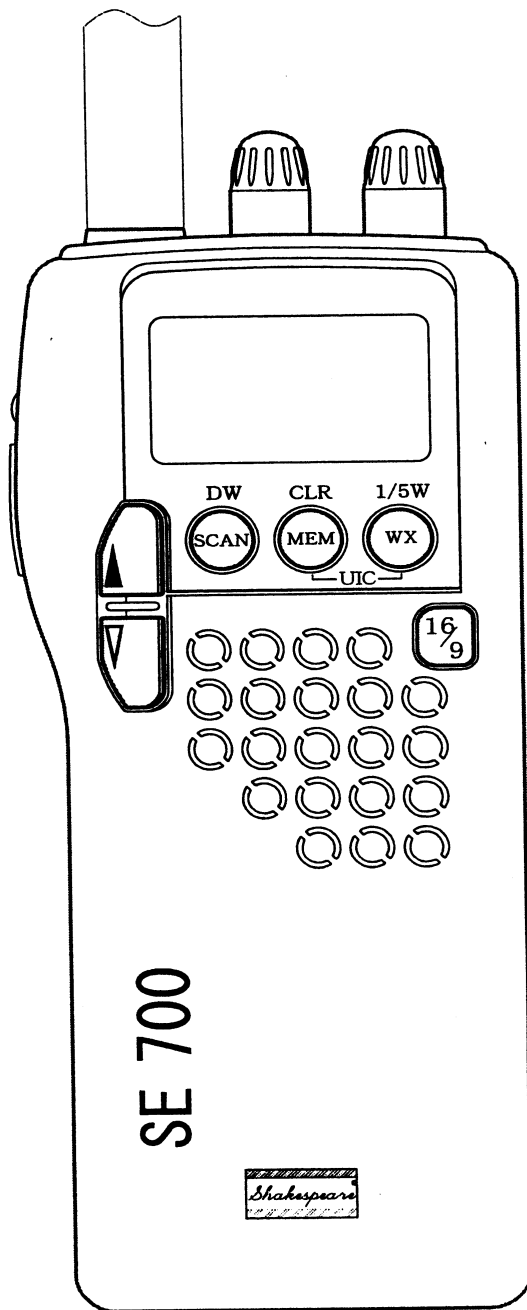


# SE700

## HAND HELD



MARINE VHF RADIO

*OWNER'S HANDBOOK*

# TABLE OF CONTENTS

**1.0 INTRODUCTION**

**2.0 INSTALLATION**

**3.0 OPERATION**

**4.0 APPENDIX**

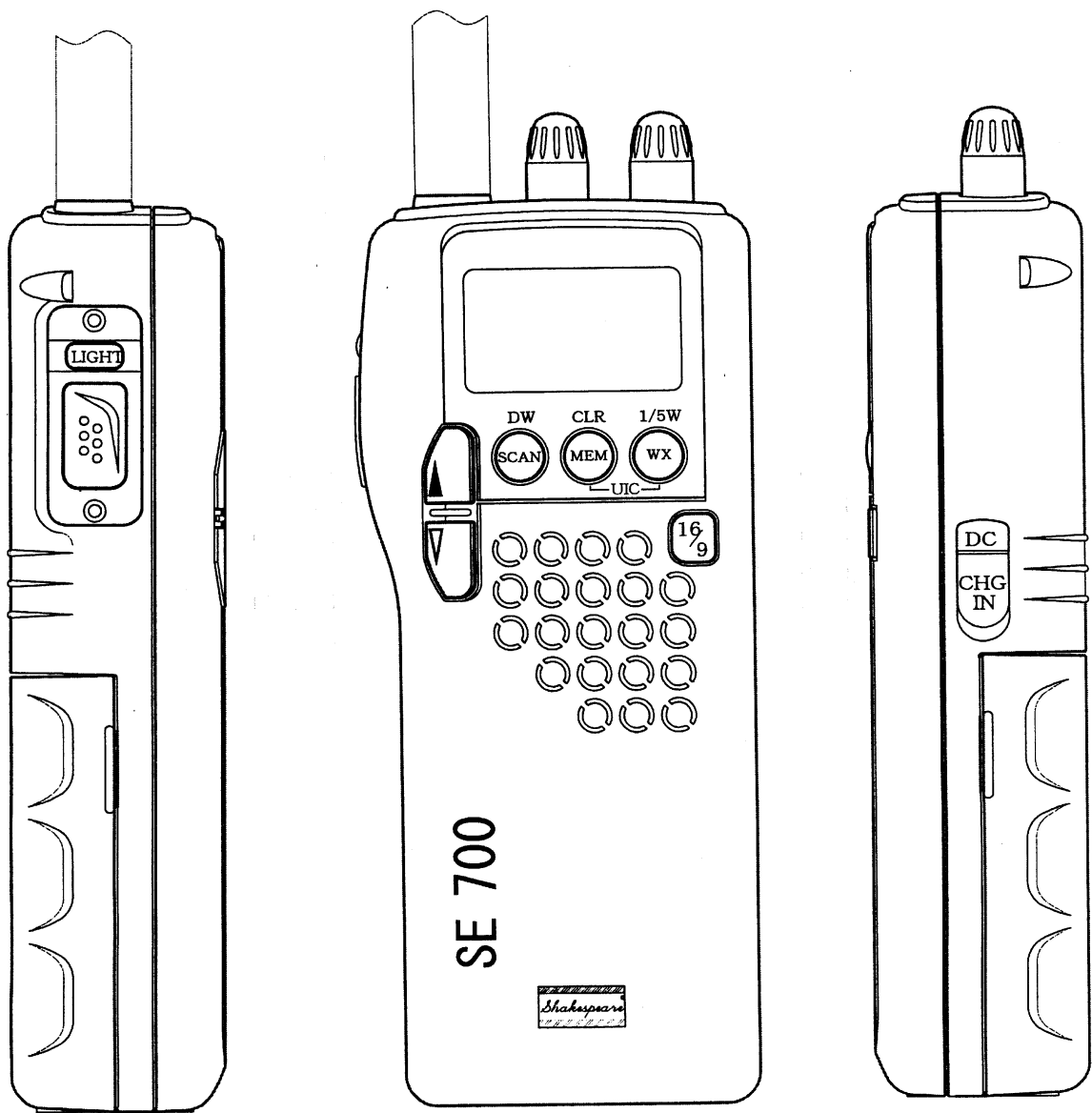


Figure1 Shakespeare SE700 Handheld Marine VHF Radio

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## 1.0 INTRODUCTION

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- 1.1 Purpose
- 1.2 Equipment Description
- 1.3 Supplied Parts
- 1.4 License

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## 2.0 INSTALLATION

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### 2.1 Unpacking And Inspection

