SoonTone®

捷灵通 *VHF MARINE*

VHF MARINE   ST-6189

PWR/VOL
OFF

SQUELCH

▲UP   TAG   9
       ·SCAN   16
▼DN   DIM   U/I/C DUAL
       H/L   CH/WX

ST-6189
VHF Wireless Phone

MARINE TRANSCEIVER

Thanks for purchasing our SoonTone® ST-6189 VHF marine radio. ST-6189 provides you reliable, clear and effecient communication service. For using this radio perfect, read this manual carefully before use.

ST-6189 VHF radio meets the national technology standard, comply with the IMO (International Marine Organization) standard. This device with Al. alloy housing ensure the perfect performance even under bad environment. All USA, International, Canadian channels and 10 weather channels plus 100 common channels and 5 programmable channels (the users can defined themselves) are available in this device.

We believe this new ST-6189 VHF wireless transceiver with multi-functions, high-tech and easy-to-use also with clear display and perfect communicating is your greatest choice. Thanks for your choosing again!

May you successful and everything goes well !

Precaution

⚠ The working voltage of this radio is DC13.8V. If the power supply is 24V, do connect with the Convertor (change 24V to 13.8V), or it cannot work.

⚠ Do not connect to the 220V power supply or it will damage the important parts   .

⚠ Transmit signals after connecting the antenna, or it will damage the transmitting module.

⚠ Do not instal this radio in high temperature, humidity or dusty place.

⚠ Keep the distance between power line and antenna to avoid interferring.

⚠ Keep working for long time, the radiator will heat.

⚠ Keep this radio away from the compass to avoid the speaker affecting.

⚠ Use the Emergency Channel only when meet with danger.

Contents

1 Features

All USA, International, Canadian channels and 10 weather channels plus 100 common channels and 5 programmable channels are available in this device.

◆ **Beautiful and Practical**

Cyclograph and curve design for light and exquisite appearance to differ from the ponderous one.

◆ **Simple Operation**

Large LCD screen shows operating conditions at a glance. The adjustable backlighting design ensures the perfect performance under all terrible circumstances.

◆ **Durable and Waterproof**

Use the aluminium alloy with high intensity, one-off technology, and waterproof, even the small things such as microphone.

◆ **Target Channel Scanning**

You only need press the pre-set channels as TAG scanning, and you need to press only one key to edit the pre-set channels.

◆ **"Smart" Microphone**

Switching channels and also set High/Low power on the microphone makes you concentrate on your work.

◆ **Dualwatch/Tri-watch Standby**

With dualwatch standby function, working at every channel can standby 16 channels. With tri-watch standby function, you can monitor all informations when working.

◆ **Voltage Protecting Function**

With voltage protecting, reverse power protecting and low power warning functions of this devide. When the voltage is over than 16V or connecting reversely, it will protect automatically and cannot power ON. When alerts you low power, please check the power system.

■ Panel
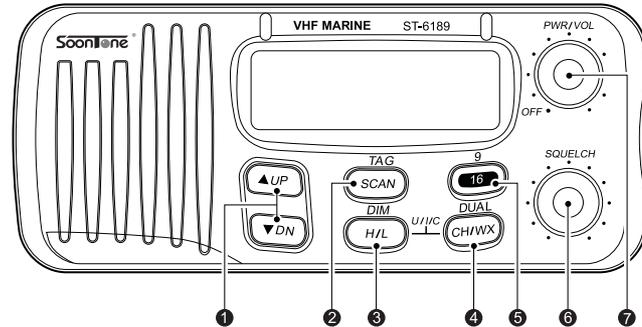
q Channel Selector [▲ UP]/[▼ DN]
➥ Press to choose channels.
● Keep pressing to choose channels quickly.

w Scanning [SCAN・TAG]
➥ Press to start or end scanning.
● Set scanning types in SETTING mode.
➥ Keep pressing for 1 second to set the scanning tag.

e High/Low Power Switch [H/L・DIM]
➥ Press to choose High/Low output power.
➥ Press this key, press [▲UP]/[▼DN] to adjust the backlighting.
➥ Press this key, press [SCAN・TAG] for 3 seconds to delete all Tag scanning channels.

r Channel Switch [CH/WX・DUAL]
➥ Press to switch channels between communicating channel groups and weather channel..
● In communicating channel group, press [H/L・DIM]+ [CH/WX・DUAL] to choose desired channel group.
➥ Press for 1 second, choose Dualwatch or Tri-watch standby function.
● Pre-set the Dualwatc or Tri-watch standby function in SET mode.

