

# SR MARINER

## SELF POWERED KNOTMETERS

### INSTALLATION INSTRUCTIONS

Congratulations in choosing a high performance marine instrument and welcome to the growing family of SR Mariner product owners. Since our establishment in 1973, we have engineered our products to give you quality at a reasonable price.

To familiarize yourself with all the features and installation procedures please read the following instructions carefully.

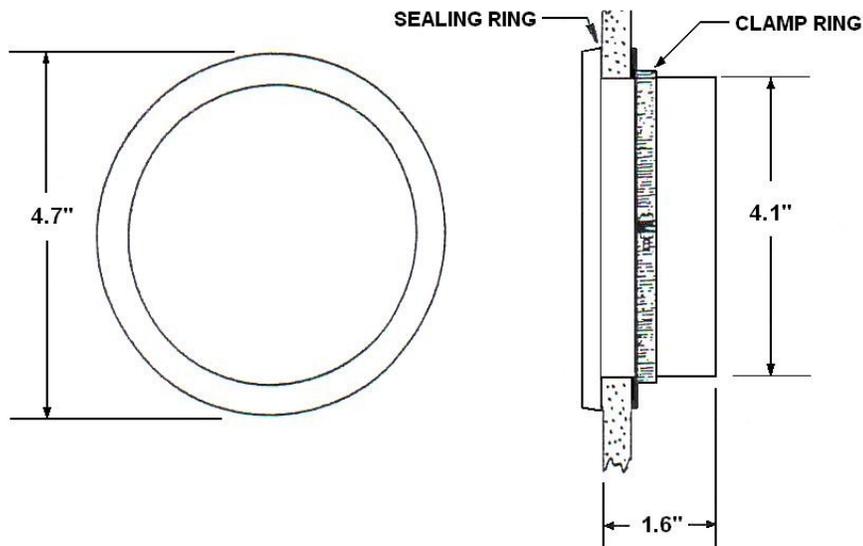
If you still have any questions or comments please call your nearest dealer or call us at (716) 693-5977 or write:

**SR Instruments**  
**600 Young Street**  
**Tonawanda, NY 14150**  
**Attn: Service Department**

It is recommended that you temporarily hook up your SR MARINER equipment before installation so you become familiar with its connections and system performance. DO NOT CUT ANY CABLES, but connect according to wiring diagram (fig.3). Spin the paddlewheel on the transducer to activate the knotmeter. If all functions perform satisfactorily, proceed with installation. If the system fails to perform, check all connections. If system still fails to perform check with your dealer for advice and/or replacement if needed.

### CHARACTERISTICS OF SELF-POWERED KNOTMETERS

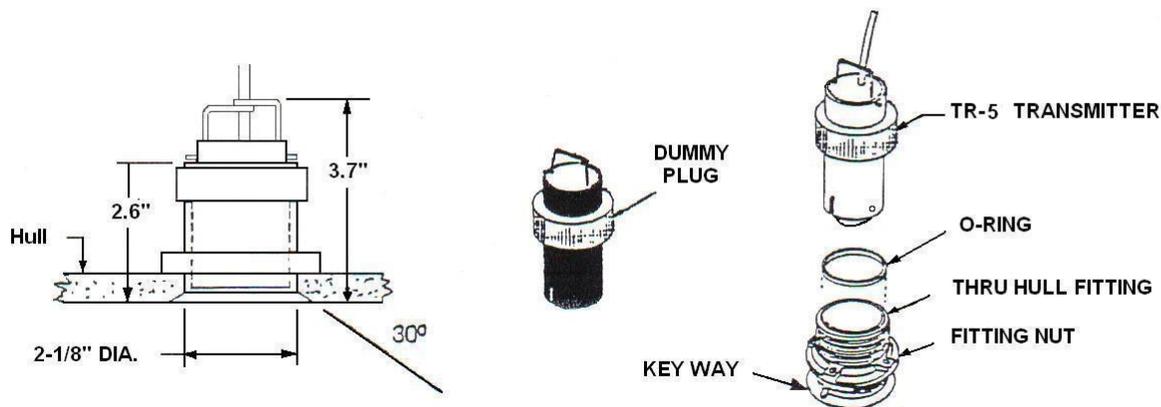
MODEL	NORMAL SCALE	EXPAND SCALE
KT-5A	0-10	N/A
KT-5	0-10	0-5
KT-6	0-40	0-10
KT-7	0-20	0-10



(Figure 1)

## INSTALLING THE DISPLAY

1. Cut a 4-1/16" (max 4-1/8") diameter hole in the bulkhead or instrument panel where the display unit is to be mounted (fig.1).
2. Be sure to remove all burrs and clean the face of the bulkhead or panel with detergent to remove all traces of dirt, oils, fingerprints, etc...
3. Each display unit is furnished with an adhesive backed sealing ring to hold the unit fast in place and creates a watertight seal. Please note that it is not recommended that the paper backing be removed until the system is tested and finally calibrated. When ready for final mounting simply remove the paper backing, position unit correctly and firmly press into place.
4. Install the RETAINING RING as shown and tighten with a blade type screwdriver.



## INSTALLATION TIPS FOR TRANSMITTERS

### SAILBOATS:

The preferred position of the transmitter is where water is diverging around the hull and is free from turbulence and eddies. This is generally in the forward one-third of the hull in front of the keel and approximately one foot off the centerline. Generally the knotmeter transmitter can be mounted on one side of the keel with the depth transducer in a similar position on the opposite side of the keel. If due to access considerations, it is necessary to locate the depth transducer and the knotmeter transmitter on the same side on a fore and aft line, be sure to locate the depth transducer forward of the knotmeter transmitter so that the turbulence created by the paddlewheel does not interfere with the depth sensor.

