



SIGNETMARINE Inc.
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SL 80

Instruction Manual

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1.0 INTRODUCTION

THE SIGNET SL80 IS A KNOTMETER, DEPTHSOUNDER, TEMPERATURE INDICATOR, AND A LOG BUILT INTO ONE COMPACT, EASY TO USE UNIT.

THE KNOTMETER READS FROM 0.00 TO 50.00 KNOTS (KT). THE RESETTABLE LOG READS FROM 0.00 TO 9999 NAUTICAL MILES (NM). THE DEPTHSOUNDER READS DEPTHS FROM 3.0 TO 500.0 FEET (FT). WATER TEMPERATURE IS DISPLAYED FROM 30.0 TO 99.9°F WITH AN ACCURACY OF ±1°F.

ALARM FUNCTIONS INCLUDE HIGH (H) AND LOW (L) DEPTH ALARMS, SETTABLE FROM 0.0 TO 500.0 FEET (FT). DEPTH THAT IS SHALLOWER THAN THE LOW SETTING OR DEEPER THAN THE HIGH SETTING WILL SOUND THE ALARM.

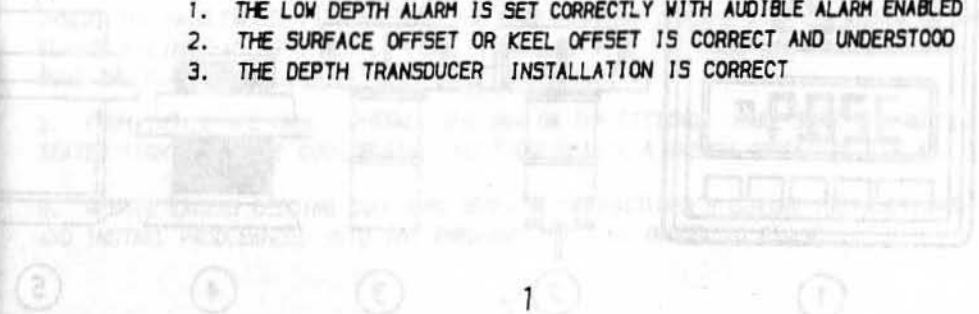
EVEN WITH ITS SOPHISTICATED PERFORMANCE AND MICROPROCESSOR CIRCUITRY, THE SL80 IS REMARKABLY SIMPLE TO USE. EACH FUNCTION CAN BE ACTIVATED WITH THE TOUCH OF A BUTTON AND ALARM DEPTH CAN BE SET IN JUST SECONDS. THE SL80 IS SHIPPED STANDARD WITH THE MUSHROOM STYLE DEPTH/TEMPERATURE TRANSDUCER, SIGNET PADDLEWHEEL SPEED SENSOR, AND BULKHEAD MOUNTING KIT.

THE SIGNET SL80 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 SL80 IS AN INSTRUCTION MANUAL WHICH INCLUDES AN OPERATION SECTION WHICH CONSISTS OF A DETAILED EXPLANATION OF THE OPERATION OF EACH FEATURE. THE INSTRUCTION MANUAL SERVES AS A QUICK REFERENCE OF OPERATION AND THEREFORE SHOULD BE KEPT NEAR YOUR SL80.

WARNING

THE SL80 IS ONLY AN AID TO THE SAFE OPERATION OF YOUR RECREATIONAL VESSEL, AND DOES NOT REDUCE THE NEED FOR CAUTION OR JUDGEMENT. WHEN OPERATING IN VERY SHALLOW WATER, LESS THAN 10.0 FEET, THE OPERATOR SHOULD EXERCISE CAUTION (REDUCE SPEED) AND VERIFY THE FOLLOWING INFORMATION:

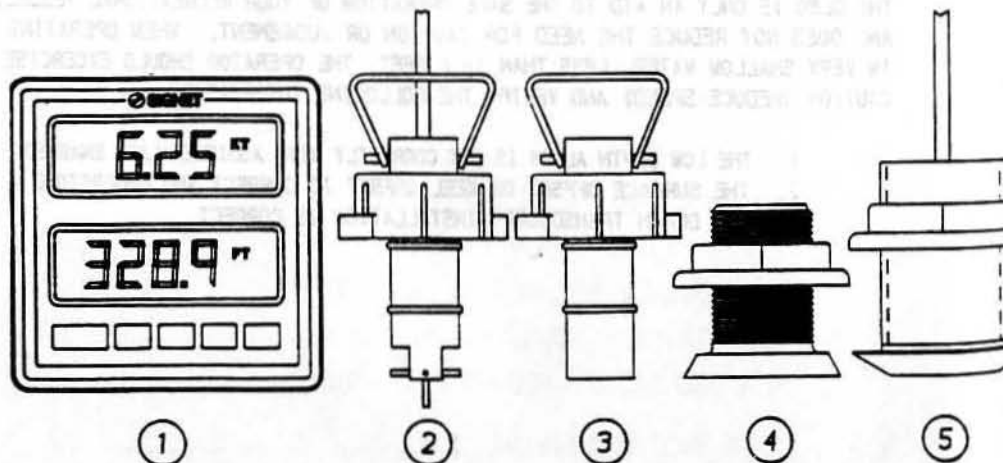
1. THE LOW DEPTH ALARM IS SET CORRECTLY WITH AUDIBLE ALARM ENABLED
2. THE SURFACE OFFSET OR KEEL OFFSET IS CORRECT AND UNDERSTOOD
3. THE DEPTH TRANSDUCER INSTALLATION IS CORRECT



2.0 UNPACKING

YOUR SIGNET SL80 INDICATOR IS SHIPPED COMPLETE WITH ALL COMPONENTS AND REQUIRED CABLING AND HARDWARE FOR OPERATION. WHEN YOU RECEIVE THE SL80, 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 FOLLOWING COMPONENTS ARE INCLUDED AND APPEAR IN GOOD CONDITION (SEE ALSO, 9.0 SL80 SYSTEM DRAWING):

- 1 SL80 INDICATOR (#1-4401.110)
- 2 PADDLEWHEEL SENSOR (#1-2200.100)
- 3 THRU-HULL PLUG (#M1536)
- 4 THRU-HULL FITTING (#M1533)
- 5 MUSHROOM DEPTH TRANSDUCER (#1-2401.100)
- 6 MOUNTING KIT (#1-0000.100 OR #2-0000.100)
- 7 CABLE ASSY, POWER (#2-1000.260)
- 8 Y-CABLE ASSEMBLY, TRANSDUCER (#1-2000.260)
- 9 PROTECTIVE COVER (#1-0000.512)
- 10 INSTRUCTION MANUAL (#1-4401.090)



2

3.1 PADDLEWHEEL SENSOR INSTALLATION

(#1-2200.100)

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 GENEROUS 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 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).

3

3.1 PADDLEWHEEL SENSOR INSTALLATION (CONT)

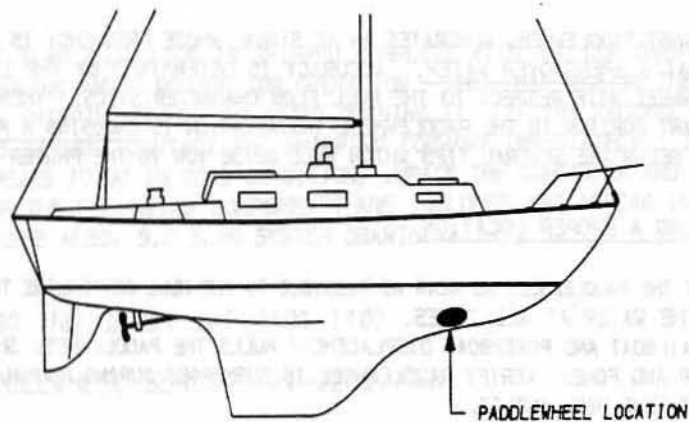


FIG. 1

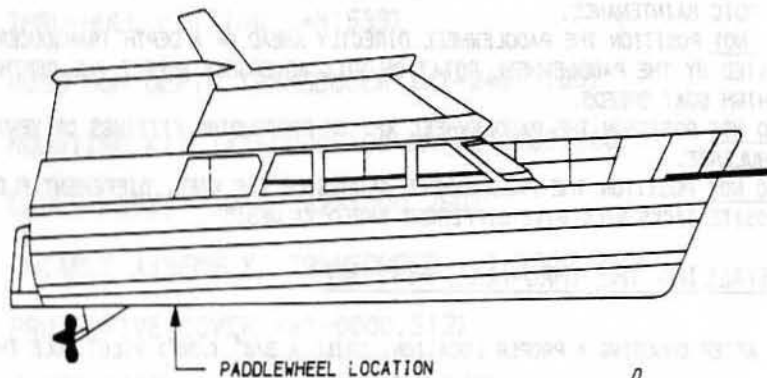


FIG. 2

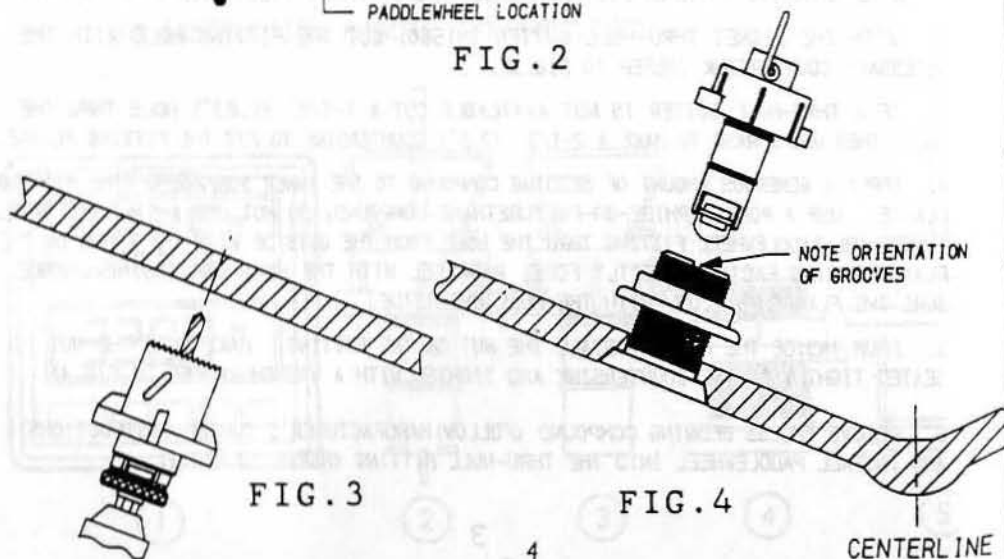


FIG. 3

FIG. 4

CENTERLINE

3.2 DEPTH TRANSDUCER INSTALLATION (MUSHROOM)

(1-2401.100)

