

## 7. Advanced Operation

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### Key-Locked Function

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This will lock several keys to avoid unintentional operating transceiver.

1. Press **FUNC** key and press **TS/DCS** key while "**🔒**" is on the screen.
2. The "**🔒**" icon appears.
3. With this function activated, only the following commands can be accessed:
  - **PTT**
  - **FUNC + TS/DCS** to cancel this function
  - Monitor function (to release squelch for weak signal receiving)
  - Squelch setting
  - **UP/DOWN** keys



### Tone Burst

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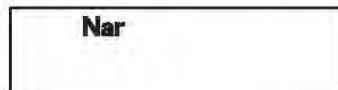
Press the **DOWN** key while **PTT** is pressed. The tone burst will be transmitted as long as both keys are pressed together. Usually just a few seconds of burst is enough to activate the repeater.

### Wide/Narrow Band

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Switching wide/narrow band mode:

1. Press **MHz** key while keeping **FUNC** key pressed. "**Nar**" appears on the LCD screen and the transceiver enters to **NARROW** mode.
2. Repeat the same sequence to switch between the **WIDE/NARROW** modes. When the transceiver is in the **WIDE** mode, "**Nar**" disappears on screen.
3. In the **NARROW** mode, the microphone gain and modulation during transmission and the demodulation range during receiving will be lower.



### Compander Function

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This function can decrease the background noise and improve the audio quality.

1. Press **FUNC**, and then press **SQL** when "**🔒**" displays on the screen. While "**🔒**" shows this function is **ON**.
2. Repeat the above operation, the transceiver switches between **ON/OFF** Compander function. "**🔒**" disappears on screen while set **OFF** this function.



### Scrambler (Optional)

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Scrambler is special solution of voice. This function will make the users who have transceiver with same frequency only can get noise, can't listen clearly about the conversation, then it has kept secret when communicates. If you want to use this function, the relevant transceivers also must have same scrambler function and enable it otherwise both sides can't communicate normally.

### ANI Function

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This transceiver uses **DTMF/5-TONE** to realize **ANI** function. When channels have been programmed to have **ANI** function, press **PTT** to send the reprogrammable **DTMF/5-TONE** codes, it will display caller information to realize **ANI** function after called transceiver has decodes.

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### Auto-Dialer

This will automatically transmit pre-programmed DTMF tones. DTMF (Dual-Tone-Multi-Frequency) are the same tones used in the telephone system, and they are often used to remote control electronic devices or AUTOPATCH phone systems available on some repeaters.

#### To program tones in the Auto-dialer memory:

1. Press **FUNC** key and **TS/DCS** key at the same time to enter the setting mode. Default display is 1 on the right end of the screen. Memory channel icon displays which of the ten auto-dial memories(1~9) is in use.



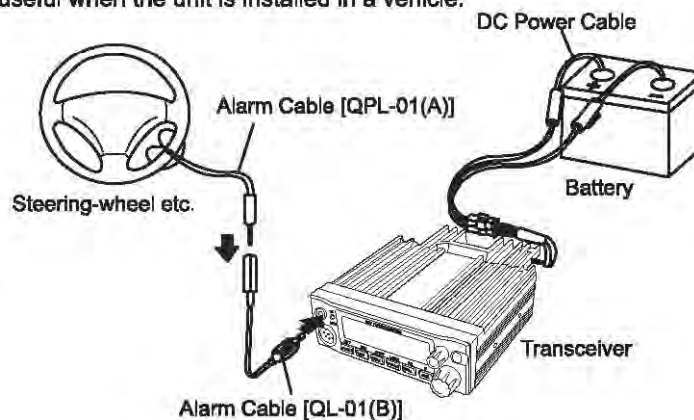
2. Use **UP/DOWN** keys to select the desired channel.
3. Rotate the main dial to select the first digit, then press **TS/DCS** key to enter. The Cursor moves toward right. Repeat sequence to complete.
4. Use "--" for pause. The display scrolls when the 7th digit is entered. The numbers 0 to 9, pause, \* and # can be stored (Max.16 digits).
5. To check the entered digits, press **FUNC** then rotate the main dial while "□" displays on the screen.
6. To delete, press **CALL** key. Press **PTT**, **V/M**, **MHz** or **SQL** keys to exit and return to original status.