### 2.2 Preparation for Use

### 2.3 Antenna Installation

### 2.4 Battery Pack Installation

### 2.5 Charging the Battery

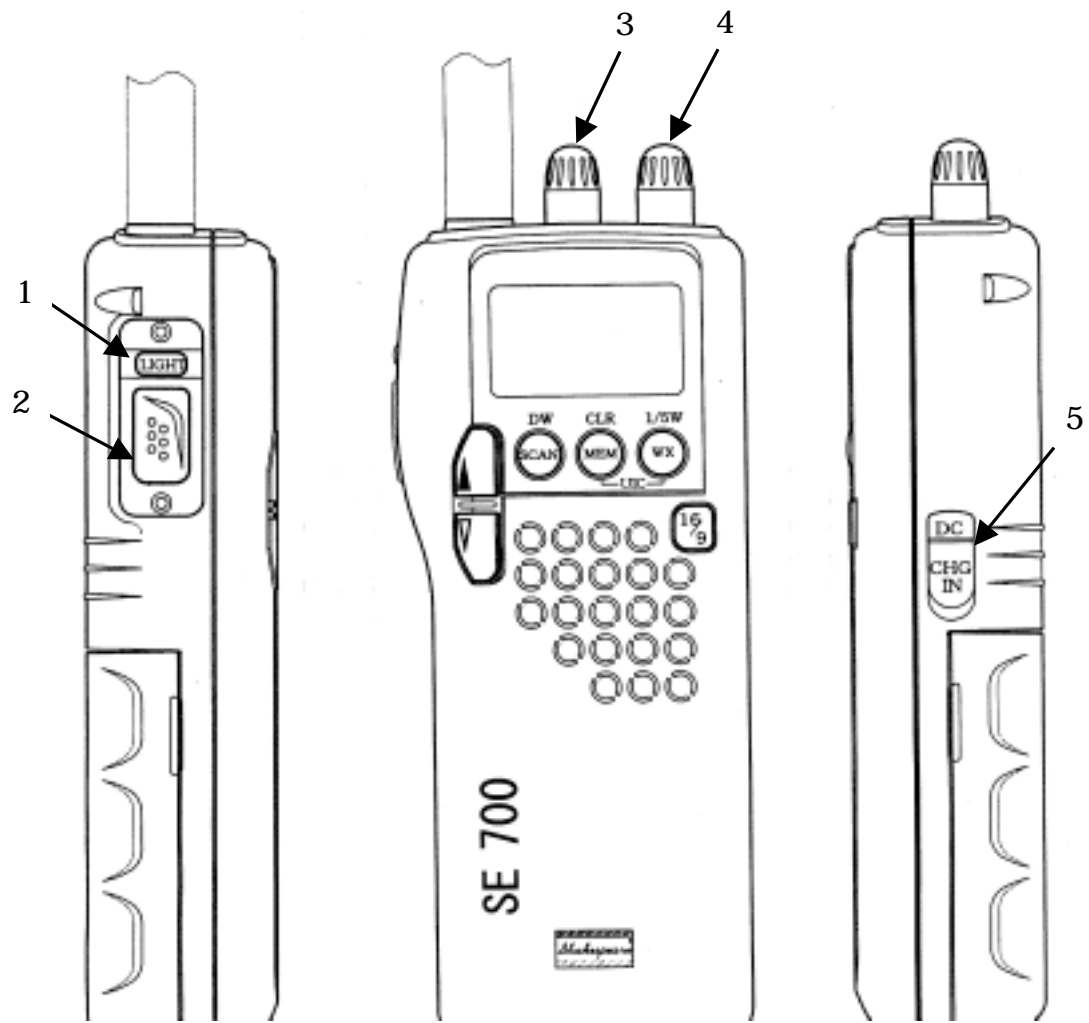
### 2.6 Using the Belt Clip

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## 3.0 OPERATION

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### 3.1 INTRODUCTION



1, Light key & Lock key  
3, Squelch Knob  
5, External Charge Jack

2, PTT key  
4, Power Switch & Volume Control

## 3.2 Controls And Display

### 3.2.1 Controls

(1) ON / OFF Volume Switch

Turns power OFF if turned fully CCW. Max audio output if turned fully CW.

All stored memory will be cleared by pressing "MEM" key and turning the power ON.

LCD display test mode will be activated by pressing "Light" key and "16/9" key at the same time and turning the power ON.

Display when the power is turned ON.

Freq. Mode : Last used CH freq. mode. ( USA, INT, CANADA)

Channel : 16CH, Working CH

WX Channel : Last used WX CH.

Tx Power : HI 5W

LCD : All characters displayed for 2 sec.

(2) Squelch Knob

Squelch will get shallow when the knob is turned CCW. Squelch will get deep when turned CW.

(3) Light Key

By pressing the Light key, Alarm 1 will sound and back light will get ON or OFF.

If pressed and held for 1.5 sec., alarm 1 will sound and all key operation will be locked.

(Key lock)

(4) PTT Key

Radio will Tx when pressed. When it is on either WX CH or Non-Tx CH, Alarm 2 will sound and does not Tx.

When the radio is transmitting for continuous 5 min., radio will stop Tx and Alarm 2 will sound until the PTT key is released.

(5) SCAN Key

If pressed, alarm 1 will sound and starts or ends ALL SCAN.

Except in SCAN MODE, radio will start SCAN if the button is pressed ( short press or long press. ).

Short press during SCAN mode will pause SCAN and cancel SCAN mode. SCAN mode will also be canceled if keys other than LIGHT key is pressed. After cancellation of SCAN mode, the radio will operate on the channel that the SCAN mode was cancelled.

