

## RF Energy Exposure Compliance

our radio is designed and tested to comply with a number of national and international standards and guidelines (listed below) regarding human exposure to radio frequency electromagnetic energy. This radio complies with the IEEE and ICNIRP exposure limits for general /uncontrolled RF exposure environment at operating duty factors of up to 50% transmitting and is authorized by the FCC for general population use. In terms of measuring RF energy for compliance with the FCC exposure guidelines, your radio radiates measurable RF energy only while it is transmitting (during talking in PTT mode), not when it is receiving (listening) or in standby mode. The device complies with SAR and/or RF field strength limits of RSS - 102 requirement

## Your radio complies with the following of RF energy exposure standards and guidelines

- United States Federal Communications Commission, Code of Federal Regulations; 47CFR part 2 sub - part J
- American National Standards Institute (ANSI)/Institute of Electrical and Electronic Engineers (IEEE) C95. 1 - 1992
- Institute of Electrical and Electronic Engineers (IEEE) C95. 1 - 1999 Edition
- International Commission on Non - Ionizing Radiation Protection (ICNIRP) 1998

## Operational Instructions and Training Guidelines

To ensure optimal performance and compliance with the general /uncontrolled environment RF energy exposure limits in the above standards and guidelines, users should transmit no more than 50% of the time and always adhere to the following procedures; and should transmit no more than 50% of the time, although the hardware support transmission up to 100% of the time.

## Transmit and Receive

To transmit (talk), push the Push - To - Talk (PTT) key; to receive, release the PTT key.

## EU Regulatory Conformance

The equipment is in compliance with the essential requirements and other relevant provisions of the Directive 1999/5/EC.



Note: The above information is applicable to EU countries only.

## FCC Licensing Information Part 15 Compliance

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can r

adiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

#### FCC Licensing Requirements

A license from Federal Communications Commission is required prior to use. Your dealer will program each radio with your authorized frequencies, signaling codes, etc., and will be there to meet your communications needs as your system expands. Contact your dealer for more information.

# HM360 Instruction Manual

## 1, HM-360 KEY FUNCTION

Keys	Short press less than 3 seconds	Long press more than 3 seconds
HI/Lo /Lock	TX Power Hi/Low	Key Lock/key unlock
16/9	CH 16	CH09
DW/TriW	Dual Watch mode	Tri Watch mode
WX/BAND	Weather Channel	UIC band
SCAN	All Scan/all memory Scan	Priority all/memory Scan
MEM	MEMORY Mode	Save/Delete Memory Channel
Up/Down	Channel/ Setting Up/Down	Channel up /down(much faster)
Menu/call	DSC menu	Main menu
Scr/MOB	Scrambler	MOB activated
Distress	Distress menu	Distress alert calling
SQL	Sql setting	Switch on/off Time&Date display

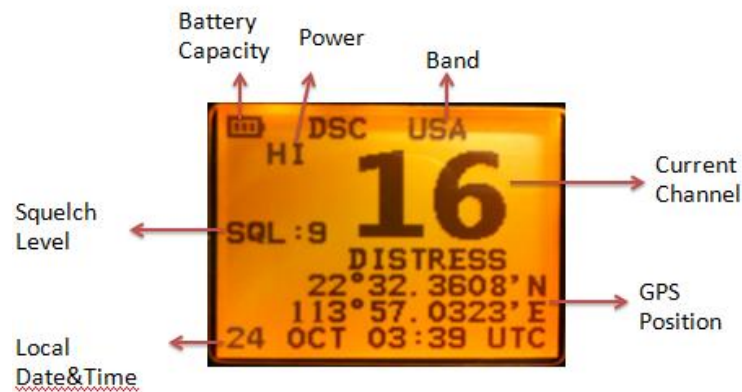
Volume Knob	Power ON / OFF Adjust the volume level
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## 2, HM-360 KEY DESCRIPTION



Note: In European version, WX function from the CH/WX/UIC key will be changed to **PRIV** function.

