

Warranty

Each unit is carefully tested and adjusted at the factory before shipping and is warranted for one full year against original defects in materials or workmanship. This warranty does not include damage to the product resulting from accident or misuse.

If the product should become defective within the warranty period, we will repair or replace it free of charge, including free return transportation, provided it is delivered prepaid to the dealer from whom it is originally purchased.

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

CruzPro®



SLT-60



Speed, Log,
Elapsed Time, Race Timer & Water
Temperature Gauge /w NMEA 0183

NMEA Sentences

The SLT60 outputs NMEA 0183 sentences on the serial data line. In the sentences below, *cs is the check sum:

Water Speed: \$VWVHW,,,,,xx.x,N,yyy.y,K*cs

xx.x is the displayed value of speed in knots and yyy.y in kilometers/hr.

Water Temperature: \$VWMTW,xx.x,C*cs

xx.x is the displayed value of temperature in deg. C.

Distance Traveled: \$VWVLW,xxxx,N,yyy.y,N*cs

yyy.y and xxxx are the displayed value of the trip and total logs in nautical miles.

Introduction

The SLT60 provides accurate digital instrumentation for boat speed, distance traveled, water temperature, elapsed time and provides a race timer that can be preset to two different (pre-programmable) values.

The SLT60 displays speed and average speed up to 50.0 Knots (58 M.P.H.) in tenths, very accurate water temperature in degrees F or C in tenths, trip log to 999.9 miles and permanent log to 9,999 miles. The two downcounting race timers are presettable from 1 to 99 minutes each and beep off the minutes and last ten seconds before reaching zero. Five levels of backlighting can be selected and all setup and calibration constants are saved to nonvolatile memory. The SLT60 outputs NMEA 0183 data of boat speed, logs, and water temperature and works on both 12 and 24 VDC systems.

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Other CruzPro Products

- Depthsounders & Speed/Temperature/Log
- DC Volts/Amps/Amp-Hour Monitors
- AC Volts/Amps/Freq/kW Monitor
- LPG/Petrol Gas Detectors/Alarms
- Bilge Water Alarms & Bilge Pump Controllers
- Windlass Controller/Chain Counter
- Digital Fuel Gauge & Fuel Consumption Calculator
- Digital Gauge for Three Tanks /w Separate Alarms
- Smart Alternator Regulator
- Marine Security System
- RPM/Engine Hours/Elapsed Time Gauge
- Digital Oil Pressure Gauge/Alarm
- Digital Engine Water Temperature Gauge/Alarm
- One and Three Bank Digital Volts Gauges
- Digital Amps Gauge
- Digital Clock/Watch/Race Timers/Alarms
- 8 and 16 Amp Light Dimmers / Motor Speed Controller
- Solar Panel Charge Controllers 6/8/9 & 20 Amps
- 4 & 8 Channel NMEA Combiners/RS-232 Convertors
- Engine/Exhaust Temp. Monitor & Digital Pyrometer
- Smart 4 Channel NMEA 0183 Remote Data Repeater

Specifications

Power supply: 9.5 to 33.0 VDC, .018 amps nominal

Size: 2.5" dia X 4.1" deep (61mm x 104 mm).

Operating temperature: 32 to 122 F (0 to 50 C)

Water Temperature Range: 32 to 90 deg F (0 to 32 deg C) in tenths.

Temperature Accuracy: Better than +/- 0.2° F (front panel adjustable)

Speed/Logs Accuracy: Better than 3% (front panel adjustable) from 3 to 50 knots - 20 levels of damping.

Race Timer Accuracy: Better than +/- 0.25 second over 10 a minute period (factory calibrated).

Elapsed Time: Min./Secs. then hrs./Min. to 59:59.

Display: 4 digit LCD, 5 levels of backlighting.

NMEA 0183: \$VWVHW; \$VWMTW; \$VWVLW

Selecting Temperature Units (Deg. C/F)

While viewing water temperature, press both the ▼ and ▲ keys to toggle between **degC** and **degF**.

Calibrating Clock Speed

While viewing Elapsed Time, press and hold both the ▼ and ▲ keys for ten seconds (until you hear a long beep). Use the ▼ and ▲ keys to adjust the displayed value UP and DOWN from 50. Raising the value above 50 makes the clock run faster, lowering the value below 50 makes the clock run slower. Press the + key to save the new value to memory.

through U1 (Knots/N miles), U2 (MPH/Miles) and U3 (KPH/Km).

Selecting Average Speed Damping

Press and hold the ▼ and ▲ keys for ten seconds while viewing Average Speed (until you hear a long beep). Use the ▼ and ▲ keys to adjust the Speed Damping value to any number between 1 and 20. Press the + key to save the new value to memory. The factory default Speed Damping is set to 10.

Calibrating Temperature

To calibrate the temperature value, press and hold the T key for ten seconds while viewing water temperature (until you hear a long beep). Use the ▼ and ▲ keys to adjust the value to read correctly. Press the + key to save the new value to memory.

