SIGNETMARINE Inc.
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SL267A DIGITAL KNOTLOG

Instruction Manual

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1.0 INTRODUCTION

THE SIGNET SL267A IS A LOW-POWER DIGITAL KNOTLOG WITH LARGE DISPLAY READOUTS THAT PROVIDE PRECISE SPEED READINGS IN KNOTS AND LOG READINGS IN NAUTICAL MILES. THE SPEED FUNCTION MAY BE USED FOR ACCURATE SAIL TRIM AND OVERALL BOAT PERFORMANCE. THE TREND FEATURE AS REPRESENTED BY THE "+" AND "-" INDICATORS ON THE DISPLAY PROVIDES ADDITIONAL INFORMATION ON YOUR BOAT'S SPEED PERFORMANCE. UNLESS CONSTANT SPEED IS MAINTAINED THE "+" OR "-" INDICATOR WILL BE DISPLAYED INDICATING INCREASING "+" OR DECREASING "-" BOATSPEED.

THE NORMAL VIEWING MODE DISPLAYS SPEED WITH TREND INFORMATION. THE SINGLE PUSH-BUTTON SWITCH LOCATED ON THE FRONT OF THE MK267A ALLOWS FOR: VIEWING LOG, RESETTING LOG, CALIBRATING SPEED, AND ALSO ADJUSTING THE SPEED AVERAGING CONSTANT. ALL SECONDARY VIEWING MODES WILL "TIME-OUT" AND RETURN TO DISPLAYING SPEED AFTER A SHORT PERIOD WITHOUT USER INTERACTION.

THE SIGNET SL267A IS SHIPPED STANDARD WITH PADDLEWHEEL SENSOR AND INDICATOR MOUNTING KIT AND COMES WITH ALL THE REQUIRED CABLING AND HARDWARE.

THE SIGNET SL267A HAS BEEN DESIGNED USING THE LATEST DEVELOPMENTS IN TECHNOLOGY. EACH UNIT HAS BEEN TESTED AND PASSED EXTENSIVE QUALITY CONTROL STANDARDS PRIOR TO PACKAGING FOR SHIPMENT. INCLUDED WITH YOUR MK267A IS AN INSTRUCTION MANUAL WHICH INCLUDES AN OPERATION SECTION WHICH CONSISTS OF A DETAILED EXPLANATION OF THE OPERATION OF EACH FEATURE. THE MANUAL SERVES AS A QUICK REFERENCE OF OPERATION AND THEREFORE SHOULD BE KEPT NEAR YOUR SL267A.

2.0 UNPACKING

YOUR SIGNET SL267A KNOTLOG IS SHIPPED COMPLETE WITH ALL COMPONENTS AND REQUIRED CABLING AND HARDWARE FOR OPERATION. WHEN YOU RECEIVE THE MK267A, INSPECT THE SHIPPING CONTAINER AFTER OPENING IT. IF THE PACKAGE SHOWS ANY OBVIOUS DAMAGE, CONTACT THE SHIPPING COMPANY IMMEDIATELY. IF THE PACKAGE APPEARS TO BE IN GOOD CONDITION, UNPACK THE CONTAINER AND VERIFY THAT ALL OF THE FOLLLOWING COMPONENETS ARE INCLUDED AND APPEAR IN GOOD CONDITION (SEE ALSO "SYSTEM DRAWING"):

1 SL267A INDICATOR (#1-4201.100-1)

2 PADDLEWHEEL SENSOR (#1-2200.100-1)

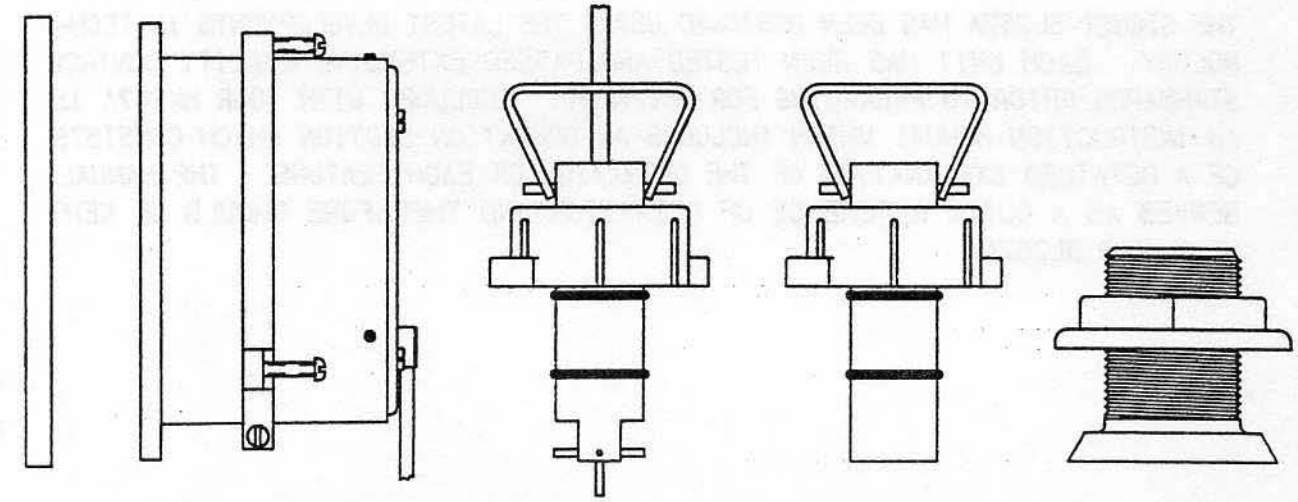
3 THRU-HULL PLUG (#M1536)

