SI-TEX《《《 MODEL HH-300

HAND HELD VHF-FM
MARINE RADIOTELEPHONE

OPERATION MANUAL

SI-TEX MARINE ELECTRONICS, INC

C O N T E N T S

IMPORTANT NOTICE

The HH-300 has been designed to give you years of reliable service providing you operate and care for this radio as described in this manual.

The following is a listing of the most important points to remember:

A) Read this manual thoroughly to insure proper operation and handling.

B) Do not overchage the battery pack.
   Overcharging will greatly reduce the life of the battery pack and can cause internai circuit damage.

C) Protect the HH-300 from the environment. This radio is not waterproof.

D) Use great care when plugging in the wall charger. Attaching the A/C charger into the wrong plug will cause severe damage not covered by the warranty. Also, use only the charger that came with the HH-300. Using other chargers can, again, cause severe damage.

E) Do not carry or grab the HH-300 by the antenna. The carrying strap is designed for this purpose.

F) Do not use the AC Adopter in the external power jack on the top of the radio. This jack is designed for 12V DC using the optional DC adaptor.

If you have any questions regarding the use or care of this radio, consult with your dealer or contact the Customer Service Department at SI-TEX.

FCC LICENSE AND REGULATION INFORMATION

The FCC requires a ship station license for any vessel on which a radiotelephone is installed, and an operator's permit is required for anyone using the radiotelephone. The following procedures should be followed to obtain the above licenses.

1. It is necessary for the mariner to fill out FCC Form 506 application for ship station license, sign it and mail to **FEDERAL COMMUNICATIONS COMMISSION, GETTYSBURG, PENNSYLVANIA 17325.**

2. If the mariner does not have any type of personal operator's licenses such as restricted radiotelephone operator's permit or commercial radio operator's license, he has to fill out FCC Form 753, an application for restricted radiotelephone operator's permit, sign it and mail to the FCC address noted in the previous paragraph.

3. You may, however, operate your VHF-FM marine radio under a temporary license Form 506A. The mariner should read FCC Form 506A carefully to determine whether he meets all of the requirements for holding a temporary permit. After reading Form 506A, the mariner should sign the form and indicate the date of mailing of the Forms 506 and 753.

DO NOT MAIL THE TEMPORARY PERMIT.
Keep it in your possession until notification is received from the FCC that the regular license application has been approved. This temporary form is valid for 60 days.

4. The final step is to determine the temporary call sign to be used in conjunction with the temporary permit, and to enter this call sign in the appropriate place on Form 506A.

<div style="border: 1px solid black; padding: 1em;">

N O T I C E

The FCC has reassigned the use of Channel 70
156.525 MHz for Digital Selective Calling only.
Do not use Channel 70 for radiotelephone communications.

</div>

S P E C I F I C A T I O N S

RECEIVER:

Number of channels	:	84 (9 weather)
Frequency range	:	156.050 MHz. to 162.550 MHz.
Frequency stability	:	0.001%
Sensitivity	:	Better than 0.5uV at 12 dB SINAD
Squelch sensitivity	:	Threshold : 0.35uV
		Tight : 1.0uV
Hum and Noise	:	Better than 40 dB
Suprious rejection	:	Less than -65 dB
Intermodulation rejection	:	60 dB
Audio output	:	0.5W into 8 ohms at 10% distortion
Current drain	:	0.2 Amps at 9.6V DC
		60 mAmps for stand-by
IF frequency	:	1st IF : 10.7 MHz.
		2nd IF : 455 KHz.
Adjacent channel rejection	:	65 dB

TRANSMITTER:

Number of channels	:	55
Frequency range	:	156.050 MHz. to 157.425 MHz.
Frequency stability	:	0.001%
Channel spacing	:	25 KHz.
Temperature range	:	-20°C to +50°C
Transmit power	:	High : 5 watts
		Low : 1 watt
Modulation	:	16F3
Hum and Noise	:	Better than 40 dB
Spurious and harmonic emission	:	-60 dB
Microphone sensitivity	:	7 mV
Microphone	:	Electret type
Power requirements	:	9.6V DC (Rechargeable battery pack) or external power 9.6V DC
Current drain	:	High power 1.2 Amps at 9.6V DC
Battery life	:	2.6 hours Duty cycle - 5 min. receiver 1 min. transmit
Regulations	:	FCC part 80

GENERAL DESCRIPTION

This unit is an all solid state VHF-FM marine radiotelephone. It contains 55 transmit channels and 84 receive channels which includes 7 U.S. weather channels and 2 Canadian weather channels. These channels are designated for marine VHF-FM operations in the United States territorial waters. This unit is completely factory calibrated and does not require the services of a licensed technician for installation. Front panel indicators display each mode of operation in the highly visible liquid crystal display (LCD). The unit is rugged and reliable. With normal care and protection it will provide many years of dependable operation.