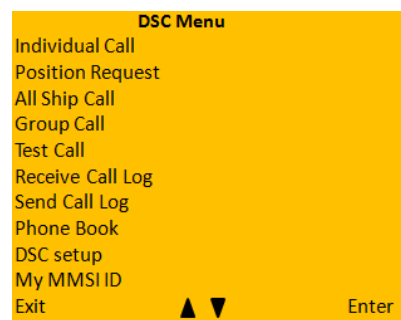
### 3, HM360-LCD DISPLAY



### 4, Menu Screen Operation:

#### 4.1 DSC Menu:

Short press the Call/Menu key will saw below DSC Menu as below.



Then the CH/WX/UIC key will became the Exit key and the Call/Menu key will became the Enter key. The UP/DOWN key function has the same function to choose the item at the menu without the changes.

✧ For *My MMSI ID* setup:

Firstly, set up the MMSI ID, to click the *My MMSI ID* and Enter, then you are able to set up your related MMSI ID as below. Generally, you need to double confirm the MMSI ID then your MMSI ID will be locked by this radio.

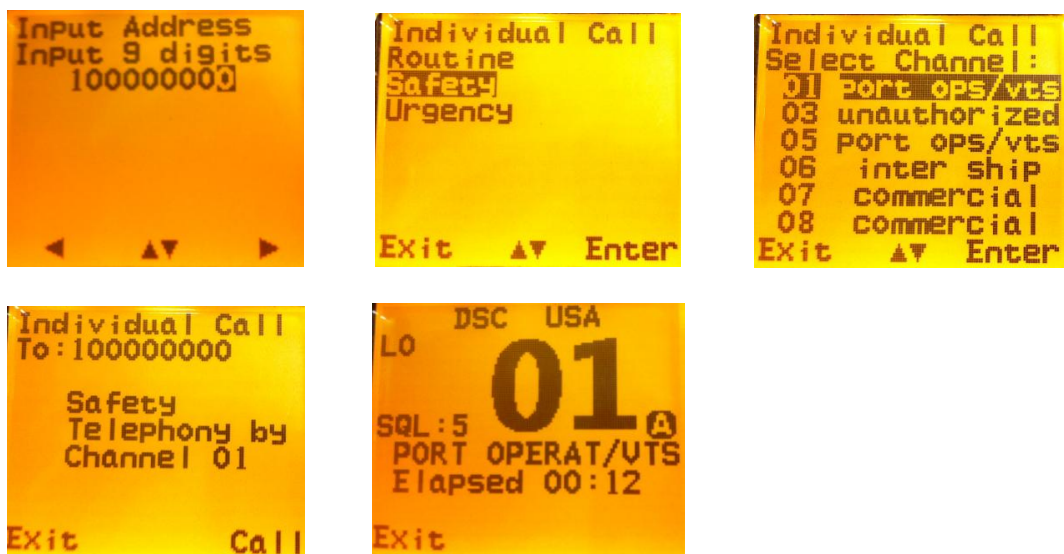


✧ For *Individual Call*, *Position Request*, *Group Call* and *Test Call*.

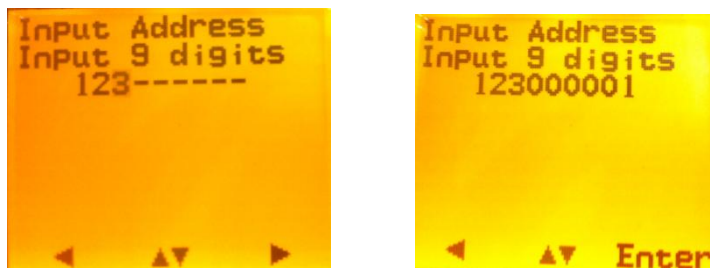
Click the preferred item then you able to find the target MMSI ID to call by *Input Address* or *From Phonebook*. We take the individual call as an example.

When you selected the *input address* item to click and input 9 digits such as

the 100000000 for your address as below. Then select the type of individual call such as the *safety* then select the channels such as the 01 port operation then confirm to call. Then the individual call is sent.

