

# OWNER'S MANUAL

## TM-882A (American Version)

June 12, 2002

### INTRODUCTION

Your marine transceiver TM-882 represents the state-of-the-art in high-tech engineering. Designed for US and international operation, plus 10 weather channels. This allows you to transmit and receive on all US and international channels in the VHF marine band, as assigned by the international Union (ITU). This unit is a quality piece of electronic equipment, skillfully constructed with the finest components. It is approved with commercial-grade standards to give you clear, reliable communication.

Your transceiver is designed for many years of reliable, trouble-free performance. It is under control of a microprocessor resulting in enhanced features and performance. The microprocessor controls not only the marine band tuning but also dual watch, memory channels, weather monitor, and a host of other useful features.

Your transceiver has the following features:

**Emergency Channel 16 Switch** ---- provides quick access to channel 16, the universal marine emergency channel.

**Weather Channel Selection** ---- lets you select from 10 weather channels for alert signal.

**PLL (Phase Lock Loop) Controlled Circuitry** ---- Provides accurate and stable channel selection.

**Squelch Adjustment** ---- help eliminate noise between transmissions.

**Mode Switch** ---- lets you quickly select weather channel mode, the US channel mode and international channel mode.

**Key Lock** ---- lets you lock the keypad in order to prevent the controls from accidental pressing.

**Call Button** ---- lets you store a priority channel.

**High/Low Power Selection** ---- lets you save power by selecting a suitable transmitting power for long or short distances.

**Battery Low Indicator** ---- shows the battery pack's condition.

**Supplied Battery Charger** ---- lets you conveniently recharge your transceiver's battery pack.

**Speaker and Microphone Jacks** ---- let you use an earphone or external speaker or microphone to help ensure understandable communication in noisy areas.

**Backlit LCD Display** ---- allows you to operate the transceiver in dark environment.

**10 Memory Channels** ---- lets you store 10 channels as memory channels.

**Dual/Scan Button** ---- lets you to select the reception of a programmed channel or scan all the channels for existing channels.

We recommend you record your transceiver's serial number here. This number is on the transceiver's back panel.

Serial Number\_\_\_\_\_

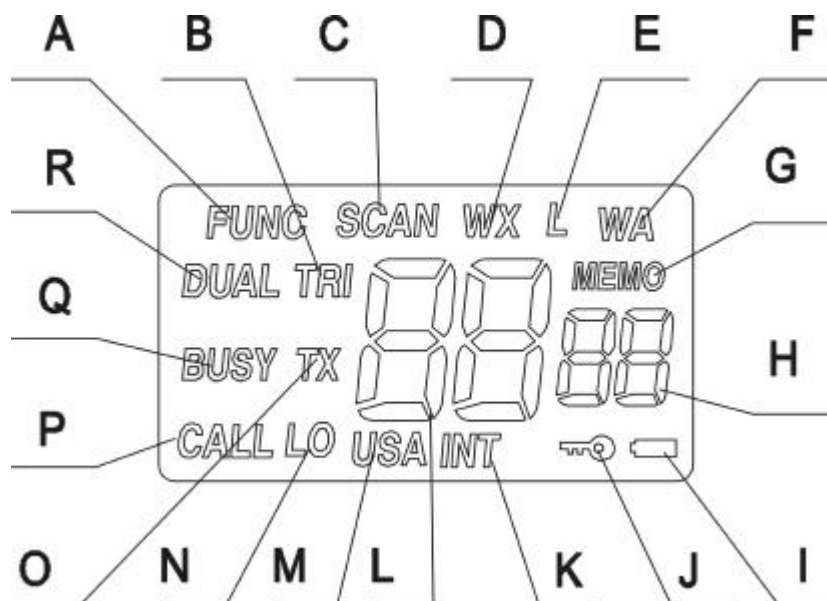
## SAFETY INFORMATION

Your hand-held marine VHF radio contains a low power transmitter. When the Push-To-Talk (**PTT**) button is pushed it sends out radio frequency (RF) signals.