Panel & Microphone

➎ Channel 16 Switch [16 · 9]

➥ Press to select the emergency calling channel CH16.

➥ Press for 1 second to select call channel(default CH19)

● Program one call channel on each communicating group.

➥ Press for 3 seconds (when in call channel) to enter call channel programming mode.

● Channel indicator flashes.

➏ Squelch Control [AQUELCH]

● Adjust squelch.

➐ Power/Volume Control [PWR/VOL]

● To power ON/OFF and adjust volume.

■ Microphone
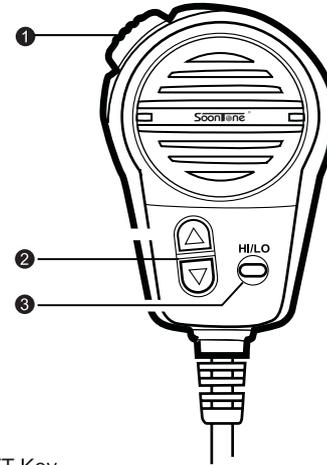
➊ PTT Key

● Press to enter transmitting status.

➋ Channel Up/Down Switches

● Press to choose channels.

● The function is the same with channel UP/DN selection on panel.

➌ High/Low Power Switch [H/L · DIM]

● The function is the same with [H/L] key on panel.

● Press to power ON, set microphone key function ON/OFF in circle.

Panel & Microphone   2

■ **LCD Screen**
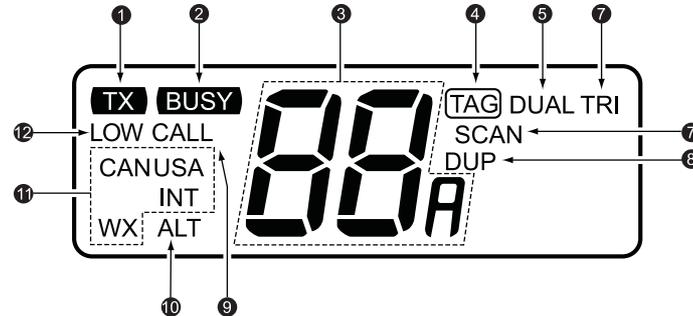
➊ TX Indicator
• Display when transmitting.
➋ Busy Indicator
• Displays when receiving a signal or rotating [SQUELCH] too far clockwise.
➌ Channel Indicator
• Shows the operating channel.
➍ Tag Channel Indicator
• Displays when the channel adding to scan.

➎ Dualwatch Indicator
• Displays when in dualwatch mode.
➏ Tri-watch Indicator
• Displays when in tri-watch mode.
➐ Scan Indicator
• Displays when scanning.
➑ Duplex Indicator
• Displays when the selected channel is a duplex channel.
➒ Call Channel Indicator
• Displays when choosing the call channel.

➓ Weather Alert Indicator
• Displays when setting weather alert function.
⑪ Channel Group Indicators
➥ "USA" shows USA channels are selected.
➥ "CAN " shows Canadian channels are selected.
➥ "INT"shows International channels are selected.
➥ "WX" shows Weather channels are selected.
⑫ Low Power Indicator
• Displays when choosing low output power.

4

Basic Operation

■ Power ON

Turn [PWR/VOL] clockwise to power ON.

All display indications
appear briefly.

Change to Channel 16
automatically.

◆ **Low Voltage Indiator**

When " " flashes on the screen, it means low voltage. Please
check the power supply.

■ Channel Selection

◆ **Channel 16**

Channel 16 is the emergency channel. It is used for contacting
with another station or ship for emergency communications.
Channel 16 is monitored during dualwatch/tri-watch. While
standing by, select Channel 16 to receive emergency calls.

Press

◆ **Call Channel Selection**

The call channel is used to store the channel you often use for
quick recall. In addition, the call channel is monitored during tri-
watch. The default call channel is CH9. Each communicating
group can program one calling channel.

Press for 1 sec.

"CALL" indicates that the
call channel is selected.

◆ **USA, Canadian and International Channels**

There are 57 USA, 57 Canadian and 57 International channels available for the different areas operating.

1. Press [CH/WX・U/I/C], to choose communicating channel.
   ● If in communicating channel group (USA, International or Canadian), this step is not necessary.