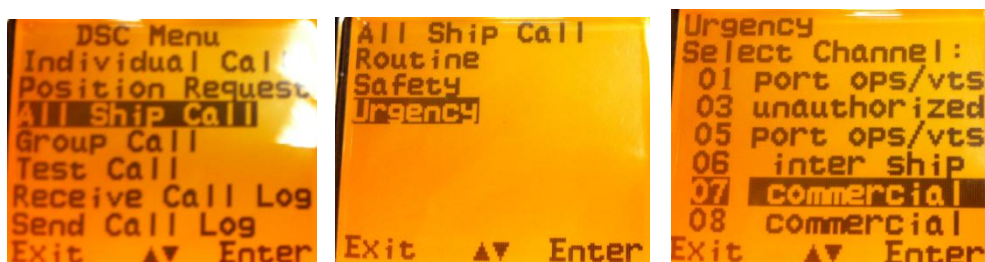


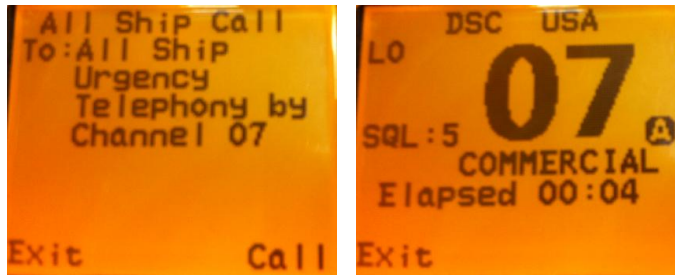
When you input 9 digits, UP/DOWN key to choose the number from 1-9, you need to input all numbers from the left to right one by one. When you input all 9 digits then press the enter to confirm.



✧ For All Ship Call:

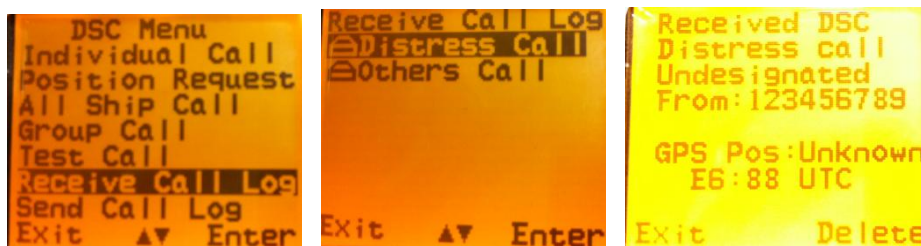
Select the *All Ship Call* item then select the type of All Ship Call such as the *Urgency* then select the channels such as the 07 Commercial then confirm to call. Then the All Ship Call is sent.





#### ✧ Receive Call Log

When receive the DSC call and you able to check the message from the Distress Call then able to see the exact message.



#### ✧ Send Call Log

To press the Send Call Log able to saw the previous Distress Call, MOB Call and Other Call you have sent

#### ✧ Phone Book:

Able to check the contact ship by Buddy list and Group list

#### ✧ DSC Setup

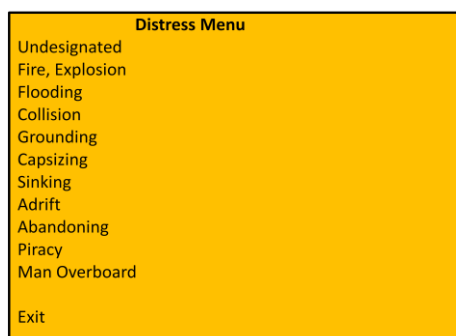
The DSC setup menu got the 4 item to choose as the *Position Input*, *Auto Ch Change*, *Position Reply* and *Test Ack*.

For *Position Input*, you can set up the GPS position and UTC time by manual operation.

For *Auto Ch Change*, *Position Reply* and *Test Ack*, you can choose the Automatic or Manual by you interests.

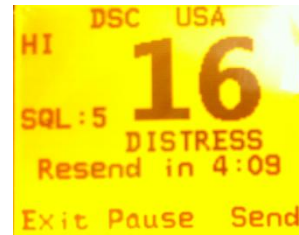
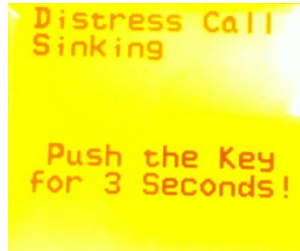
### 4.2 Distress Menu:

Pull the Distress red cover then press the Distress key. You are able to saw the Distress Menu in below.