## USING THE RADIO

### A. DISPLAY

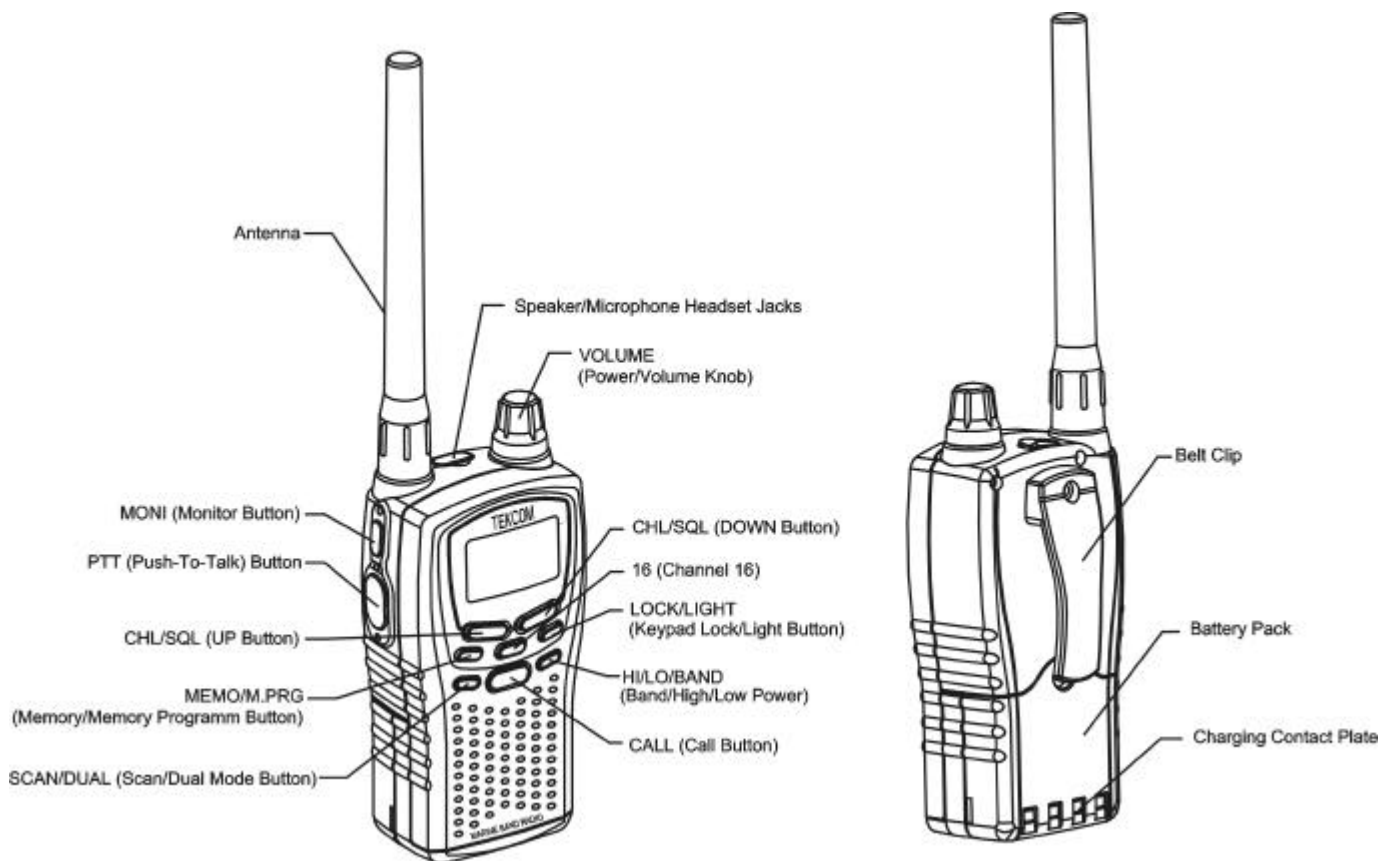
Your radio comes with a multifunctional backlight display. By pressing **LOCK/LIGHT** key, it will illuminate the backlight for 5 seconds; once more press will turn off the light.



- A. Function is activated.
- B. "TRI": appears when the radio is in Triple Watch mode.
- C. "SCAN": appears when the radio is in Scan mode.
- D. "WX" indicates that your radio is receiving weather alert signal.
- E. "L" which means lockout appears to indicate the current channel you select is overridden from scan.