CHOOSING A PROPER LOCATION

- MOUNT THE TRANSDUCER AS NEAR AS POSSIBLE TO THE HULL CENTERLINE TO INSURE CONTACT WITH THE WATER AT ALL TIMES.
- MOUNT THE TRANSDUCER AT LEAST 18" FORE OF THE KEEL (REFER TO FIG. 1).
- ON SAILBOAT DISPLACEMENT HULLS THE TRANSDUCER SHOULD BE MOUNTED MIDSHIP AND FORE. VERIFY THE TRANSDUCER IS SUBMERGED UNDER NORMAL BOAT ATTITUDES, MOTIONS, AND HEEL ANGLES.
- ON PLANING HULLS THE TRANSDUCER SHOULD BE MOUNTED WELL AFT TO INSURE THE TRANSDUCER IS SUBMERGED AT HIGHER BOAT SPEEDS.
- THE TRANSDUCER SHOULD BE ORIENTED VERTICALLY (WITHIN 10°) WITH THE WATER TO YIELD A VERTICALLY DIRECTED ACOUSTIC BEAM.
- PROVIDE A CLEARANCE RADIUS OF 5" INSIDE THE HULL FOR TRANSDUCER INSTALLATION AND PERIODIC MAINTENANCE.
- MOUNT THE TRANSDUCER WITHIN 35' OF THE INDICATOR, SHIELDED CABLE SHOULD NOT BE SPLICED OR EXTENDED.
- DO NOT POSITION THE DEPTH TRANSDUCER DIRECTLY BEHIND THE PADDLEWHEEL SENSOR, TURBULENCE CREATED BY THE PADDLEWHEEL ROTATION WILL ADVERSELY AFFECT THE DEPTH TRANSDUCER AT HIGH SPEEDS.
- DO NOT POSITION THE TRANSDUCER AFT OF PROTRUDING FITTINGS OR VENTS TO AVOID TURBULENCE.

INSTALLING THE TRANSDUCER

1. DRILL A 3/8" (.38") PILOT HOLE THROUGH THE HULL AT THE POSITION YOU HAVE SELECTED.
2. CUT A 1-7/8" (1.88") HOLE THROUGH THE HULL.
3. APPLY A GENEROUS AMOUNT OF BEDDING COMPOUND TO THE INNER SURFACE OF THE TRANSDUCER FLANGE. USE A POLYSULPHIDE OR POLYURETHANE COMPOUND; DO NOT USE A SILICONE SEAL. INSERT THE TRANSDUCER THROUGH THE HULL.
4. FROM INSIDE THE HULL INSTALL THE NUT ON THE TRANSDUCER AND TIGHTEN FIRMLY WITH A WRENCH (REFER TO FIG. 2).
5. WIPE OFF ANY EXCESS BEDDING COMPOUND FROM THE FLANGE.
6. ROUTE THE CABLE TO THE INSTRUMENT, KEEP THE CABLE CLEAR OF IGNITION, TACHOMETER, ALTERNATOR OR OTHER SOURCES OF ELECTRICAL INTERFERENCE. CONNECTOR REMOVAL OR CABLE SPLICING VOIDS THE TRANSDUCER WARRANTY.

3.2 DEPTH TRANSDUCER INSTALLATION, MUSHROOM (CONT)

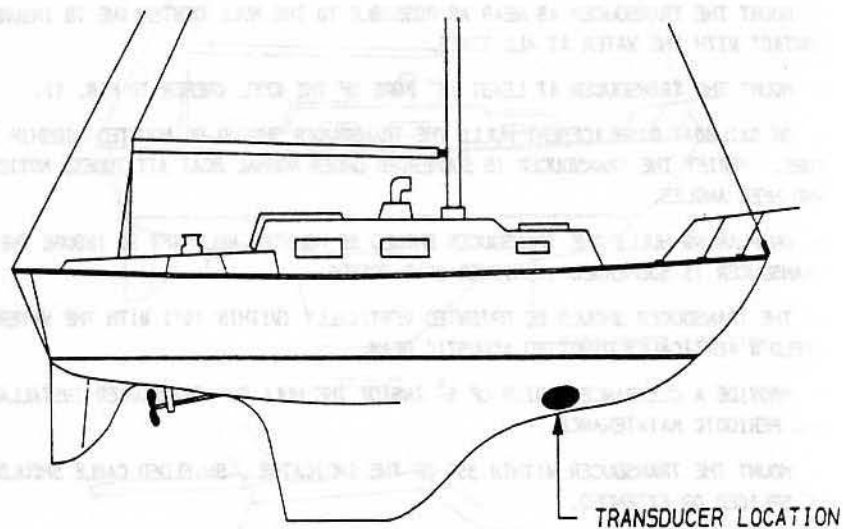


FIG. 1

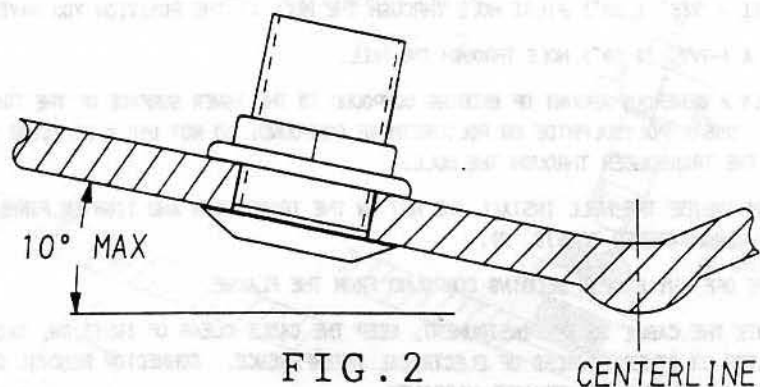


FIG. 2

CENTERLINE

3.3.1 BULKHEAD INSTALLATION

THE STANDARD MOUNTING FOR THE SL80 ALLOWS FOR FLUSH MOUNTING AGAINST AN INSTRUMENT PANEL OR BULKHEAD USING THE SIGNET BULKHEAD MOUNTING KIT (#1-0000.100).

BULKHEAD INSTALLATION:

1. SELECT A LOCATION WITH PROPER INSTRUMENT OPERATION CLEARANCE WITH 2" OF CLEARANCE BEHIND THE PANEL (CONNECTOR CLEARANCE). THE INSTRUMENT SHOULD BE MOUNTED TO INSURE A 90° VIEWING ANGLE FROM ALL POSITIONS IN THE COCKPIT.
2. FOLLOW THE INSTRUCTIONS PRINTED ON THE MOUNTING TEMPLATE PROVIDED FOR DRILLING OPERATION (SEE FIGURE 1).
3. ATTACH THREADED STUDS TO THE 4 BRASS INSERTS LOCATED ON THE REAR OF THE INSTRUMENT (DO NOT OVERTIGHTEN STUDS TO INSTRUMENT).
4. PLACE INSTRUMENT (WITH STUDS ATTACHED) AND GASKET AGAINST THE INSTRUMENT PANEL AND TIGHTEN THE WING NUTS EVENLY (DO NOT OVERTIGHTEN) TO INSURE EVEN COMPRESSION OF THE SOFT GASKET (SEE FIGURE 2).

TOOLS REQUIRED:

- DRILL WITH A 1/4" DRILL BIT
- 2" DIA HOLE SAW
- STANDARD SCREWDRIVER (SMALL)

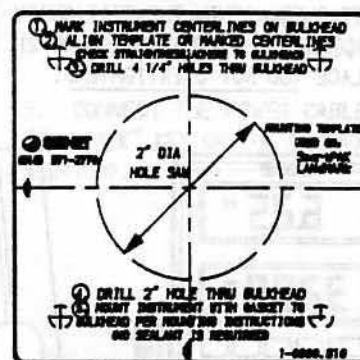


FIGURE 1
(MOUNTING TEMPLATE)

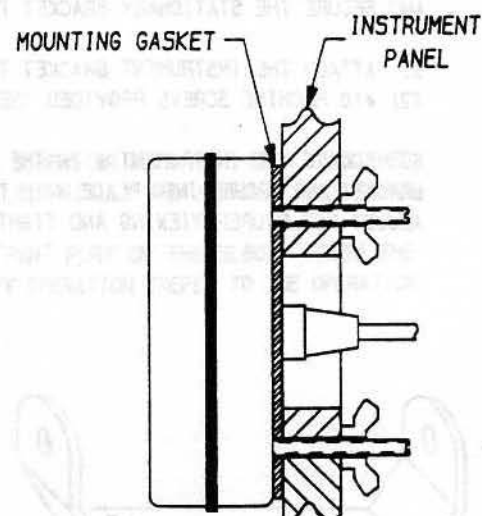


FIGURE 2
(BULKHEAD ASSEMBLY)

3.3.2 TILTMOUNT INSTALLATION

(OPTIONAL TILTMOUNT KIT #2-0000.100)

THE SIGNET SL80 HAS (4) MOUNTING INSERTS LOCATED SYMMETRICALLY ON THE REAR OF THE INSTRUMENT WHICH IS CAPABLE OF SUPPORTING HORIZONTAL AND VERTICAL MOUNTING (HORIZONTAL MOUNTING IS SHOWN).

