# MST65 Deluxe AM/FM Stereo System

**Owner's Manual** 





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# **FEATURES**

- Sealed water resistant marine housing using corrosion proof materials.
- Large easy-to-read LCD display of station memories, frequency, selected function and time.
- Automatic tune and store feature to locate and memorize stations.
- Special "night vision" orange back lighting of the display and all controls.
- Extended station memories 18 FM and 6 AM.
- Built-in protection against damage from static or high power radio transmissions.
- Provisions for four speakers with Fader control.
- 60 watts, total power.
- Separate Base and Treble controls.
- Built-in clock automatically displays the time while the cassette is playing
  or the unit is switched off, and at a press of a key when using the radio.
- Automatic Stereo/Mono switching and soft muting control.
- Metal tape and tape noise reduction controls.
- Reverse polarity protection of the DC input.

# **ACCESSORIES**

AS101	7-inch Flush Mount Speakers (available in black or white)
AS301	
CMB60	Flush Mount Kit

# REPLACEMENT PARTS

PART	SCC PART NUMBER
Dust Cover	053002027A
Flush Mount Escutcheon	063002002A
Mounting Bracket	160004023A
Mounting Bracket Knobs	154011017A
Power Wire Harness	156007001A
Rear Case Assembly	M32649001A
Speaker Wire Harness	156008001A

# LISTENING TO FM ON YOUR BOAT

The majority of FM broadcasts are music programs. Compared with AM signals, FM signals have a wider dynamic range, are relatively immune to noise and provide virtually distortion-free music reproduction. However, because of the nature of FM signals and the fact that FM stations are usually positioned for shore-based reception, receiving them in a moving boat may be accompanied by problems.

- FM programs are broadcast for local reception and cannot be heard satisfactorily at distant locations. To enjoy FM programs at their best, it is important that you tune to a station that is broadcasting in your locality.
- FM signals can reflect from solid objects such as buildings or hills. If these
  reflected signals are received along with signals arriving directly from the
  transmitter, they may mix together to produce what is known as "multipath
  distortion". This distortion is heard as noise. Often moving as little as 3 feet
  from your position will correct this problem.
- FM signals travel in straight lines. Because the signals are reflected from
  or absorbed by large solid objects, a signal shadow may be present
  behind the object which may result in poor reception in that area.

# CASSETTE CARE AND MAINTENANCE

- Tapes no longer than C-90 (90 minutes playing time) are recommended. Avoid using C-120 tapes because they are extremely thin and may jam your cassette player mechanism.
- 2. The most common cause of poor sound reproduction is a contaminated tape head. Signs of contamination include low volume on one or both channels and failure to reproduce high frequency notes. The head can be cleaned using a cotton applicator soaked in alcohol. If the cassette unit is used for more than one hour each day, the head should be cleaned once or twice a month.
- 3. To extend the life of your cassettes, keep them away from:
  - areas exposed to the sun
  - · top of instrument panels
  - the engine
  - areas exposed to heat and moisture
  - magnetic fields (such as speakers)
- 4. Replace tapes in their plastic cases when not in use.
- 5. Do not oil revolving parts.

#### MOUNTING

The MST65 is designed to be mounted in several different ways so that it can be installed in the most convenient position. Although the MST65 is water resistant when the front cover is closed, care should be taken to locate it where it will not be subjected to spray or rain. Figure 1 shows the various methods of mounting available.

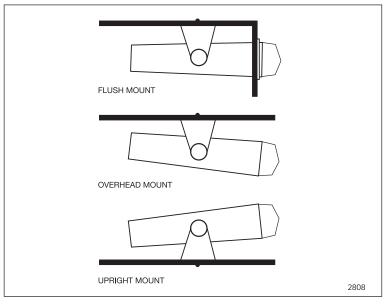


Figure 1. Upright or Overhead Mounting

# **Upright or Overhead Mounting**

- Attach the two gimbal knobs and self-adhesive rubber washers to the MST65 and slide the unit into the mounting bracket. Ensure the rubber washers are between the bracket and the radio. Tighten the knobs firmly.
- Temporarily position the MST65 in the desired location, tilting the radio in the bracket to ensure you are able to get the required adjustments for viewing angle etc.