- F. "WA" shows on LCD that there is Weather Alert signal received.
- G. "MEMO" shows your radio being in memory function mode.
- H. Small 2-bit digits show the memory channel location number or "SL" for squelch.
- I. Battery icon: shows the battery is low.
- J. Key lock icon: appears when key lock function is enabled.
- K. "INT" shows the current channel is International channel.
- L. The current selected channel number or squelch level.
- M. "USA" shows the current channel is US channel.
- N. "LO" shows the radio in low power mode.
- O. "TX" appears if your radio is transmitting.
- P. "CALL" shows that you are using CALL channel.
- Q. When a signal is being received, your radio will have a "BUSY" appear on LCD.
- R. "DUAL" indicates your radio is in Dual Watch mode.

## B. FUNCTION AND LOCATION OF THE CONTROLS



## D. BASIC OPERATION

Before operating your transceiver, you should make the following preparations. You should install the battery pack on to the main unit and fully charge your 7.2VDC Ni-CD battery pack, then you can use it after making sure to attach the antenna on your radio.

### Turning On/Off Your Transceiver

Rotate **VOLUME** knob to turn the transceiver on or off with an indicating voice of click. And adjust the volume to a comfortable level.

### Illuminating the Display

When your radio is on, push **LOCK/LIGHT** key once to illuminate the display for 5 seconds. Once more press will turn off the backlight.

### Monitor

The monitor function allows faint signals on a channel to be heard. To activate the monitor function, press and hold the **MONI** button to hear all traffic on the current channel. Release the **MONI** button when finish listening.

### Using Key Lock

You can lock your radio keypad to avoid accidental pressing of keys by activating the key lock. Pressing and holding **MONI** button then press the **LOCK/LIGHT** key can enable or disable the key lock. Key lock icon will appear on LCD if it is enabled. The function is effective to all other knobs/keys except **MONI**, **PTT**, **16** and **LIGHT/LOCK** buttons.

### Selecting High/Low Power

In order to extend the battery life, you can also press **HI/LO/BAND** key while holding **MONI** button to select the low power for your transceiver. If you want to send or hear long distance or weaker signals, press the key combination again to select the high power. High power is 5.0 watts, and low power is 1.0 watt. When the unit is operating at low power, "LO" appears on LCD and disappears when operating at high power.

### Selecting a Band

Three bands are available on the TM-882 – USA, International and Weather. The USA band are frequencies for use in US boundaries. The International band are frequencies for use outside US boundaries. The Weather band monitors weather broadcasts. To switch between bands, press the **HI/LO/BAND** key until the desired band is reached. The band in use is indicated on the LCD by USA, INT or WX.

### Selecting a Channel

Select the appropriate band – USA, International or Weather. Once the band is selected, press the CHL/SQL (UP/DOWN) button to scroll through the available channels.

**Note: Not all channel numbers are available in all bands.**

## Transmitting and Receiving

The **PTT** (Push-To-Talk) button is located on the side of the TM-882. Before transmitting, make sure the channel is not a “receive-only” channel. To transmit a message, press and hold the **PTT** button. Talk clearly into the speaker/microphone area of the radio. When finished, release the **PTT** button. During a transmission, “TX” appears on the LCD. To receive a call, just release the **PTT** button.

## Adjusting Squelch

Squelch is used to eliminate static and background noise and allows for silent operation of the TM-882 until a transmission is received. If the squelch is too high, only the strongest transmissions are heard, and when too low, intermittent static and noise are heard.

To adjust the squelch, press and hold the **MONI** button then press either the **UP** or **DOWN** for **CHL/SQL** key until the background noise is quiet. The LCD displays the squelch setting from 00 to 08.

## Channel 16

Channel 16 is the standard channel for placing a call or for an emergency broadcast. The **16** button selects Channel 16 immediately. To exit, press the **16** button again. Channel 16 is the same frequency on both the USA and International bands.

## Transmitting a Help Message on Channel 16

Press and hold the **16** key for several seconds. This starts the transmission of the emergency Help signal. The Help code can be heard through the speaker. When in the emergency mode, “EMERG (emergency)” appears on the LCD.