2. Press [H/L・DIM], and then predd [CH/WX・DUAL] to change channel groups.
   ● USA, Canadian and International channels can be selected in sequence.

USA Channels

Press

International Channels   Canadian Channels
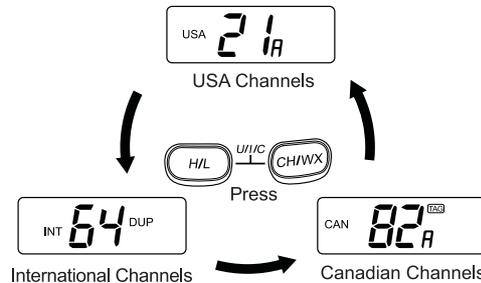
◆ **Weather Channels**

There are 10 weather channels available for monitoring NOAA (National Oceanic and Atmospheric Administration) weather broadcasts.

Press

⚠️ **NOTE**

◆ *Weather Alert Function:* NOAA will transmit a weather alert tone before broadcasting the weather report.
● *"Alt"* displays on the screen when this function is ON.
● *"Alt"* flashes on the screen when receiving signals, meanwhile sounds the weather alert tone, and then you can listen the weather report normally. Refer to the details of Setting Mode.

■ **Receiving**

1. Rotate [PWR/VOL] clockwise to power ON.
2. Rotate [SQUELCH] counterclockwise to set squelch ON.

3. Rotate [PWR/VOL] to adjust the suitable volume.

4. Rotate [SQUELCH] clockwise to set squelch OFF.

5. Select the desired channel. Refer to the details of "Channel Selection".
   ● When receiving a signal
      ➤ Squelch function ON.
      ➤ Speaker sounds.
      ➤ "🔲BUSY🔲" displays on screen.

6. When receiving an interrupting signal. rotate [SQUELCH] clockwise to increase squelch.

◆ **Dual/Tri-watch Functions**

This function allows you to conveniently monitor the emergency channel and calling channel while using one channel.

Depending on your preference, select dual watch or tri-watch in SET mode. The default setting is dual watch.

When set dual watch in SET mode:

➤ Press [CH/WX · DUAL] for 1 second to start dual watch.

Checking the signal of CH16 every 2 seconds.

Communicating on CH16 when receiving a signal until the signal disappears.

When set tri-watch in SET mode:

➤ Press [CH/WX · DUAL] for 1 second to start tri-watch.

Checking the signals of CH16 and calling channel every 2 seconds.

When call channel receiving a signal, checking CH16 every 2 seconds.

Communicating on CH16 when receiving a signal until the signal disappears.

➤ Press [CH/WX · DUAL] return to normal operation.

■ Transmitting

Make sure that the communicating channel is not occupied before transmitting in order to avoid the interference. Notice your transmitting time, do not take up for too long time.

1. Select the desired comminicating channel, refer to "Channel Selection".

2. Press [HI/LO · DIM] to choose transmitting power.
   ● Displays "LOW" when transmitting in Low power.
   ● Some channels cannot transmit in high power. Refer the details on Frequency Chart.

3. Press [PTT] on microphone to transmit.
   ● " TX " displays on the screen.

4. Speak into the microphone at your normal voice level.
   ● Keep 15cm far away from the speaker to ensure the perfect communication.

5. Release PTT to receive.

✔ **Time-Out-Timer (USA version only)**

This function can avoid long time transmitting. Transmit inhibited after 5 minutes continuously transmitting.

■ Scan Function

The transceiver has a high speed scan function for checking signals. Two scanning types are available: Normal scanning (scan all tag scan channels in sequence) and Priority scan (CH16 comes first while scanning). These can be set freely in SET mode.

◆ Setting Scan channel Tag

You can set the channels as tag channels for efficient scanning.Tag channels can be set for each channel group (USA, Canadian and International) independently.

➡ Select the desired scanning channel, then press [SCAN・TAG] for 1 second to Set/Cancel the scanning tag.

USA **11** ^{TAG} Displays when the channel is added into the scanning list.

✔ Deleting All Scanning Channels

Press [HI/LO・DIM], and press [SCAN・TAG] for more than 3 seconds (Alerts a long prompting voice,and then two short). All tags channels in the selected channel group are released.