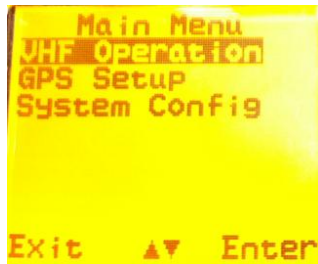
#### ✧ Send the distress Message:

Choose one distress item such as the *Sinking* the press and hold the distress key for 3 seconds, the Sinking distress message will be sent. You also able to choose to resend, pause or Exit after the message be sent.



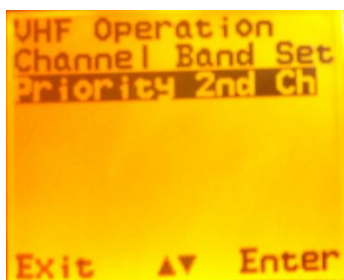
#### 4.3 Main Menu:

Long press the Call/Menu key will saw below Main Menu as below.



##### For VHF Operation:

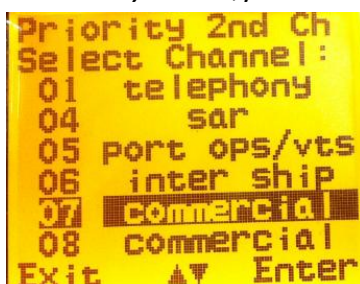
Select the VHF operation to enter will see Channel Band Set and Priority 2<sup>nd</sup> Ch options in below



For *VHF Operation*, you are able to choose the wanted channel band from those three options USA, INT and CAN.



For *Priority 2<sup>nd</sup> Ch*, you can select you wanted priority 2<sup>nd</sup> channel.





**For GPS Setting:**

You are able to setup the *Time Display* and *Time Offset*. More detail able to see the 5.4 (4) The local time and date on screen:

**For System Config:**

Select the system config and you are able to see the below menu to check and adjust the LCD/Key Beep figure, version info and factory reset.



## 5,KEY OPERATION

### (1) Power ON/OFF& Volume Control

Turn the Volume knob clockwise until a click sound heard, the unit will power on

### (2) Volume Control:

Turn the Volume knob :Clockwise-volume up, Counter-clockwise-volume down.

### (3) **Special function** :Distress Key and Real DSC

Send the Distress message:

Pull the Distress key cover then able to Press the Red key into the Distress Menu selection. Then select the current distress situation such as the "*Flooding*" then press and hold for 3 seconds, the selected DSC message will be send.

This message also will be resend within 4 mins, press the Up key will *pause* or *resume* the resend, press Call/Menu key will resend immediately. Press the CH/WX/UIC key will exit the current menu and give the option on cancel of this selected distress alert.

Receive the Distress message:

The HM360 model has two receivers, one receiver used for receiving/transmit voice and another receiver used for to continually monitor 70 channels. The DSC function for HM360 model is operated by individual way. Even you are using the HM360 to make the transmit or receive, when the DSC message is arrived. The HM360 handheld model always can receive all of the DSC message as a fixed mounted marine radio.

Press the Call/Menu key and select the *receive call log* then press the enter to see all received DSC message.



#### (4) Squelch function key

Short press the SQL key then press the Up/Down key to select squelches level accordingly. Then short press the SQL key to exit the squelch level adjustment.

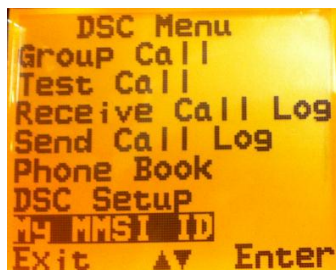
#### (5) Scramble/MOB function key

Short press the SCRM/MOB key then the scramble function is switched on, there is the "S" symbol will displayed at the top middle of the screen. See below photo



Long Press the SCRM/MOB key then the MOB function is activated, when the *Man over Board* emergency was occurred, all you need to do is that long press the SCRM/MOB key then the HM360 will send the MOB alert with your individual MMSI.