TO INSTALL THE TILTMOUNT BRACKETS:

1. SELECT A LOCATION WITH PROPER CLEARANCE FOR TILTING AND ACCESS TO THE KEYPAD AND THE INPUT CABLES.
2. SELECT THE MOUNTING HARDWARE TO BE USED. IF THE MOUNTING SURFACE IS THICK ENOUGH THE WOOD SCREWS (#10) PROVIDED CAN BE USED. A THINNER PANEL MAY REQUIRE STANDARD (#10) MACHINE HARDWARE OR (#10) MOLYBOLTS (NOT PROVIDED).
3. PLACE THE STATIONARY BRACKET (SEE FIGURE 1) ON THE MOUNTING SURFACE AND OUTLINE THE TWO MOUNTING SLOTS. MARK THE CENTERS OF THE SLOTS (KIDNEY SHAPE SLOTS ALLOW FOR $\pm 8^\circ$ ROTATION FOR FINE ADJUSTMENT).
4. IF USING THE WOOD SCREWS PROVIDED, DRILL PILOT HOLES (#28 DRILL OR 9/64" DRILL) 1/2" DEEP. TIGHTEN THE STATIONARY BRACKET TO THE MOUNTING SURFACE (SEE FIGURE 1).
IF USING #10 STANDARD HARDWARE (NOT PROVIDED) DRILL PROPER CLEARANCE HOLES AND SECURE THE STATIONARY BRACKET TO THE MOUNTING SURFACE.
5. ATTACH THE INSTRUMENT BRACKET TO THE BACK OF THE INSTRUMENT WITH THE (2) #10 MACHINE SCREWS PROVIDED (SEE FIGURE 2).
6. LOCATE THE INSTRUMENT WITH THE BRACKET ATTACHED WITHIN THE STATIONARY BRACKET AND SECURE INTO PLACE WITH THE THUMB SCREWS PROVIDED (SEE FIGURE 2). ADJUST FOR PROPER VIEWING AND TIGHTEN INTO PLACE (DO NOT OVERTIGHTEN).

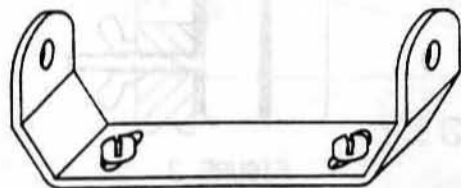


FIG. 1

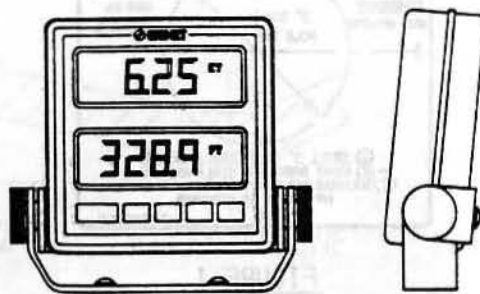


FIG. 2

3.4 POWER SOURCE HOOK-UP

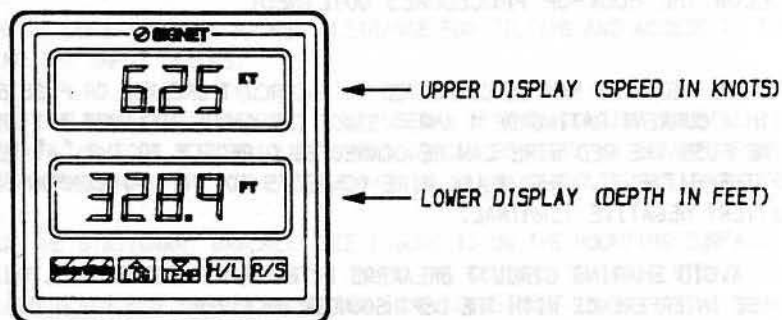
THE SL80 IS POWERED BY A STANDARD 12 VOLT BATTERY (CAR OR MARINE TYPE). WHENEVER POSSIBLE, AVOID USING THE STARTING BATTERY FOR THE SL80 POWER. FOR BOATS WITH ONLY ONE BATTERY, IT IS RECOMMENDED THAT THE SL80 BE TURNED OFF BEFORE STARTING (THE SL80 IS PROTECTED BY A 1 AMP FUSE).

FOLLOW THE HOOK-UP PROCEDURES OUTLINED:

1. THE RED WIRE MAY BE CONNECTED TO A CIRCUIT BREAKER OR FUSE BLOCK WITH A CURRENT RATING OF 1 AMP. SINCE THE CABLE INCLUDES A 1 AMP IN-LINE FUSE THE RED WIRE CAN BE CONNECTED DIRECTLY TO THE "+" TERMINAL OF THE BATTERY. THE BLACK WIRE CONNECTS TO THE (-) COMMON GROUND, BATTERY NEGATIVE TERMINAL.
2. AVOID SHARING CIRCUIT BREAKERS WITH CB, OR SSB RADIOS. IT MAY CAUSE INTERFERENCE WITH THE DEPTHSOUNDER RECEIVER.
3. FOR PROPER PIN ASSIGNMENTS OF THE POWER CONNECTOR, REFER TO SECTION 5.3 "PORT DIAGRAMS".
4. BEFORE CONNECTING THE POWER TO THE SL80, IT IS GOOD PRACTICE TO VERIFY:
 1. BATTERY VOLTAGE AND POLARITY,
PIN 1=GROUND (BLACK)
PIN 2=+12VDC (RED)
 2. CHECK ALL CONNECTIONS THAT USE SCREWS OR NUTS HAVE BEEN TIGHTENED AND THAT ALL SOLDER JOINTS ARE ELECTRICALLY AND MECHANICALLY SOUND.
5. CONNECT THE POWER CABLE TO THE "PWR" PORT OF THE SL80. PRESS THE "SMARTPAK" KEY ON THE KEYPAD AND VERIFY OPERATION (REFER TO THE OPERATION SECTION).

4.1 NORMAL OPERATION MODE

PRESS AND RELEASE THE "SMARTPAK" KEY TO TURN THE SL80 ON, THE NORMAL OPERATION MODE WILL BE DISPLAYED. IN NORMAL OPERATION MODE THE BOATSPEED WILL BE DISPLAYED IN KNOTS (KT) ON THE UPPER DISPLAY AND DEPTH WILL BE DISPLAYED IN FEET (FT) ON THE LOWER DISPLAY.



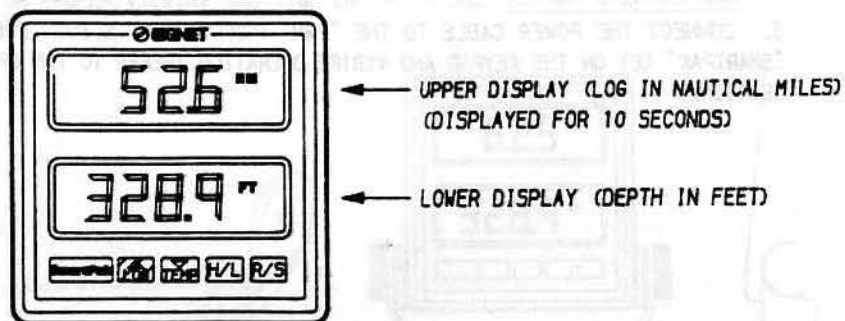
NORMAL OPERATION MODE

TO TURN LIGHTS ON OR OFF

IF AT ANY TIME YOU NEED TO TURN LIGHTS ON OR OFF PRESS AND RELEASE THE "SMARTPAK" KEY.

TO DISPLAY LOG

AT ANY TIME THE LOG CAN BE DISPLAYED BY PRESSING AND RELEASING THE "LOG" KEY. THE LOG WILL BE DISPLAYED IN NAUTICAL MILES (NM) FOR 10 SECONDS ON THE UPPER DISPLAY THEN REVERTS TO DISPLAYING SPEED.

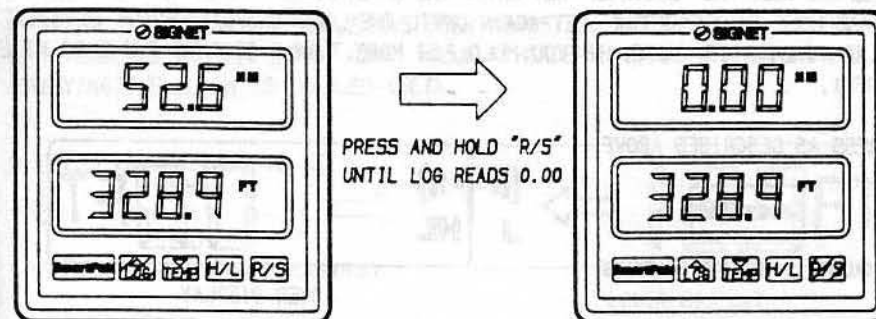


DISPLAYING LOG

4.1 NORMAL OPERATION MODE (CONT)

TO RESET LOG

THE LOG CAN BE RESET TO ZERO BY PRESSING AND HOLDING THE "R/S" (RESET) KEY FOR 1 TO 2 SECONDS WHEN LOG IS BEING DISPLAYED.