POWER REQUIREMENTS

1. POWER REQUIRED FOR OPERATION

Your radiotelephone is designed to operate from a built-in power pack of NiCad rechargeable batteries. An external battery supply or an external power supply of 9.6 volts 1.2 amp. can also be used.

2. BATTERY OPERATION

The NiCad batteries and the battery charger are supplied as standard equipment. These batteries have been fully charged at the factory. However, they should be recharged for several hours before using the unit for the first time.

3. BATTERY CHARGING

Batteries should be recharged for several hours after use and for a short period before you plan to use the radiotelephone again. This will ensure longer, more reliable operation. It is not necessary to remove the battery pack for recharging.
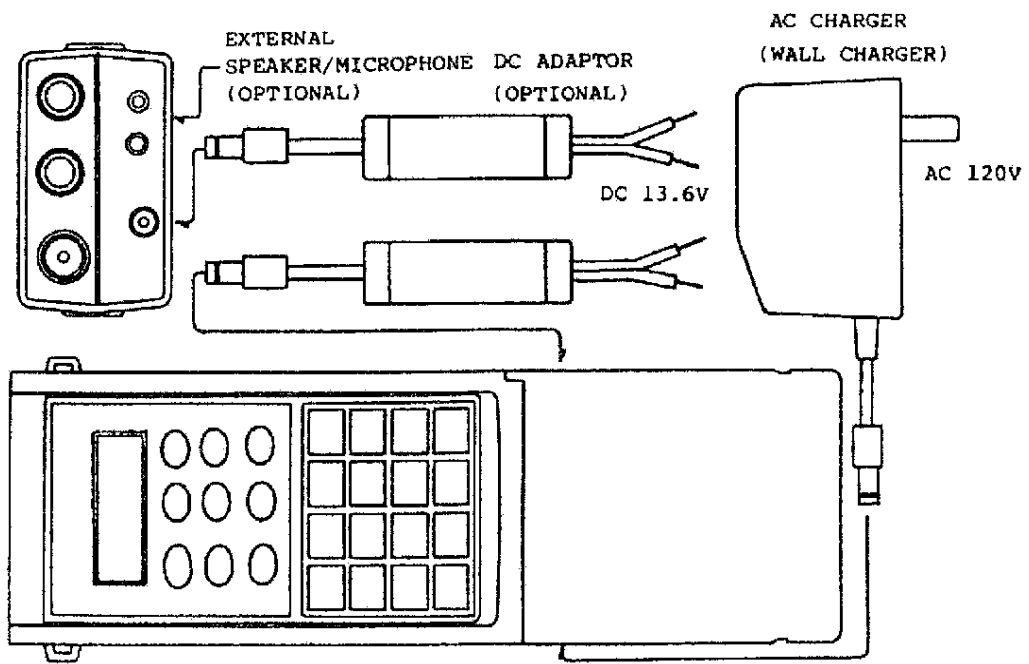
To charge the battery pack (Use wall charger):

1) Connect the AC charger to the external wall CHG jack on the side of the unit.
2) Be sure the Power-Volume control is OFF.
3) Connect the battery charger to 115 volt 60 Hz. power. The battery pack will be charged automatically. Full charge requires approximately 6 hours.

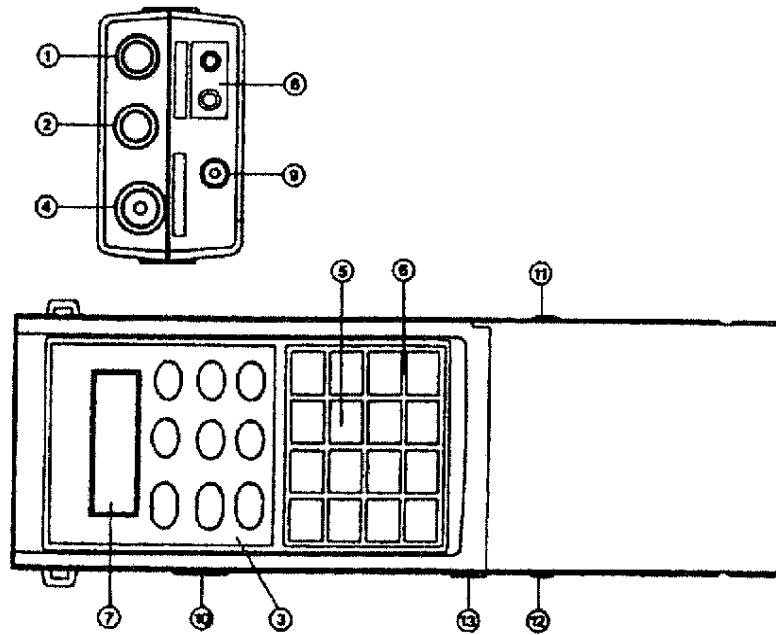To charge the battery pack (Use DC adaptor - Adaptor is an option item):