- Roughly mark the location of the bracket edges, then separate the radio from the bracket and reposition the bracket to mark the mounting hole positions. A range of mounting holes is provided to suit most installations.
- 4. Screw or bolt the bracket into position. The mounting method will depend on the material to which the bracket is being attached.
- 5. Slide the MST65 back into the bracket slots and adjust to the required position before tightening the gimbal knobs.
- 6. Connect the antenna lead and electrical wiring as described later.

# Flush Mounting

The MST65 can be neatly flush mounted into a panel or bulkhead so that just the controls and the protective cover are visible. There are two flush mounting options available. The best option for you will depend on your particular situation.

- If the space behind the bulkhead or panel you have selected has a suitable support shelf and the area is fully accessible, you can use the supplied escutcheon panel as described later.
- If the space behind the bulkhead or panel is largely inaccessible or there is
  no additional support shelf, we recommend you use the optional flush
  mounting kit (available as an accessory). This kit is more robust, is fully self
  supporting and allows the MST65 to be installed from the front.

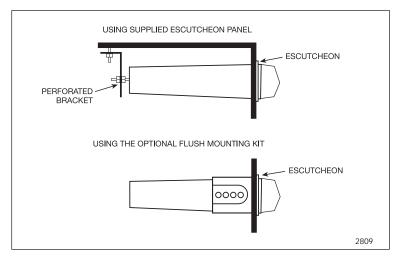


Figure 2. Flush Mounting

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#### Installation using the Supplied Escutcheon Panel

- 1. Select a suitable location on a panel or bulkhead.
- 2. Examine behind the bulkhead to determine the best method of support for the radio. Examples of internal support methods are shown in Figure 2.
- 3. Place the escutcheon on the bulkhead or panel in the required position and pencil around the outside edge of the escutcheon slot wall (see Figure 3).
- 4. Remove the escutcheon and measure your marks. They should measure approximately 7 7/8 inches wide by 2 3/4 inches high. If not, check Figure 3 to ensure you measured the correct edge.
- 5. If your measurements are correct, carefully cut the slot around the marked lines, ensuring that you maintain the curves in each corner.
- 6. Mark and drill four 1/8-inch holes in the bulkhead to accept the escutcheon locating pins at each corner of the escutcheon.
- Trial fit the escutcheon to ensure it fits securely against the panel. If all fits well, put a small dab of glue on each locating pin and press the escutcheon firmly into place. Temporarily hold in place with tape if necessary.
- 8. With the escutcheon in place, slide the MST65 through the slot from the front and push it almost as far as it will go. The radio should not be pushed all the way in, to ensure there is adequate clearance for the front cover to hang in the open position. Open the cover if necessary to check for the correct clearance.
- 9. Holding everything in position, mark the location of the internal support bracket(s). Drill the required holes and fit the bracket(s) as required to firmly hold the MST65 in place.
- 10. Connect the antenna lead and electrical wiring as described later.

**NOTE:** Installation Instructions for the optional Flush Mount Kit are supplied with the kit.

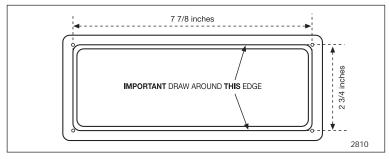


Figure 3. Escutcheon Dimensions

#### FLECTRICAL CONNECTION

FOR NEGATIVE GROUND ELECTRICAL SYSTEMS ONLY. See Figure 4.

The MST65 is intended for use in vessels with a 12 volt negative ground electrical system. The Positive RED fused lead must be connected to the positive (+) side of the electrical system and the Negative BLACK lead must be connected to the ground negative (-) side. Reversal of these connections will cause the fuse to blow and may seriously damage the unit, voiding the warranty.

On smaller vessels, the negative BLACK lead can be connected directly to the negative (-) terminal of the battery. The positive RED lead can go directly to the battery positive (+) terminal, or if more convenient, to an accessory post on the ignition switch.

On larger vessels with a switchboard, the negative lead should go to the common negative bus and the positive lead to the switched and fused radio (or spare) power circuit.

The orange fused lead is used to maintain the memories inside the radio and must be connected to a continuous +12 Volt point such as the positive (+) terminal of the battery.