#### Dialing numbers in the Auto-dial memory:

1. Choose the desired communicating frequency or memory channel.
2. Press **FUNC** and **TS/DCS** at the same time to enter setting mode. Choose autodialing memory channels.
3. Press **PTT** and **UP** at the same time to transmit a group of numbers stored in the Auto-dialer memories.

### Burglar Alarm

This alert uses a beep sound when the unit is about to be removed in an unwarrantable way. This function is useful when the unit is installed in a vehicle.



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### **【Operation 1】**

**Setting:** Connect the provided alarm DC cable directly to the battery.

1. Connect the provided alarm cable to the DATA jack on the front panel as shown. Secure the other end of the cable to an object that stays fixed in the vehicle.
2. Enter the Parameter Setting mode by pressing **FUNC** key for more than 2 seconds. Use **SQL** or **UP/DOWN** keys to select menu and rotate the dial to set SCR-ON. Press any key other than **SQL/UP/DOWN** key to enter the setting and exit.
3. Turn off the unit with PWR switch. The TX LED will light.

To turn off the alarm function, turn on the unit, enter the Parameter setting mode again, and select SCR-OFF. When alarm is activated, the decimal points on 100 MHz and 10kHz order will flash on screen.

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**NOTE:**

1. The alarm function is ON only when the unit is turned off.
  2. When alarm is activated (SCR-ON or DLY), the ignition key function does not work.
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**Function:**

1. When the alarm cable is removed from the DATA jack or cut without using the proper sequence, the alarm sounds for 10 minutes. During the alarm, the unit goes to receive on memory channel 99, according to its pre-programmed setting (TSQ/DCS received).
2. When a signal is received on Channel 99, the alarm stops.
3. Turning on the unit with SQL key pressed also cancels the alarm.
4. Turn the unit off again with the alarm cable connected properly. It returns to the alarm mode.

### **【Operation 2】**

Choose this operation when a delay period is desired.

1. Enter the Parameter setting mode as described previously and select SCR-DLY. Follow the previous instruction to set.
2. Turn off the unit. Display will disappear but the LCD illumination stays on. After 20 seconds TX LED lights up, illumination dims, and alarm functions. The system won't work during the 20-second "DELAY" period.
3. The alarm sounds under the same condition as described previously. There is a 20 second delay until the alarm sounds. During the 20-second period, only the display illumination is lit. Turn ON the unit during "DELAY" period to cancel the alarm function.

**Do set SCR-OFF during normal operation.**

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**NOTE:**

1. Start alarming, the unit will switch between transmitting and receiving signals per 5 seconds (lasts 1 minute), and then the audio-alarm sounds for 10 minutes.
  2. Setting and operating this function is same with other models, it allows you to monitor and control alarm far away on memory channel 99.
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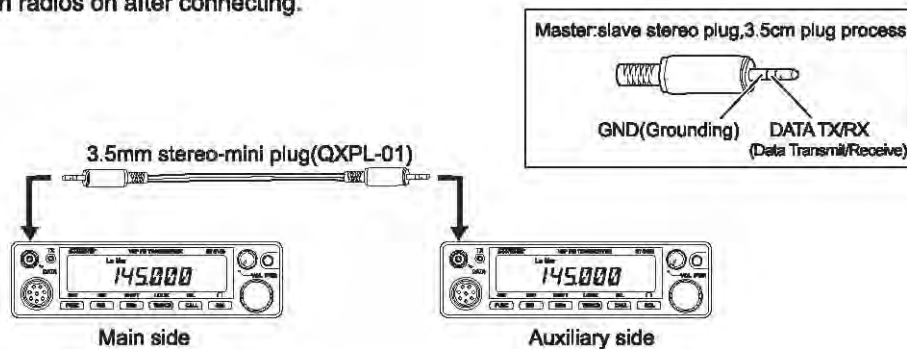
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### Cable Clone

This feature will clone the programmed data and parameters in the master unit to slave units. It copies the parameters and memory program settings.