1) Connect the DC adaptor to the external DC CHG jack on the side of the unit.
2) Be sure the Power-Volume control is OFF.
3) Connect the DC Adaptor to 13.6 volt DC power. The battery pack will be charged automatically. Full charge requires approximately six hours.

NOTE : This unit does not have an indicator to show when the battery pack is fully charged. To determine the charged condition, disconnect the charger from the radio, and briefly press the transmit switch. If ‎BATT sign appears in the LCD display, the battery pack should be charged immediately.

- 8 -

CHARGER and EXT. POWER CONNECTIONS

EXTERNAL
SPEAKER/MICROPHONE   DC ADAPTOR
(OPTIONAL)   (OPTIONAL)

AC CHARGER
(WALL CHARGER)

DC 13.6V

AC 120V

CONTROLS AND CONNECTORS

1. **ON-OFF/VOLUME CONTROL**
   Applies power to the unit and adjusts desired level of sound.

2. **SQUELCH CONTROL**
   When properly set, silences background noise in absence of a received signal.

3. **PROGRAM KEYPAD**
   Used to select desired channel and mode selections.

4. **ANTENNA CONNECTOR**
   Connect VHF/FM marine antenna (Rubber antenna).

5. **SPEAKER** : Front panel speaker.

6. **MICROPHONE** : Inside Electret Microphone.

7. **LCD CHANNEL/FUNCTION DISPLAY**
   Shows channel number and function mode.

8. **PTT-MIC-SP. JACK**
   For use external speaker-microphone with PTT switch.

9. **EXTERNAL POWER JACK**
   Used for adaptor operation. The power supply from battery pack is disconnected
   when the DC ADAPTOR is used. Do not use AC ADAPTOR in this jack.

10. **PUSH-TO-TALK SWITCH** : Push to transmit, release to receive.

11. EXTERNAL DC CHARGER JACK
Used to charge the battery pack with DC adaptor.

12. EXTERNAL AC CHARGER (WALL CHARGER) JACK
Used to charge the battery pack with AC CHARGER.

13. BATTERY UNIT RELEASE LEVER
Used to remove the battery pack. Push the release lever upward and slide the battery pack toward the right side to remove it.

OPERATION

RECEIVING:

1. Rotate the VOLUME control clockwise. When you hear a click, the power is ON. Adjust the control to the desired listening level of sound. If you do not hear any sound, proceed to the next step.

2. Turn the SQUELCH completely counterclockwise. When sound comes from the speaker, adjust the VOLUME control to the desired listening level. Set the channel switch to an unused channel, then adjust the SQUELCH control clockwise until the background noise is just eliminated. This is called threshold adjustment. Further rotation of the squelch control can block out weaker signals, so do not adjust the control further.

3. Select the channel desired with ten key of keypad. If channel 16 is to be used, select with CH 16 key.

TRANSMITTING:

CAUTION : Do not transmit unless the antenna is connected to the unit.

Transmission is controlled by the "Push to Talk" switch on the unit. When the switch is pressed, the transmitter is turned ON and the receiver is turned OFF. When the switch is released, the receiver is turned ON again and the transmitter is turned OFF. TX will appear in the LCD display when the PTT switch is pressed.

1. Before transmitting, choose the desired channel for operation. Be sure that the channel is clear and not occupied by another party.

2. If your transmission is to be short range or in a harbor area, set to LOW power. When the communication range is longer, set to HI power. Hi or LOW power is indicated in the LCD display. Low power is 1 watt, high power is 5 watts.

   NOTE : Channel 13, 67 USA and channel 15, 17 INT'L are automatically set to 1W low power when they are selected. 5W high power for these two USA channel is available by pressing the HI/LO switch. The transmitter will not operate on CH 15, 60-64 USA channel and on weather channels.