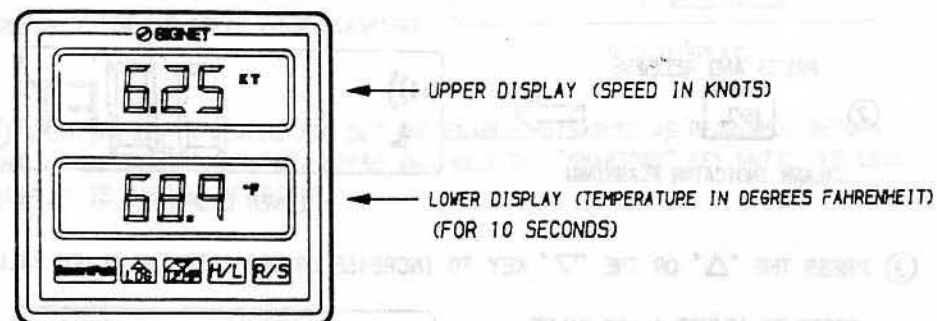


DISPLAYING LOG

RESETTING LOG

TO DISPLAY WATER TEMPERATURE

AT ANY TIME THE WATER TEMPERATURE CAN BE DISPLAYED BY PRESSING AND RELEASING THE "TEMP" KEY. THE WATER TEMPERATURE WILL BE DISPLAYED IN DEGREES FAHRENHEIT (°F) FOR 10 SECONDS ON THE LOWER DISPLAY THEN REVERTS TO DISPLAYING DEPTH.



DISPLAYING WATER TEMPERATURE

TO DISABLE ALARM SOUND

TO DISABLE THE ALARM SOUND PRESS AND HOLD THE "R/S" KEY FOR 2-3 SECONDS UNTIL THE ALARM SOUND STOPS. ALARM SOUND WILL BE DISABLED UNTIL THE ALARM CONDITION IS RECYCLED (ALARM IS STILL ENABLED).

TO TURN INSTRUMENT OFF

PRESS AND HOLD THE "SMARTPAK" KEY (FOR APPROXIMATELY 6 SECONDS) UNTIL THE SL80 DISPLAYS TURN OFF.

4.2 SETTING DEPTH ALARMS

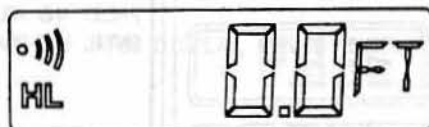
THE TWO DEPTH ALARMS, LO (L) INDICATING A DEPTH LESS THAN SET DEPTH VALUE AND HI (H) INDICATING A DEPTH GREATER THAN THE SET DEPTH VALUE CAN BE SET AS SHOWN BELOW (FROM NORMAL VIEWING MODE):

- 1 PRESS AND HOLD THE "SMARTPAK" KEY UNTIL THE UPPER DISPLAY FLASHES, THEN RELEASE. PRESS AND HOLD THE "SMARTPAK" KEY AGAIN UNTIL THE LOWER DISPLAY BEGINS TO FLASH THE ALARM INDICATOR (NOTE: IF YOU HOLD FOR MORE THAN 6 SECONDS THE SL80 WILL TURN OFF).

PRESS AS DESCRIBED ABOVE



(ALARM INDICATOR FLASHING)



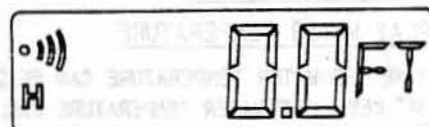
LOWER DISPLAY

- 2 PRESS AND RELEASE THE "H/L" KEY TO SELECT BETWEEN HI (H) AND LO (L) ALARMS.

PRESS AND RELEASE



(ALARM INDICATOR FLASHING)

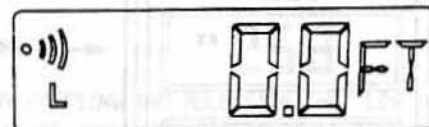


LOWER DISPLAY

PRESS AND RELEASE



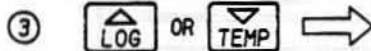
(ALARM INDICATOR FLASHING)



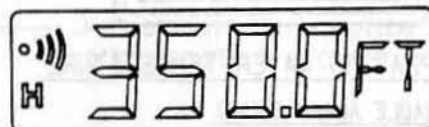
LOWER DISPLAY

- 3 PRESS THE "▲" OR THE "▼" KEY TO INCREASE OR DECREASE THE ALARM VALUE.

PRESS TO ADJUST ALARM VALUE

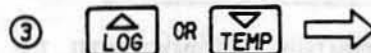


(ALARM INDICATOR AND DEPTH VALUE FLASHING)

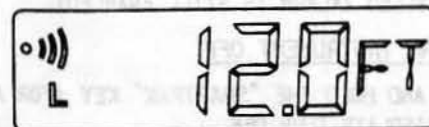


LOWER DISPLAY

PRESS TO ADJUST ALARM VALUE



(ALARM INDICATOR AND DEPTH VALUE FLASHING)



LOWER DISPLAY

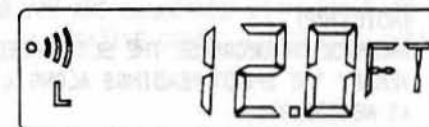
4.2 SETTING DEPTH ALARMS (CONT)

- 4 AFTER THE NEW ALARM VALUE HAS BEEN ADJUSTED, PRESS THE "R/S" KEY TO SET THAT VALUE AS THE NEW DEPTH ALARM VALUE. THE DEPTH VALUE WILL NO LONGER FLASH, VERIFYING THE ALARM IS ENABLED (SET).

PRESS AND RELEASE TO SET



(ALARM INDICATOR ONLY FLASHING)



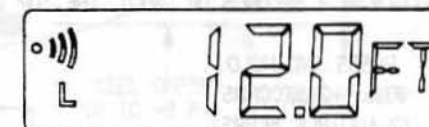
LOWER DISPLAY

- 5 TO CANCEL THE ALARM, PRESS AND HOLD THE "R/S" KEY FOR AT LEAST 3 SECONDS

PRESS AND HOLD UNTIL
ALARM VALUE FLASHES



(ALARM INDICATOR AND DEPTH VALUE FLASHING)



LOWER DISPLAY

- 6 WHEN THE DEPTH ALARMS ARE SET AND ENABLED/DISABLED AS REQUIRED, RETURN TO THE NORMAL OPERATION MODE. PRESS AND HOLD THE "SMARTPAK" KEY UNTIL THE LOWER DISPLAY IS DISPLAYING DEPTH.

NOTE: TO SET ANCHOR WATCH (DEVIATION FROM A GIVEN DEPTH VALUE) SET THE LO (L) ALARM ABOVE (SHALLOWER THAN) THE KNOWN DEPTH AND SET THE HI (H) ALARM BELOW (DEEPER THAN) THE KNOWN DEPTH. (EXAMPLE: ANCHORED IN 50.0 FEET OF WATER, SET THE LO ALARM TO 45.0 FEET AND THE HI ALARM TO 55.0 FEET. THE ALARM WILL SOUND GIVEN ANY BOTTOM DEVIATION OF GREATER THAN 5.0 FEET FROM THE KNOWN DEPTH VALUE).

4.3 SPEED/LOG CALIBRATION

THE SIGNET SL80 HAS BEEN FACTORY CALIBRATED TO BE COMPATIBLE WITH THE SIGNET PADDLEWHEEL SENSOR'S INPUT (SEE SPEED SPECIFICATIONS FOR DETAILS). HOWEVER, VARIATIONS CAUSED BY HULL CONFIGURATION AND SENSOR LOCATION MAY CAUSE ERRORS OF UP TO 30% IN THE INDICATED SPEED VALUE, REQUIRING CALIBRATION AFTER THE UNIT IS INSTALLED.

SPEED CALIBRATION IS BEST DONE UNDER POWER ON A CALM DAY IN AN AREA WHERE THERE IS NEGLIGIBLE CURRENT.

1. MOTOR AT A CONSTANT SPEED ON A STEADY COURSE (COMPARE THE SL80 SPEED WITH THE "SOG" OF A LORAN UNIT OR ANY OTHER KNOWN SPEED INDICATOR).
2. INCREASE OR DECREASE THE SL80 SPEED READING TO THE CORRECT VALUE.
3. VERIFY THE SPEED READINGS ALONG A RECIPROCAL COURSE AND ADJUST AS NECESSARY.

THE SPEED CALIBRATION (ADJUSTMENT) IS MADE AS SHOWN:

- ① PRESS AND HOLD THE "SMARTPAK" KEY (1-2 SECONDS WITH 2 AUDIBLE BEEPS) UNTIL THE UPPER DISPLAY BEGINS TO FLASH (NOTE: IF YOU HOLD LONGER THAN 2 SECONDS THE LOWER DISPLAY WILL BEGIN FLASHING, IF THIS OCCURS PRESS AND HOLD THE "SMARTPAK" KEY AGAIN FOR 4 SECONDS OR UNTIL THE TOP DISPLAY BEGINS TO FLASH).