A long press during the SCAN mode will stop ALL scan and alarm 1 will sound and starts DW.

A short press during memory stand-by will start Memory scan.

Type of SCAN

(a) ALL SCAN : Scans all the channels.

(b) MEM-SCAN : Scans memory channels.

If only 1 or less channel is stored in memory, alarm 2 will sound and return to the previous operation .

(6)MEM Key

At a short press, alarm 1 will sound and starts memory stand-by. If pressed again, then it will show the channels stored in memory on the small CH display. It will show from the smallest number. Other channels stored in memory can be seen by pressing UP/DOWN key and during the time MEM will blink on the display.

At a long press, alarm 1 will sound and will store the current channel into memory. If the current channel is already stored in memory, it will be deleted from memory.

MEM will be displayed on LCD if the channel is stored in memory. CLR will be displayed for 3 sec. and MEM will come off when channels are deleted from Memory.

(7)WX Key

If pressed, alarm 1 will sound and channel will toggle between working and WX channel  
Long press will change the Tx power. ( toggle between 1W and 5W )

(8)UP Key

If pressed, alarm 1 will sound and channel will be changed (+1).

If pressed and hold for 0.5 sec. or more, the channels will be changed continuously by 100 msec. step.

(9)DOWN Key

If pressed, alarm 1 will sound and channel will be changed (-1).

If pressed and hold for 0.5 sec. or more, the channels will be changed continuously by 100 msec. step.

(10)16/9 Key

If pressed, alarm 1 will sound and the radio switches to priority channel .

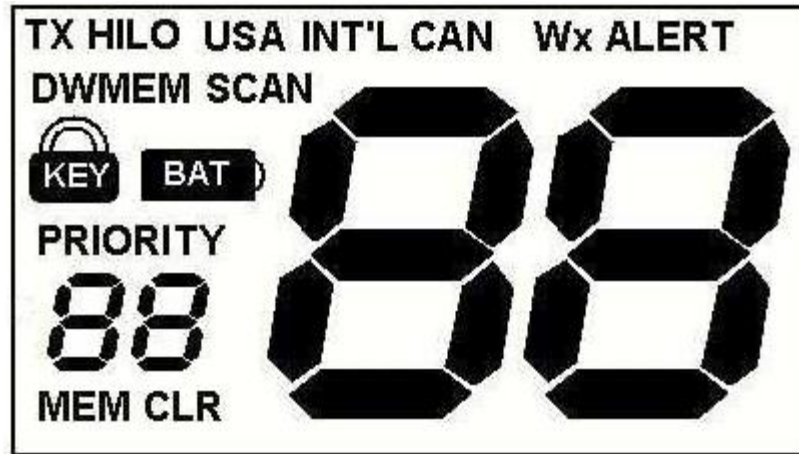
At a long press, the set priority channel will toggle between CH16 and 9.

(11)MEM+WX Key

If pressed together, the frequency mode will be changed. The frequency mode consist of USA, INT and CAN mode and will change as follows :. The display will show on which mode the radio is :

( USA-INT, INT- CAN, CAN- USA)

### 3.2.2 Display



**Fig. LCD Display**

- 1) **MEM** (Memory): Displayed when the current channel is memory channel, and memory SCAN mode.
- 2) **SCAN** (All scan/memory Scan) : displayed when the radio is in the All SCAN or Memory SCAN mode.
- 3) **WX** : Will be displayed when Weather channel
- 4) **ALERT** : The "ALERT" indicator will blink when a weather alert tone is received (in SCAN mode or WX mode)
- 5) **PRIORITY** : will be displayed when small CH indicate display is priority.
- 6) **USA** : will be displayed when USA channel mode.
- 7) **INT'L** : will be displayed when international channel mode.
- 8) **CAN** : will be displayed when Canada channel mode.
- 9) **HI** : will be displayed when high power output mode (TX)
- 10) **LO** : will be displayed when low power output mode (TX)
- 11) **TX** : will be displayed on the LCD when the Push-To-Talk (PTT) switch on the radio is engaged and the transmitter circuits are providing RF signals to the antenna.
- 12) **BAT** (Battery) : will be displayed when battery voltage is low.
- 13) **KEY** : will be displayed when key locked.
- 14) **LARGE CHANNEL #** : displays the channel number currently.
- 15) **SMALL CHANNEL #** : displays the channel number of priority channel or memory channel.

