.1
4	71.9	15	103.5	26	151.4	37	196.2	48	233.6
5	74.4	16	107.2	27	156.7	38	189.9	49	241.8
6	77.0	17	110.9	28	159.8	39	192.8	50	250.3
7	79.7	18	114.8	29	162.2	40	196.6	51	254.1
8	82.5	19	118.8	30	165.5	41	199.5		
9	85.4	20	123.0	31	167.9	42	203.5		
10	88.5	21	127.3	32	171.3	43	206.5		
11	91.5	22	131.8	33	173.8	44	210.7		

10.2 1024 groups DCS Code

000	001	002	003	004	005	006	007
010	011	012	013	014	015	016	017
020	021	022	023	024	025	026	027
030	031	032	033	034	035	036	037
040	041	042	043	044	045	046	047
050	051	052	053	054	055	056	057
060	061	062	063	064	065	066	067
070	071	072	073	074	075	076	077
100	101	102	103	104	105	106	107
110	111	112	113	114	115	116	117
120	121	122	123	124	125	126	127
130	131	132	133	134	135	136	137
140	141	142	143	144	145	146	147
150	151	152	153	154	155	156	157
160	161	162	163	164	165	166	167
170	171	172	173	174	175	176	177
200	201	202	203	204	205	206	207
210	211	212	213	214	215	216	217
220	221	222	223	224	225	226	227
230	231	232	233	234	235	236	237
240	241	242	243	244	245	246	247
250	251	252	253	254	255	256	257
260	261	262	263	264	265	266	267
270	271	272	273	274	275	276	277
300	301	302	303	304	305	306	307
310	311	312	313	314	315	316	317
320	321	322	323	324	325	326	327
330	331	332	333	334	335	336	337
340	341	342	343	344	345	346	347
350	351	352	353	354	355	356	357
360	361	362	363	364	365	366	367
370	371	372	373	374	375	376	377
400	401	402	403	404	405	406	407

410	411	412	413	414	415	416	417
420	421	422	423	424	425	426	427
430	431	432	433	434	435	436	437
440	441	442	443	444	445	446	447
450	451	452	453	454	455	456	457
460	461	462	463	464	465	466	467
470	471	472	473	474	475	476	477
500	501	502	503	504	505	506	507
510	511	512	513	514	515	516	517
520	521	522	523	524	525	526	527
530	531	532	533	534	535	536	537
540	541	542	543	544	545	546	547
550	551	552	553	554	555	556	557
560	561	562	563	564	565	566	567
570	571	572	573	574	575	576	577
600	601	602	603	604	605	606	607
610	611	612	613	614	615	616	617
620	621	622	623	624	625	626	627
630	631	632	633	634	635	636	637
640	641	642	643	644	645	646	647
650	651	652	653	654	655	656	657
660	661	662	663	664	665	666	667
670	671	672	673	674	675	676	677
700	701	702	703	704	705	706	707
710	711	712	713	714	715	716	717
720	721	722	723	724	725	726	727
730	731	732	733	734	735	736	737
740	741	742	743	744	745	746	747
750	751	752	753	754	755	756	757
760	761	762	763	764	765	766	767
770	771	772	773	774	775	776	777

N is positive code, **I** is negative code, total: 232 groups.