3. Do not use obscene language in your communications. It is a violation of the rules and regulations and your license can be revoked.

USING THE KEY PAD

The program keypad contains 9 touch-entry keys to perform all the channel and mode selections.

(▲) UP KEY

Pressing the "UP" key increases the channel numbers. Pressing the key during transmit mode also advances channel numbers.

DOWN KEY

Pressing the "DOWN" key decreases the channel numbers. Pressing the key during transmit mode also decreases the channel numbers.

(3) INT'L KEY

The INT'L and USA mode are alternatively switched each time key is pressed. INT'L is displayed in the LCD display.

(16) CH 16 KEY

Press to automatically select from any other mode to CH-16. Pressing again makes the unit return to the last channel set before the key was pressed.

(D) DIM KEY

Press the key. The LCD display is lighted for about 5 seconds.

(HL) HI/LO KEY

The transmit power is alternatively switched from "LO" to "HI" or "HI" to "LO" each time key is pressed. "HI" or "LO" is displayed in the LCD display.

(W) WX KEY

Pressing the key during reception in any other channel selects the channel WX1. "WX" is displayed in the LCD display. Repeat pressing advances the channel to WX2, WX3 - WX9, WX1 in this sequence. When selecting other channels, operate the keys as follows.

A) Pressing the "▲" or "▼" key returns the unit to the last channel selected before the "WX" channel was selected.

B) Pressing the "16" key automatically selects channel 16.

(S) SEEK/SCAN KEY

Pressing the key starts the all channel SEEK or scanning operation. "SEEK" is displayed in the LCD display. The scanning speed is 2 channels per second and stops at any active channel. To start scanning again while the unit is stopped on an active channel, keep pressing the "S" key for 0.5 second or more. When the active channel goes OFF, the scanning starts again. To stop the SEEK or scanning operation, operate the keys as follows.

A) Re-press the "▲" or "▼" key. The SEEK or scanning operation stops at the last channel displayed.

B) Pressing the "16" key stops the SEEK or scanning operation, and selects the channel 16.

(M) MEMORY KEY

Used to add or delete channels from the scan memory list. When the "M" key is pressed during scanning, the function will be changed as follows:

A) When in all channel scanning : Changes to memory scan

B) When in memory scanning   : Changes to all channel scan

(S) (M) MEMORY SCANNING

Press the "S" key for memory channel scan, when in all channel scanning.

Press the "M" key. To stop and re-start the memory scanning function is the same as all channel scanning.

MEMORY PROGRAMMING

Select the channel number you want to enter into the Scan Memory. Press "M" key. This selected channel is now in memory. If you want to add additional channels to the memory Scan, repeat the above operation. The Scan Memory is available for all U.S. and international channels with the exception of the weather channels. Also, it is not possible to scan U.S. and international channels at the same time.

To activate the Scan Memory function on the HH-300, press the Scan key after you have programmed the channels you wish to monitor.

MEMORY CHANNEL DELETION

To remove a channel from memory, select the channel to be deleted and press the "M" key. After reactivating the Scan Memory function, you will notice the channel deleted will not be part of the programmed Scan.

In the event no channels are programmed into memory, the L.C.D. Display will show "CL" to indicate a clear program.

INSTALLED MARINE CHANNELS AND THEIR USAGE

CAUTION: While it is possible to select channel such as channels WX1 ~ WX9 and 15, 60 ~ 64 (USA position transmitter is disabled since no communication is authorized on these channels.