4 THRU-HULL FITTING (#M1533)

5 MOUNTING KIT (#M0201-1)

6 PROTECTIVE COVER (#M0212-01)

7 INSTRUCTION MANUAL (#1-4201.091)



3.1 PADDLEWHEEL SENSOR INSTALLATION

(#M1530 OR 1-2200.100-1)

THE SIGNET PADDLEWHEEL GENERATES AN AC SIGNAL WHOSE FREQUENCY IS PROPORTIONAL TO THE BOAT'S SPEED OVER WATER. ACCURACY IS DETERMINED BY THE LOCATION OF THE PADDLEWHEEL WITH RESPECT TO THE HULL FLOW CHARACTERISTICS. THEREFORE, THE MOST IMPORTANT PORTION TO THE PADDLEWHEEL INSTALLATION IS CHOOSING A PROPER LOCATION. LISTED BELOW ARE SEVERAL TIPS WHICH WILL GUIDE YOU TO THE PROPER LOCATION.

CHOOSING A PROPER LOCATION

- MOUNT THE PADDLEWHEEL AS NEAR AS POSSIBLE TO THE HULL CENTERLINE TO INSURE CONTACT WITH THE WATER AT ALL TIMES.
- ON SAILBOAT AND POWERBOAT DISPLACEMENT HULLS THE PADDLEWHEEL SHOULD BE MOUNTED MIDSHIP AND FORE. VERIFY PADDLEWHEEL IS SUBMERGED DURING NORMAL BOAT ATTITUDES, MOTIONS, AND HEEL ANGLES.
- THE PADDLEWHEEL NEED NOT BE FACING DIRECTLY DOWNWARD (REFER TO FIG.4).
- PROVIDE A CLEARANCE RADIUS OF 5" INSIDE THE HULL FOR PADDLEWHEEL INSTALLATION AND PERIODIC MAINTENANCE.
- DO NOT POSITION THE PADDLEWHEEL DIRECTLY AHEAD OF A DEPTH TRANSDUCER, TURBULENCE CREATED BY THE PADDLEWHEEL ROTATION WILL ADVERSELY AFFECT THE DEPTH TRANSDUCER AT HIGH BOAT SPEEDS.
- DO NOT POSITION THE PADDLEWHEEL AFT OF PROTRUDING FITTINGS OR VENTS TO AVOID TURBULENCE.
- DO NOT POSITION THE PADDLEWHEEL ALONGSIDE THE KEEL, DIFFERENT FLOW PATHS ON OPPOSITE TACKS WILL GIVE DIFFERENT SPEED VALUES.

INSTALLING THE THRU-HULL FITTING

1. AFTER CHOOSING A PROPER LOCATION, DRILL A 3/8" (.38") PILOT HOLE THRU THE HULL.

2. WITH THE SIGNET THRU-HULL CUTTER (M1580) CUT THE FITTING HOLE WITH THE NECESSARY COUNTERSINK (REFER TO FIG.3).

3. IF A THRU-HULL CUTTER IS NOT AVAILABLE CUT A 1-5/8" (1.63") HOLE THRU THE HULL, THEN USE A RASP TO MAKE A 2-1/2" (2.5") COUNTERSINK TO FIT THE FITTING FLANGE.

4. APPLY A SMALL AMOUNT OF BEDDING COMPOUND TO THE INNER SURFACE OF THE FITTING FLANGE. USE A POLYSULPHIDE OR POLYURETHANE COMPOUND; DO NOT USE A SILICONE SEAL. INSERT THE PADDLEWHEEL FITTING THRU THE HOLE FROM THE OUTSIDE WITH THE ARROW ON THE FLANGE FACING FACING DIRECTLY FORE, PARALLEL WITH THE HULL CENTERLINE. MAKE SURE THE FLANGE IS FLUSH WITH THE HULL UNDERSIDE.

5. FROM INSIDE THE HULL, INSTALL THE NUT ON THE FITTING. MAKE SURE THE NUT IS SEATED TIGHTLY IN THE COUNTERSINK AND TIGHTEN WITH A WRENCH (REFER TO FIG.4).

6. REMOVE EXCESS BEDDING COMPOUND (FOLLOW MANUFACTURER'S CURING INSTRUCTIONS) AND INSTALL PADDLEWHEEL INTO THE THRU-HULL FITTING (REFER TO FIG.4).