### 3.3 Operation

#### (1) Operation to change frequency mode

Frequency mode is selectable from USA, International and Canada. The present mode will be shown on LCD by "USA", "INT" or "CAN".

Press MEM and WX key at the same time for 1.5sec. or more, alarm 1 will sound and the frequency mode will be changed. ( USA to INT, INT to CAN, CAN to USA) The changed frequency mode will be stored in the EEPROM. If the radio is turned ON, it will start from the last used frequency mode and the set priority channel ( CH 16 or 9 ).

When frequency modes are changed :

It will change to the same channel number of the channel it is changed from. If the frequency mode does not have that channel number, the channel number next to it will be used. But when the frequency mode is changed again, it will change back to the original channel number.

ex. 1:

USA CH15 – INT CH15 – CAN CH15 – USA CH15 –

ex. 2:

CAN CH 2 – USA CH3 – INT CH2 – CAN CH2

ex. 3 :

CAN CH2 – USA CH3 – USA CH5 – CAN CH5

CH and it's frequencies are attached.

(2) Rx of WX channels

WX channels consist of 10 channels. ( CH0 to CH9 )

Channel mode will toggle between working channel and WX channel

(3)Selecting Channels

Channels can be changed by pressing either UP or DOWN key.

( Alarm 1 will sound )

The channels that is not used in the frequency modes are skipped. The channels change +1 or -1, but at the smallest number it will change to the biggest number or at the largest number it will change to the smallest number.

(4) Store channel in memory

All channels can be stored in memory. Stored channels will be scanned during memory scan. Channels has to be stored separate in every frequency mode.

Store or delete channels from memory

If MEM key is pressed for 1.5 sec. or more, alarm 1 will sound and the current channel will be stored into or deleted from memory. If the current channel is already stored, it will delete after displaying CLR for 3 sec. on LCD. On stored channels, MEM will be displayed on LCD.

(5) Memory stand-by

Short press of MEM key will change the radio to memory stand-by mode. This mode will last for 3 sec. and the MEM display will blink every 0.5sec.

If the SCAN key is pressed during the memory stand-by mode, alarm 1 will sound and starts Memory Scan. If no channels are stored, alarm 2 will sound and revert to the previous mode.

If the MEM key is pressed again during the memory stand-by mode, it will show the channels stored in memory on the small CH display. Other channels can be seen by pressing the UP or DOWN key. If MEM key is pressed during this mode, it will return to the current channel.

(6) Priority Channel Call

The priority channel have to be set individually on every frequency mode.

CH16 is set as default.

If the 16/9 key is pressed, alarm 1 will sound and changes to priority channel.

The display is :

Big CH display : Priority channel

Small CH display : OFF

“PRIORITY” will be displayed

(7)Select Tx Power

Tx output power ( 1W or 5W )can be selected by a long press of WX key.

On WX channels, Tx prohibited channels, Tx power specified channels, key operation will not be accepted and alarm 2 will sound.



#### (8) Backlight

Backlight of LCD can be lit by a long press of LIGHT key. Alarm 1 will sound and the light stays ON for 5 sec. If any key is pressed ( except the PTT key ) within the 5 sec. from when the LIGHT key has been pressed, the backlight will stay ON for another 5 sec. from the time the other key has been pressed. If the LIGHT key is pressed during the time the backlight is lit, alarm 1 will sound and will turn the light OFF.

#### (9) Key Lock

The Key Lock function will be started by a long press of LIGHT key. Alarm 1 will sound when the Key is pressed and also the KEY icon will be displayed on LCD and the back light comes ON for 5 sec.

A long press of the LIGHT key during the Key lock function will cancel that function. Alarm 1 will sound and the KEY icon will come OFF and the back light comes ON for 5 sec.

All key operation will be prohibited ( except the PTT and LIGHT key ) during this function.

