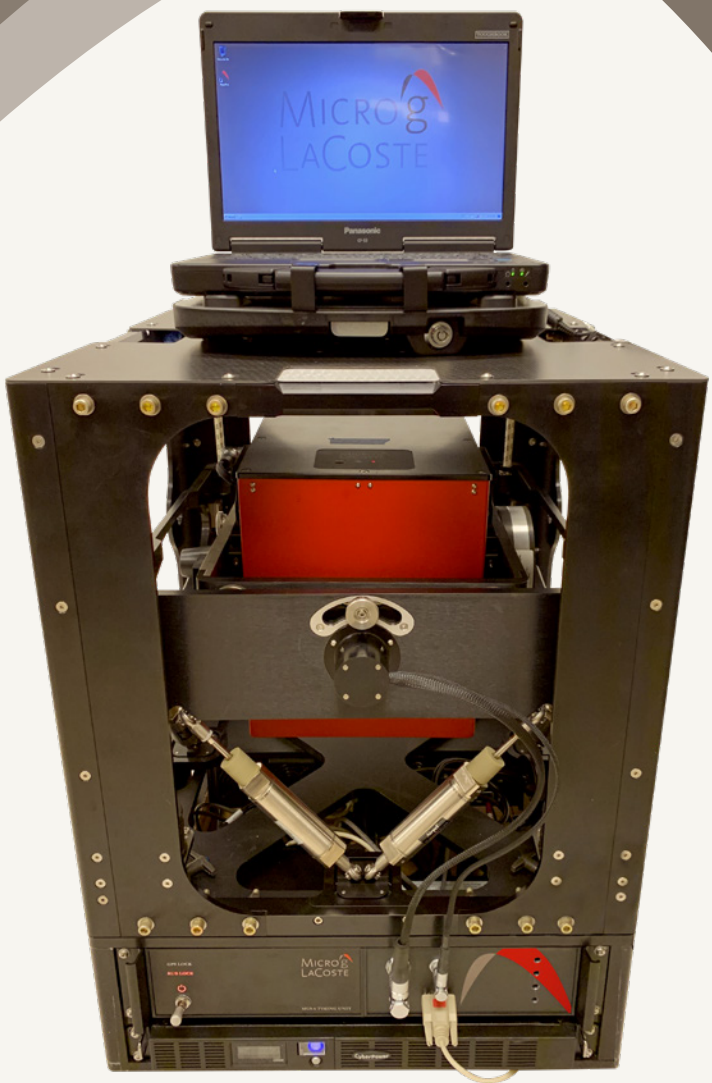
SEA III
MARINE GRAVITY SYSTEM



The latest in a line of Marine Gravity Meters going back over 60 years.

MICRO g LACOSTE
A DIVISION OF LRS

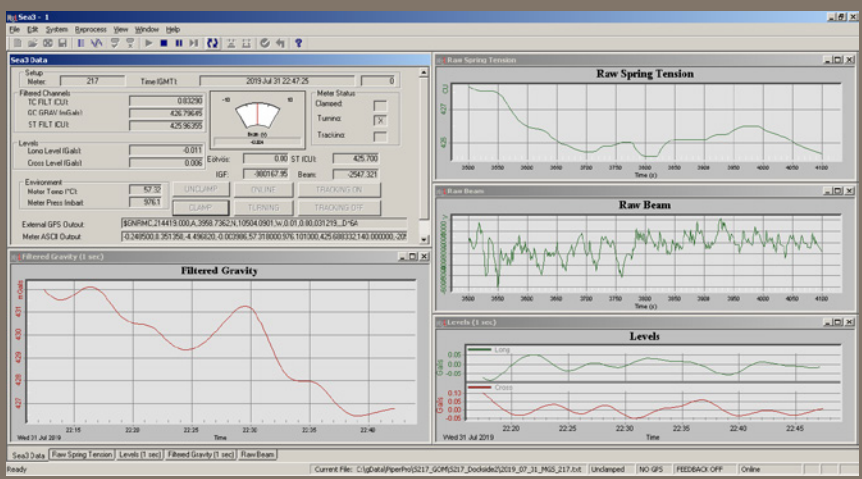
APPLICATIONS INCLUDE

- Geoid Mapping
- Regional Geophysics
- Petroleum Exploration
- Mineral Exploration

ZERO LENGTH SPRING TENSION / BEAM VELOCITY SENSOR:

- Full worldwide range 20,000 mGals
- Double oven temperature control
- Temperature controlled electronics, accelerometers, and high precision MEMS IMU

SEA III SOFTWARE:



SEA III software is a logging and control GUI-application software for the Sea III System.

- Communicates with the Platform Controller
- Controls feedback to the Spring Tension Motor / Counter at 1 second intervals
- User selectable filters for data Display
- Provides Total Correction (TC) and Quality Control Gravity (QC Gravity)
- Calculates the cross coupling corrections (CC)
- Logs data to hard disk and outputs to serial port
- Easy menu selections for basic calibration functions

MICRO-G LACOSTE IS PROUD TO ANNOUNCE the arrival of the next generation dynamic marine gravity meter The “SEA III Marine Gravity System” as the latest in the long line of successful LaCoste & