

INSTALLATION AND OPERATION MANUAL

D10DX.06T – Digital Depth Sounder with Air & Water Temperature, Thru-Hull Transducer



To ensure safety and many years of trouble-free operation of your product, please read this manual carefully before using this product.

SAFETY INFORMATION:

- Periodically wipe the face with a dry cloth. Do not use abrasives or solvents on this device.
- Only qualified personnel should perform repairs or servicing not covered in this manual.
- The LCD used in the product is made of glass. Therefore, it can break when the product is dropped or impacted.
- Keep this product away from heat sources such as radiators, heaters, stoves and other heat generating sources. Do not store in extreme temperatures above 150° F (65° C).
- Shade the LCD during storage. Do not expose LCD to direct sunlight for extended periods of time. Use the supplied cover at all times during storage.

NOTES, NOTICES, AND CAUTIONS



WARNING: Indicates a potential for property damage, personal injury or death.



IMPORTANT: Indicates potential damage to the device and tells you how to avoid it.



NOTICE: Indicates important information that helps you make better use of the device and tells you how to correct a performance problem.



INFORMATION: Indicates resources to obtain the proper information to help you make the most of your device.

INFORMATION:



Read this manual completely before attempting to use or install your device. Visit our Customer Service Center on our website for advanced troubleshooting and technical support.

WARNING:



This depth sounder should not be used as a navigational aid to prevent grounding, boat damage, or personal injury. Always operate the boat at slow speeds in unfamiliar water, or if you suspect shallow water or submerged objects.

PARTS SUPPLIED IN PACKAGING

The following parts should be included with the display:

- Digital Depth Sounder Display
- White and Black Faces and Bezels (optional on some models, see package for details)
- Display Sun Cover (optional on some models, see package for details)
- Thick Dash Extension Rod (optional on some models, see package for details)
- Flush Mount Bracket and Hardware
- Display Power Harness and Waterproof Fuse Holder Attached to the Unit
- Air Temperature Sensor and Harness Connected to the Display

The following parts should be included with the transducer:

- Thru-Hull Transducer with Integrated Temperature Sensor, 30 ft Cable and Connectors
- Rubber Gasket
- Plastic Nut
- Integrated Temperature Sensor

If any items are missing or damaged, please contact our customer service department.

SELECTING THE PROPER TRANSDUCER INSTALLATION

The D10DX is available with either a Transom Mount (*D10DX.01T*) or a Plastic Thru Hull (*D10DX.06T*) Transducer. This package includes a plastic Thru-Hull Transducer that can ONLY be Transom Mounted.

The Thru Hull Transducer (*D10DX.06T*) is suitable for the following vessels:

- Outboard, inboard/outboard, single or dual inboard, or jet-drive propulsion.
- Hull dead rise angle below 20°.
- Fiberglass or Metal Hull Material. CANNOT be constructed of wood.
- Hull thickness LESS than 1.25" (32 mm)

The Transom Mount transducer (*D10DX.01T*) is suitable for the following vessels:

- Outboard, inboard/outboard, single inboard, or jet-drive propulsion.
- Hull dead rise angle below 30°.
- Transom angle from 3-20°.

If you think that the thru-hull transducer is not suitable for your installation, return to the place of purchase and exchange for the transom mount (*D10DX.01T*). You can also visit our Customer Service Center at www.hawkeyelectronics.com to contact us or to complete a transducer exchange request to exchange the

transducer for one that is specialized for your vessel. You may also call 888-766-7276 to inquire about exchanging the transducer.

INSTALLING THE DISPLAY

Tools & Supplies Required for Installation

- Electric Drill
- 2" Hole Saw
- Wire Connectors Suitable for Connecting the Power Wire to Your Vessel
- Wire Cutting/Crimping Tool
- Marine Sealant/Caulk

STEP 1

Installing the Display

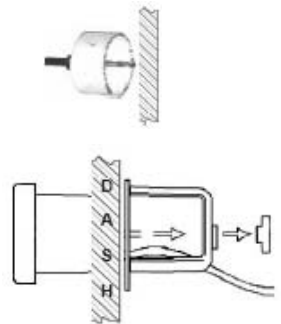
1. Find a location on the boat that will allow clear viewing of the display. Keep in mind that the wires for the transducer and power must reach the mounting location.
2. After finding the right location, mark a 2-inch hole. *(If your boat has a pre-cut hole in the dash panel, simply remove the hole plug and proceed to Step 5.)*

IMPORTANT:

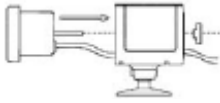


Check behind the desired cutting area for wires, switches, etc. that may be damaged during cutting. If these obstructions are present, use masking tape to hold them out of the way during cutting.