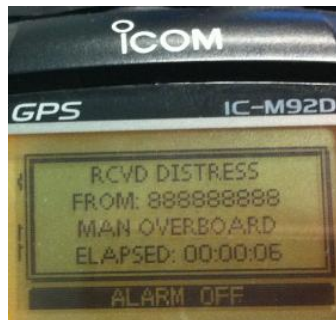
Firstly, need to set up the MMSI from the DSC menu(see photo in below)



Secondly, input your individual MMSI ID such as the 8888888(see photo in below).When you belonged HM360 has jumped into the water with yourself then people able to know your emergency situation and realise who has jumped into the water after you send the MOB alert.(no worries, the HM360 is floating and flash handheld radio then you definitely able to send the MOB alert after you over board)



Last, the MOB alert with your individual MMSI ID will be sent, other marine radios will receive your sent MOB alert with your MMSI ID (see below photo)



P.S. when the MOB emergency situation was occurred, you also able to press the DSC Menu key to select the MOB function as other normal handheld marine radios. However, our HM360 does care about the safety reason of the end-user and all you need to do is long press the SCRM/MOB key to send the MOB alert as easy/quick as possible.

#### (6) Up/Down key

At the normal mode, they act as Channel Up/Down key. When it press > 0.5 sec, the channels will change in a quick way. It returns to normal mode when key press is released.

**Notes:** Channels 2, 4, 60, and 62 cannot be used for transmission in US waters

#### (7) 16/9 key

At the normal mode, pressing the 16 / 9 Key (short press to jump to priority CH16 at High Power and long press to jump to priority CH9 at High Power) if the current channel is not the priority channel

After the channel is tuned to the priority channel, the "P-CH" and "P-2<sup>nd</sup>" icon is lit to indicate that the priority CH16 or CH9 has been reached. UP/Down key functions normally.

##### (7.1) Select the second priority channel

**Change the second priority channel by 16/9 key:** normally the second priority channel is initially sets as the channel 9. At the normal mode, Long press the 16 / 9 Key will display the second priority channel as channel 9. Then long press the 16 / 9 Key again and the "2<sup>nd</sup> Prior" icon will display on the screen. Using the UP/Down key to choose your prefer channel as the second priority channel then long press the 16 / 9 Key to confirm it

**Change the second priority channel by Menu key:** Press the 16 / 9 Key then press the Call/ Main key to select *VHF operation* option then press Enter to select the *Priority 2<sup>nd</sup> Ch* then press Enter and select you preferred channel by Up/Down Key then press Enter to confirm

#### (8) Hi/Lo/Lock Key

Short press the Hi/Lo/LOCK key will toggle the TX power from Hi to Lo or vice

versa. The corresponding “*Hi or Lo*” icon will turn on to display on the LCD.

Some of the channel(such as channel 16 only for high power/channel 13&67 only for low power) has been limited to be low power only or high power only. Thus, the software needs to check against the channel setting stored in the EEPROM

Long press the Hi/Lo/LOCK key will lock the keys and the “*lock key*” icon, then all of the key will be locked to use except the PPT key and Distress key /**related distress function**. Long press the Hi/Lo/LOCK key again to cancel the lock mode and the “*lock key*” icon will disappear.

#### (9) Ch/Wx/UIC key

NOTE: In European version, **WX function** from the CH/WX/UIC key will be changed to **PRIVATE CHANNEL function**. Weather Channels will not be available for HM360(European).

Short press Wx key will enter Wx mode. Press Up/Down key to change Wx channel. The “*WX*” icon will display on the screen.

When Dual or Tri watch is being activated in the Wx mode, the watch will monitor the current WX channel and priority channel(s).

#### **Weather Alert Operation (WAT):**

At the weather mode, Long press the CH/WX/UIC key will switch on the weather alert function. Toggling the Weather Alert function ON and OFF will toggle the icon “WAT” accordingly

**When Weather Alert function is enabled. Every 4 seconds the last used weather channel should be checked for weather alert tone when the radio is tuned to working channel. With Weather Alert Function enable, if the alert tone is detected, the “WX” and “WAT” symbol should flash and a short alarm tone should sound. The radio would automatically tune to the current monitor WX channel where the weather alert has been detected. The alert should be detected in all the modes of operation (Standby, Dual and Tri-watch, Scan etc.)**

#### **UIC Band:**

Long press the CH/WX/UIC key, switch the operational channel band [USA, International & Canada]. When band switched, the channel sequences will be follow accordingly.

