

SL-1

Digital Speed Log

Contains:

- General Information
- Performance Specifications
- Operation
- Installation
- Maintenance
- Drawings
- Parts Lists

Owner's Manual



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Loose illustrations are contained in the pocket in the back cover of the manual.

PERFORMANCE SPECIFICATIONS

Performance specifications are nominal, unless otherwise indicated, and are subject to change without notice.

Speed Range	0 to 60 knots or mph
Accuracy	±10%
Log Mode Range	0 to 999 nautical or statute miles
Elapsed Mode Range	0 to 999 hours
Count Down Settings	5 or 10 minutes
Input Voltage	±13.8 VDC ±20% (12 volt battery system)
Current Drain	
Nominal	50 mA
Max. Brightness	300 mA
Temperature Range	-10° to +50°C
Impeller (supplied)	Through-hull, low drag turbine
Display	0.6 in. liquid crystal display with internal backlight
Dimensions	5 face x 4 body x 4 deep in.
Weight	1 lb

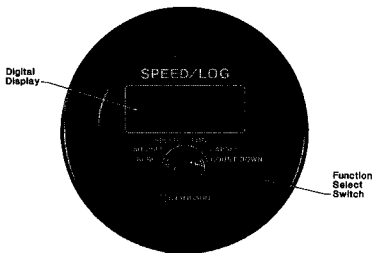


FIGURE 1. SL-1 FRONT PANEL

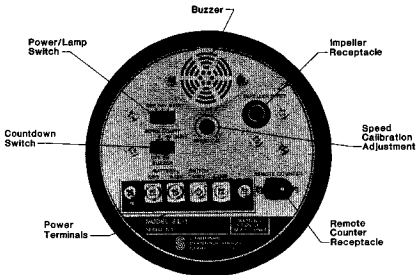


FIGURE 2. SL-1 REAR PANEL

GENERAL INFORMATION

The Standard Communications Corp. (SCC) Model SL-1 is a digital speed log specifically designed for sailboat applications. It mounts easily in a standard four-inch instrument aperture, requires 12 VDC input power, and is supplied with a through-hull turbine impeller. All solid-state, the speed log is controlled by an internal microprocessor, which enables such features:

- Speed display from 0 to 60 knots (or statute miles per hour).
- Automatic decimal display at speeds of less than 10 knots.
- Three timer modes - racing down counter, elapsed time, and total navigation time.
- Log mode which displays distance travelled, from 0 to 999 nautical or statute miles.
- Audible alarm which warns of deviation from a speed pre-set by the operator.
- Large liquid crystal display (LCD) for maximum visibility, even in direct sunlight. Backlit for night use.

This Owner's Operating and Maintenance Manual will assist you in the installation and operation of the SL-1, and provide guidelines for maintenance should it ever be required. We urge you to read this manual carefully to obtain optimum performance from your speed log.

We at SCC thank you for buying Standard, and are sure you will be impressed with the accuracy, reliability, and durability of your Standard Communications equipment for many years to come.

OPERATION

For location of controls described in the following paragraphs, refer to Figures 1 and 2.

1. Speed Reading

To monitor the speed of your vessel, apply power to the unit by sliding the power/lamp switch to the "Day" position (or the "Night" position if you wish to illuminate the display). Set the function select switch to the "Speed" position. The digital display will indicate the speed in knots. For speeds under 10 knots, the display will automatically scale the speed in tenths to provide accurate slow speed measurements.

The SL-1 can be altered to display a miles-per-hour reading rather than a knots reading by adjusting the speed calibration adjustment. A full explanation of this procedure is given in the alignment portion of the maintenance section in this manual.

2. Speed Deviation Alarm

To set the alarm to warn you of deviation in speed, set the countdown switch to the "Buzzer On" position. Set the function select switch from the "Speed" to the "Audible" position when the display reads the desired speed (thus establishing the "pre-set" speed). The buzzer will sound when the actual speed deviates from the pre-set speed (one continuous tone when the actual speed is slower than the pre-set speed; many short tones when the actual speed is faster than the pre-set speed). The buzzer will stop sounding if the actual speed returns to the pre-set speed. The display in this mode is always scaled in tenths.

3. Racing Countdown

To activate the timer mode, set the countdown switch to the desired position (5 minutes with buzzer off, 5 minutes with buzzer on, or 10 minutes with buzzer on).

Set the function select switch to the "Count Down" position. The display will begin at the desired amount of time and count down. If the buzzer is on, it will sound at 3 minutes (3 tones), 2 minutes (2 tones), 1 minute (1 tone), 30 seconds (3 tones), 20 seconds (2 tones), 10 seconds (1 tone), and each of the last 5 seconds (1 tone each). When the timer reaches zero, it will blink a "0:00" display until the function select switch is set to a different position, then begin the countdown again if the switch is set to the "Count Down" position.

4. Distance Log

The log will accumulate distance travelled any time power is applied to the unit by the power/lamp switch. There are two sub-modes within the log mode. The resettable sub-mode begins accumulating distance when the power/lamp switch is turned on. It will continue to do so unless you set the function select switch to the "Reset" position, or allow the racing countdown to countdown to zero; in either of these instances it will reset to zero and begin accumulating again. The accumulative sub-mode also begins accumulating distance when the power/lamp switch is turned on. It will not be reset unless you turn off the main power source for the speed log. (See the installation section for special requirements for this feature.) Both sub-modes stop accumulating distance (but are not reset) when you turn the power/lamp switch to the "Off" position.