3. Cut out the 2-inch hole using the 2" hole saw.
4. Seal any exposed wood with a marine sealant.
5. Insert the display from the front of the panel, feed the wires through the bracket and install the bracket and locking nut from the rear of the panel. Make sure that the face of the display is rotated upright and aligned to your satisfaction for easy viewing from the vessel's helm.



NOTICE:

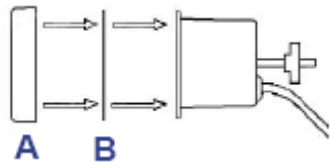


The display can also be surface mounted using the Adjustable Surface Mount Bracket (1000-10). Please visit our website or contact us by phone for purchase information. You must attach the extension rod to the mounting stud on the back of the display housing before inserting the display into the Surface Mount Bracket.

STEP 2

Installing the Face and Bezel

1. Place the face (B) over the display making sure to line up the cut outs on the face with the notches on the display.
2. While holding the bezel (A), place it over the display and turn clockwise until the bezel locks into place.



NOTICE:



Gold and Chrome Alloy Bezels can be purchased on our website to match your factory dash or give your Digital Depth Sounder a custom appearance (P/N: 1000.20, 1000.22).

STEP 3

Installing the Air Temperature Sensor

The air temperature sensor is already installed on the back of the display housing and includes a short harness.

- To install simply route the wire so that the end is located in the area where you would like to take air temperature readings.
- Keep in mind that the sensor is located at the end of the harness and should be kept away from direct sunlight, enclosed compartments, and external heat sources.

NOTICE:



The water temperature sensor is located in the transducer. It will be installed and connected during the transducer installation process.

STEP 3

Connecting of the Power Cable

The display has no ON/OFF switch. Therefore, you will need to connect the power harness to a power source that will turn the unit on as power is applied. The key switch or an ON/OFF power switch will be suitable for powering the unit.

1. Connect the BLACK wire in the harness to a negative (-) terminal or suitable ground.
2. Connect the RED wire in the harness to a positive (+) 12 Volt switchable power source (key switch, on/off switch, terminal block, etc).



NOTICE:



Never use "Twist-On" or "Automotive" type connectors. These connectors form a solid electrical connection and are less likely to corrode.

STEP 4

Testing the Display Installation

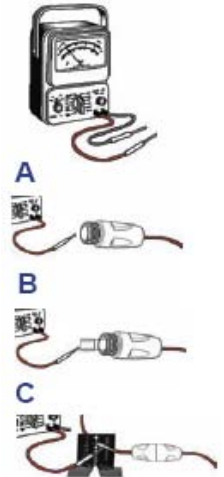
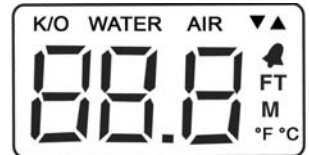
Before continuing with your installation, you should test the unit to make sure the power wires are properly attached.

1. Apply power to the unit by turning on the power source that you've attached the red and black wires to.
2. The buzzer should beep three times while the display illuminates all the LCD graphics for 2 seconds. "---" will then be shown on the LCD.

If the display operates as per #2 above, continue to the "Basic Operation" section.

If the display does not turn ON:

1. Check the power source using a test light or DC volt meter. Make sure there is 12 volt power where the power harness connects to both the positive and negative sources.
2. Check the fuse holder assembly with a test light or DC volt meter. Connect the ground for the test meter or light to the vessel's negative power source.



3. Remove the fuse and check for 12 volt power at the spring located inside the fuse housing that is connected to the vessel's power source. If 12 volt power is present continue to the next step. If power is not present, return to Step 1.
4. Insert the fuse and check for 12 volt power at the end of the fuse. If 12 volt power is present continue to Step C. If power is not present, replace the fuse.
5. Reassemble the fuse housing. Strip back a quarter of an inch of wire cover on the display side of the fuse housing and test for 12 volt power. If 12 volt power is present continue to Step 2.D. If power is not present, replace the fuse housing assembly.
6. Visit our Customer Service Center on our website or call 888-766-7276 for advanced technical support.