◆ Setting Operation

1. Select the desired scanning channel group.
   ● When the Weather Alert Function is ON, select the desired WX channel to scan.
2. Press [SCAN・TAG] to start scanning.
   ● "SCAN" flashes on the screen.
   ● "16" displays on the screen during priority scan.
3. Press [SCAN・TAG] again to end scanning.
   ● "SCAN" disappears on the screen.

✔ Scan Resume Timer

Scan resume timer can be set under setting mode. When receiving a signal, scan pauses until the signal disappears or resumes after pausing 5 seconds. Refer to the SET mode details.

✔ Confirming Scanning Channels

Press [UP]/[DN] when scanning.
   ● Displays the scanning channels only.
   ● Stop pressing UP]/[DN] to resume scanning.

✔ Weather Alert Function

When this function is ON, the selected weather channel will be added to scan.

Advanced Operation

■ Programming Call Channel

You can program the channels you use often in each channel group for quick call. Press [16 • 9] for 1 second to select the call channel.

1. Press [H/L • DIM] and then press [CH/WX • DUAL] to choose the desired channel group (USA, INT, CAN) to be programmed.

2. Press [16 • 9] for 1 second to select the call channel.
   ● Call channel displays on the screen.

3. Press [16 • 9] for 3 seconds to enter call channel setting mode.
   ● Call channel flashes on the screen.

4. Press [UP]/[DN] to choose the desired programming channel.

5. Press any other key to store and exit.
   ● Return to the normal operation.
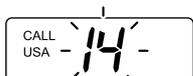
■ Backlighting

You can adjust the lighting as per different places. That can be backlit for better visibility under weak light conditions.

● Press [HI/LO • DIM], rotate [UP]/[DN] to adjust the intensities 1~3 level or turned OFF.

■ 100 Common & 5 Programmable Channels

100 common channels and 5 programmable channels are available in this device. These common channels can meet all communicating requirement for making up the defect of so many different channels in each group.

1. Enter the common channel, press [DN], [SCAN • TAG] and [16 • 9] at the same time to power ON the transceiver.
   ● Enter the 100 common communicating channels.
   ● Press [CH/WX • DUAL] to enter the 5 programmable communicating channels.

2. Exit the common channels, repeat the above operations.

◆ **Program 5 Programmable Channels**

1. Enter the common channel, press [UP], [H/L • DIM] and [CH/WX • DUAL] at the same time to power ON the transceiver.

2. Press [UP]/[DN] to choose the program-mable channels.
   ● The programmable channel flashes.

3. Press [H/L • DIM] to choose programm-able channels.
   ● 200 programmable channels available.

4. Press [UP]/[DN] to choose programmable channels.

5. Only press [CH/WX • DUAL] can store the programming.

6. Exit the programming and power OFF.
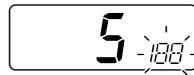
Setting Mode

■ Setting Mode

Setting mode is used to set functions of ST-6188 transceiver to meet your demands.

◆ **Entering Setting Mode**

1. Press [16 • 9] to power ON.
- Press [16 • 9] for 3 seconds to enter the set mode.
- Press [16 • 9] to choose the setting mode items.
2. Exit the setting mode, power OFF the transceiver.

◆ **How to Set**

There are 5 items in Setting mode available for your free choice.

1. Enter the Setting mode.
2. Press [16 • 9] to choose an item, then press [UP]/[DN] to modify the setting.

■ Setting Mode Items

Beep tones

Normal/Priority scan

Weather alert

Scan timer

Dual/Tri-watch

Change setting

Choose setting mode items
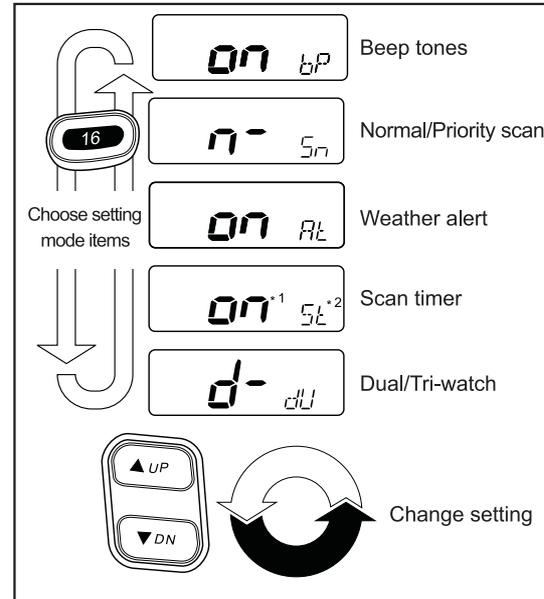
The diagram shows the default setting of each mode.