PADDLEWHEEL INSTALLATION (FLUSH), FIGURES

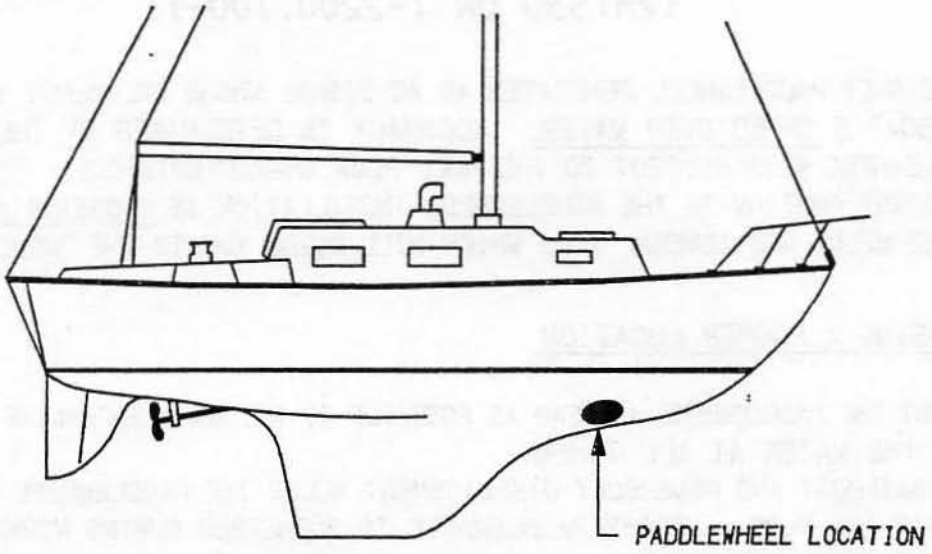


FIG.1

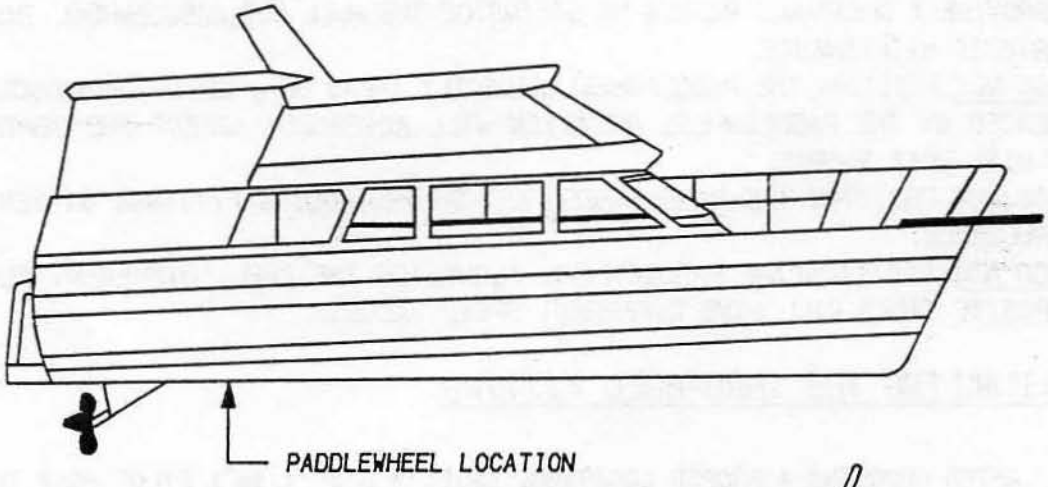


FIG.2

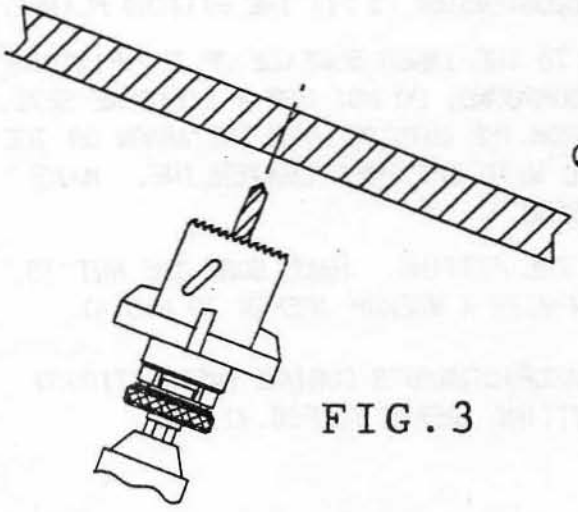


FIG.3

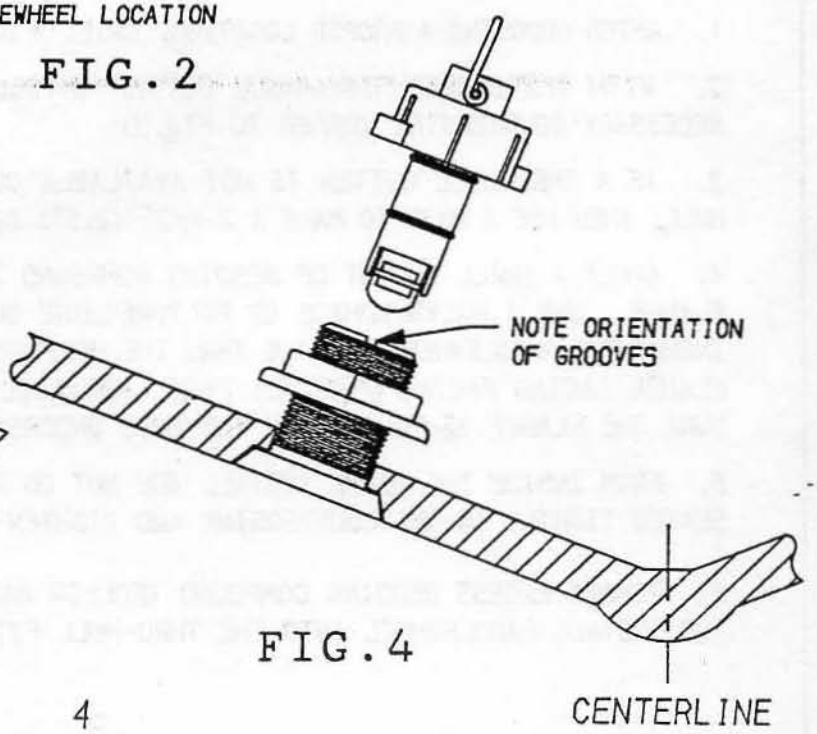


FIG.4

3.2 INDICATOR INSTALLATION

THE INDICATOR MAY BE INSTALLED IN A BULKHEAD OR INSTRUMENT PANEL HAVING A 4.6"DIA. HOLE CUT-OUT WITH SUFFICIENT CLEARANCE TO ACCOMMODATE THE INDICATOR'S 5.5"DIA. FRONT BEZEL. THERE MUST BE A MINIMUM OF 3-1/2" REAR CLEARANCE. VERIFY THAT YOUR INDICATOR IS MOUNTED WITHIN THE CABLE LENGTH OF YOUR PADDLEWHEEL SENSOR AS INSTALLED.