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Installation

*Before starting the installation, please read this entire section first. Be sure to install the bulkhead gasket before you install the instrument. **Finger tighten the screws that mount the instrument bracket - do not use tools.***

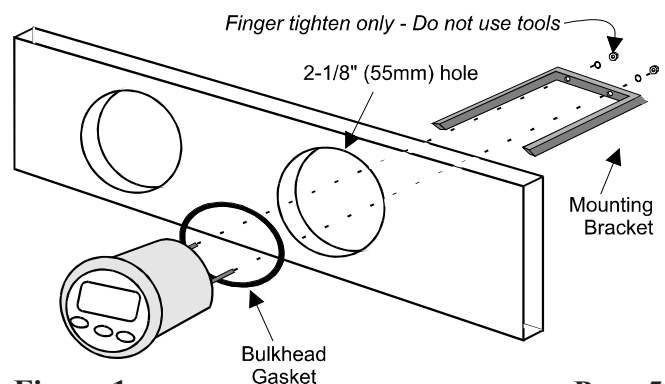


Figure 1

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Display/Start/Setting the Race Timer

The race timer can be started with one of two different values between 1 and 99 minutes (factory preset to 5 and 10 minutes). To start the timer with the first value, press both the ▼ and + keys. The display will start counting down from 5:00, beeping at each minute and for each of the last ten seconds. To start the timer with the second (10 minute) value, press both the + and ▲ keys simultaneously.

If the timer was already running, the current value is displayed. To stop and preset the timer, press the appropriate key combination. To restart the timer, press the appropriate key combination.

The race timer is factory preset to start at either 5 or 10 minutes. To change the start value, press and hold the ▼ and + keys for ten seconds and use the ▼ and ▲ keys to adjust the first start value to any

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- Carefully check all your wiring and mount the SLT60 in the instrument hole. Be sure the bulkhead gasket is in place and use only finger tension to tighten the bracket hold-down nuts. *Do not over-tighten the bracket or you may damage the case - do not use tools to tighten the nuts.*

Transducer Installation

The installation instructions for each type transducer you can fit to the SLT60 is supplied with the transducer. *To save possible expense in hauling/launching your boat, be sure to test the transducer before installation and before launching your boat the first time. Simply spin the paddle wheel while observing boat speed on the instrument display. Also check that the temperature display is working.*

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- Drill **no smaller than** a 2-1/8" (55mm) mounting hole where you desire to mount the instrument.
- Bring the transducer wires, ground, and power lines out of the mounting hole and use a small flat screwdriver to make the connections to the screw terminals on the instrument case back as shown.

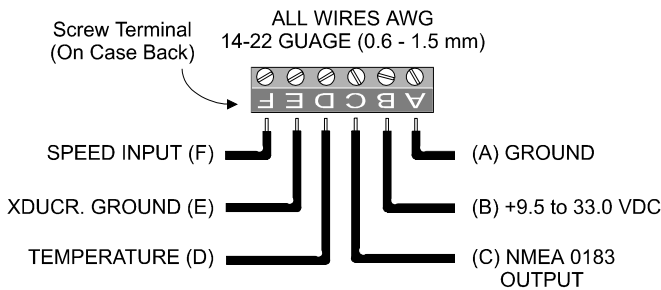


Figure 2

number between 1 and 99 minutes. Press the **+** key to save the new value to memory. To change the second value, press and hold the **+** and **▲** keys for ten seconds and use the **▼** and **▲** keys to adjust the second start value to any number between 1 and 99 minutes. Press the **+** key to save the new value to memory.

Calibrating Speed

To calibrate the displayed speed value, press and hold the **S** key for ten seconds while viewing boat speed (until you hear a long beep). Use the **▼** and **▲** keys to adjust the value to read correctly. Press the **+** key to save the new value to memory.

Selecting Speed & Log Units of Measure

While viewing Speed, Average Speed, Trip Log or Permanent Log, press both the **▼** and **▲** keys to step

Operation

Key Functions

The **S**, **L**, and **T** keys are used to select what to display, set backlight levels, calibrate the instrument, and set/start the race timers. New information is automatically saved to memory.

Backlight Intensity

Press the **+** key for 1/2 second to adjust the backlight level for nighttime viewing. Each time you press the **+** key for 1/2 second, the level will get brighter 1, 2, 3, 4, OFF, 1, 2, ... etc.

Display Speed/Logs/Temperature

Press the **S**, **L** or **T** key to select Speed, Trip Log or Temperature. Press the **L** key a second time to display the permanent Log. The trip log displays with a decimal point such as "82.3" and the perma-

nent log displays to a full mile such as "823" so you always know which log you are viewing.

Display Average Speed

Press and hold the **S** key for 1/2 second to display the average speed (the speed icon will blink). The damping can be set between 1 and 20 (see page 12).

Display Elapsed Time

Press and hold the **T** key for 1/2 second to display the elapsed time since the instrument was turned on. When the elapsed time exceeds 60 minutes, the elapsed time clock displays hours and minutes in place of minutes and seconds.

Resetting the Trip Log/Elapsed Time Clock

While viewing the Trip Log, press and hold the **+** key for 10 seconds (till you hear a long beep) to reset both the trip log and elapsed time clock to zero.