Setting Mode

Beep Tones

Set beep tones ON/OFF.

Beep tones ON
Beep tones OFF
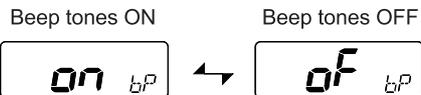
Scan Timer

Set the Scan Timer ON/OFF.

Scan timer OFF
Scan timer ON
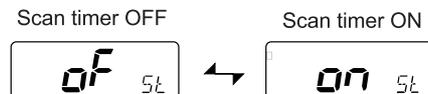
Normal/Priority Scan

Set the scan function to be Normal or Priority.

Normal scan
Priority scan

Dual/Tri-watch

Press [CH/WX • DUAL] for 1 second to set dual watch or tri-watch.

Dualwatch
Tri-watch
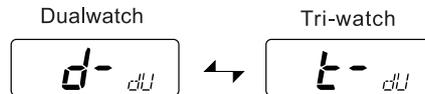
Weather Alert

Set the weather alert function ON/OFF.

Weather alert OFF
Weather alert ON

◾ Accessories
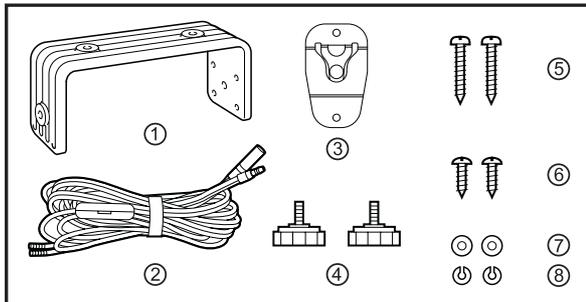
◾ Antenna

Install the antenna in correct place, it is the key element in any communication systems. The central frequency is 156.000MHz. Do not install it in/close to the metal mount or similar antenna. Keep it at least 3m far away.

◾ Fuse Replacement

Install the fuse in the supplied DC power cable. If the fuse is burned out, the transceiver stops working. Track the source of the problem, if possible, replace the damaged fuse with a new one.
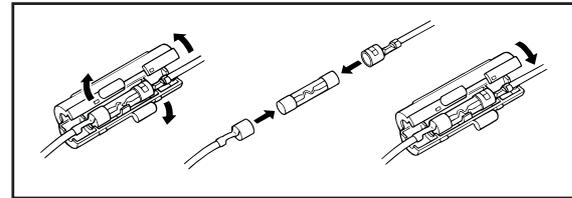
◾ Cleaning

If the transceiver becomes dusty or dirty, wipe it clean with a dry, soft cloth.

AVOID: The use of solvents such as benzene or alcohol, as they may damage trasceiver surfaces.

■ Connections

1. DC Power Connector

   Connect with the external supplied 13.8V DC power cable.

2. Antenna Connector

   Connect with the external connector of the VHF transceiver antenna.

   NOTE: Transmitting without connecting the antenna would damage the device.

3. External Speaker Jack

   Connect with the speaker.

4. Microphone Hanger

   For resting the microphone.

■ Installation

The transceiver can be installed overhead or hanging with the supplied mounting bracket.
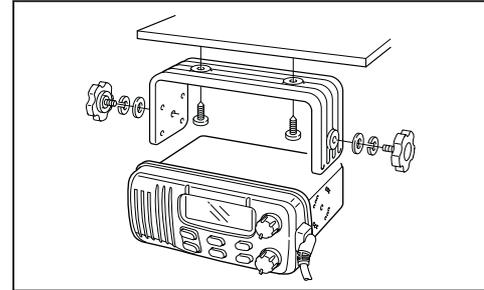
1. Fix transceiver mount with supplied screws or hanged installing.