REQUIRED INSTALLATION EQUIPMENT:

1. 1/2" DRILL MOTOR
2. 4-1/2" HOLE SAW (4.6" DIA HOLE REQUIRED) — OR SABRE SAW
3. FLAT-BLADE SCREWDRIVER
4. BEDDING COMPOUND (SILICONE SEALANT)

CAUTION

DO NOT USE POLYSULPHIDE BEDDING COMPOUNDS SUCH AS 3M 3700, BOAT LIFE, OR LIFE CAULK ON INDICATOR. USE SILICONE, NON-HARDENING BEDDING COMPOUNDS, SUCH AS GE SILICONE SEAL.

INSTALLATION PROCEDURES:

1. CHOOSE A LOCATION WITH SUITABLE CLEARANCE.

2. CUT A 4.6" DIA THRU-HOLE.

3. INSTALL THE INDICATOR WITH BEDDING COMPOUND OR SEALANT AROUND THE REAR OF THE FLANGE.

4. LOOSEN THE RING CLAMP. INSTALL ON THE CASE FROM THE REAR, AS SHOWN ON FIG.1. WITH THE INDICATOR FLANGE AGAINST THE BULKHEAD, POSITION THE CLAMP AGAINST THE REAR OF THE BULKHEAD AND TIGHTEN SCREW "A" UNTIL CLAMP IS SECURED TO THE INDICATOR. TURN THE THREE RING CLAMP SCREWS CLOCKWISE UNTIL THE INDICATOR FLANGE IS SEATED SNUGLY AGAINST THE BULKHEAD (SEE FIG.2). DO NOT OVERTIGHTEN THE RING CLAMP.