The radio will continue the normal Tx and RX during this function.

#### (10) Scan

Scan Modes :

ALL SCAN : All the channels will be scanned.

MEM-SCAN: The memory channels will be scanned.

##### a) How to start and stop ALL SCAN

If the SCAN key is pressed, alarm 1 will sound and the radio start scanning from the channel next to the current channel. SCAN will be displayed while scanning.

If the SCAN key is pressed again during scanning, alarm 1 will sound and stops scanning.

##### b) How to start and stop Memory Scan

A short press of MEM key and enter memory stand-by mode. A short press of SCAN key will start scanning the memory channels from the memory channel next to the present following alarm 1. If only 1 or less channel is stored in memory, alarm 2 will sound and return to previous operation.

##### c) DW SCAN

A long press of SCAN key will start DW scan that will scan the current channel, priority channel and the WX channels.

##### All scan search

The channels will be scanned as above. When it goes to CH88, then it will go back to CH1.

If carrier is detected on any of the channels during scanning , it will stop scanning on that channel.

##### Memory Scan

All the channels in memory will be scanned. Others are same as above.

##### Key operation during Scan

a) PTT button : Stops scan and Tx on that channel

b) SCAN, MEM, UP, DOWN key : Alarm 1 will sound and stops scanning

c) 16/9 key : Alarm 1 will sound, stops scanning and changes to priority channel

d) WX key : Alarm 1 will sound, stops scanning and changes to WX channel

e) LIGHT key : Turn ON / OFF the back light.

##### SCAN key operation

###### a) During Scan

Short press : Alarm 1 will sound and stops scanning

Long press : Alarm 1 will sound and changes to monitor of DW.

b) During Scan pause

Short press : Stops scanning.

Long press : Set to skip the channel during scan. This will be reset when scan is stopped.

DW mode

Working channel, priority channel and WX channel will be scanned. During this mode, "MON" & "WX" will be displayed on LCD. The working channel will be shown on the bigger channel display, the priority channel will be displayed on the smaller channel display.

(11) Detection of Weather Alert

If a weather alert tone of 1050Hz is detected on a WX channel, alarm 3 will sound for 5 sec. and "ALERT" will blink every 0.5 sec. on the LCD. If the weather alert is detected while you are on a weather channel, only "ALERT" will blink.

(12) TX operation

TX will start when PTT key is pressed. If output power is detected on the detection terminal, "TX" is displayed. If the PTT key is pressed on WX channel or No-Tx channel, alarm 2 will sound to inform that the key operation is not accepted.

If Tx is continued for 5 min. or more, Tx will be stopped automatically and alarm 2 will sound until the PTT key is released.

On high power channel, the radio transmits with 5W during the PTT is pressed and hold.

(13) Battery Monitor mode

The battery will be monitored and if the voltage is detected to be lower than the value set in the EEPROM, the "BAT" will be displayed. The display does not go off until the unit is turned off.

If the voltage drops below it, the "BAT" display starts blinking.

(14) Alarm

The alarm sound will be made by ON / OFF the buzzer sound (2.048 Khz ) made at CPU.

The alarm 3 will be maximum of buzzer sound.

1) Alarm 1

Click sound of key operation.

Sound low.

2) Alarm 2

Error of key operation and after long press of key.

Sound low

3) Alarm 3

When weather alert is detected.

Sound maximum

(15) Un-lock

Detected at un-lock detection terminal. If detected, it operates as follows :

(16) Memory Clear

By pressing and holding the MEM key and turning ON power, the radio will start the Memory Clear mode. "CL" will be displayed on the 7 segment display for 2 sec. and all the memory stored in EEPROM will be erased.