INSTALLED CHANNELS	TX (MHz)		RX (MHz)		TYPE TRAFFIC	FUNCTION	
	INT'L	USA	INT'L	USA		SHIP TO SHIP	SHIP TO SHORE
01	156 050	156 050	160 650	156 050	VTS	Yes	Yes
02	156 100	156 100	160 700	156 100	Port Op	Yes	Yes
03	156 150	156.150	160 750	156 150	Port Op	Yes	Yes
04	156 200	156 200	160.800	156 200	Port Op	Yes	Yes
05	156.250	156 250	160 850	156 250	VTS	Yes	Yes
06	156.300	156 300	156.300	156 300	Safety C	Yes	No
07	156 350	156.350	160 950	156 350	Com I	Yes	Yes
08	156 400	156 400	156 400	156 400	Com'l	Yes	No
09	156 450	156 450	156 450	156 450	Com'l & Non Com'l	Yes	Yes
10	156 500	156.500	156 500	156 500	Com'l	Yes	Yes
11	156 550	156 550	156 550	156 550	Com'l	Yes	Yes
12	156 600	156.600	156 600	156.600	Port Op	Yes	Yes
13	156 650	156 650	156 650	156.650	Nav	Yes	Yes
14	156 700	156 700	156 700	156 700	Port Op	Yes	Yes
15	156 750	—	156 750	156.750	Distress, Safety C	Receive Only	Receive Only
16	156 800	156 800	156 800	156 800	Safety C	Yes	Yes
17	156.850	156 850	156 850	156 850	State Con	Yes	Yes
18	156 900	156 900	161 500	156 900	Com I	Yes	Yes
19	156 950	156 950	161 550	156 950	Com'l	Yes	Yes
20	157 000	157 000	161 600	161 600	Port Op	Yes	Yes
21	157 050	157 050	161 650	157 050	Coast Ga d	Yes	Yes
22	157 100	157 100	161 700	157 100	Coast Ga d	Yes	Yes
23	157 150	157 150	161 750	157 150	Coast Ga d	Yes	Yes
24	157 200	157 200	161 800	161 800	Public C	No	Yes
25	157 250	157 250	161 850	161 850	Public C	No	Yes
26	157 300	157 300	161 900	161 900	Public C	No	Yes
27	157 350	157 350	161 950	161 950	Public C	No	Yes
28	157 400	157 400	162 000	162 000	Public C	No	Yes
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	—			

INSTALED CHANNELS	TX (MHz)		RX (MHz)		TYPE	FUNCTION	
	INT'L	USA	INT'L	USA	TRAFFIC	SHIP TO SHIP	SHIP TO SHORE
65	156 275	156.275	160 875	156 275	Port Op	Yes	Yes
66	156 325	156 325	160 925	156 325	Port Op	Yes	Yes
67	156 375	156 375	156 375	156 375	Com I	Yes	No
68	156 425	156 425	156 425	156 425	Non Com'l	Yes	Yes
69	156 475	156 475	156 475	156 475	Non Com'l	Yes	Yes
70	156 525	156 525	156 525	156 525	Non Com'l	Yes	No
71	156 575	156 575	156 575	156 575	Non Com I	Yes	Yes
72	156 625	156 625	156 625	156 625	Non Com'l	Yes	No
73	156 675	156 675	156.675	156 675	Port Op	Yes	Yes
74	156 725	156 725	156 725	156.725	Port Op	Yes	Yes
77	156 875	156 875	156 875	156 875	Port Op	Yes	No
78	156 925	156 925	161 525	156 925	Non Com'l	Yes	Yes
79	156 975	156 975	161 575	156 975	Com'l	Yes	Yes
80	157 025	157 025	161 625	157 025	Com'l	Yes	Yes
81	157 075	157 075	161 675	157 075	Coast Ga'd	Yes	Yes
82	157 125	157 125	161 725	157 125	US Gov Only	Yes	Yes
83	157 175	157 175	161 775	157 175	Coast Ga'd	Yes	Yes
84	157 225	157 225	161 825	161 825	Public C	No	Yes
85	157 275	157 275	161 875	161 875	Public C	No	Yes
86	157 325	157 325	161 925	161 925	Public C	No	Yes
87	157 375	157 375	161 975	161 975	Public C	No	Yes
88	157 425	157 425	162 025	157 425	Com I	Yes	No
WX1	–	–	–	162 550	NOAA WX	Receive Only	Receive Only
WX2	–	–	–	162 400	NOAA WX	Receive Only	Receive Only
WX3	–	–	–	162 475	NOAA WX	Receive Only	Receive Only
WX4	–	–	–	162 425	NOAA WX	Receive Only	Receive Only
WX5	–	–	–	162 450	NOAA WX	Receive Only	Receive Only
WX6	–	–	–	162 500	NOAA WX	Receive Only	Receive Only
WX7	–	–	–	162 525	NOAA WX	Receive Only	Receive Only
WX8	–	–	–	161 650	Canadian WX	Receive Only	Receive Only
WX9	–	–	–	161 775	Canadian WX	Receive Only	Receive Only

CAUTION: OPERATION OF CHANNELS NOT DESIGNATED FOR USES BY YOUR CLASSIFICATION OF CRAFT OR ON INTERNA-
TIONAL CHANNELS WHEN WITHIN UNITED STATES TERRITORIAL WATERS IS A VIOLATION OF FEDERAL COM-
MUNICATIONS COMMISSION RULES AND REGULATIONS AND MAY RESULT IN SEVERE PENALTIES.