5. WIPE AWAY ANY EXCESS BEDDING COMPOUND AROUND THE INDICATOR BEZEL ON THE FRONT OF THE BULKHEAD.

6. CONNECT THE PADDLEWHEEL SENSOR CONNECTOR TO THE PADDLEWHEEL SENSOR AFTER ROUTING.

7. CONNECT INSTRUMENT AND LIGHTING POWER TO THE INDICATOR PER : "3.3 POWER SOURCE HOOK-UP".

3.2 INDICATOR INSTALLATION FIGURE

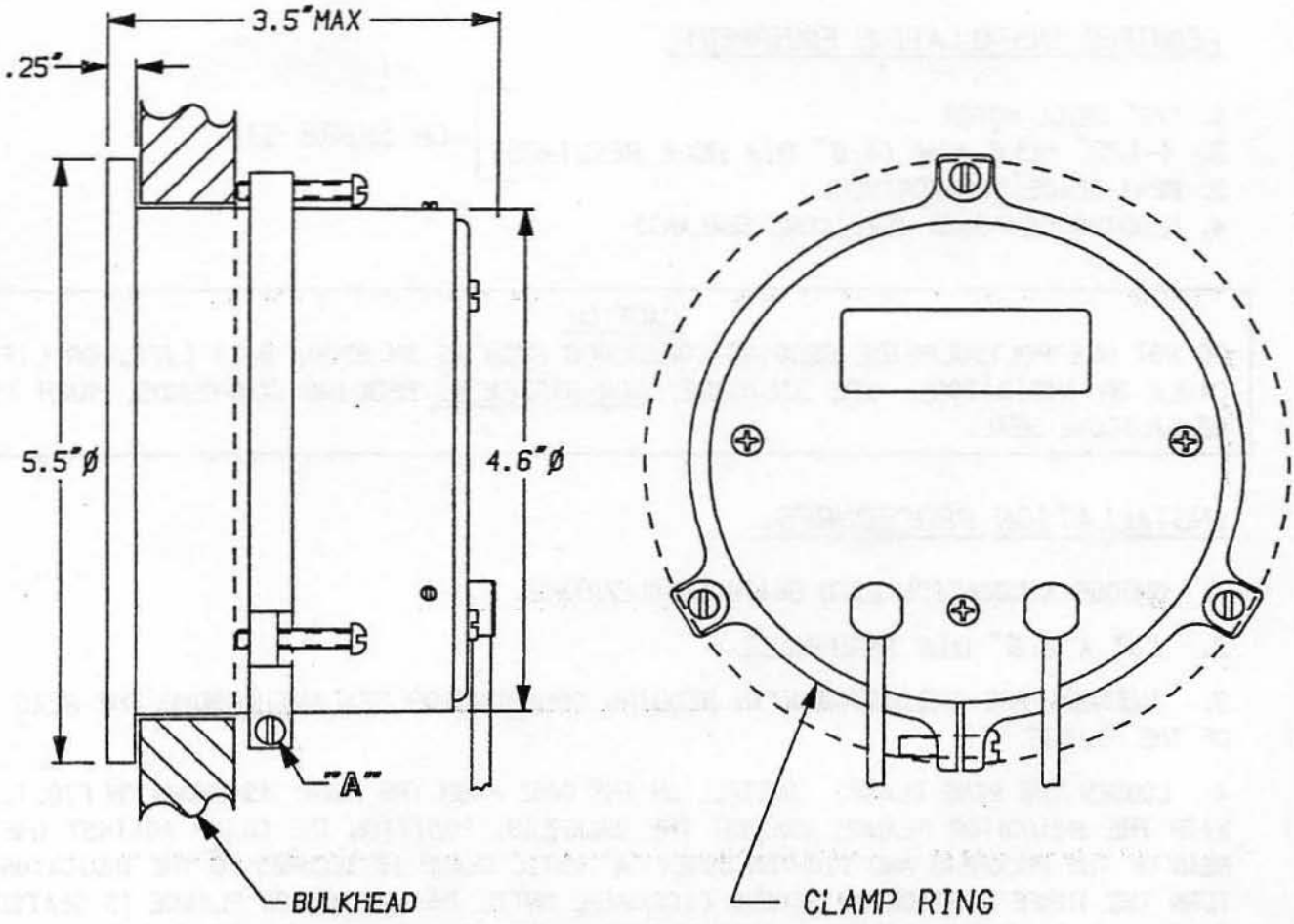


FIG. 1

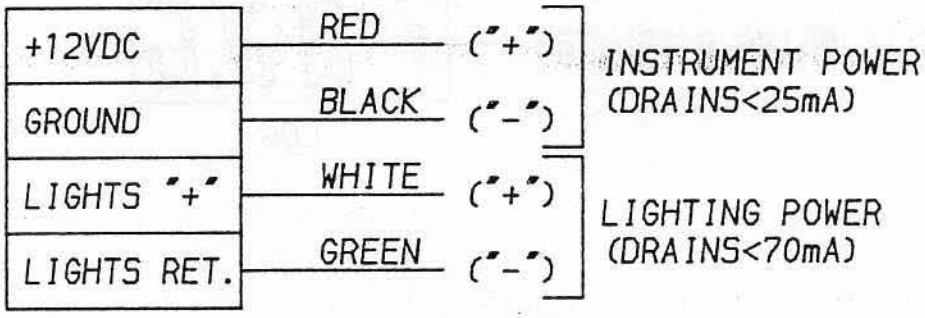
3.3 POWER SOURCE HOOK-UP

THE SL267A IS POWERED BY A STANDARD 12 VOLT BATTERY (CAR OR MARINE TYPE). WHENEVER POSSIBLE, AVOID USING THE STARTING BATTERY FOR THE SL267A POWER. AFTER INSTALLING THE PADDLEWHEEL AND INDICATOR PER THE APPROPRIATE INSTALLATION INSTRUCTIONS, FOLLOW THE HOOK-UP PROCEDURES OUTLINED:

1. CONNECT THE INSTRUMENT POWER WIRE (RED WIRE) TO YOUR INSTRUMENT CIRCUIT BREAKER OR FUSE BLOCK WITH A CURRENT RATING OF 1 AMP. THE BLACK WIRE CONNECTS TO THE (-) COMMON GROUND, BATTERY NEGATIVE TERMINAL. (THE INSTRUMENT WILL DRAIN LESS THAN 25 mA).

CONNECT THE LIGHTING POWER WIRE (WHITE WIRE) TO YOUR INSTRUMENT LIGHTING SWITCH PANEL (CURRENT RATING OF 1 AMP). THE GREEN WIRE CONNECTS TO THE (-) COMMON GROUND, BATTERY NEGATIVE TERMINAL. (THE LIGHTING WILL DRAIN LESS THAN 70 mA).

NOTE: IF NO SWITCH PANEL, DIMMER CONTROL, OR FUSE BOX IS AVAILABLE THE RED AND WHITE WIRES MAY BE CONNECTED DIRECTLY (THROUGH A 1 AMP FUSE) TO THE "+" TERMINAL OF THE BATTERY. IF NO LIGHTS ARE REQUIRED DO NOT CONNECT THE WHITE AND GREEN WIRES. (REFER TO WIRING DIAGRAM BELOW).



WIRING DIAGRAM

INSTRUMENT AND LIGHT CIRCUITS ARE REVERSE POLARITY PROTECTED.

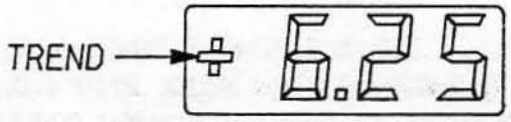
2. CHECK THAT ALL CONNECTIONS THAT USE SCREWS OR NUTS HAVE BEEN TIGHTENED AND THAT ALL SOLDER JOINTS ARE ELECTRICALLY AND MECHANICALLY SOUND.

3. REFER TO OPERATION INSTRUCTIONS TO VERIFY INSTRUMENT OPERATION.

4.1 SPEED AND LOG OPERATION

TO VIEW SPEED

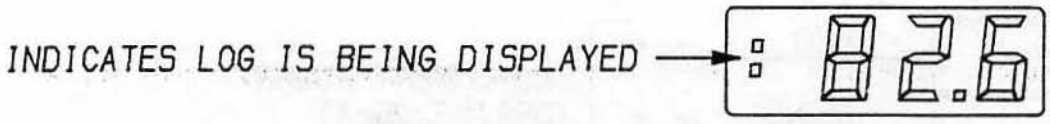
THE NORMAL OPERATION MODE FOR THE SL267A DISPLAYS SPEED IN KNOTS, WITH TREND INFORMATION. TREND IS REPRESENTED BY A "+" OR "-" ON THE DISPLAY INDICATING A SIGNIFICANT INCREASE OR DECREASE IN SPEED.



