frequently asked questions

Sonic Speed

Installation and Common Problems

- Transducer faces are 'active filled'. Transducer faces should be kept clean with one or two thin coats of antifouling.
- Transducer faces do not face each other squarely. Active areas must face each other within 5° of squareness. It is strongly recommended that the Sonic Speed installation tool (184-00-066) is used for alignment purposes.
- The worst enemy of Sonic systems is 'water aeration'; therefore surfaces must be kept clean and smooth to promote an even water-flow over the boat hull and between the sensor transducers.
- The recommended distance between the transducers is 1 metre (3.3 feet). The closer the transducers are positioned to this distance, the easier it becomes to control the accuracy of the unit.
- Care must be taken when deciding on the cable runs. Running Sonic transducer and Echo Sounder cables together may cause interference and a resulting loss of accuracy from the units.
- The length of the neoprene housing extension should always be kept to a minimum to limit the effect on water-flow.
- The tuning potentiometer located on the rear of the Sonic Control processor must be set to ensure that the LED is permanently illuminated. The best way to achieve this is to slowly turn the potentiometer from fully anti-clockwise, and then note the distance that the LED illuminates. Next, continue to rotate the potentiometer clockwise until the LED extinguishes, and again, note this value. Turn the potentiometer mid-way between these two points.

Tests and Measurements

Sonic Speed Control Unit: AGC (TP 15) should measure 1.8 to 2.5 volts in relation to 0 volts (TP 0). The gain is increased as the voltage decreases. Therefore, if the AGC reads low, the signal is being attenuated (e.g. fouling on the transducer faces). It may also mean that one or both of the transducers may be faulty. If the AGC reads high, then the signal is suffering from interference. The Sonic transducers have resistors fitted across the crystal to enable cable checks to be carried out.

Measure 110kΩ ± 1% between the RED and BLACK cores on each transducer wire. The resistance should be 'open circuit' when measured with respect to SCREEN.

If the transducer measures less than 108.9K, then there is moisture in the transducer or cable and it will need to be changed. Sonic Transducers must be changed as a matched pair and can be ordered by using the following part number: 184-00-081

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