2. Adjust the transceiver so that the face of it at 90° to your line of sight when operating it.

3. Install the transceiver with the supplied mounting button.

◆ *CAUTION: Keep the transceiver and microphone at least 1m far away from your vessel's magnetic navigation compass.*

◆ *NOTE: When connecting the transceiver in the shaky place, put the sponge between the transceiver and the installing mount to avoid shaking.*

Connections & Maintenance

■ Dimensions

51 mm

152 mm

67 mm

178 mm

28.5 mm 86.5 mm 5 mm
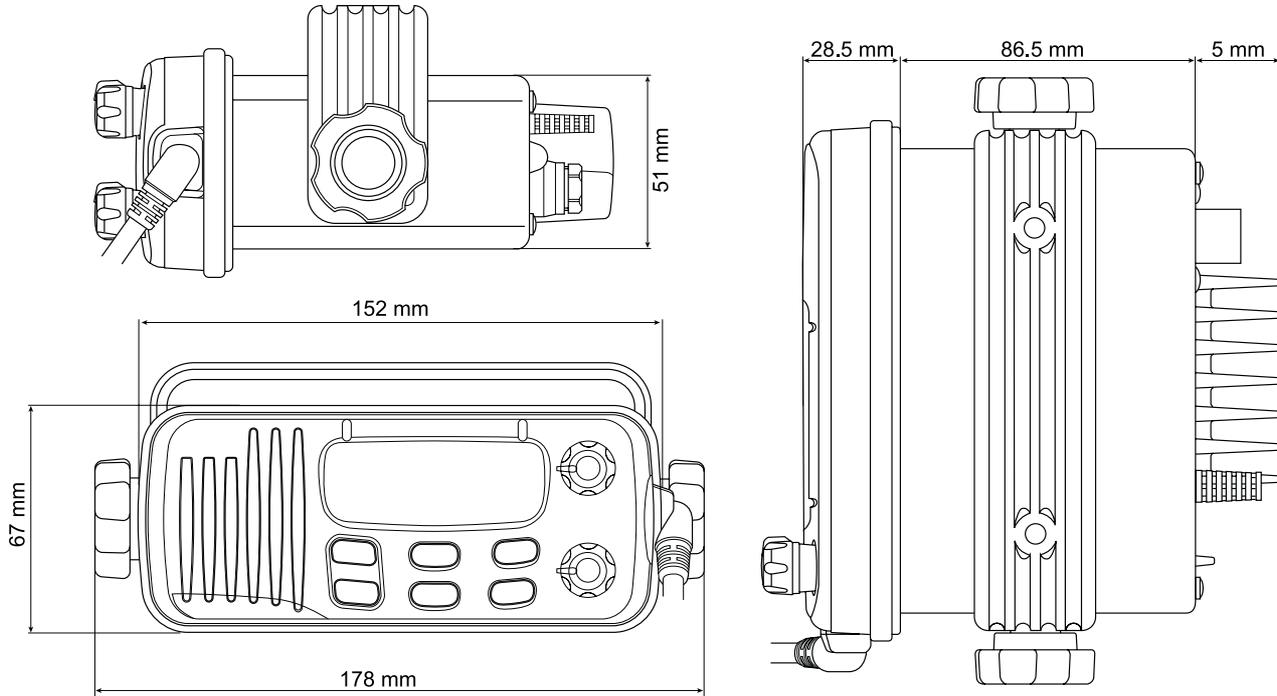
Trouble Shooting

Trouble Phenomenon	Possible Reason	Shooting Method
No power comes on	1. Power OFF or power cord not connected properly. 2. The working voltage is over 17V or too low. 3. Blown fuse.	1. Check the power cord connection. 2. Use the supplied 13.8V DC power. 3. Replace the fuse.
Cannot transmit	Working on weather channel or 70 channels.	Exit the weather channel or 70 channel.
Cannot choose high power	Some channels can only transmit signals in low power.	Choose the other channels.
Cannot communicate in the same frequency or when receiving calls	1. The chose channel is the DUP channel. 2. The working channel is the programmable one.	1. Rechoose the channel. 2. Program the same channel.
Cannot scan	No "TAG" channels are programmed.	Set the desired scanning channels as "TAG" ones.

Frequency Chart

Channel number			Frequency (MHz)	
USA	INT	CAN	Transmit	Receive
	01	01	156.050	160.650
01A			156.050	156.050
	02	02	156.100	160.700
02A			Prohibit	Prohibit
	03	03	156.150	160.750
03A			156.150	156.150
	04		156.200	160.800
		04A	156.200	156.200
	05		156.250	160.850
05A		05A	156.250	156.250
06	06	06	156.300	156.300
	07		156.350	160.950
07A		07A	156.350	156.350
08	08	08	156.400	156.400
09	09	09	156.450	156.450
10	10	10	156.500	156.500
11	11	11	156.550	156.550
12	12	12	156.600	156.600
13*2	13	13*1	156.650	156.650
14	14	14	156.700	156.700
15*2	15*1	15*1	156.750	156.750
16	16	16	156.800	156.800
17*1	17	17*1	156.850	156.850
	18		156.900	161.500
18A		18A	156.900	156.900