SPEED

TO VIEW LOG

TO DISPLAY LOG IN NAUTICAL MILES, PRESS AND RELEASE THE MODE SWITCH ON THE FRONT PANEL. THE COLON AT THE LEFT OF THE DISPLAY INDICATES LOG IS BEING DISPLAYED. LOG IS DISPLAYED FOR 5 SECONDS AND AUTOMATICALLY REVERTS TO DISPLAYING SPEED. DO NOT PRESS THE MODE SWITCH WHILE VIEWING LOG UNLESS YOU ARE ATTEMPTING TO CALIBRATE SPEED (REFER TO 4.2 SPEED/LOG CALIBRATION).



LOG

TO RESET LOG

WHILE THE DISPLAY IS IN THE NORMAL MODE (DISPLAYING SPEED) THE LOG CAN BE RESET TO ZERO BY PRESSING AND HOLDING THE MODE SWITCH UNTIL THE DISPLAY READS :0.00 (MUST HOLD FOR APPROXIMATELY 4 SECONDS).

4.2 SPEED/LOG CALIBRATION

THE SL267A HAS BEEN FACTORY CALIBRATED TO BE COMPATIBLE WITH THE SIGNET PADDLEWHEEL SENSOR. HOWEVER, VARIATIONS CAUSED BY HULL CONFIGURATION AND SENSOR LOCATION MAY CAUSE AN ERROR OF UP TO 30% IN THE INDICATED SPEED AND LOG VALUES, REQUIRING CALIBRATION AFTER THE UNIT IS INSTALLED.

PREFERRED CALIBRATION METHOD

SPEED/LOG MUST BE CALIBRATED IN AN AREA WHERE THERE IS NEGLIGIBLE CURRENT. IN ORDER TO COMPENSATE FOR ANY SLIGHT SURFACE CURRENTS, CALIBRATION SHOULD BE CHECKED ON TWO RECIPROCAL COURSES, SO THAT THE AVERAGE RESULT IS CORRECT. SPEED CALIBRATION IS BEST DONE UNDER POWER ON A CALM DAY, USING A KNOWN DISTANCE RANGE. A CALCULATOR WILL PROVE USEFUL.

PROCEDURE FOR CALCULATING THE CORRECT CALIBRATION CONSTANT

1. RUN A COURSE OF KNOWN DISTANCE AND RECORD THE LOG READING FOR THIS DISTANCE.
2. CALCULATE THE PERCENTAGE ERROR OF THE LOG READING.
3. ADJUST THE CALIBRATION NUMBER BY THE PERCENTAGE ERROR.
4. REPEAT THE PROCEDURE TO ASSURE ACCURACY.

EXAMPLE: OVER A 2.00 NAUTICAL MILE COURSE THE LOG RECORDS 1.75 NAUTICAL MILES.
% ERROR= [(RECORDED VALUE - ACTUAL VALUE)/(RECORDED VALUE)] * 100%
% ERROR= [(1.75 NM - 2.00 NM)/(1.75 NM)] * 100%= -14.3%
THEREFORE THE CALIBRATION CONSTANT MUST BE INCREASED 14.3%
THE STANDARD CALIBRATION VALUE IS 100.0 (REPRESENTING 100%)
NEW CALIBRATION NUMBER SHOULD BE 100% + 14.3%=114.3% OR 114.3

ALTERNATE METHOD FOR FOR CALCULATING THE CORRECT CALIBRATION CONSTANT

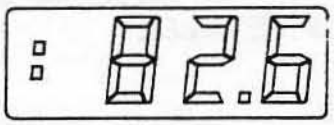
IF A SUITABLE CALIBRATION RANGE IS NOT AVAILABLE, BUT THE BOAT IS EQUIPPED WITH A LORAN THAT INDICATES SPEED OVER GROUND (SOG):
1. MOTOR AT A CONSTANT SPEED ON A STEADY COURSE AND MONITOR THE SPEED OVER GROUND FOR A PERIOD OF AT LEAST 5 MINUTES.
2. DETERMINE THE PERCENT ERROR TO THE SPEED READING.
3. RUN ALONG A RECIPROCAL BEARING TO THE INITIAL COURSE AND AGAIN DETERMINE THE PERCENT ERROR OF THE SPEED READING.
4. AVERAGE THE PERCENT ERROR OF THE TWO RUNS.
5. ADJUST THE CALIBRATION NUMBER BY THE AVERAGE PERCENT ERROR.

EXAMPLE:
ON THE FIRST RUN THE SL267A VALUE WAS 5.10 KNOTS AND THE LORAN VALUE WAS 5.75 KNOTS.
ON THE SECOND RUN THE SL267A VALUE WAS 5.05 KNOTS AND THE LORAN VALUE WAS 5.80 KNOTS.
% ERROR (FIRST RUN)= [(5.10 KNOTS - 5.75 KNOTS)/5.10 KNOTS)] * 100%= -12.7%
% ERROR (SECOND RUN)= [(5.05 KNOTS - 5.80 KNOTS)/(5.05 KNOTS)] * 100%= -14.9%
AVERAGE % ERROR= (-12.7% + (-14.9%))/2= -13.8%
NEW CALIBRATION CONSTANT= 100.0% + 13.8%= 113.8% OR 113.8
NOTE: IN THE ABOVE PROCEDURES IT IS ASSUMED THAT THE INITIAL CALIBRATION CONSTANT IS 100.0, IF NOT THE % INCREASE MUST REFLECT THE INITIAL CALIBRATION CONSTANT.