## 4.0 APPENDIX

### SE700 VHF Marine Radiotelephone

USA Frequency DATA

CH	Tx Frequency	Rx Frequency
1	156.050	156.050
2		
3	156.150	156.150
4		
5	156.250	156.250
6	156.300	156.300
7	156.350	156.350
8	156.400	156.400
9	156.450	156.450
10	156.500	156.500
11	156.550	156.550
12	156.600	156.600
13	156.650	156.650
14	156.700	156.700
15		156.750
16	156.800	156.800
17	156.850	156.850
18	156.900	156.900
19	156.950	156.950
20	157.000	157.000
21	157.050	157.050
22	157.100	157.100
23	157.150	157.150
24	157.200	161.800
25	157.250	161.850
26	157.300	161.900
27	157.350	161.950
28	157.400	162.000
60		
61	156.075	156.075
62		
63	156.175	156.175
64	156.225	156.225
65	156.275	156.275
66	156.325	156.325
67	156.375	156.375
68	156.425	156.425
69	156.475	156.475
70		156.525
71	156.575	156.575
72	156.625	156.625
73	156.675	156.675
74	156.725	156.725
75		156.775
76		156.825

77	156.875	156.875
78	156.925	156.925
79	156.975	156.975
80	157.025	157.025
81	157.075	157.075
82	157.125	157.125
83	157.175	157.175
84	157.225	161.825
85	157.275	161.875
86	157.325	161.925
87	157.375	161.975
88	157.425	157.425

#### INT Frequency DATA

CH	Tx Frequency	Rx Frequency
1	156.050	160.650
2	156.100	160.700
3	156.150	160.750
4	156.200	160.800
5	156.250	160.850
6	156.300	156.300
7	156.350	160.950
8	156.400	156.400
9	156.450	156.450
10	156.500	156.500
11	156.550	156.550
12	156.600	156.600
13	156.650	156.650
14	156.700	156.700
15		156.750
16	156.800	156.800
17	156.850	156.850
18	156.900	161.500
19	156.950	161.550
20	157.000	161.600
21	157.050	161.650
22	157.100	161.700
23	157.150	161.750
24	157.200	161.800
25	157.250	161.850
26	157.300	161.900
27	157.350	161.950
28	157.400	162.000
60	156.025	160.625
61	156.075	160.675
62	156.125	160.725
63	156.175	160.775
64	156.225	160.825
65	156.275	160.875
66	156.325	160.925
67	156.375	156.375

68	156.425	156.425
69	156.475	156.475
70		156.525
71	156.575	156.575
72	156.625	156.625
73	156.675	156.675
74	156.725	156.725
75		156.775
76		156.825
77	156.875	156.875
78	156.925	161.525
79	156.975	161.575
80	157.025	161.625
81	157.075	161.675
82	157.125	161.725
83	157.175	161.775
84	157.225	161.825
85	157.275	161.875
86	157.325	161.925
87	157.375	161.975
88	157.425	162.025

#### CAN Frequency DATA

CH	Tx Frequency	Rx Frequency
1	156.050	156.050
2	156.100	156.100
3	156.150	156.150
4	156.200	156.200
5	156.250	156.250
6	156.300	156.300
7	156.350	156.350
8	156.400	156.400
9	156.450	156.450
10	156.500	156.500
11	156.550	156.550
12	156.600	156.600
13	156.650	156.650
14	156.700	156.700
15		156.750
16	156.800	156.800
17	156.850	156.850
18	156.900	156.900
19	156.950	156.950
20	157.000	157.000
21	157.050	157.050
22	157.100	157.100
23	157.150	157.150
24	157.200	161.800
25	157.250	161.850
26	157.300	161.900
27	157.350	161.950

28	157.400	162.000
60	156.025	156.025
61	156.075	156.075
62	156.125	156.125
63	156.175	156.175
64	156.225	156.225
65	156.275	156.275
66	156.325	156.325
67	156.375	156.375
68	156.425	156.425
69	156.475	156.475
70		156.525
71	156.575	156.575
72	156.625	156.625
73	156.675	156.675
74	156.725	156.725
75		156.775
76		156.825
77	156.875	156.875
78	156.925	156.925
79	156.975	156.975
80	157.025	157.025
81	157.075	157.075
82	157.125	157.125
83	157.175	157.175
84	157.225	161.825
85	157.275	161.875
86	157.325	161.925
87	157.375	161.975
88	157.425	157.425

#### Wx Frequency DATA

CH	Rx Frequency
0	163.275
1	162.550
2	162.400
3	162.475
4	162.425
5	162.450
6	162.500
7	162.525
8	161.650
9	161.775