PRESS AND HOLD
FOR 1-2 SECONDS
(2 AUDIBLE BEEPS)

①

SmartPak



6.25KT

(SPEED VALUE FLASHING)

UPPER DISPLAY

- ② PRESS THE "△" OR THE "▽" KEY TO ADJUST THE SPEED TO THE CORRECT VALUE (RANGE= ±60% FROM THE FACTORY SETTING).

PRESS TO ADJUST SPEED VALUE

②

LOG OR TEMP



6.00KT

(SPEED VALUE FLASHING)

UPPER DISPLAY

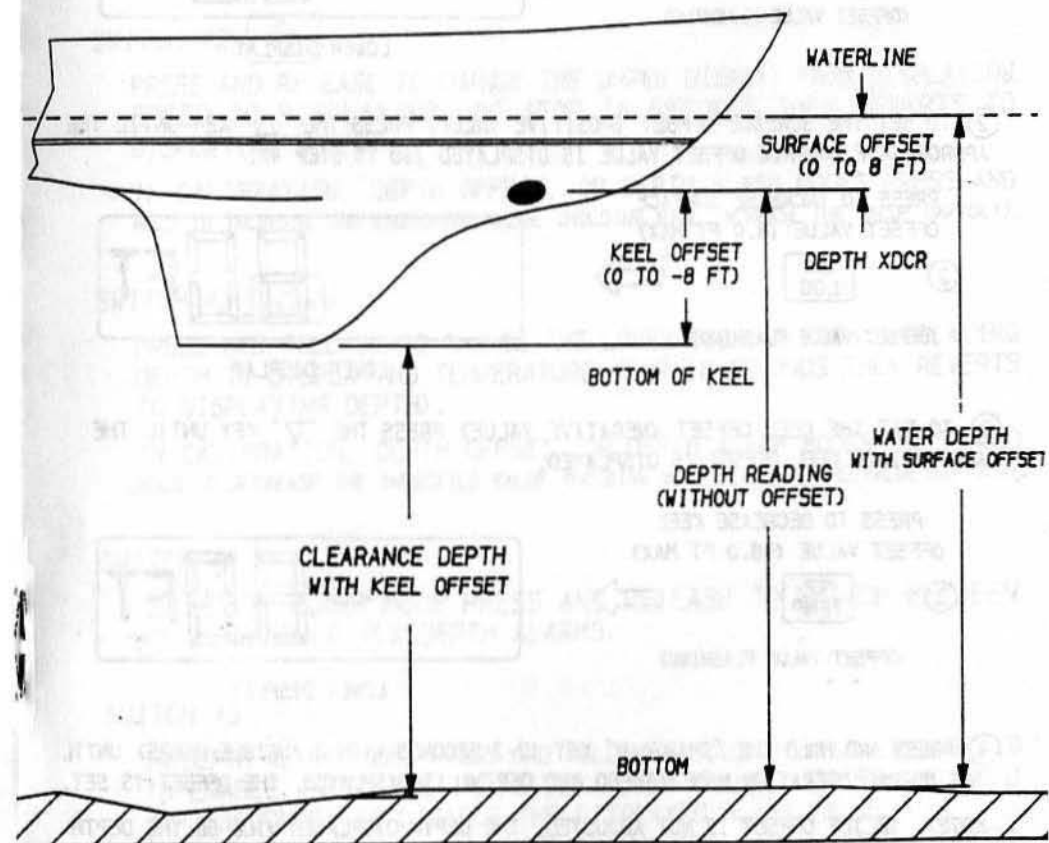
- ③ PRESS AND HOLD THE "SMARTPAK" KEY UNTIL THE NORMAL OPERATION MODE IS DISPLAYED. CALIBRATION IS COMPLETE.

4.4 SETTING THE SURFACE OR KEEL OFFSET

THE SIGNET SL80 IS CAPABLE OF RETAINING A DEPTH OFFSET LENGTH (THE LENGTH IN FEET FROM THE BOTTOM OF THE DEPTH TRANSDUCER TO THE BOAT'S WATERLINE OR TO THE LOWEST POINT ON THE KEEL). THE SURFACE OFFSET SHOULD BE SET IF YOUR BOAT DRAWS MORE THAN 1 FOOT OF WATER AND YOU ARE CONCERNED WITH ACCURATE WATER DEPTH (NOT DEPTH FROM THE BOTTOM OF THE TRANSDUCER) READINGS IN SHALLOW WATER.

A POSITIVE OFFSET IS REQUIRED FOR SURFACE OFFSET, WHICH GIVES WATER DEPTH (GREATER THAN DEPTH BELOW THE TRANSDUCER).

THE KEEL OFFSET SHOULD BE SET IF YOUR KEEL IS SIGNIFICANTLY BELOW THE BOTTOM SURFACE OF THE DEPTH TRANSDUCER AND YOU ARE CONCERNED WITH ACCURATE DEPTH READINGS BELOW THE KEEL (CLEARANCE). A NEGATIVE OFFSET GIVES KEEL CLEARANCE DEPTH.

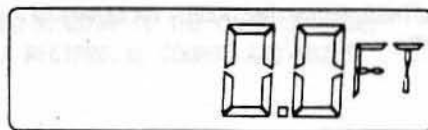


4.4 SETTING SURFACE OR KEEL OFFSET (CONT)

TO SET THE DEPTH OFFSET VALUE,

- 1 PRESS AND HOLD THE "SMARTPAK" KEY (2-3 SECONDS WITH 3 AUDIBLE BEEPS) UNTIL THE LOWER DISPLAY FLASHES (X.X FT WITH NO ALARM INDICATOR AT THE LEFT).
NOTE: IF YOU HOLD LONGER THAN 3 SECONDS THE DEPTH ALARM DISPLAY WILL APPEAR (FLASHING ALARM INDICATOR), IF THIS OCCURS PRESS AND HOLD THE "SMARTPAK" KEY AGAIN FOR 4 SECONDS OR UNTIL THE LOWER DISPLAY BEGINS FLASHING X.X FT.

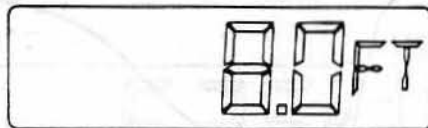
PRESS AND HOLD FOR 2-3 SECONDS
(3 AUDIBLE BEEPS)



LOWER DISPLAY

- 2 TO SET THE SURFACE OFFSET (POSITIVE VALUE) PRESS THE "Δ" KEY UNTIL THE APPROPRIATE SURFACE OFFSET VALUE IS DISPLAYED (GO TO STEP 4).

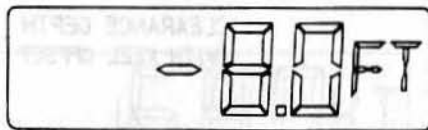
PRESS TO INCREASE SURFACE
OFFSET VALUE (8.0 FT MAX)



LOWER DISPLAY

- 3 TO SET THE KEEL OFFSET (NEGATIVE VALUE) PRESS THE "▽" KEY UNTIL THE APPROPRIATE KEEL OFFSET IS DISPLAYED.

PRESS TO DECREASE KEEL
OFFSET VALUE (-8.0 FT MAX)




LOWER DISPLAY

- 4 PRESS AND HOLD THE "SMARTPAK" KEY (2-3 SECONDS WITH 3 AUDIBLE BEEPS) UNTIL THE NORMAL OPERATION MODE (SPEED AND DEPTH) IS DISPLAYED. THE OFFSET IS SET.

NOTE: IF THE OFFSET IS NOT ADJUSTED, THE DEPTH DISPLAYED WILL BE THE DEPTH BELOW THE BOTTOM OF THE DEPTH TRANSDUCER (FACTORY OFFSET IS 0.0 FT).

5.1 SWITCH OPERATIONS

SWITCH #1 :

PRESS TO TURN POWER ON

FIRST PRESS TURNS LIGHTS ON OR OFF


FIRST PRESS AND HOLD (1-2 SECONDS) GOES TO SPEED CALIBRATION MODE

SECOND PRESS AND HOLD (1-2 SECONDS) GOES TO DEPTH OFFSET MODE

THIRD PRESS AND HOLD (1-2 SECONDS) GOES TO DEPTH ALARM MODE


FOURTH PRESS AND HOLD (1-2 SECONDS) RETURNS TO NORMAL OPERATION MODE

NOTE: AT ANY TIME A PRESS AND HOLD OF THE "SMARTPAK" KEY FOR MORE THAN 6 SECONDS WILL TURN THE SL80 OFF.

SWITCH #2 :


PRESS AND RELEASE TO CHANGE THE UPPER DISPLAY FROM DISPLAYING SPEED TO DISPLAYING LOG (FOR 10 SECONDS THEN REVERTS TO DISPLAYING SPEED).

IN CALIBRATION, DEPTH OFFSET, OR DEPTH ALARM MODES PRESS AND HOLD TO INCREASE THE INDICATED VALUE (HOLDING WILL INCREASE THE VALUE RAPIDLY).


SWITCH #3 :

PRESS AND RELEASE TO CHANGE THE LOWER DISPLAY FROM DISPLAYING DEPTH TO DISPLAYING TEMPERATURE (FOR 10 SECONDS THEN REVERTS TO DISPLAYING DEPTH).

IN CALIBRATION, DEPTH OFFSET, OR DEPTH ALARM MODES PRESS AND HOLD TO DECREASE THE INDICATED VALUE (HOLDING WILL DECREASE THE VALUE RAPIDLY).

