

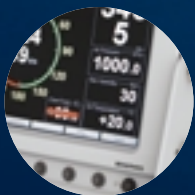
# AGILOG<sup>2</sup>

Electromagnetic Log System

## About AGI

AGI is backed by over 30 years of experience in the design, development, manufacture and installation of ship borne systems and provides full Integrated Logistic Support services, training, installation and documentation.

AGI is accredited to International Quality Standards ISO 9001/BS5750 Part 1 and Tick-IT software procedures.



Aeronautical & General  
Instruments Ltd



Aeronautical & General  
Instruments Ltd

Fleets Point, Willis Way, Poole, Dorset, BH15 3SS, England

Tel: +44(0)1202 685661 Fax: +44(0)1202 685670 E-mail: sales@agiltld.co.uk Website: www.agiltld.co.uk

# AGILOG 2

## Electromagnetic Log System

Developed for use in surface warships and submarines and specified by navies worldwide. Agilog2 sets the standard for accurate and reliable measurement of ship's speed through the water - an essential element in navigation and weapons system integration. Agilog2 is fully type approved and in service with the Royal Navy and navies worldwide.

### PRINCIPLE OF OPERATION

Agilog2 is founded on the well proven electromagnetic principle that a voltage is induced in a conductor by a moving magnetic field. A sensor attached to the hull of the vessel produces an electromagnetic field. By using the water as the conductor an output is generated, as the vessel progresses, relative to the ship's speed through the water.

Electromagnetic speed measurement is passive in operation and therefore particularly suitable for use in submarines and warships.

### SEMI AUTO-CALIBRATION

The accuracy of any log system depends largely upon the method of calibration. The underwater sensor signal output is, in its raw state, related to the water flow characteristics of the ship's hull and is rarely linear over the speed range of the vessel. In the Agilog2 this non-linearity is corrected by entering ship's true speed data gathered during speed trials via a simple keypad, or by using the semi automated calibration with GPS input available. Multiple calibration points anywhere in the speed range, may be entered at random, thus allowing for very high accuracy over the whole speed range. In summary - high cost calibration trials are minimised for maximum cost effectiveness

### SYSTEM CONFIGURATION

Typically the Agilog2 system comprises:-  
 Speed & Distance Transmitter Unit (SDTU)  
 Underwater Sensor (or Sensors)  
 Multi-Function Displays  
 Optional Data Distribution Unit (for system expansion)



### SPEED & DISTANCE TRANSMITTER (SDTU)

Available in bulkhead mounted form or alternatively as part of an integrated 19 inch rack system.

### OUTPUT AND DATA TRANSMISSION

Generous output facilities are available from the Agilog 2 system, typically :-

- Up to 2 solid-state synchro outputs
- Analogue voltage, o/p's
- Simulated potentiometer
- Up to four sets of solid-state contacts, programmable for 100, 200 or 400 pulses per mile, 'fault indication', 'speed limit indication' etc
- RS422 NMEA or other
- Ethernet I/O base, I10FO, I10FX

### SYSTEMS EXPANSION

Additional outputs may be provided.

### SPECIFICATION

**Speed Range** - 10 to +60 knots  
**Speed Accuracy** (excluding sensor)  
 within 0.06 knot (0.1% of full scale)  
**Distance Display** 99999.99 non-resettable.  
**Operating Temperature** -20°C to +55°C  
**Power supply** 50/60Hz, 115/230v, 200VA



### SPEED & DISTANCE REPEATERS

Constructed to full defence standards, these instruments employ latest solid-state display technology for maximum readability in a wide range of ambient conditions - from direct sunlight to night viewing.

### KEY FEATURES FOR AGILOG 2

**Semi Auto Calibration Facility** GPS assisted. GPS NMEA input required.

**Dual calibration** curves for each sensor may, if required, be calibrated for two alternative operation conditions. (Typical examples - changes in water flow caused by a retractable sonar dome, or a submarine surface/dived)

**Dual axis** options for forward and athwartships speed/distance.

**Ethernet interfacing** built in.

**Dual sensor** option for high integrity naval systems

**Exceeds international specifications EN60945, EN61023, IMO A.824(19)** (Certificates pending at time of print)

**Low magnetic signature** contact AGI for specification data.

**Simulation mode selection** enabling operation of the Log System in the absence of a signal from the underwater sensor.

**Underwater sensor selection** Agilog2 enables the alternative use of two sensors, each sensor independently calibrated.

**FIXED PROBE** - offering extreme accuracy with protrusion beyond the ship's boundary layer. Also available as low magnetic version for low signature ships

**HIGH SPEED PROBE** - up to 60knots

**DUAL AXIS FIXED OR INBOARD RETRACTABLE FLUSH SENSOR** - with the advantage of the absence of underwater protrusion for shallow water operations and avoidance of floating debris or ice. Available in a surface mounted or inboard retractable form.



**Self-test capability** Agilog2 contains full BITE (built in test equipment) facilities. Dual Axis Option.

**Trip meter** for daily/hourly distance.

**User friendly** interface.

**Sensor replacement** without dry docking.

**Extended warranty options.**



### UNDERWATER SENSORS

A comprehensive range of sensors is offered to meet all applications: -

### QUALIFIED TO MILITARY STANDARDS:

**EMC** - Mil Std 461E  
**Shock** - Mil S 901 grade A  
**Vibration** - Mil Std 167-1  
**Environmental** - Mil Std 810E  
**Power supply** - Mil Std 1399 & Stanag 1008