While the TM-882 is transmitting the Help message, it listens for anyone trying to respond and interrupts transmission when a response is received.

During a Help transmission, no other transmission is possible. If a transmission is necessary, stop the Help transmission by pressing the **16** button.

## Programming the Call Channel

1. Press the **CALL** button. “CALL” appears on the LCD.
2. Press and hold the **MONI** button then press the **CALL** button. The display will flash. Release all buttons.
3. Press **UP** or **DOWN** key to get the desired call channel.
4. Press and hold the **MONI** button then press the **CALL** button to store the Call Channel.

**Note:** The default value for **CALL** channel is 09.

## Resetting the Radio

Provided that your radio can not work properly any longer, you can make it return to the original

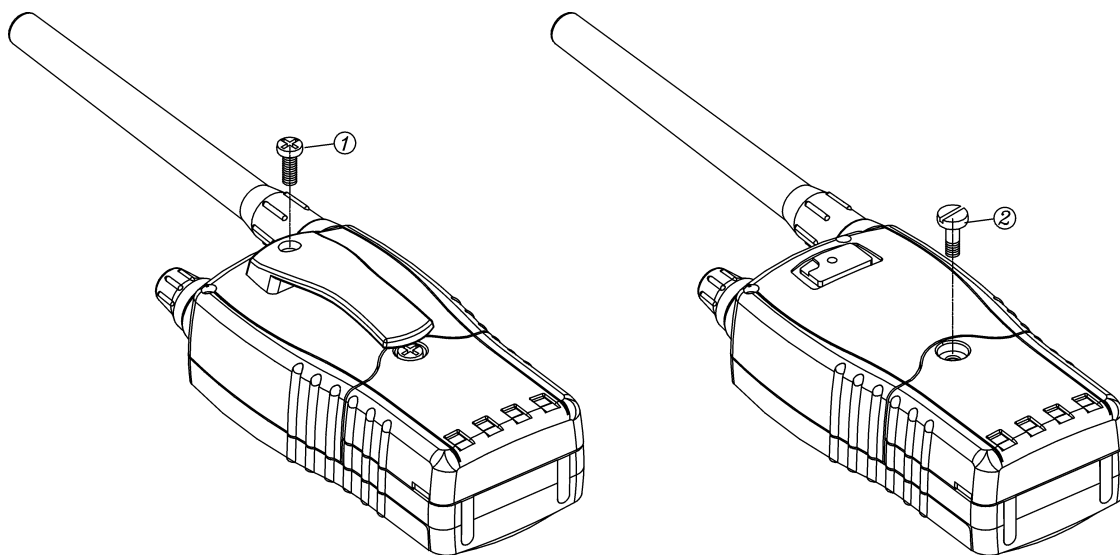
status by resetting. Turn on your radio while pressing and holding down **MEMO/M.PRG** or **LIGHT/LOCK** key, the current channel for USA, INT and WX are all CH1, the CALL channel is USA CH09, squelch level is 02, the default band is INT band, etc.

### Charging and Attaching Your Battery Pack

The design of the battery pack let you can charge it either when it is attached on the radio or being detached. You should use the supplied specialized charger to charge it for 14~15hrs. Before attaching the pack, you should detach the belt clip first, then aligning place the pack on the unit and secure it using the supplied screw.

### Using the Belt Clip

The supplied belt clip lets you easily attach the transceiver to your belt. To attach the belt clip, put it onto the back of your transceiver aligning the fitting groove and use a standard PHILIP screw driver to secure.



## E. SCANNING FEATURES

### Scanning All Channels

The TM-882 scans all channels in one of two modes: normal or priority scan. You may program the TM-882 to scan in either mode.

In normal scanning, the radio rapidly scans through channels, either in the USA or International band. It stops scanning on busy channels and remains stopped several seconds after the signal disappears allowing time to answer the call if necessary.

In priority scanning, the scanning operation is the same as normal scanning except Channel 16 is constantly checked for activity, allowing for much quicker response to Channel 16 traffic.