NOTICE:



The fuse used in the In Dash Depth Sounder is a .25A, 250V fuse. Do not rely on a visual inspection of the fuse to determine if it is functioning. If your depth sounder will not turn on, ALWAYS test the fuse with a test light or voltage meter.

GETTING TO KNOW YOUR DIGITAL DEPTH SOUNDER DEPTH

The unit's auto-ranging, auto-sensitivity features means that you never have to worry about adjustments. Simply turn the power on, and you're ready to go. The Depth Sounder emits sound signals that travel through water, and then calculates the amount of time that elapsed while the signal traveled down to the bottom and returned back to the transducer. This time is calculated by the microprocessor and displayed as a depth reading. Extremely dirty water, very soft bottom, high speeds, deep water, or a combination of the above will result in incomplete or inaccurate readings. Under these conditions variable readings or " - - -" will be displayed.



NOTICE:



This depth sounder has a non-volatile memory. ALL settings will be stored when the power is turned OFF.

DISPLAY MODE SELECTION

The unit has 3 user selectable modes:

- Depth Sounder
- Water Temperature
- Air Temperature



To Change the Mode:

1. Press the "UP" Button to change the mode to the Right (*The display will change modes from Depth to Water Temperature to Air Temperature*)
2. Press the "DOWN" Button to change the mode to the Left (*The display will change modes from Depth to Air Temperature to Water Temperature*)

NOTICE:



When a Temperature Mode is selected the Water or Air indicator will flash on the LCD for 5 seconds while the temperature is calculated.

SHALLOW WATER ALARM

The shallow alarm function can be set for depths ranging from 3 to 200 feet and triggers an alarm when the depth is less than the setting. You must be in the "Depth Sounder" mode to adjust this setting.

To set the SHALLOW ALARM (upper alarm):

1. Press and hold the "UP" and "DOWN" keys until the ▼ and ▲ indicators illuminate and the 📡 icon blinks. (*approximately 3 seconds*).
2. Release the Keys.
3. Press the "UP" key to access the shallow water alarm setting. The 📡 icon will illuminate and the ▲ indicator will blink.
4. Pressing the "UP" key will increase the selected value. Pressing the "DOWN" key will reduce the value.
5. Pressing and releasing the key will change the value in 1-foot increments per second.
6. Holding down the key will change the value in 9 foot increments per second.
7. After the desired setting is achieved, the display will return to normal operation after 5 seconds.
8. The ▲ and 📡 indicators will now be illuminated to indicate that a shallow water alarm is set.



When triggered, the alarm sounds an audible buzzer for ten seconds while flashing the warning LED and the ▲ and 📡 icons on the display. After 10 seconds, the audible alarm mutes and the warning LED and the ▲ and 📡 icons continue to blink until the depth increases, or the alarm is reset. To reset the alarm repeat steps 1 thru 5.

DEEP WATER ALARM

The deep alarm function can be set for depths ranging from 3 to 200 feet and triggers an alarm when the depth is more than the setting. You must be in the "Depth Sounder" mode to adjust this setting.

To set the DEEP ALARM (lower alarm):

1. Press and hold the "UP" and "DOWN" keys until the ▼ and ▲ indicators illuminate and the 🚨 icon blinks. (approximately 3 seconds).
2. Release the Keys.
3. Press the "DOWN" key to access the deep water alarm setting. The 🚨 icon will illuminate and the ▼ indicator will blink.
4. Pressing the "UP" key will increase the selected value. Pressing the "DOWN" key will reduce the value.
5. Pressing and releasing the key will change the value in 1-foot increments per second.
6. Holding down the key will change the value in 9 foot increments per second.
7. After the desired setting is achieved, the display will return to normal operation after 5 seconds.
8. The ▼ and 🚨 indicators will now be illuminated to indicate that a deep water alarm is set.



When triggered, the alarm sounds an audible buzzer for ten seconds while flashing the warning LED and the ▼ and 🚨 icons on the display. After 10 seconds, the audible alarm mutes and the warning LED and the ▼ and 🚨 icons continue to blink until the depth increases, or the alarm is reset. To reset the alarm repeat steps 1 thru 5.