#### (10) Scan Key

This is the function to scan for currently working channels. When a signal is detected, the scan pauses until the signal disappears.

Short press the Scan Key, to activate the SCAN function. Scan all channels.

Long press the Scan Key, to activate the Priority Scan.

#### (11) MEM Key

Enter /Exit the memory mode:

Short press the MEM key to enter the memory mode, the memory channel will

mark as the “M” icon at the right side of channel number. At the left side of the current channel will mark as the “user” icon means as already enter the user memory mode.

At the Memory mode, short press the MEM key to exit the memory mode. The “M” icon ( at the right side of channel number) and the “user” icon (at the left side of the current channel) will disappear.

Adding/Deleting memory CH:

1. During the normal mode, use the UP/DOWN key to select the desired channel for programming.
2. Long press the MEM key to store up the channel as memory channel.
3. The “M” icon at the right side of current channel number, will show up to indicate the current CH has been saved in the memory. No limited of memory channels.
4. Separate memory channel exists for USA, International, and Canadian Frequency group.
5. During the normal mode, use the UP/DOWN key to select the memory channel to be deleted.
6. Long press the MEM key to delete the selected channel from the memory.

## (12) DW/TRIW key(Dual Watch/Tri Watch)

At the normal mode, Short press DW/TRIW key to activate the DUAL WATCH mode. Monitor the current channel and Ch 16 in cycle. Whenever, Weather Alert is activated, the Wx Alert channel will be monitored once every 4sec.

Long press DW/TRI key to activate the TRI WATCH mode. Monitor the Ch 16, current channel and 1 programmed channels in cycle.

## (13) Backlight

Any key press will turn on the backlit (if backlit setting is ON ) except the PTT key. The backlit should be remaining on for 7 seconds if no any keys pressed. The time out will be reset if any key pressed within the time frame.

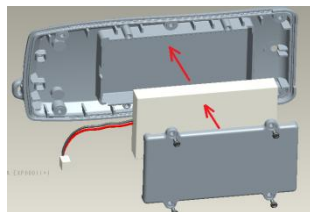
## 5,Other features and solutions:

### (1)TX Time Out

The transmission will be automatically turn off after PTT key pressed over 5 consecutive minutes. The TX mode will be terminate and back to Rx mode. The display will show current channel and switch the indicator “to” (time out) every 2 sec. To indicate the PTT key as the stuck condition. Once the PTT key is released, the TX time out timer will be reset. PTT key will work back normally.

### (2) Build in Battery

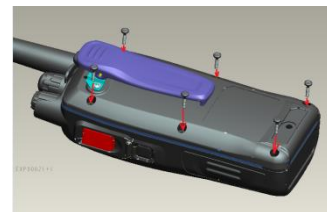
The HM360 model has the Build in Battery design likes the iphone. There are three steps to installation and removal the battery in below diagram.



Step1



Step2



Step3

### (3) IP68 Connection Cable

Due to the HM360 got the build in battery. Therefore, we do place the IP68 connection cable(1.5 meter length) for power charger. It also used for the software update and automatic test in manufacture stage.

For Power charger:



When the Radio at the power charge stage, the screen will display the “charge” icon at the top left corner to indicate this radio is power charge now.



Step 1: Counterclockwise screw the power charger & software updated connector knob.

Step2: use the pin terminal to connect with the radio and another USB terminal to connect with the charger.

Step3: We have two options for the charge (regular one or cigarette lighter socket). Just use the USB terminal to connect with the suitable charger for power

charger.

Diagrammatize 3 steps:



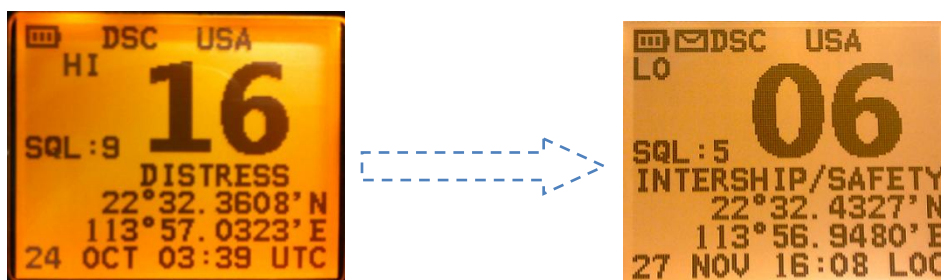
Reality images to display:



For software update/automatic test: When the USB terminal to connect with the computer, then we are able to update its software or PC programmable function. It also support for the automatic test during the manufacturer stage.