### POWERBOATS:

The depth transducer and knotmeter transmitter are generally located aft so that they remain immersed at full speed. Both sensors must remain forward of the propeller turbulence but remain sufficiently under water as not to encounter surface bubbles.

## INSTALLING THE THRU-HULL FITTING

1. The thru-hull fitting requires a 2-1/8" hole with a 30 degree flange. This can be done by use of a hole saw and then filing the flange, or by use of a tool (THT) provided by SR Instruments. If this tool is not available locally, contact the factory and arrangements can be made to rent one.

*NOTE: This tool requires a 1/2" drill motor.*

2. When drilling the hole, drill in stages, checking the fit of the thru-hull fitting so as not to cut too deep. Be sure the thru-hull fitting is flush with the hull.

3. With the edge of a file, cut or file a notch FACING FORWARD, to seat the key way of the thru hull fitting.

4. Apply bedding compound around the lip and body of the fitting where it will be in contact with the hull.

5. Insert the thru-hull fitting and tighten the FITTING NUT by using a spanner wrench or tap with a small wooden block against the nut to provide a snug fit. DO NOT OVER TIGHTEN!

## FOLLOW THE MOUNTING INSTRUCTIONS FOR DISPLAY AND TRANSMITTER BEFORE PROCEEDING:

1. Be sure that the thru-hull fitting is properly installed with the KEY WAY facing FORWARD before you insert the transmitter into the thru-hull fitting. This key way mates with the speed sensor to assure proper orientation when transmitter is removed for maintenance or replacement.

2. Connect the transmitter wires to the display unit as shown in figure 3.

3. If you choose to connect night lighting, simply connect your +12 volt D.C. wire as indicated in figure 3, and install a SPST switch on the positive (+) line to complete the circuit and turn on the lights.

4. To operate the expand function (not applicable to the KT-5A) install a SPST switch with the leads connected to the terminals marked EXPAND. When the switch is closed you will read the larger white scale and when switch is open you will be reading the EXPAND mode which is the smaller blue scale.

## BACK OF DISPLAY

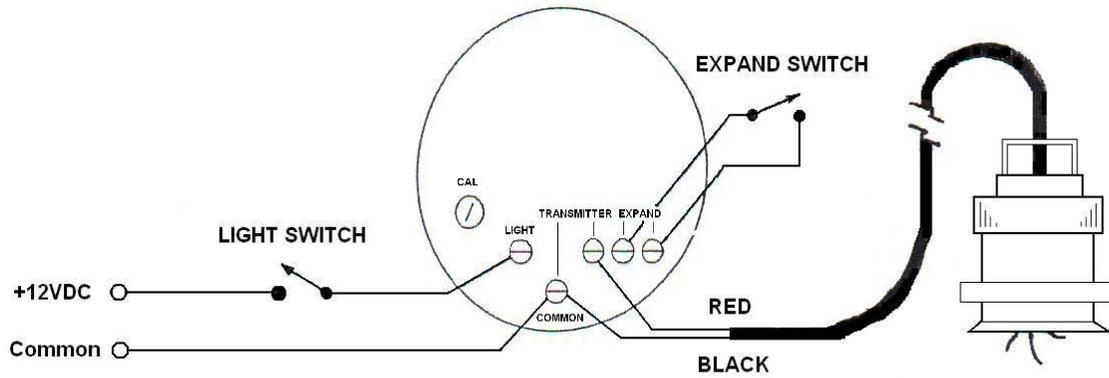


Figure 3

## CALIBRATION

1. Your instrument is factory calibrated to read knots, however, if you need to recalibrate you must first remove the plug from the holes marked CAL. (fig.3)
2. Proceed on a timed measure course to determine proper speed.
3. After making an initial determination of boat speed, turn the calibration adjustment CLOCKWISE to INCREASE the indicated speed or COUNTERCLOCKWISE to DECREASE. A small blade type screwdriver will serve the purpose. The same adjustment may be used to calibrate in either KNOTS or STATUTE MILES. NOTE: DO NOT APPLY EXCESSIVE PRESSURE TO THE CALIBRATION CONTROL!

## POWER CONSUMPTION

LIGHTS	
AMPS	
OFF	0
ON	60mA

## TROUBLESHOOTING

**DISPLAY READS ZERO-** The problem could be either the transmitter or the display. Please follow the proceeding steps to determine cause of the problem-

- A. Measure the two wires of the transmitter with an ohm meter for resistance value of approximately 2000 ohms (2K ohms). Do not spin the paddlewheel.
  - a. If unit is good, then check paddlewheel for any broken fins or missing magnets.
  - b. If unit is open (infinite resistance) then unit needs replacing.
- B. Measure with an AC voltmeter when the paddlewheel is spinning. You should get approximately 1.0 VAC at about 5 knots of speed when unloaded (not hooked up to display).

**INTERMITTENT READINGS-** Keep the unit wired as normal and add an AC voltmeter to where the input wires of the transmitter are connected. Motor or sail as usual-

- A. If an AC voltage is being produced but no speed indication appears on display, then the problem is in the display.
- B. If readings only occur when voltages are produced, then the paddlewheel is not always turning. Clean paddlewheel first and be sure it spins freely, and then try again. If the results are the same then paddlewheel may need replacing.

## ACCESSORIES

FRICW-1	INSTRUMENT COVER
FRO-RING	GASKET FOR THRU-HULL
FRDP-1	DUMMY PLUG
FRTR-1R	IMPELLER AND PIN
FRCLP RNG	CLAMP RING
ESM	EXPAND SWITCH MODULE
FRMC-1	METER CASE FOR DKT (YOUR MODEL NUMBER)
FRSEAL RING	GASKET FOR INSTRUMENT GAUGE
FRTH-1	THRU-HULL FITTING