NOTE: It is possible to use the MST65 on vessels with a 12 volt positive ground electrical system, but special precautions are required when installing the stereo system antenna and any accessories. If in doubt, consult a qualified marine electronics technician.

#### **FUSE REPLACEMENT**

If any of the fuses blow, replace them as follows:

RED supply lead fuse: 7 Amp 3 AG type (1 3/16 inches)
ORANGE memory lead fuse: 1 Amp 3AG type (1 3/16 inches)

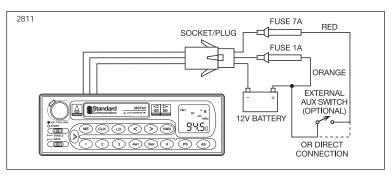


Figure 4. Electrical Connections

#### SPEAKER INSTALLATION

To obtain the best possible sound, flush-mount speakers should be mounted in a bulkhead or panel to provide adequate isolation between the front and rear of the speaker. A baffle area of approximately 2ft x 2ft is desirable when bulkhead mounting. If mounting on a shelf or panel, the speaker can be enclosed in a box, preferably with a volume area of 1 cubic foot.

Speakers which are fully enclosed in their own speaker boxes and incorporate a gimbal mounting bracket can be mounted in any convenient location. Although these speakers have water resistant cones, they should be mounted in a sheltered position away from direct spray.

See Figure 5 for speaker connections.

#### WARNING

- Do not allow the speaker leads (even the common lead) to come into contact with grounded metal on the vessel or the negative (-) supply. If any speaker lead is connected to chassis ground, the amplifier in the MST65 will be damaged.
- Do not allow the speaker leads to "short" together as this will also cause damage to the MST65 amplifier. Damage caused by the above may not be covered by warranty.

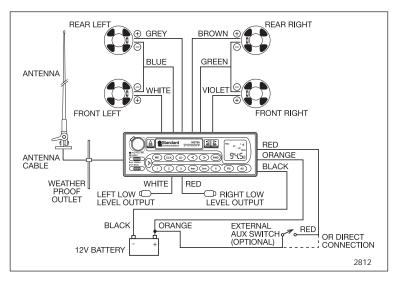


Figure 5. Speaker Installation

Refer to Figure 6 for location of controls.

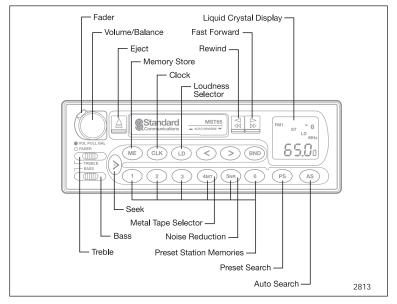


Figure 6. Controls

#### Volume ON/OFF

Rotate the Volume knob clockwise to turn the unit on. Rotate the control further to increase the volume

#### **Balance**

Grasp the Volume knob and pull it outwards while rotating it left or right to adjust the speaker left-right balance. The center balance point is indented for easy location.

#### Fader

Rotate the concentric Fader knob to adjust the balance between the front and rear speakers. Rotate clockwise to increase the front speaker volume and counterclockwise to increase the rear speaker volume.

#### **Bass and Treble**

Slide the Bass or Treble controls to the right to increase the Bass or Treble response. The center "flat response" position is indented for easy location.

#### Loudness (LD)

The LD key is used to increase the low frequency response at low to medium volume levels. This provides compensation for the human ear which does not respond well to low frequencies at lower volumes. When selected, "LD" is displayed.

# Liquid Crystal Display (LCD)

The LCD indicates the station frequency and the selected band along with any other selected functions. The display is permanently backlighted for low light viewing.

#### Band (BND)

The MST65 has 4 selectable frequency bands labeled FM1, FM2, FM3 and MW. Bands FM1 - FM3 are identical and cover the FM band from 87.5 MHz to 108 MHz. The MW band covers the AM frequencies from 531 kHz to 1620 kHz. The separate FM bands allow stations from different areas to be stored and kept separate. Up to 6 channels in each band can be stored in memory, making 18 FM and 6 AM channels available.

e.g. Hometown FM stations can be stored using FM1. When traveling to new areas, new local stations can be located and stored using FM2 or FM3, leaving the hometown stations in FM1 for when you return home.