To scan channels, press and hold the **SCAN/DUAL** button for a few seconds. The TM-882 begins scanning channels using the scan method programmed in the radio. The word "SCAN" appears on the LCD. To stop scanning, press the **SCAN/DUAL** button, your radio will stop on the current

arrived channel.

### Programming for Normal or Priority Scan

1. Turn the unit off. Press and hold the **MONI** button while turning the power on until there are characters appear on LCD. The unit displays "02" or "03". Release the **MONI** button.
2. Press the **MONI** button again. The radio displays "n-sc" or "P-sc".
3. Press **UP** or **DOWN** key to choose "n-sc" for normal scan, or "P-sc" for priority scan.
4. Press the **16** key once to store programming.

### Deleting Channels from Scan

To delete a channel from scan, select the channel to be deleted. Press the **MONI** and **SCAN/DUAL** button keys at the same time. "L" appears on the LCD, indicating the channel is locked out of scan. This is useful for bypassing channels that are continuously busy. To activate a skipped channel, select the channel to be activated then press the **MONI** and **SCAN/DUAL** keys at the same time.

### Dual and Triple Watch Scanning

To scan selected channels, there are three options: Dual Watch, Dual Watch with Weather Alert, and Triple Watch.

In Dual Watch scanning, your radio toggles between Channel 16 and the current channel. In Dual Watch with Weather Alert scanning, the TM-882 toggles between Channel 16, the current weather channel, and the current VHF channel. In Triple Watch scanning, it toggles between Channel 16, the Call Channel, and the current channel.

### Programming for Dual, Dual with Weather, or Triple Watch Scanning

1. Turn the unit off. Press the **MONI** button while turning the power on until there are characters appear on LCD. Release the **MONI** button.
2. Press the **UP** or **DOWN** key until "02du" (for Dual Watch), "03du" (for Dual Watch with Weather Alert), or "03tr" (for Triple Watch) appears on the LCD.
3. Press the **16** key or turn off the radio to store programming.

To scan channels, press the **SCAN/DUAL** key. The radio begins scanning channels using the scan method programmed in the radio. The characters "DUAL" or "TRI" appears on the LCD.

The TM-882 rapidly scans through channels, and stops scanning on busy channels. The radio remains stopped several seconds after the signal disappears allowing time to answer the call if necessary.

In Dual Watch scanning, the radio constantly monitors Channel 16 for an alert signal.

In Dual Watch with Weather Alert and Triple Watch scanning, the radio constantly monitors the selected weather channel and Channel 16 for an alert signal.

Press the **SCAN/DUAL** button again to exit.

## F. MEMORY CHANNELS

### Using Memory Channels

The radio has 10 memory locations (00-09), to quickly access frequently used channels.

To access the memory channels, press the **MEMO/M.PRG** button. The LCD displays the channel number on the left, and the memory location in smaller numbers to the right. Turn the **CHL/SQL** knob to select a memory channel. To exit the memory channel mode, press the **MEMO/M.PRG** button again.

### Programming Memory Channels

To enter channels into memory:

1. Press the **MEMO/M.PRG** button.
2. Press and hold the **MONI** button then press the **MEMO/M.PRG** button. The memory location number begins to flash.
3. Press the **UP** or **DOWN** key to get the desired memory location.
4. Press the **MEMO/M.PRG** button. The channel number begins to flash.
5. Press the **HI/LO/BAND** key to select either the USA, Weather, or International band for the channel you wish to store.
6. Press the **UP** or **DOWN** key to reach the desired channel for this memory location.
7. Press and hold the **MONI** button then press the **MEMO/M.PRG** button to save the memory location and exit programming.
8. To store additional memory channels, repeat the above procedure.

Press the **MEMO/M.PRG** button to exit the memory channel mode.

### Scanning Memory Channels

To scan the memory channels, press the **MEMO/M.PRG** button, then press and hold the **SCAN/DUAL** key for a few seconds. "SCAN" appears on the LCD as the radio scans the memory channels, stopping on an active channel. Press the **SCAN/DUAL** key again to exit.



