SSA

GS-2002

AUTOMATIC ALIGNMENT SYSTEM

The GS-2002 Automatic Alignment System is a transportable system originally developed for the accurate alignment of shipboard weapon systems and equipment.

The same alignment principles can be used in construction and real-time monitoring of parallelism, distortion and movement in large structures, like heavy machinery, bridges, marine platforms, tall structures road surfaces, supports, etc.

Features

- No dry-docking required
- Non-compromising accuracy
- A complete range of functions for static alignment
- Covers all aspects of calibration of tilt sensors, adapters etc.
- Azimuth measurement between stations even if not within line-of-sight
- True gun barrel axis measurement
- Ship's gyro performance test
- User-friendly AAS software provides real-time absolute and relative vector indications on a polar diagram
- Supports the following sensors:
  - LEICA TDA5005, T-1800 Theodolite
  - GYROMAT 2000 Gyroscope
  - SPERRY MK-29/39 Gyro Compass
  - SAGEM Gyro Compasses
- Coarse/Fine operation
- Platform information for report generation
- Variable measurement integration time
- Calibration aids
- MIL-C-4150J cases used for transportation

Standard Equipment

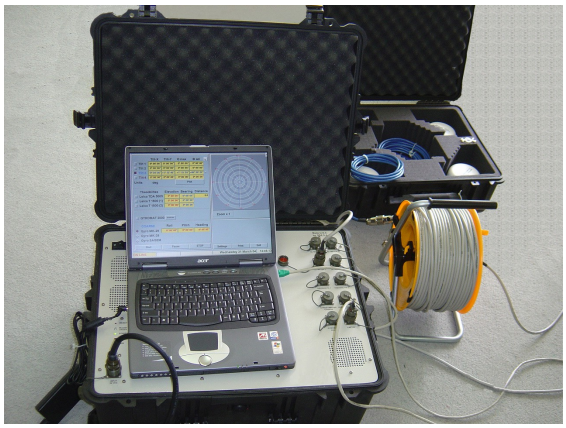
GS-2002-1370	Power Supply Unit
GS-2002-1130	Interface Unit
GS-2002-1100	Notebook Computer
GS-2002-1110	GS-2002 AAS Software
GS-2002-1140	Dual Axis Clinometer Set
GS-2002-1120	Portable Color printer
GS-2002-1170	AAS Field Wires

Optional Equipment

GS-2002-1470-xx	Weapon System Adapters (System Specifications)

Services

GS-2002 CUST	GS-2002 CUSTOMIZATION - Special adapters - Automation of specific tasks - New sensors/interfaces



GS-2002 AUTOMATIC ALIGNMENT SYSTEM

Application

The GS-2002 Automatic Alignment System is able to perform 3 and 4 – plane and line parallelism measurements in real time employing dual-axis clinometers. Additional tasks include angle estimation, slope comparison, azimuth alignment, clinometer calibration.

The GS-2002 features a number of electrical interfaces to accommodate various sensors and equipment on large platforms, such as ships and large fixed structures.

RS-232 to RS-485 interfaces guarantee noise-free sampling of instrument data, while a Synchro to Digital Converter handles shipboard equipment, such as gyro compasses.

Information for Tilt (2 axes) from clinometers, Elevation – Bearing – Distance from Theodolites, Roll – Pitch – Heading from Gyros, is processed by the interface unit and displayed on the portable computer screen, in real time. Clinometer temperatures are also available, in real time.

A number of weapon system adapters have been designed for use by the GS-2002 Automatic Alignment System; see specifications on next page.

Approvals

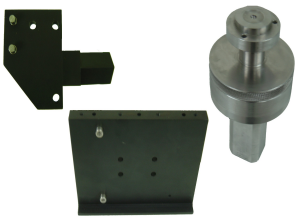
GS-2002 performance has been verified by the **HELLENIC AIR FORCE CALIBRATION SERVICE**.

Custom Applications

The GS-2002 can be customized to meet specific customer requirements (clinometer fixtures, further automation of specific measuring tasks, reports, instrument interfaces).

GS-2002 Automatic Alignment System Specifications

Interfaces	V.24/V.28 (RS-232) and RS-485 Asynchronous ports Transformer-isolated Synchro/Resolver-to-Digital Converter Ethernet port
Clinometers	IP65 (aluminium dome), temperature sensor Angular range ±5 degrees Resolution < 10 μradians Repeatability 10 μradians (static) Temperature Coefficient ±3.5 μradians/°C RS-485
Weapon System Adapters	GS-2002-1470-01 - OTO MELARA 76/62 GS-2002-1470-02 - OTO MELARA 5/54 GS-2002-1470-03 - OERLIKON 35mm GS-2002-1470-04 - EMERLEC 30mm GS-2002-1470-05 - EMERLEC DS30 GS-2002-1470-06 - OTO BREDA 30mm GS-2002-1470-07 - POLLUX GS-2002-1470-08 - NA-21 GS-2002-1470-09 - STIR GS-2002-1470-10 - WM-25 GS-2002-1470-11 - MW-08 GS-2002-1470-12 - SPG-51 GS-2002-1470-13 - CASTOR GS-2002-1470-14 - STING EO GS-2002-1470-15 - MIRADOR GS-2002-1470-16 - LIROD GS-2002-1470-17 - MSI 25mm
Synchro/Resolver	47Hz to 10 kHz 12-16 bit resolution, up to 150 RPS at 16 bit, Coarse/Fine operation 1 arc minute accuracy for single
Interface Unit Power Supply	Operating Voltage: 90-132 / 180-265 VAC @47-440 Hz, 300 VDC Operating Temperature Range: 0°C to +50°C
Interface Unit Indicators	Indicators: Fan 1, Fan 2, HDD +5V
Maintenance port	Ethernet 10/100 (RJ-45),
Power Supply	Input: 90-265 VAC 150W
Environmental	5 - 35°C, 20 - 80% relative humidity, non-condensing
MTBF	25,000 hrs
Physical	Total Weight: 100 kg
Safety	UL / TUV / NEMKO / CCC / BSMI / CE FCC
EMC	FCC/CE
Applicable standards and recommendations	MIL-STD-461E MIL-STD-1472F MIL-S-901D MIL-C-4150J



List of Services Offered

Training	Maintenance Personnel.
Pre-Installation	Application planning, installation study.
Installation	Installation, Setting to work.
Post-Installation	After sales technical support.

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 Specifications are subject to change without notice.