#### **【Connection】**

Make a cable using 3.5mm(QXPL-01) stereo-mini plugs as shown below. Set and program it as required, turn off both units. Connect the cable between the DATA jacks on both master and slave. Turn both radios on after connecting.



#### **【Setting: Main side】**

1. Press **CALL** and **FUNC** key at the same time. **CLONE** will be displayed and the radio enters the clone mode.
2. Press **PTT**. **"SD 100"** will be displayed and it starts sending the data into the slave unit.
3. **"PASS"** will appear on the screen when the data is successfully transmitted.
4. The master radio may stay turned on for the next clone. Turn off the unit to exit from the clone mode.

#### **【Setting: Auxiliary side】**

1. When the Slave unit receives the clone data, **"LD..."** shows on the screen.
2. **"PASS"** will appear on the screen when the data is successfully transmitted.
3. Turn off the power. Disconnect the cable and repeat the sequence to copy the next slave unit.

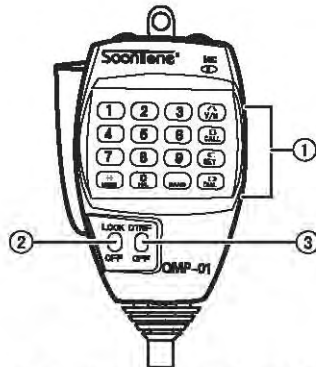
If the data is not successfully transmitted, turn off both units, make sure the cable connection is correct and repeat the entire operation from the beginning.

## 7. Advanced Operation

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## 8. Microphone Operation

### Keys' Instruction



1. Dual-audio keypad -- setting functions, inputting VFO frequency or dialing DTMF, etc.
2. LOCK/OFF--Key locks (Lightening turns ON/OFF in synchrony).
3. DTMF OFF and DTMF keypad switch between dual-audio dialing, functions operating, etc.

### Functions Chart

Key	Transceiver corresponding key	Function
0-9	—	Input frequency directly
A	V/M	Switches between VFO and Memory mode
B	CALL	Switch to Call Mode
C	Press <b>FUNC</b> for more than 2 seconds	Switch parameter setting modes, matches with # key to check the value of DTMF/ANI/2Tone 5Tone
D	FUNC + TS/DCS	Program auto dialer values
*	Press <b>SQL</b> for 1 second	Monitor function
#	—	Switch to DTMF/ANI/2-Tone/5-Tone mode
0	H/L	Switches transmission output among HI, MID and LOW.

#### NOTE:

1. Under the Parameter setting mode, press **UP** or **DOWN** to choose menu, press \* or # to choose the desired setting, press any other key except \*, #, **UP** or **DOWN** to exit the Parameter setting mode.
2. Setting the auto dialer, press **UP** or **DOWN** to choose memory channels, input the numbers on the keypad. Press \* or # to choose numbers or symbols, press **A** to enter, press **C** to clear, press **B**, **D** or **PTT** key to return to the initial status.
3. Only DTMF/ANI/2-TONE/5-TONE mode has been selected, **C** key matches with # key to check the value of DTMF/ANI/2-TONE/5-TONE. In addition, press and hold **FUNC** key for 3 seconds to enter, the value also can be checked by matching with **UP** or **DOWN** key.

## 8. Microphone operation

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### Inputting Frequencies

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Frequencies can be entered directly by pressing the numerical (1~0) keys.

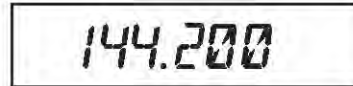
1. Set the microphone DTMF OFF to OFF.