The display will indicate the resettable sub-mode distance when the power/lamp switch is in the "Day" or "Night" position, and the accumulative sub-mode distance when the switch is in the "Off" position. The resettable log is displayed in tenths up to 99.9, then whole numbers up to 999, at which time it automatically resets to zero. The accumulative log is always displayed in whole numbers, also from 0 to 999. The unit of measure will be the same as calibrated for the speed (nautical or statute miles).

5. Elapsed Timer

The timer will accumulate time whenever power is applied to the unit by the power/lamp switch. As with the log, there are two sub-modes; resettable and accumulative. These sub-modes operate in the same manner as the distance log sub-modes. Refer back to those paragraphs for details, simply substituting "time" for "distance".

The resettable sub-mode is displayed in hours and minutes up to 9:59, then it automatically reverts to zero. The accumulative sub-mode is displayed in hours only, from 0 to 999.

NOTE: Basically, the accumulative sub-modes of the distance log and elapsed timer serve to measure total distance or time during a trip, in case you switch to other functions during the trip which reset the resettable sub-modes. Keep in mind that although you must turn the power/lamp switch to the "Off" position to display the accumulative sub-mode distance or time, you must switch it back to the "Day" or "Night" position to continue accumulating distance or time.

INSTALLATION

For location of connections described in the following paragraphs, refer to Figures 1 and 2.

1. General

When selecting the location for mounting the speed log, keep in mind that the controls must be accessible to the user, and the electrical connections should be routed to their connections as directly as possible. To preserve the life of the speed log, mount the instrument in a location that avoids direct exposure to water or rain.

2. Mechanical

With the mounting bracket (001V, Figure F) removed from the speed log, insert the unit into a standard 4-inch instrument aperture until the back of the face is flush with the outside mounting wall. Slide the bracket over the body of the speed log, then tighten it with the hex head bolt (002V, Figure F). Secure the bracket to the inside mounting wall with the supplied hardware.

3. Electrical

Connect the power cord to the unit. The black lead connects to the "Battery" terminal marked "Neg" (negative) on the back of the unit, and the red lead connects to the terminal marked "Switch, +12V". Connect the other end of the power cable to a switched 12 volt supply which is active whenever the ignition switch is on. For operation of the display lamp, connect the terminal marked "Lamp" to the "Switch, +12 V" terminal with a jumper.

For display of the accumulative sub-modes of the distance log and the elapsed timer features when the power/lamp is off, connect the "Battery, +12V" to the "Switch, +12V" terminal with a jumper.

Obtain the power from a switched +12V source as directly as possible, avoiding power circuits which share loads with ignition, alternators, radio transmitters, etc. Excessive electrical noise associated with such devices may prevent the speed log from operating properly.

For proper impeller operation, the RCA plug on the end of the impeller cable must be inserted into the impeller receptacle.

4. Impeller

Correct installation of the impeller is essential for optimum operation of the speed log. Select a location for the impeller using the following guidelines:

- a. Mount as close as possible to the centerline to insure contact with water at all times. (However, avoid location at the centerline to prevent damage to the impeller in case of grounding.)
- b. Generally, a location approximately 2/3 aft is best. However, this may vary dependent upon the hull of your boat.

Once a location is established, install the impeller in a thru-hull fashion, insuring that the end marked "Front" is facing the front of the boat. (The impeller need not be installed facing directly downward.) A good underwater sealing compound should be used to secure the impeller and seal all cracks. Take care not to apply sealing compound on the impeller wheel, and insure that the impeller wheel is always free to rotate. See Figure 3 for an impeller installation aid.

IMPELLER PROTECTED BY KEEL

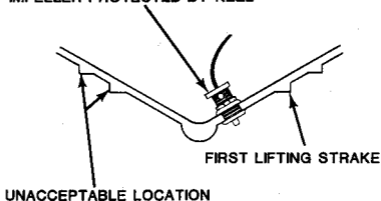


FIGURE 3. IMPELLER INSTALLATION AID

The following steps provide a detailed explanation of impeller installation.

1. Remove the springs from the shaft.
2. Remove the shaft from the impeller housing.
3. Remove the impeller assembly from the impeller housing.
4. Unscrew the stopper from the impeller housing.
5. Place sealing compound around the mounting hole in the hull.
6. Reassemble the impeller as shown in Figure 4, making sure that sealing compound and a washer is on both sides of the hull.
7. If you need to remove the impeller assembly for any reason, use the dummy impeller in its place to seal the hull. To do this, simply remove the springs and shaft from the impeller housing, remove the impeller assembly, and replace it with the dummy impeller. Be sure to reinstall the springs and shaft onto the dummy impeller, thus locking it in place. Refer to Figure F at rear for part numbers.

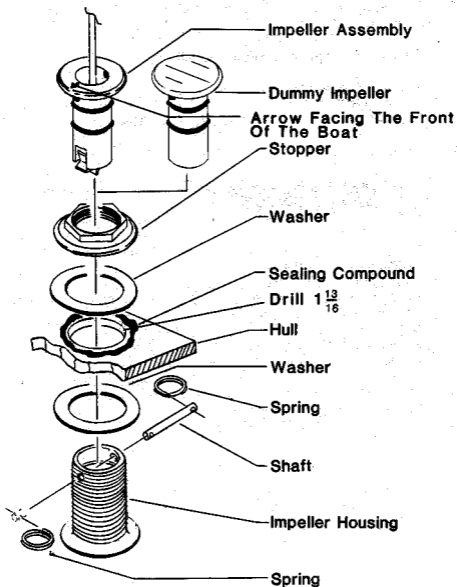


FIGURE 4. SL-1 IMPELLER EXPLODED PARTS VIEW