To change bands, press BND. Each press will advance to the next band i.e. FM1 - FM2 - FM3 - MW - FM1 etc.

#### **Tuning**

Manual Tuning (< >)

To manually tune the radio, press the < or > keys. Press > to tune to a higher frequency and < to tune to a lower frequency. Release the key when the desired frequency is displayed. The sound is muted while tuning.

Seek Tuning (>>)

To automatically tune the radio to a station, press the >> Seek key. The radio will automatically seek upwards through the selected band until a station is found. Tuning then stops on that station. To tune to another station, press the >> key again.

#### Manual Station Preset

To manually store stations in the station memories:

- Select the required station frequency using either the < or > manual tune keys or the >> seek key.
- Press the ME key. "ME" will flash on the display for 5 seconds. During this
  time, press the required station preset number 1 6. The selected station
  will be stored in that preset memory and the preset number will be
  displayed

To recall station memories, press the required station preset number 1-6.

# Auto Memory Store (AS)

Use the Auto Memory Store AS function to automatically locate and store stations in memory. In FM mode (bands FM1, FM2 and FM3), stations are stored in order of signal strength with the strongest signals being stored first. In AM mode (MW band), stations are stored in the sequence in which they are found.

To automatically store stations in memory, press the AS key. "8" will flash in the top right corner of the LCD while the Auto Memory Store is functioning.

In FM mode, the radio will begin scanning upwards through the entire selected band (FM1, FM2 or FM3), starting at the currently selected frequency and returning to that frequency when finished. The memories for that band will then contain the six strongest FM stations in your area.

In the AM mode, the radio will begin scanning upwards (from the currently selected frequency) and will store the first six stations found. Scanning will then stop.

Note: If the AM stations you wish to store were not included because the memories were filled up too soon by other unwanted stations, select a frequency to start from that is just below the stations you wish to store (using the < > manual tune keys or the >> seek key), then press the AS key. Stations will be then located and stored starting from the selected frequency.

#### Preset Scan (PS)

The Preset Scan function automatically steps through all preset stations in sequence, pausing to play each station for 5 seconds.

To start the Preset Scan, press the PS key. The radio will begin stepping through and playing each station preset in memory and the current station memory number will flash in the top right of the display.

Note: In FM mode, the preset scan will step through all 18 channels of the three FM bands (FM1, FM2 and FM3).

To cancel the Preset Scan and remain on the current station, press the PS key again.

#### Clock (CLK)

To display the clock on the LCD, press the CLK key. The display will return to normal after 5 seconds.

To set the clock:

- 1. Press CLK to display the clock.
- 2. Press and hold ME while pressing 1 to adjust the hours.
- 3. Press and hold ME while pressing 2 to adjust the minutes.

Note: When playing cassettes, the clock is displayed automatically. During this time the clock can be set without the need to press the CLK key.

#### CASSETTE PLAYER

Insert a cassette tape into the cassette door with the side you wish to play facing upwards and the exposed tape facing to the right. The LCD will indicate the direction the cassette is playing and the clock will be displayed.

To fastforward or rewind the cassette, press and lock the fastforward  $\blacktriangleright \blacktriangleright$  or rewind  $\blacktriangleleft \blacktriangleleft$  keys. Press  $\blacktriangleright \blacktriangleright$  for fastforward and  $\blacktriangleleft \blacktriangleleft$  for rewind regardless of which direction the tape is playing. To stop fastforward or rewind, press the opposite key. i.e. press  $\blacktriangleleft \blacktriangleleft$  to cancel  $\blacktriangleright \blacktriangleright$ , etc.

When the tape reaches the end, the unit will automatically reverse the play direction and play the other side of the tape.

To change the play direction manually, press ◀◀ and ▶▶ simultaneously. The direction indicator on the display will change to indicate the new direction. To stop the tape and eject the cassette, press the eject key ▲.

#### Noise Reduction (NR)

To reduce any annoying background hiss when playing tapes, press the NR noise reduction key. "NR" will be displayed.