SWITCH #4 :

IN DEPTH ALARM MODE PRESS AND RELEASE TO SWITCH BETWEEN HI (H) AND LO (L) DEPTH ALARMS.

SWITCH #5 :

IN DEPTH ALARM MODE, PRESS AND HOLD AFTER ALARM VALUE IS ADJUSTED TO ENABLE (SET) THE INDICATED ALARM VALUE. PRESS AND HOLD (1-2 SECONDS) TO DISABLE THE DISPLAYED ALARM VALUE.

NOTE: A FLASHING DEPTH ALARM VALUE INDICATES THE ALARM IS UNSET (DISABLED).

WHILE LOG IS BEING DISPLAYED PRESS AND HOLD FOR 1-2 SECONDS TO RESET THE LOG TO ZERO.

TO DISABLE THE ALARM SOUND, PRESS AND HOLD UNTIL SOUND STOPS.

5.2 QUICK REFERENCE OPERATION

DISABLING THE ALARM SOUND

PRESS AND HOLD THE "R/S" KEY UNTIL THE ALARM SOUND STOPS.

DISABLING THE DEPTH ALARMS

1. ENTER DEPTH ALARM MODE (PRESS AND HOLD THE "SMARTPAK" KEY FOR 2-3 SECONDS WITH 4 AUDIBLE BEEPS), THE ALARM INDICATOR WILL FLASH.
2. PRESS THE "H/L" KEY TO SELECT HI (H) OR LO (L) ALARM.
3. PRESS THE "P/S" KEY UNTIL THE ALARM VALUE FLASHES (INDICATING THE ALARM IS DISABLED).
4. PRESS AND HOLD THE "SMARTPAK" KEY UNTIL NORMAL OPERATION MODE IS DISPLAYED.

RESETTING THE DEPTH ALARMS

1. ENTER DEPTH ALARM MODE (PRESS AND HOLD THE "SMARTPAK" KEY UNTIL THE UPPER DISPLAY FLASHES THEN RELEASE. PRESS AND HOLD THE "SMARTPAK" AGAIN UNTIL THE ALARM INDICATOR OF THE LOWER DISPLAY BEGINS TO FLASH).
2. PRESS THE "H/L" KEY TO SELECT HI (H) OR LO (L) ALARM.
3. PRESS THE "Δ" OR THE "▽" KEY TO INCREASE OR DECREASE THE ALARM VALUE.
4. PRESS THE "R/S" KEY TO SET THIS VALUE (ALARM VALUE STOPS FLASHING).
5. PRESS AND HOLD THE "SMARTPAK" UNTIL NORMAL OPERATION MODE IS DISPLAYED.

SETTING THE SURFACE OR KEEL OFFSET

1. ENTER DEPTH OFFSET MODE (PRESS AND HOLD "SMARTPAK" KEY 2-3 SECONDS WITH 3 AUDIBLE BEEPS), THE OFFSET VALUE WILL FLASH.
2. PRESS THE "Δ" OR THE "▽" KEY TO INCREASE OR DECREASE THE OFFSET VALUE.
3. PRESS AND HOLD THE "SMARTPAK" UNTIL NORMAL OPERATION MODE IS DISPLAYED.

CALIBRATING SPEED/LOG

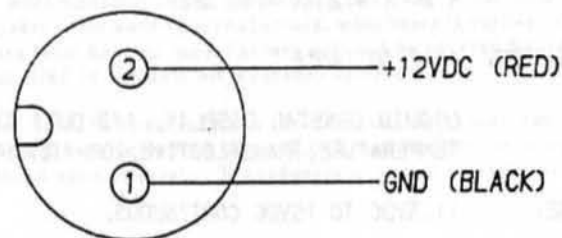
1. ENTER SPEED CALIBRATION MODE (PRESS AND HOLD THE "SMARTPAK" KEY 1-2 SECONDS WITH 2 AUDIBLE BEEPS), THE UPPER DISPLAY WILL FLASH SPEED.
2. PRESS THE "Δ" OR THE "▽" KEY TO INCREASE OR DECREASE THE SPEED VALUE.
3. PRESS AND HOLD THE "SMARTPAK" UNTIL NORMAL OPERATION MODE IS DISPLAYED.

TURNING THE SL80 OFF

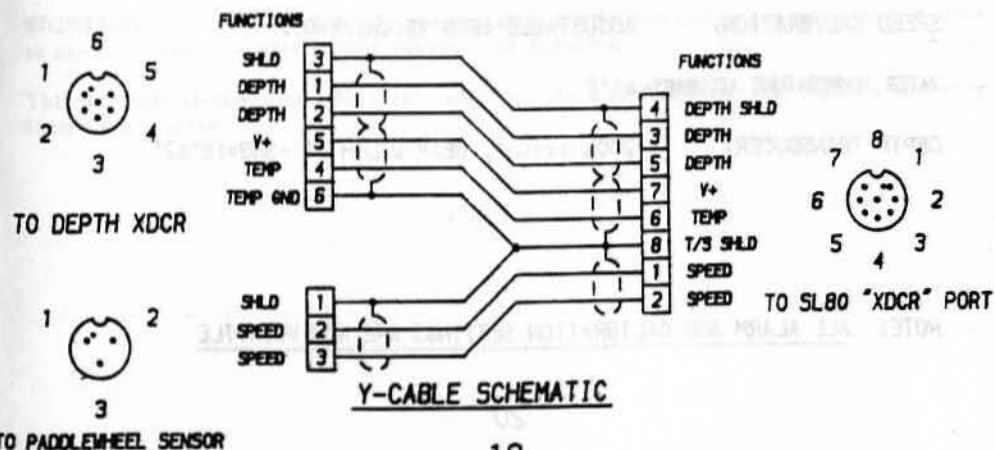
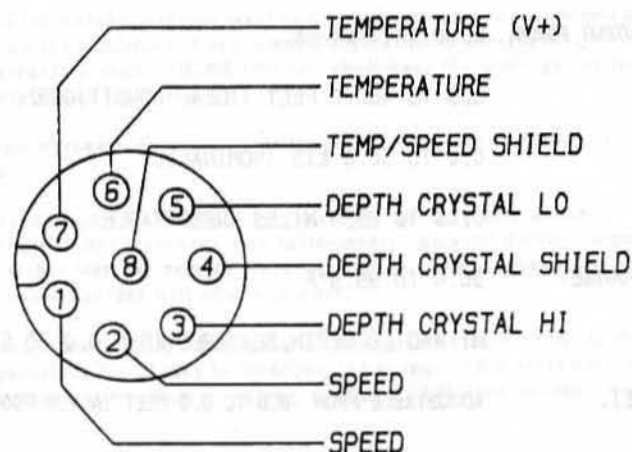
PRES AND HOLD THE "SMARTPAK" UNTIL THE INSTRUMENT TURNS OFF.

5.3 PORT DIAGRAMS

"PWR" PORT



"XDCR" PORT



6.0 SPECIFICATIONS

CONSTRUCTION:	UV PROTECTED ABS ENCLOSURE WITH SOFT SILICONE SEAL.
DIMENSIONS:	4.2" X 4.2" X 1.5" DEEP
OPERATING TEMPERATURE:	10°F TO 140°F
DISPLAY TYPE:	LIQUID CRYSTAL DISPLAY, 1/3 DUTY CYCLE, HIGH TEMPERATURE, TRANSFLECTIVE, TOP-VIEWING, BACKLIT.
OPERATING VOLTAGE:	11.5VDC TO 15VDC CONTINUOUS.
POWER DRAIN:	LESS THAN 250mA WITHOUT LIGHTS LESS THAN 300mA WITH LIGHTS
DEPTHSOUNDER OUTPUT POWER:	60.0 WATT pK-pK
DEPTH RANGE:	3.5 TO 400.0 FEET (IDEAL CONDITIONS).
SPEED RANGE:	0.0 TO 50.0 KTS (NOMINAL).
LOG RANGE:	0.00 TO 9999 MILES (RESETTABLE).
TEMPERATURE RANGE:	30.0 TO 99.9°F
ALARMS:	HI AND LO DEPTH, SETTABLE FROM 0.0 TO 500.0 FEET
SURFACE OFFSET:	ADJUSTABLE FROM -8.0 TO 8.0 FEET IN 1.0 FOOT INCREMENTS
ANCHOR WATCH:	SETTABLE USING HI AND LO DEPTH ALARMS.
SPEED CALIBRATION:	ADJUSTABLE $\pm 60\%$ (8.0Hz/KNOT)
WATER TEMPERATURE ACCURACY:	$\pm 1^\circ\text{F}$
DEPTH TRANSDUCER:	200kHz \pm 4kHz, BEAM WIDTH AT $-3\text{dB}=18^\circ\pm 2^\circ$

NOTE: ALL ALARM AND CALIBRATION SETTINGS ARE NON VOLATILE

SIGNETMARINE LIMITED TWO YEAR WARRANTY

SIGNETMarine's Limited Two Year Warranty warrants its instruments to be free from defect in material and workmanship under normal use two years from date of purchase by initial owner, or three years from date of manufacture, whichever is earlier. Products not purchased within three years from date of manufacture will not be covered by warranty. Proof of date of purchase is required to validate all warranty service.

Instruments which prove to be defective in the first year of the warranty period will be repaired or replaced free of charge including labor, F.O.B. our factory, or designated Service Centers (addresses furnished upon request). Transducers or cables are not covered after installation.

The limited warranty for the second year of the warranty period covers only non-moving parts, such as electrical components. Meter movements will not be covered after one year. All units qualifying for warranty repair after one year are subject to a service charge of \$20.00.