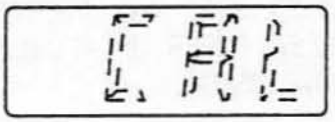
4.2 SPEED/LOG CALIBRATION (CONT)

PROCEDURE FOR CHANGING THE CALIBRATION CONSTANT

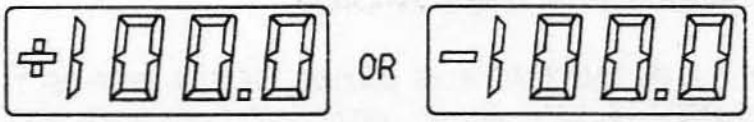
1. PRESS AND RELEASE THE MODE SWITCH TO DISPLAY LOG.



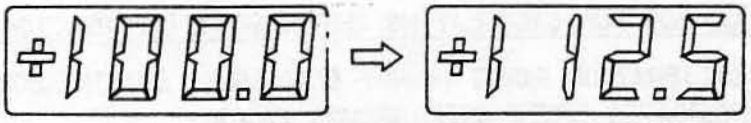
2. WHILE LOG IS BEING DISPLAYED (:XXX DISPLAYED FOR 5 SECONDS ONLY) PRESS AND RELEASE THE MODE SWITCH AND "CAL" WILL FLASH ON THE DISPLAY.



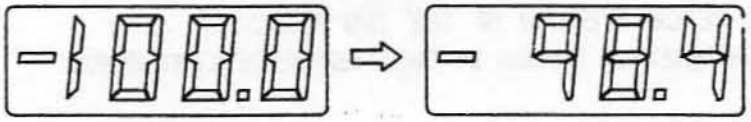
3. WHILE "CAL" IS FLASHING ON THE DISPLAY (FOR 5 SECONDS ONLY) PRESS AND RELEASE THE MODE SWITCH AND THE CALIBRATION CONSTANT (100.0 STANDARD) WILL APPEAR ON THE DISPLAY. A "+" OR "-" INDICATOR WILL APPEAR ON THE DISPLAY (CHANGES BETWEEN "+" AND "-" EVERY 2 SECONDS).



4. TO INCREASE THE CALIBRATION CONSTANT (WHICH WILL INCREASE YOUR DISPLAYED SPEED AND LOG VALUE) PRESS AND HOLD THE MODE SWITCH WHILE THE "+" IS BEING DISPLAYED (AFTER 5 SECONDS OF NO INTERACTION THE DISPLAY REVERTS TO DISPLAYING SPEED). THE SL267A WILL RETAIN THE LAST CALIBRATION CONSTANT DISPLAYED, MAX=199.9.



5. TO DECREASE THE CALIBRATION CONSTANT (WHICH WILL DECREASE YOUR DISPLAYED SPEED AND LOG VALUE) PRESS AND HOLD THE MODE SWITCH WHILE THE "-" IS BEING DISPLAYED (AFTER 5 SECONDS OF NO INTERACTION THE DISPLAY REVERTS TO DISPLAYING SPEED). THE SL267A WILL RETAIN THE LAST CALIBRATION CONSTANT DISPLAYED, MIN=20.0.



6. DO NOT TURN THE SL267A POWER OFF WITHIN 10 SECONDS AFTER CHANGING THE CALIBRATION CONSTANT.

7. VERIFY THE CALIBRATION CONSTANT IS CORRECT BY REPEATING STEPS 1 THRU 3. RECORD THE NEW CALIBRATION CONSTANT IN THE "CALIBRATION LOG" (PAGE 10) FOR FUTURE REFERENCE.

NOTE: IF AT ANY TIME THE DISPLAY REVERTS TO DISPLAYING SPEED, THE LAST CALIBRATION CONSTANT DISPLAYED WILL BE RETAINED.

4.2 SPEED/LOG CALIBRATION (CONT)

CALIBRATION JOURNAL

	OPERATOR/ DATE	DISPLAYED VALUE	ACTUAL VALUE	%ERROR		STANDARD= 100.0 CORRECTED CONSTANT	NOTES
EXAMPLE	A. DAVIS 4-1-88	1.75 NM	2.00 NM	-14.3%		114.3	NEWPORT IDEAL CONDITIONS
EXAMPLE	L. DAVIS 4-1-89	5.10 KNOTS 5.05 KNOTS	5.75 KNOTS 5.80 KNOTS	-12.7% -14.8%	AVG. -13.8%	113.8	COMPARED WITH LORAN SOG

% ERROR= [(DISPLAYED VALUE - ACTUAL VALUE)/(DISPLAYED VALUE)] * 100%

4.3 ADJUSTING THE SPEED AVERAGING

(ADVANCED OPERATION)

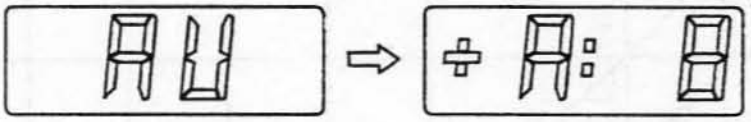
THE SPEED AVERAGING CONSTANT AS SET AT THE FACTORY SHOULD NOT BE ADJUSTED UNLESS YOUR SPECIFIC APPLICATION REQUIRES. THE SPEED AVERAGING CONSTANT IS FACTORY SET AT A NOMINAL VALUE OF 8 WHICH CORRESPONDS TO A PERIOD (TAU) OF 8 SECONDS (SEE BELOW) WHICH IS THE TIME REQUIRED TO DISPLAY APPROXIMATELY 70% OF THE THE INSTANTANEOUS SPEED (AT CONSTANT SPEED STARTING AT ZERO). THE SPEED AVERAGING CONSTANT CAN BE ADJUSTED FROM 15 TO 1 (TAU= 4 TO 64 SECONDS).