## Metal Oxide Tapes (MT)

Metal oxide tapes are often used as an alternative to standard tapes because of their better frequency response and lower background hiss. The MST65 is fitted with a metal tape key MT to ensure the best performance is obtained when using these tapes. When MT is pressed, "MTL" will be displayed.

# SPECIFICATIONS

### General

DC Supply Input
Standby
FM Radio
Frequency Range       87.5 - 108.1 MHz         Intermediate Frequency.       10.7 MHz         Sensitivity (30dB S/N).       4 mV         Selectivity (± 200 kHz).       -30 dB         Station Memories.       18, FM1/FM2/FM3
AM Radio
$\begin{array}{lll} Frequency Range & 530 - 1620 \text{ kHz} \\ Intermediate Frequency & .450 \text{ kHz} \\ Sensitivity (20 \text{ dB S/N}) & .30 \text{ \mu\text{V}} \\ Selectivity (\pm 9 \text{ kHz}) & .30 \text{ dB} \\ Station Memories & .6, \text{MW} \\ \end{array}$
Audio Amplifier
Audio Output (10% Dist.)
Stereo Cassette Deck
Deck type

# TROUBLESHOOTING

The following checks will assist you in solving most of the problems you are likely to encounter after installing your MST65. Should any problem persist after you have tried these ideas, consult your dealer.

SYMPTOM	CAUSE	SOLUTION
No Power.	The boat's ignition is not turned on or is not in the accessory position.	Turn the ignition key to the ACC or ON position.
	The Fuse has blown.	Replace the fuse with one of the same rating.
No Sound.	The Volume or Fader controls are not set correctly.	Adjust the Volume and Fader controls.
	The speakers are not connected correctly.	Recheck the speaker wiring. Ensure no speaker wires are shorting together or to ground.
The radio does not work.	The antenna is not connected.	Connect the antenna to the antenna socket.
The radio reception is noisy.	The antenna cable is not connected correctly.	Check the antenna connection.
	The station is not properly tuned in.	Retune the radio.
	The station you are tuned to has a very weak signal.	Select a stronger station.
Blank display.	Loose positive 12V connections or blown fuse.	Check red and orange wires and 2 fuses.

# **MAINTENANCE**

Your stereo is designed for years of trouble-free operation assuming proper installation and care of the unit are provided. Following the installation and operation guidelines in this manual should ensure optimum performance of the stereo.

In the unlikely event that the stereo shall fail to perform or shall need servicing, please contact the following:

Factory Service Facility SCC-Standard Communications Corp. 115 North Wright Brothers Drive Salt Lake City, Utah 84116-2838 Telephone Number: 1-800-366-4566 FAX Number: 1-801-359-4122

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# LIMITED WARRANTY

STANDARD COMMUNICATIONS CORP. ("SCC") warrants, to the original purchaser only, each new Marine Communications Product ("Product") manufactured and/or supplied by SCC against defects in material and workmanship under normal use and service for a period of time from the date of purchase as follows:

#### MST65 Marine AM/FM Stereo System - 1 year

To receive warranty service, the purchaser must deliver the Product, transportation and insurance prepaid, to SCC Standard Communications Corp.,115 North Wright Brothers Drive, Salt Lake City, Utah 84116-2838. Include proof of purchase indicating model, serial number, and date of purchase. SCC will return the Product to the purchaser freight prepaid. Products purchased prior to January 1, 1991 will bear the SCC warranty terms in effect prior to that date.

In the event of a defect, malfunction or failure of a Product during the warranty period, SCC's liability for any breach of contract or any breach of express or implied warranties in connection with the sale of Products shall be limited solely to repair or replacement, at its option, of the Product or part(s) therein which, upon examination by SCC, shall appear to be defective or not up to factory specifications. SCC may, at its option, repair or replace parts of subassemblies with new or reconditioned parts and subassemblies. Parts thus repaired or replaced are warranted for the balance of the original applicable warranty.

SCC will not warrant installation, maintenance or service of the Products. In all instances, SCC's liability for damages shall not exceed in purchase price of the defective Product. This warranty only extends to Products sold within the 50 States of the United States of America and District of Columbia.

SCC will pay all labor and replacement parts charges incurred in providing the warranty service except where purchaser abuse or other qualifying exceptions exist. The purchaser must pay any transportation expenses incurred in returning the Product to SCC for service.