KEEL OFFSET

The Keel Offset feature is used to adjust the depth readings displayed by the device to compensate for the depth of the water required for your vessel to operate safe (typically referred to as your vessel's "Draft")



For Example: If your boat's draft is 3 feet, the Keel Offset feature should be set to 3 feet. The device will then subtract 3 feet from the actual depth reading and display this figure as the depth. If the water depth is 5 feet and the Keel Offset is set to 3 feet, the depth will be displayed as 2 feet, indicating to the operator that there is 2 feet of safe operating water.

The maximum Keel Offset setting is 20 FT (6.1 M), and can be set in .1 (1/10th) Feet or Meter increments. The unit will read “---” when a negative value occurs due to the Keel Offset subtraction.

To set the Keel Offset:

1. Press and hold the "UP" and "DOWN" keys until the **K/O** indicator begins to blink. (approximately 6 seconds).
2. Release the Keys.
3. Press the "UP" key to increase the Keel Offset value. Press the "DOWN" key to reduce the value.
4. The display will return to the normal operation mode after five seconds if no keys are pressed.
5. "K/O" will remain illuminated in the top left hand corner indicating that the depth readings are adjusted to the Keel Offset setting.



UNITS OF MEASURE

The units of measure for the depth readout and alarm functions can be set in 4 easy steps. The two settings available are Feet (FT) and Meters (M). You must be in the "Depth Sounder" mode to adjust this setting.

To Set the Units of Measure:

1. Press and hold the "UP" and "DOWN" keys until the current unit of measure begins to blink. (approximately 8 seconds).
2. Release the Keys.
3. To set the units to FEET press the "UP" key. "FT" will flash on the Display.
4. To set the units to METERS press the "DOWN" key. "M" will flash on the Display.
5. The display will return to the normal operation mode automatically after five seconds.



IMPORTANT:



Install and test the display in the desired mounting location before attempting the transducer installation.

NOTICE:



The included transducer needs to be installed in a thru-hull configuration. It CANNOT be glued in-hull. We also offer the option to trade-in the included transducer for a customized transducer. Please visit our website for details.

Does the Installation Vessel Have These Characteristics?

- Outboard, inboard/outboard, single or dual inboard, or jet-drive propulsion.
- Hull deadrise angle below 20°.
- Fiberglass or Metal Hull Material. CANNOT be constructed of wood.
- Hull thickness LESS than 1.25" (32 mm)

If the answer to any of these characteristics is NO, visit our Customer Service Center at www.hawkeyelectronics.com to learn about our Transducer Exchange Program. You may also call 888-766-7276 during normal business hours.

Tools and Supplies Required for Installation

- Safety goggles
- Dust mask
- Electric drill with minimum 3/8th Inch (10 mm) chuck capacity
- Drill Bit: 1/8" (3 mm)
- Hole Saw: 2" (51mm)
- Sandpaper
- Marine sealant
- Zip-ties
- Water-based antifouling paint (*mandatory in salt water*)

WARNING:

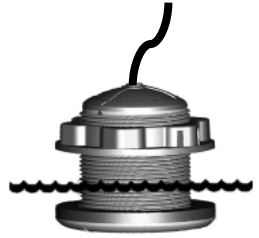


Never install a plastic thru-hull sensor in a wood hull as swelling of the wood could cause damage to the sensor that could cause the vessel to sink.

STEP 1

Test Before Installation

1. Connect the sensor to the instrument as per the instructions supplied with the instrument.
2. Place the sensor in the water with the transducer face in the horizontal position and aimed towards the sea bottom.
3. Check for a depth reading (and temperature reading if applicable).
4. If there is no reading, check all the connections and repeat the test.
5. Visit our Customer Service Center at www.hawkeyelectronics.com or call 888-766-7276 for further troubleshooting information



NOTICE:



Mount the transducer as far as possible away from sources of internal noise as outlined above.

How Acoustic Noise Effects Performance

External sound waves can interfere with the operation of the depth sounder. Background noise from sources such as vegetation, fish, sea surface waves, and other vessels cannot be controlled.

You can limit the amount of noise generated by your vessel by carefully selecting the transducer's mounting location. This will allow the automatic sensitivity settings on your depth sounder display to give you the best possible performance.

Common Sources of Internal Noise Are:

- Propeller(s), shaft(s), fins, rudders and other running gear.
- Engines, Generators, Pumps, etc
- Other echo sounders, fish finders or depth sounders.