Items returned for warranty repair must be prepaid and insured for shipment. Warranty claims are processed on the condition that prompt notification of a defect is given to SIGNETMarine within the warranty period. SIGNETMarine shall have the sole right to determine whether in fact a warranty situation exists.

SIGNETMarine warranty does not cover travel time, mileage expenses, removal, reinstallation or calibration.

This warranty does not cover defects caused by installation, abuse, or electrical damage. SIGNETMarine will not warranty any instruments damaged during shipment to the factory which arrive either less the case or were improperly packed. Repair attempts by other than authorized Service Centers will void warranty.

SIGNETMarine is continually making design changes and improvements that adapt to original circuit configuration. These may be incorporated as required in older units on a minimal charge basis. Pre-authorization must be given by SIGNETMarine before any field upgrades are undertaken.

CONSEQUENTIAL DAMAGES

SIGNETMarine shall not be liable for special consequential damages of any nature with respect to any merchandise or service sold, rendered, or delivered.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

7.0 TROUBLE SHOOTING		
SYMPTOM	CAUSES	REMEDIES
NO DISPLAY	NO DC POWER TO THE SL80 FUSE BLOWN IN THE POWER CABLE CIRCUIT BREAKER BLOWN	CHECK POWER SOURCE REPLACE 1 AMP FUSE 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/PIRES ETC)
SL80 FALLS WHEN ENGINE IS RUNNING	ALTERNATOR NOISE, OTHER ENGINE NOISE CONDUCTED INTERFERENCE ON THE +12VDC LINE	ALTERNATOR NOISE SUPPRESSION FILTERS RELOCATE SL80 SOURCE (SEPARATE FROM ENGINE)
ERRONEOUS DEPTH READINGS	BAD INSTALLATION (CAVITATION OR AERATION) DAMAGED TRANSDUCER	CHECK INSTALLATION (RELOCATED) VERIFY SURFACE OFFSET SETTING
ERRONEOUS TEMPERATURE READINGS	POOR LOCATION OUT OF TEMPERATURE RANGE DAMAGED TRANSDUCER	RELOCATE AWAY FROM HEAT SOURCES
ERRONEOUS SPEED READINGS	IMPROPER CALIBRATION BAD INSTALLATION DAMAGED OR FOLDED ROTOR	DISCONNECT POWER SOURCE AND RECALIBRATE CHECK INSTALLATION CLEAN ROTOR ASSEMBLY

8.1 DEPTH TRANSDUCER INSTALLATION, FLUSH (1-2400.100)

CHOOSING A PROPER LOCATION

- Mount the transducer as near as possible to the hull centerline to insure contact with the water at all times. (refer to Fig.4).
- Mount the transducer at least 18" fore of the keel (sailboat) or the propellor (powerboat) (refer to Figs. 1 & 2).
- On sailboat and powerboat displacement hulls the transducer should be mounted midship and fore. Verify transducer is submerged during normal boat attitudes, motions, and heel angles.
- On planing hulls the transducer should be mounted well aft to insure that the transducer is submerged at higher boat speeds.
- The transducer should be oriented vertically (within 10 degrees) with the water to yield a vertically directed acoustic beam.

- Provide a clearance radius of 5" inside the hull for transducer installation and periodic maintenance.
- Mount the transducer within 35' of the indicator or processing unit, shielded cable should not be spliced or extended.
- Do not position the depth transducer directly behind a Paddlewheel sensor, turbulence created by the Paddlewheel rotation will adversely affect the depth Xdcr at high speeds.
- Do not position the transducer Aft of protruding fittings or vents to avoid turbulence.

INSTALLING THE FLUSH TRANSDUCER

1. After choosing a proper location, drill a 3/8" (.38") pilot hole through 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" (2.50") countersink to fit the transducer flange.
4. Apply a generous amount of bedding compound to the inner surface of the transducer flange. Use a polysulphide or polyurethane compound; do not use a silicone seal. Insert the transducer through the hole from the outside. Make sure the flange is flush with hull underside.
5. From inside the hull, install the nut on the transducer. 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).
7. Route the cable to the instrument, keep the cable clear of ignition, tachometer, alternator or other sources of electrical interference. Connector removal or cable splicing voids transducer warranty.

8.1 FLUSH TRANSDUCER INSTALLATION

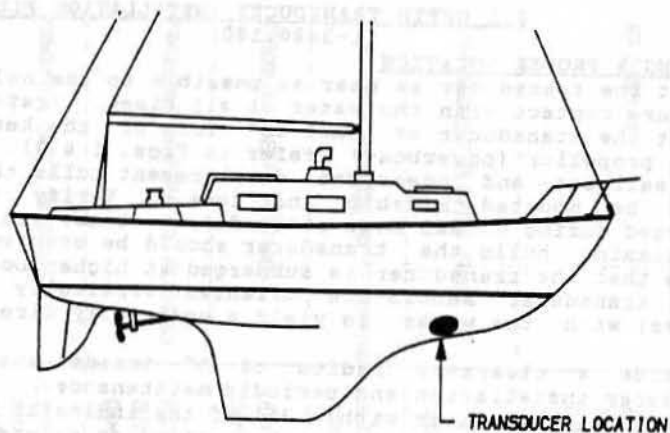


FIG. 1

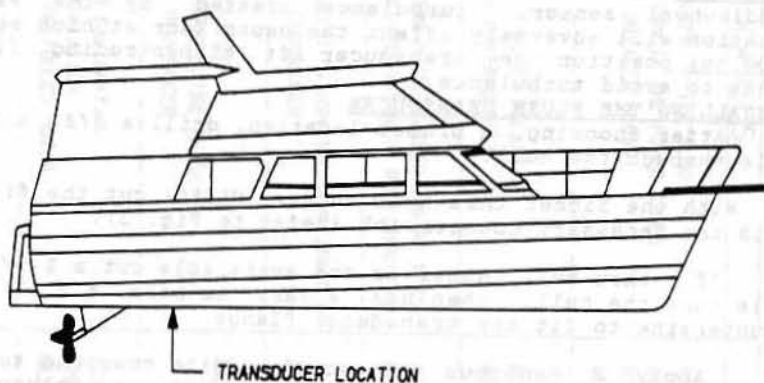


FIG. 2

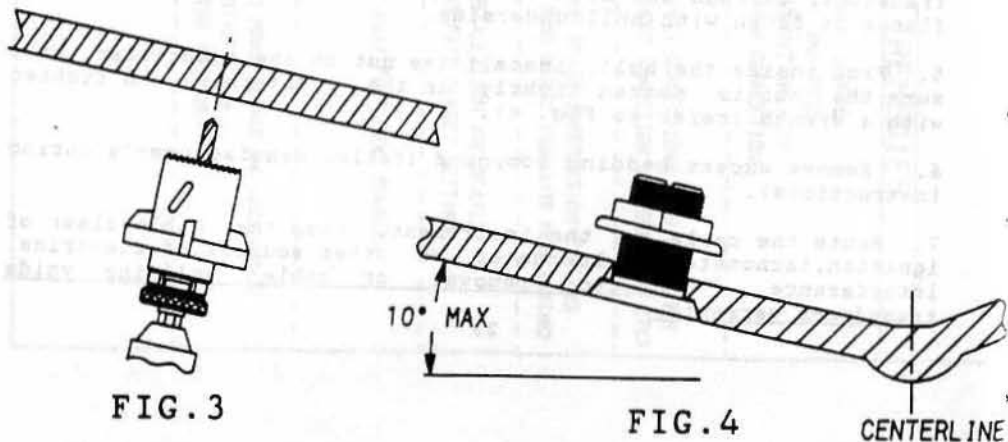


FIG. 3

FIG. 4

CENTERLINE

8.2 DEPTH TRANSDUCER INSTALLATION, SMALL BRASS (1-2402.100)

CHOOSING A PROPER LOCATION

- Mount the transducer as near as possible to the hull centerline to insure contact with the water at all times.
- Mount the transducer at least 18" fore of the keel (sailboat) or the propeller (powerboat) (refer to Figs. 1 & 2).
- On sailboat and powerboat displacement hulls the transducer should be mounted midship and fore. Verify the transducer is submerged under normal boat attitudes, motions, and heel angles.
- On planing hulls the transducer should be mounted well Aft to insure the transducer is submerged at higher boat speeds.
- The transducer should be oriented vertically (within 10 degrees) with the water to yield a vertically directed acoustic beam.
- Provide a clearance radius of 5" inside the hull for transducer installation and periodic maintenance.
- Mount the transducer within 35' of the indicator or processing unit, shielded cable should not be spliced or extended.
- Allow an area large enough around the transducer housing for fairing the transducer (fairing not supplied from Signet).
- Do not position the depth transducer directly behind a Paddlewheel sensor, turbulence created by the Paddlewheel rotation will adversely affect the depth transducer at high speeds.
- Do not position the transducer Aft of protruding fittings or vents to avoid turbulence.

INSTALLING THE SMALL BRASS TRANSDUCER

1. Drill a 3/8" (.38") pilot hole through the hull at the position you have selected (vertical if custom fairing is used, perpendicular to the hull if deadrise angle is less than 10 degrees).
2. Cut a 7/8" (.88") hole through the hull.
3. Custom fairing may be required for steep deadrise angles (see Fig. 3) to assure vertical beam direction and minimize drag.
4. Apply a generous amount of bedding compound to the inner surface of the transducer flange. Use a polysulphide or polyurethane compound; do not use a silicone seal. Insert the transducer stem through the hull (with fairing if required).
5. From inside the hull install the nut on the transducer (with fairing) and tighten firmly with a wrench (refer to Fig. 3).
6. Wipe off any excess bedding compound.
7. Route the cable to the instrument, keep the cable clear of ignition, tachometer, alternator or other sources of electrical interference. Connector removal or cable splicing voids transducer warranty.