2. DTMF keys can be used to enter frequencies from 100MHz.

(Ex.) When setting 144.20MHz with the tuning step set to 5kHz.

Input (1) (4) (4) (2) (0) (0)

After entering the sixth digit a slightly longer beep is heard and the entry is complete. The output frequencies cannot be input.



144.200

3. Cancelling the entry : Press PTT, or any key other than the numerical keys.

## 9. Maintenance

### Reset

Resetting the transceiver is return all programmed setting to default setting. If the trouble continuously appears, this function can solve the problems and return to the normal operation status.

### How To Reset

Press **FUNC** for 3 seconds and power ON the transceiver, all the icons display on the LCD screen, and then display the default setting.



all icons display on the LCD screen

**NOTE:** All the settings would be initialized, therefore pay more attention on resetting operation.

### Default Setting After Resetting

	ST-5188	CTCSS Frequency	88.5Hz
VFO Frequency	145.00MHz	DCS Setting	—
CALL Frequency	145.00MHz	DCS Code	023N
Memory Channels (0~99)	—	Output Power	HI
Offset Direction	—	Key Locked Setting	No Use
Offset Frequency	600kHz	TOT	No Use
Channel Stepping	5kHz	APO	No Use
CTCSS Setting	—	Squelch Level	0

### Trouble Shooting

Check the transceiver refer to the following chart if there is anything wrong with it. Resume the transceiver if the trouble continuously appears, it can avoid the incorrect operation.

Trouble	Shooting Guide
Get through, but displays nothing	The battery pole is reversed. Connect the Red lead to positive terminal of the DC power, connect the Black lead to negative terminal.
The fuse is melted	Check out the problem and solve, change a new fuse.
The screen is too dim	Setting the dimmer LAMP-L to LAMP-H.
No sound from the speaker	Decrease the squelch level when it is set to mute. Set the Tone-Burst or DCS squelch function ON. Set OFF the CTCSS/DCS function.
The keys and main dial cannot work	Set ON the Tuning-Locked function. Set it OFF.
The main keypad couldnot change the memory channel.	The transceiver is on CALL or VFO mode.
Press PTT but cannot transmit signals	The microphone is installed incorrectly. Please connect correctly again.



## 10. Specification

General Specification	
Frequency Range	136-173.995MHz      27-42.995 MHz(customize) 400-489.995 MHz      220-259.995(customize)
Working Way	16KOF3E (FM)    8K50F3E (Narrow band FM)
Frequency Rate	5,8.33,10,12.5,15,20,25,30,50kHz
Number of Channels	100 channels + CALL Channel
Antenna Impedance	50 $\Omega$ Imbalance
Frequency Stability	$\pm 5$ ppm
Microphone Impedance	2 k ohm
Regulate Voltage	DC 13.8V $\pm 15\%$ (11.7-18.5)
Current	Transmit: $\leq 9$ A Receive: $\leq 600$ mA
Working Temperature	-10°C ~ +60°C(+14° F ~ +140° F)
Grounding	Negative
Size	145(W)X47(H)X190(D)mm
Weight	about 1.2kg
Transmitter	
Output Power	50W (High) 10W (Medium) 5W (Low)
Modulation	FM
Residual Radiation	-60dB or below
Max. Fre. Deviation	$\pm 5$ KHz, $\pm 2.5$ KHz (Narrow band mode)
Receiver	
Circuit	Double-change Transceiver
Sensitivity	-12.0 dBu (0.25 $\mu$ V) or below 12dB SINAD
Middle Frequency	First: 21.7MHz, Second: 450KHz
Squelch Sensitivity	-16.0 dBu (0.1 $\mu$ V)
Selectivity	>60dB/12.5KHz      >70dB/25KHz
Intermodulation	>65dB
Audio Power	2.0 W (8 $\Omega$ , 10% distortion)

**NOTE:** No further advice for changing the specification.



***Win-Win***

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