NOTICE:



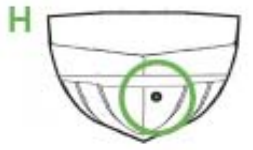
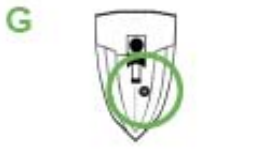
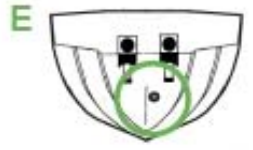
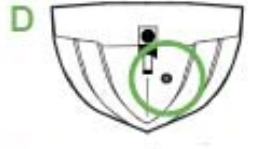
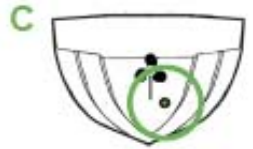
Install and test the display in the desired mounting location before attempting the transducer installation.

STEP 2

Choosing a Mounting Location

To obtain the best performance, the transducer should be mounted in a location where the water flow beneath the hull is aeration and turbulence-free. Try to mount the transducer as close to the centerline of the boat as possible. Consult the boat manufacturer for the best transducer placement. If this information is unavailable, follow the guidelines below.

- A. On a single drive outboard or inboard/outboard boat, mount towards the back of the boat, on or near the centerline, and well inboard of the first lifting strakes. Mount on the side of the hull where the propeller is moving downward.
- B. On a twin outboard or inboard/outboard boat, mount between the drives, making certain that the transducer is not directly in front of either drive or propeller (avoid aligning directly in line with the bottom of the boat if the hull comes to a point).
- C. On a single or twin inboard boat, mount ahead of the propeller(s) and shaft(s) near the centerline.
- D. On a single jet drive boat, mount on the starboard side at least 4" outside the intake grate.
- E. On twin jet drive boats, mount on the center line, between the intake grates (avoid aligning directly in line with the bottom of the boat if the hull comes to a point).
- F. On sailboats, mount on the starboard side at least 6" outside and forward of the keel.
- G. On PWC's, mount on the starboard side, at least 2" outside and forward of the intake grate.
- H. On a stepped hull mount just ahead of the first step.



Mounting Location "DON'T's"

NOTICE:



To deliver consistent, accurate readings, the transducer must have a continuous supply of non-turbulent water.

DO NOT MOUNT THE TRANSDUCER IN AN AREA OF TURBULENCE OR BUBBLES.

Never install the transducer where the boat may be supported during trailering, launching, hauling, or storage.

NOTICE:



To Get a Good "View" of the Mounting Location: While the vessel is out of the water, position yourself at the transom and look at the bottom of the hull towards the bow. Using illustrations A thru I, note anything that could interrupt the clean flow of water to the transducer mounting location.

NEVER MOUNT:

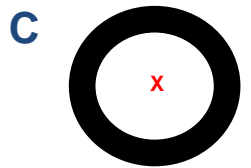
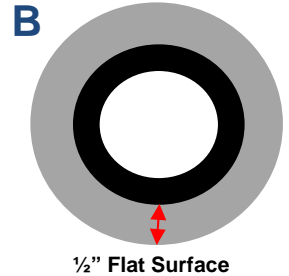
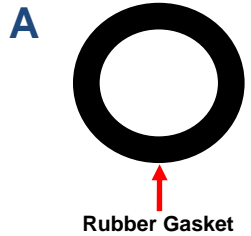
- A. Behind water intakes, discharge openings, or thru-hull fittings.
- B. Behind strakes, struts, or hull irregularities.
- C. Behind transom steps or pockets.
- D. Behind eroding paint, hull deformities, or marine growth.
- E. Behind rivets or strakes on aluminum boats.
- F. Behind the step on stepped hulls.
- G. Directly on the "V" in the hull.
- H. Behind propellers or anywhere propeller turbulence will interrupt the flow of "clean" water to the transducer.
- I. In areas where the hull has a reverse angle.



STEP 3

Drilling the Hole

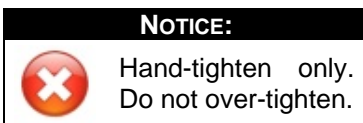
1. After selecting the mounting location based on STEP 2, place the rubber gasket inside the hull against the mounting location. (*illustration A*)
2. Ensure that there is at least 1/2" (12 mm) of flat surface area around the rubber gasket. (*illustration B*)
3. Place a mark in the center of mounting location. (*illustration C*)
4. Drill a 1/8" (3 mm) pilot hole on the mark. If there is a rib, strut, or other hull irregularity on the hull bottom near the selected mounting location, drill from the outside.
5. Using a 2" (51 mm) hole saw, cut a hole from outside the hull. (Illustration A)
6. Using sandpaper and mild house hold detergent, sand and clean the area around the hole (inside and outside). Make sure to remove all rough spots and petroleum residue.