## TECHNICAL SPECIFICATIONS

Channels.....	All USA and International Channels, Plus Ten Weather Channels		
Frequency Method.....	Phase Lock		
L	o	o	p
Frequency Range.....	TX 156.050~157.425 MHz		
	RX 156.050~163.275 MHz		
Antenna Impedance.....	50		
O	h	m	
Power Supply.....	7.2VDC		
Operating Temperature.....	-20℃ to +50℃		
Dimensions (HWD).....	112×62×39 mm		
Weight (with Batteries).....	300 g		

### TRANSMITTER

Power Output.....	0.6 or 2 Watts (Switch Selectable)
Modulation Type.....	FM
Hum and Noise Attenuation.....	34dB
Audio Distortion.....	5%
Spurious Suppression.....	60dB

### RECEIVER

Sensitivity at 12dB Sinad.....	0.5μV	
S/N Ratio (20dB).....	0.8μV	
Squelch Sensitivity.....	Threshold -12dBμV(EMF)	
Adjacent Channel Rejection.....	70dB	
Audio Power Output.....	200mW at 10%	
T	H	D
Spurious Response Attenuation.....	70dB	
Hum and Noise Attenuation.....	40dB	
Modulation Acceptance Bandwidth.....	+/- 7.0KHz Minimum	

**Note:** The data are typical, and the practical ones may be varied.

## FREQUENCY CHARTS

Unit: MHz

	US		INT	
	TX	RX	TX	RX
1	156.050	156.050	156.050	160.650
2			156.100	160.700
3	156.150	156.150	156.150	160.750
4			156.200	160.800
5	156.250	156.250	156.250	160.850
6	156.300	156.300	156.300	156.300
7	156.350	156.350	156.350	160.950
8	156.400	156.400	156.400	156.400
9	156.450	156.450	156.450	156.450
10	156.500	156.500	156.500	156.500
11	156.550	156.550	156.550	156.550
12	156.600	156.600	156.600	156.600
13	156.650	156.650	156.650	156.650
14	156.700	156.700	156.700	156.700
15		156.750	156.750	156.750
16	156.800	156.800	156.800	156.800
17	156.850	156.850	156.850	156.850
18	156.900	156.900	156.900	161.500
19	156.950	156.950	156.950	161.550
20	157.000	161.600	157.000	161.600
21	157.050	157.050	157.050	161.650
22	157.100	157.100	157.100	161.700
23	157.150	157.150	157.150	161.750
24	157.200	161.800	157.200	161.800
25	157.250	161.850	157.250	161.850
26	157.300	161.900	157.300	161.900
27	157.350	161.950	157.350	161.950
28	157.400	162.000	157.400	162.000
37			157.850	157.850
39			157.950	157.950
60			156.025	160.625
61	156.075	156.075	156.075	160.675
62			156.125	160.725
63	156.175	156.175	156.175	160.775
64	156.225	160.825	156.225	160.825
65	156.275	156.275	156.275	160.875
66	156.325	156.325	156.325	160.925

67	156.375	156.375	156.375	156.375
68	156.425	156.425	156.425	156.425
69	156.475	156.475	156.475	156.475
70				
71	156.575	156.575	156.575	156.575
72	156.625	156.625	156.625	156.625
73	156.675	156.675	156.675	156.675
74	156.725	156.725	156.725	156.725
77	156.875	156.875	156.875	156.875
78	156.925	156.925	156.925	161.525
79	156.975	156.975	156.975	161.575
80	157.025	157.025	157.025	161.625
81	157.075	157.075	157.075	161.675
82	157.125	157.125	157.125	161.725
83	157.175	157.175	157.175	161.775
84	157.225	161.825	157.225	161.825
85	157.275	161.875	157.275	161.875
86	157.325	161.925	157.325	161.925
87	157.375	161.975	157.375	161.975
88	157.425	157.425	157.425	162.025

### Weather Channel Frequencies

Channel No.	US	International
	RX (MHz)	RX (MHz)
WX0	163.275	163.275
WX1	162.550	162.550
WX2	162.400	162.400
WX3	162.475	162.475
WX4	162.425	162.425
WX5	162.450	162.450
WX6	162.500	162.500
WX7	162.525	162.525
WX8	161.650	161.650
WX9	161.775	161.775