This limited warranty does not extend to any Product which has been subjected to misuse, neglect, accident, incorrect wiring by anyone other than SCC, improper installation, or subjected to use in violation of instructions furnished by SCC, nor does this warranty extend to Products on which the serial number has been removed, defaced, or changed. SCC cannot be responsible in any way for ancillary equipment not furnished by SCC which is attached to or used in connection with SCC's Products, or the operation of the Product with any ancillary equipment and all such equipment is expressly excluded from this warranty. SCC disclaims liability for range, coverage, or operation of the Product and ancillary equipment as a whole under this warranty. SCC reserves the right to make changes or improvements in Products, during subsequent production, without incurring the obligation to install such changes or improvements on previously manufactured Products.

The implied warranties which the law imposes on the sale of this Product are expressly LIMITED in duration, to the time period specified above. SCC shall not be liable under any circumstances for consequential damages resulting from the use and operation of this Product, or from the breach of this LIMITED WARRANTY, any implied warranties, or any contract with SCC. IN CONNECTION WITH THE SALE OF ITS PRODUCTS, SCC MAKES NO WARRANTIES, EXPRESS OR IMPLIED AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE, EXCEPT AS FXPRESSI Y SET FORTH HERRIN.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitation on how long an implied warranty lasts, so the above limitations or exclusions may not apply. This warranty gives specific legal rights, and there may be other rights which may vary from state to state.

ONLY PRODUCTS SOLD ON OR AFTER JANUARY 1, 1991 WILL BE COVERED UNDER THE TERMS OF THIS LIMITED WARRANTY

# WARRANTY INFORMATION CARD

Model	Serial Nu	mber	Purchase Date	
Please give us your opinion about our product				
What is your over	I. What is your overall evaluation of the product?			
2. What do you like	2. What do you like most about it?			
3. What do you like	e least about it?			
4. Does the Owner	's Manual provide adequate info	rmation to install and operate th		
About your boat:		About your purchase decision	n:	
5. Type of boat:		9. Where was the equipment	•	
☐ Sail		☐ Boat/Motor De		
☐ Pow		☐ Marine Electro	nics Dealer	
L Con	nmercial	Mail Order		
6. Length of boat:	ft	Other		
	<del></del> -	10. Why did you choose Star	ndard Horizon?	
7. Where do you u	se your boat?	Features		
☐ Salt Water		Price		
☐ Fres	h Water	Recommendar	tion of Dealer	
8. Equipment on b	oard	- Other		
Now Own	Plan to Buy	11. If you hadn't chosen Star	idard, what was	
	Autopilot	your next choice? (indicate b	rand):	
	Desalinator			
	☐ Digital Depth Sounder			
	GPS	12. How did you learn about		
	☐ EPIRB	Advertisement		
	☐ Loran ☐ Radar	☐ Dealer ☐ Friend		
	☐ Radar ☐ Single Sideband	☐ Friend ☐ Magazine artic	da	
	☐ VHF Radio - Fixed	Previously own		
	☐ VHF Radio - Handheld	Other		
ā	☐ Video Fishfinder	<u> </u>		
ā	☐ Windspeed/Point	13. What boating magazines	do you read?	
ā	☐ Speed Log	<b>J</b>	•	



PLACE STAMP HERE

> Standard Communications Corp. Attn: Advertising Department

P.O. Box 92151

Los Angeles, CA 90009-2151

#### WARRANTY INFORMATION CARD INSTRUCTIONS

Please complete the Warranty Information Card on the previous page, detach it and mail it to SCC. Then complete the Owner's Record below for your records. Should you ever return the equipment to your SCC Dealer or SCC for in-warranty repair, the Owner's record, or other proof of purchase, must be included with the unit to provide warranty information.

**THANK YOU** for buying Standard Communications products! We are confident your new radio will serve your needs for many years!

#### OWNER'S RECORD

Model		Serial Number
Purchase Date	Dealer	
Owner's Name and Address		
	\	

Be sure to put this same name and address on the reverse side of this Warranty Information Card before you mail it to SCC!

**IMPORTANT** 



Standard Communications Corp. P.O. Box 92151 Los Angeles, CA 90009-2151 Telephone 310/532-5300

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