STEP 4

Sealing and Installing

1. Remove the nut and rubber gasket from the sensor.
2. Apply a bead of marine sealant around the lip of the sensor housing. (*illustration D*)
3. From outside the hull, feed the cable through the hole (plug first) into the mounting hole until all the cable is inside the hull.
4. Insert the sensor into the hole using a twisting motion to squeeze out excess sealant.
5. From inside the hull, align the arrow on the housing towards the bow of the vessel. (*illustration E*)
6. Slide the rubber gasket onto the housing.
7. Screw the hull nut into place, being sure the arrow on the housing is still positioned forward toward the bow.



8. Remove the excess sealant on the outside of the hull.

STEP 5

Cable Routing & Connection to the Depth Sounder Display

Route the cable to the mounting location of the depth sounder transducer plug.

- To reduce electrical interference, separate the transducer cable from other electrical wiring.
- Coil any excess cable and secure it in place using tie-wraps.
- Connect the transducer plug to the depth sounder display plug and secure to prevent accidental disconnection.

STEP 6

Antifouling Paint

Marine growth can accumulate rapidly on the transducer's surface. If the vessel is left in saltwater for extended periods of time, all components of the transducer exposed to sea water must be painted with WATER BASED antifouling paint.

- Clear, spray-on antifouling paints are very easy to apply and can be purchased from your local boating supply store.
- Reapply paint as needed to prevent marine growth

NOTICE:



Never use ketone-based paint, as this type of paint can damage the transducer's plastic shell.

STEP 7

Checking for Leaks

Immediately after placing the vessel in the water check around the transducer for leaks.

- If no leaks are evident, recheck the area after 2, 12, 24, and 48 hours.
- If there is a leak, remove the vessel from the water and repeat STEP 4 above immediately.

WARNING:



Never install this transducer and leave the vessel in the water unchecked. Refer to STEP 7 above.

CARE AND MAINTENANCE

Aquatic growth can accumulate rapidly on the transducer's surface. This will greatly reduce its performance. If you notice a degradation in performance of your depth sounder, you may need to clean the transducer.

- Clean minor marine growth from the surface with a soft cloth and mild household detergent.
- Clean severe marine growth with a stiff brush or putty knife. Be careful to avoid making scratches on the surface. Wet sanding can be done with fine grade wet/dry paper.

TROUBLESHOOTING AND FREQUENTLY ASKED QUESTIONS

24-Hour Technical Support is available online at hawkeyelectronics.com. Search our online Knowledgebase for the latest troubleshooting and FAQ's, or post your own question for our support staff. For one-on-one support please email customerservice@norcrossmarine.com.

INFORMATION:



If you have questions about this device please visit our Customer Service Center on our website or *call us toll free at 888-766-7276.*

Warranty Details • Warranty Registration
Troubleshooting • Product Knowledgebase
Product Specifications • Parts & Accessories
www.hawkeyelectronics.com

REPLACEMENT PARTS

Individual components are not available for sale on our website. If you need replacement parts, please email or call our customer service department.

WARRANTY

This device is covered by a 2 Year Limited Warranty. To be eligible for warranty coverage, you must register your product within 15 days of purchase. Visit our website for warranty details and to register.

- To Activate Your Warranty:
- Read and print out a copy of the warranty details for your records.
- Complete the registration form our website.

- Make a copy of your original purchase receipt and staple it to this manual. *You will need to present it in the rare occurrence that you need to send your product in for service.*
- Complete the information below and store this manual in a safe place. *You can print additional copies of this manual from our website.*

INFORMATION:



To aid in maintenance and service, record the following:

Date of Purchase: _____

Place of Purchase: _____

Date of Online Warranty Registration: _____

Production Date Code : _____ (3 digit code located on the device housing)

LEGAL

INFORMATION:



Made in China. Tested to comply with FCC, CE & ROHS standards if applicable. Visit our website for compliance and warranty information. All Specifications and Prices Subject to Change Without Notice.

NorCross Marine Products, Inc

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