Channel number			Frequency (MHz)	
USA	INT	CAN	Transmit	Receive
	19		156.950	161.550
19A		19A	156.950	156.950
20	20	20*1	157.000	161.600
20A			157.000	157.000
	21	21	157.050	161.650
21A		21A	157.050	157.050
	22		157.100	161.700
22A		22A	157.100	157.100
	23	23	157.150	161.750
23A			157.150	157.150
24	24	24	157.200	161.800
25	25	25	157.250	161.850
26	26	26	157.300	161.900
27	27	27	157.350	161.950
28	28	28	157.400	162.000
	60	60	156.025	162.625
60A			Prohibit	Prohibit
	61		156.075	156.075
61A		61A	156.075	156.075
	62		156.125	160.725
		62A	156.125	156.125
	63		156.175	160.775
63A			156.175	156.175
	64	64	156.225	160.825
64A		64A	156.225	156.225

Channel number			Frequency (MHz)	
USA	INT	CAN	Transmit	Receive
	65		156.275	160.875
65A	65A	65A	156.275	156.275
	66		156.325	160.925
66A	66A	66A*1	156.325	156.325
67*2	67	67	156.375	156.375
68	68	68	156.425	156.425
69	69	69	156.475	156.475
70*3	70*3	70*3	156.525	156.525
71	71	71	156.575	156.575
72	72	72	156.625	156.625
73	73	73	156.675	156.675
74	74	74	156.725	156.725
75	75	75	Prohibit	Prohibit
76	76	76	Prohibit	Prohibit
77*1	77	77*1	156.875	156.875
	78		156.925	161.525
78A		78A	156.925	156.925
	79		156.975	161.575
79A		79A	156.975	156.975
	80		157.025	161.625
80A		80A	157.025	157.025
	81		157.075	161.675
81A		81A	157.075	157.075
	82		157.125	161.725
82A		82A	157.125	157.125

Channel number			Frequency (MHz)	
USA	INT	CAN	Transmit	Receive
	83	83	156.175	161.775
83A		83A	157.175	157.175
84	84	84	157.225	161.825
84A			157.225	157.225
85	85	85	157.275	161.875
85A			157.275	157.275
86	86	86	157.325	161.925
86A			157.325	157.325
87	87	87	157.375	161.975
87A			157.375	157.375
88	88	88	157.425	162.025
88A			157.425	157.425

WX Channel	Frequency (MHz)	
	Transmit	Receive
01	Prohibit	162.550
02	Prohibit	162.400
03	Prohibit	162.475
04	Prohibit	162.425
05	Prohibit	162.450
06	Prohibit	162.500
07	Prohibit	162.525
08	Prohibit	161.650
09	Prohibit	161.775
10	Prohibit	163.275

*1Low power only. *2Momentary high power. *3Receive only.

Main Technology Parameter

Gerneral	
Frequency Range	Transmit: 156.025-157.425MHz Receive: 156.025-163.275MHz
Usable Channels	All USA,International, Canadian channels plus 10 weather channels.
Modulation	FM 16K0G3E
Input DC Power	Double Conversion Superheterodyne System
Frequency Stability	≤±10ppm
Working Voltage	DC 13.8V(±15%)
Working Temperature	-20°C~+60°C
Dimensions	152(W) x 67(H) x 144(D)mm
Weight	900g

Transmitter	
Output Power	High power: 25W Low power: 1W
Modulation Limit	≤±5.0kHz
Spurious Emissions	≤-70dB
Wastage Power	High power: ≤5A Low power: ≤1.2A
Mic. Impedance	600Ω

Receiver	
Sensitivity	0.22uV(12dB SINA)
Squelch Sensitivity	0.18uV
Adjacent Channel Selectivity	≥70dB
Intermodulation Interference	≥70dB
Spurious Response Interference	≥70dB
Audio Output Power	3.5W (less than10%distortion)
Audio Output Impedance	4Ω

Win-Win

Qixiang Electron Science & Technology Co.,Ltd.
Add:Qixiang Building Tangxi Industrial Zone,Luojiang
District,Quanzhou 362011,Fujian,China.
Website:www.qx-tele.com