8.2 SMALL BRONZE TRANSDUCER INSTALLATION

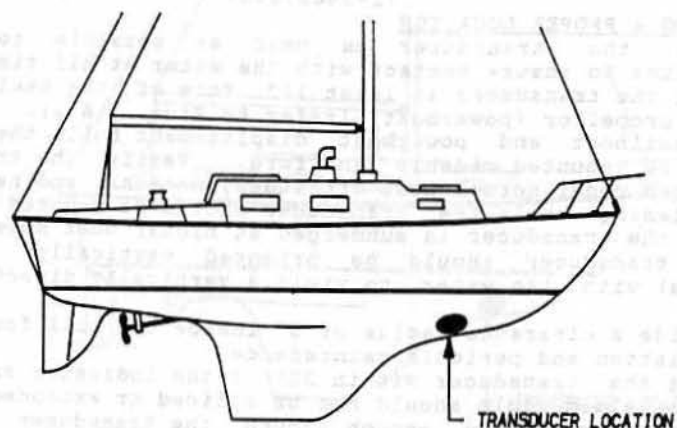


FIG. 1

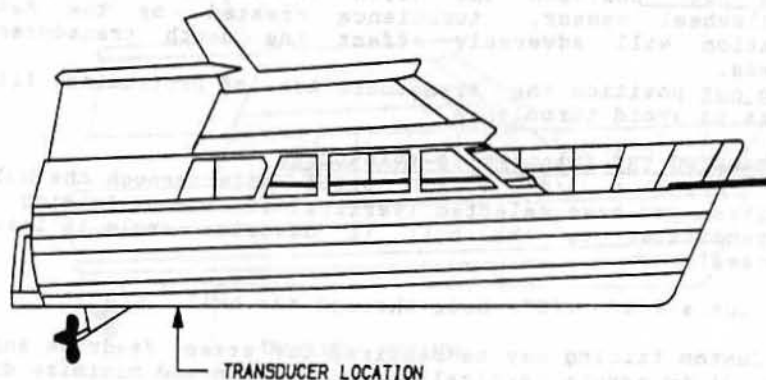


FIG. 2

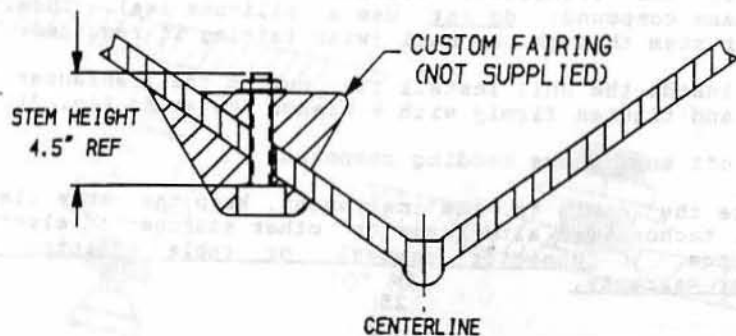


FIG. 3
(35° DEAD-RISE ANGLE SHOWN)

8.3 DEPTH TRANSDUCER INSTALLATION, TRANSON MOUNT (2-2400.100)

CHOOSING A PROPER LOCATION

Best operation is usually achieved when the transducer is mounted close to the boat's centerline. Centerline installation assures minimum potential aeration over the acoustic window of the transducer. On twin drive installations, it is best to install between the drives. On single drive installations it is recommended that the transducer be mounted on the side of the boat where the propeller blade is rotating upwards. If possible, the transducer should not be mounted directly behind any strakes, ribs, intakes and outlets, or any protrusion which may cause turbulence or cavitation (on slower heavier boats, good results can be achieved further from the boat centerline).

BRACKET INSTALLATION

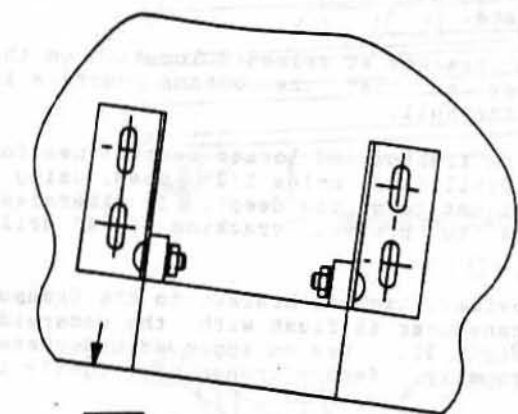
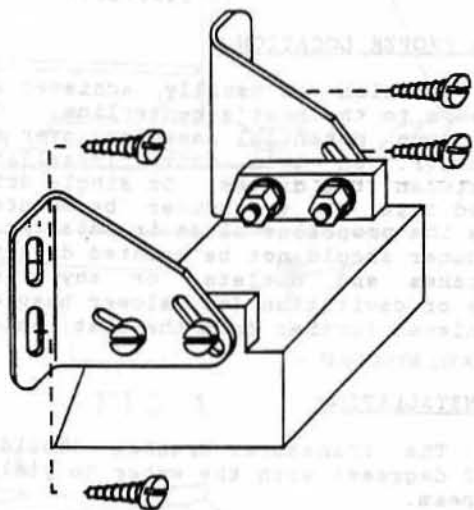
Note: The transducer bracket should be oriented vertically (within 10 degrees) with the water to yield a vertically directed acoustic beam.

1. Attach the transducer to the bracket with the stainless steel hardware provided (refer to Fig. 1). Hand tighten screws so that the transducer remains in place.
2. Place transducer and bracket at selected location on the transom. Align the transducer so that the bottom surface is flush with the underside of the hull.
3. Mark outline of slots on transom and locate centerlines for screws (refer to Fig. 2). Drill four holes 1/2" deep, using a #28 or 9/64" drill (careful not to go too deep). In fiberglass hulls chamfer the pilot holes to prevent cracking (1/4" drill 1/16" deep).
4. Using tapping screws provided, tighten bracket to the transom so that the bottom of the transducer is flush with the underside of the boat (refer to Fig. 3). Use an approved underwater sealant to bed the screws properly. Secure transducer tightly to bracket.
5. Route the cable to the instrument, keep the cable clear of ignition, tachometer, alternator or other sources of electrical interference. Connector removal or cable splicing voids transducer warranty.

Note: Some hulls are specifically designed to direct air under the hull, moving the transducer away from the centerline may improve performance.

8.3 TRANSOM MOUNT TRANSDUCER INSTALLATION

FIG. 1
BRACKET ASSEMBLY



10°
MAX

FIG. 2
LOCATING HOLES

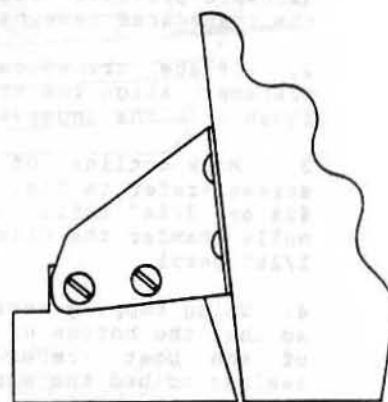


FIG. 3
TRANSDUCER LOCATION

NOTE: IF THE VESSEL IS KEPT IN SALT WATER FOULING MAY OCCUR, IF FOULING OCCURS, USE A STIFF BRUSH OR PUTTY KNIFE TO REMOVE GROWTH. WET SANDING OF TRANSDUCER BOTTOM IS PERMISSIBLE WITH #220 OR FINER GRADE WET OR DRY SAND-PAPER.

8.4 DEPTH TRANSDUCER INSTALLATION, BRASS, FAIRED (2-2401.100)

CHOOSING A PROPER LOCATION

- Mount the transducer as near as possible to the hull centerline to insure contact with the water at all times.
- Mount the transducer at least 18" fore of the keel (sailboat) or the propellor (powerboat) (refer to Figs. 1 & 2).
- On sailboat and powerboat displacement hulls the transducer should be mounted midship and fore. Verify the transducer is submerged under normal boat attitudes, motions, and heel angles.
- On planing hulls the transducer should be mounted well Aft to insure the transducer is submerged at higher boat speeds.
- The transducer should be oriented vertically (within 10 degrees) with the water to yield a vertically directed acoustic beam.
- Provide a clearance radius of 5" inside the hull for transducer installation and periodic maintenance.
- Mount the transducer within 35' of the indicator or processing unit, shielded cable should not be spliced or extended.
- Do not position the depth transducer directly behind a Paddlewheel sensor, turbulence created by the Paddlewheel rotation will adversely affect the depth transducer at high speeds.
- Do not position the transducer Aft of protruding fittings or vents to avoid turbulence.

INSTALLING THE TRANSDUCER

1. Drill a 3/8" (.38") pilot hole through the hull at the position you have selected.
2. Cut a 7/8" (.88") hole through the hull.
3. Apply a generous amount of bedding compound to the inner surface of the transducer flange. Use a polysulphide or polyurethane compound; do not use a silicone seal. Insert the transducer stem through the hull with the "v" pointing fore.
4. From inside the hull install the nut on the transducer and tighten firmly with a wrench (refer to Fig. 3).
5. Wipe off any excess bedding compound.
6. Route the cable to the instrument, keep the cable clear of ignition, tachometer, alternator or other sources of electrical interference. Connector removal or cable splicing voids transducer warranty.