(4) The local time and date on screen:





## UTC TIME

## LOCAL TIME

When the HM360 cannot receive the GPS signal to display the current position, the screen will automatic display the UTC local time and date.

Long press the SQL key will switch on/off Time Date display. When the radio received the GPS signal, the screen will display the current GPS location and related UTC time and date below the GPS location mark.

The user can press the menu to switching your local time based on the UTC time. Long press the Call/Menu key then select the *GPS setup* item to enter. Then you can saw the *GPS setting* item and click the enter to select the *Time offset* item. Then you are able to adjust your location time based on the time difference with the UTC time then press the enter to confirm. (You need to pass the entire item from the hour-minutes –seconds then able to saw the enter option to click and confirm).



Generally, it all likes when you operate your locate time at your computer or laptop

## 6, Channel List

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
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		156.300	156.300
07			156.350	160.950
07A	07A		156.350	156.350
08	08		156.400	156.400
09	09		156.450	156.450
10	10		156.500	156.500
11	11		156.550	156.550
12	12		156.600	156.600
13 <sup>*2</sup>	13	13 <sup>*1</sup>	156.650	156.650
14	14		156.700	156.700
15 <sup>*2</sup>	15 <sup>*1</sup>	15 <sup>*1</sup>	156.750	156.750
16	16		156.800	156.800
17 <sup>*1</sup>	17	17 <sup>*1</sup>	156.850	156.850
18			156.900	161.500
18A	18A		156.900	156.900
19			156.950	161.550
19A	19A		156.950	156.950
20	20	20 <sup>*1</sup>	157.000	161.600
20A			157.000	157.000

Channel number			Frequency (MHz)	
USA	INT	CAN	Transmit	Receive
21	21		157.050	161.650
21A	21A		157.050	157.050
	21b		Rx only	161.650
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
	25b		Rx only	161.850
26	26	26	157.300	161.900
27	27	27	157.350	161.950
28	28	28	157.400	162.000
	28b		Rx only	162.000
60	60		156.025	160.625
61			156.075	160.675
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	64	156.225	160.825
64A			156.225	156.225
65			156.275	160.875
65A	65A	65A	156.275	156.275
66			156.325	160.925
66A	66A	66A <sup>*1</sup>	156.325	156.325
67 <sup>*2</sup>	67	67	156.375	156.375

Channel number			Frequency (MHz)	
USA	INT	CAN	Transmit	Receive
68	68	68	156.425	156.425
69	69	69	156.475	156.475
70 <sup>*3</sup>	70 <sup>*3</sup>	70 <sup>*3</sup>	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 <sup>*1</sup>	75 <sup>*1</sup>	75 <sup>*1</sup>	156.775	156.775
76 <sup>*1</sup>	76 <sup>*1</sup>	76 <sup>*1</sup>	156.825	156.825
77 <sup>*1</sup>	77	77 <sup>*1</sup>	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
	83	83	157.175	161.775
83A	83A		157.175	157.175
	83b		Rx only	161.775
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

Channel number			Frequency (MHz)	
USA	INT	CAN	Transmit	Receive
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
1	RX only	162.550	
2	RX only	162.400	
3	RX only	162.475	
4	RX only	162.425	
5	RX only	162.450	
6	RX only	162.500	
7	RX only	162.525	
8	RX only	161.650	
9	RX only	161.775	
10	RX only	163.275	

<sup>\*1</sup> Low power only. <sup>\*2</sup> Momentary high power. <sup>\*3</sup> DSC operation only.

**NOTE:** Simplex channels, 3, 21, 23, 61, 64, 81, 82 and 83 **CANNOT** be lawfully used by the general public in U.S.A. waters.



## 7 Body worn accessories



Beltclip



Battery : capacity-1700mAH

Manufacturer: Shenzhen Grepow Battery Co Ltd

