



LaCoste & Romberg LLC

The first name in gravity since 1939

Air-Sea Gravity System II™

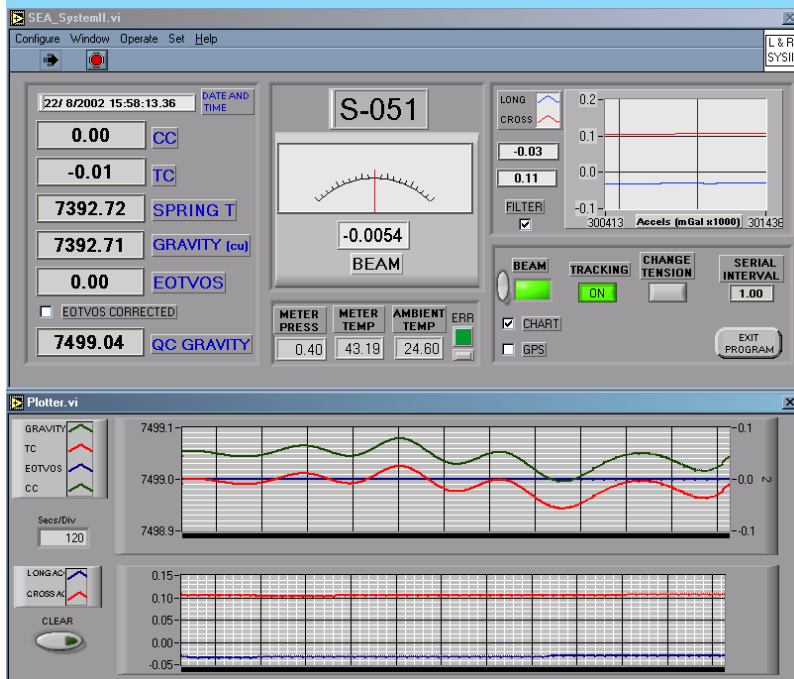
A New Generation Dynamic Gravity Meter

In 1965 LaCoste & Romberg, manufacturers of high-precision gravity meters since 1939, introduced the world's first dynamically stabilized platform gravity meter. These meters revolutionized the geophysics world by making it possible, for the first time, to take highly accurate gravity measurements from a moving ship or aircraft. Since then, over a hundred of these instruments have sailed or flown around the world, logging millions of hours of gravity data.

L&R is proud to introduce our next-generation successor to the renowned S-Meter system: **The L&R Air-Sea Gravity System II**. Based on our famous, time-tested Zero-Length Spring™ sensor technology, the System II incorporates an advanced electronics system, user-friendly software, and a more compact, self contained sensor platform.

The Air-Sea Gravity System II offers capabilities unmatched by any stable-platform system currently in service. Fiber-Optic gyros, state of the art accelerometers, a tightly-integrated digital control system and modern digital filters offer increased precision and greater reliability, even while running unattended.

Control System Features



Air-Sea Gravity System II Control Interface

- Microsoft Windows™ interface
- Simple configurations
- Separate Air and Sea Versions
- Real Time Data Output to Serial Port and Internal Hard drive
 - up to 100Hz in Air Version
 - up to 1 Hz in Sea Version
 - Data Output compatible with Excel™ or Quattro Pro™
- Spring Tracking with user changeable algorithm
- GPS input to synch time and position with data
- New digital filtering - no longer uses 3 x 20 RC filter
 - A user selectable FIR low-pass filter is applied to all data
- Real Time EOTVOS corrections on Sea Version
- Real Time graphic plots with user selectable time bases
- Self diagnostics run at start-up and anytime user requires, complete with a logged report

Hardware Features

- ✓ **Repeatability** - Laboratory tests show a dynamic repeatability of better than 0.25 mGals.
- ✓ **Increased Precision** - Internal sampling of the analog signals at 1000Hz improves accuracy and avoids aliasing. 20 Bit effective resolution.
- ✓ **DSP Platform Control** - Withstands greater turbulence - Better Tracking - Automatic or Manual engagement of accelerometers during turns, avoids table dumps
- ✓ **Reliability** - The new Air-Sea Gravity System II employs industrial-grade electronics designed for long life and high reliability even in adverse conditions, minimizing the need for operator intervention and maintenance. Built-in diagnostic functions will even assist the operator in troubleshooting and repairs when necessary. Full modular plug-in spare electronics for less downtime.
- ✓ **Reduced size and weight** - 64 x 56 x 74 cm; 25 x 22 x 29 in, 230lbs
- ✓ **Gyros** - Air-Sea System II uses dual third-generation, solid-state Fiber-Optic Gyros (FOGs). The highest sensitivity possible using direct digital output.
- ✓ **Digital Control System** - The all-new digital control system stabilizes the platform and sensor, records data, and monitors system performance with greater reliability.
- ✓ **Uninterruptible Power Supply** - An Uninterruptible Power Supply is standard on the system, insulating the system from power fluctuations. It can accept any standard AC input voltage
- ✓ **Shaft Encoder Standard** - Digital control system reads and saves the spring tension value continuously, avoiding sync problems between the control system and the meter
- ✓ **Stable Time Base** - Rubidium oscillator is standard on meter
- ✓ **GPS Interface** - When selected the gravity meter time will be synchronized to the GPS clock and an EOTOVOS correction calculated.
- ✓ **Upgrade Your Meter!** - Upgrades are available for most older L&RAir-Sea Gravity Meters



Specifications

System Performance

Resolution	0.01 mGal
Dynamic Repeatability:	<0.25 mGal in lab accelerations <1.00 mGal reported in the field
Platform Range:	25° of roll and pitch
Platform Period:	4 Minutes
Platform Damping:	0.707 of critical damping
Drift:	<3.0 mGal per month, when new, negligible after 2 years Linear drift predictable within 0.1 mGal/month
Range:	12,000 mGals (Worldwide)

Size

64 x 56 x 74 cm; 25.0 x 22.0 x 29 in.

Weight

104 kg; 230 lbs.
100 watts at 115/230 VAC
Operating Temperature: 0°C to 40°C

Warranty

One-year warranty on parts and labor

Specifications subject to change.



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