SPEED AVERAGING EQUATIONS

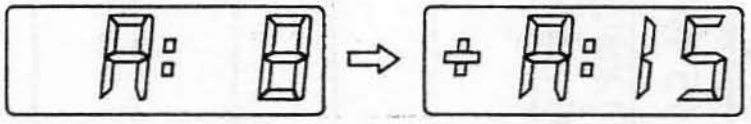
A= AVERAGING CONSTANT= 1 TO 15 (FACTORY SET AT 8)
S1= PREVIOUS AVERAGED SPEED
S2= CURRENT (DISPLAYED) AVERAGED SPEED
I= INSTANTANEOUS SPEED (RAW SPEED)
$\triangle S = S1 - I$
$TAU = 64/A$
$S2 = S1 - (\triangle S) * (A/64)$

PROCEDURE FOR ADJUSTING THE SPEED AVERAGING CONSTANT

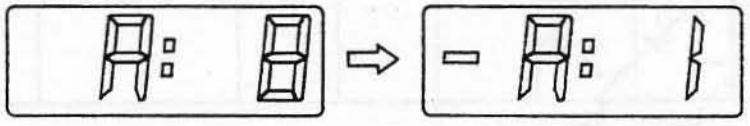
1. TURN INSTRUMENT POWER OFF.
2. PRESS THE MODE SWITCH AND HOLD WHILE POWER IS SWITCHED ON, THE DISPLAY WILL SHOW "AV", RELEASE THE MODE SWITCH AND THE DISPLAY WILL SHOW "±A:8".



3. TO INCREASE THE AVERAGING CONSTANT (WHICH WILL MAKE THE DAMPING LIGHTER) PRESS AND HOLD THE MODE SWITCH WHILE THE "+" IS BEING DISPLAYED (AFTER 5 SECONDS OF NO INTERACTION THE DISPLAY REVERTS TO DISPLAYING SPEED). THE SL267A WILL RETAIN THE LAST AVERAGING CONSTANT (A) DISPLAYED, MAX=15.



3. TO DECREASE THE AVERAGING CONSTANT (WHICH WILL MAKE THE DAMPING HEAVIER) PRESS AND HOLD THE MODE SWITCH WHILE THE "-" IS BEING DISPLAYED (AFTER 5 SECONDS OF NO INTERACTION THE DISPLAY REVERTS TO DISPLAYING SPEED). THE SL267A WILL RETAIN THE LAST AVERAGING CONSTANT (A) DISPLAYED, MIN=1.



5. DO NOT TURN POWER OFF WITHIN 10 SECONDS AFTER ADJUSTING THE AVERAGING CONSTANT.

NOTE: THE TREND FEATURE WILL BE LESS APPARENT WITH LIGHTER (LARGER AVERAGING CONSTANT) DAMPING THAN WITH HEAVIER (SMALLER AVERAGING CONSTANT) DAMPING.

5.0 TROUBLE SHOOTING

SYMPTOM	CAUSES	REMEDIES
NO DISPLAY	NO DC POWER TO THE SL267A	CHECK POWER SOURCE
	CIRCUIT BREAKER BLOWN	RESET CIRCUIT BREAKER CHECK POWER CONNECTIONS
CONTINUOUSLY BLOWING FUSES	INCORRECT POWER POLARITY SHORT ON POWER SUPPLY	CHECK SUPPLY CONNECTIONS WITH VOLTMETER REMOVE SHORT CONDITION (WATER/WIRES ETC)
DISPLAYED SPEED IS ERRATIC	AVERAGING IS TOO LIGHT (CONSTANT IS TOO HIGH)	REDUCE THE AVERAGING CONSTANT (FACTORY SETTING= 8)
DISPLAYED SPEED IS SLOW TO RESPOND	AVERAGING IS TOO HEAVY (CONSTANT IS TOO LOW)	INCREASE THE AVERAGING CONSTANT (FACTORY SETTING= 8)
LOG DOES NOT RESET TO ZERO	INCORRECT RESET NOT ALLOWING ENOUGH TIME FOR STORAGE OF NEW VALUE 0.00	RESET POWER, AND RESET LOG DO NOT TURN POWER OFF WITHIN 10 SECONDS AFTER RESETTING THE LOG
INCORRECT SPEED READINGS	IMPROPER CALIBRATION BAD INSTALLATION DAMAGED OR FOULED ROTOR	DISCONNECT POWER SOURCE AND RECALIBRATE CHECK INSTALLATION CLEAN ROTOR ASSEMBLY
SL267A FAILS TO DISPLAY SPEED	CONDUCTED INTERFERENCE ON THE +12VDC LINE DAMAGED PADDLEWHEEL ROTOR	RELOCATE POWER SOURCE AWAY FROM ENGINE VERIFY PADDLEWHEEL OPERATION CONTACT FACTORY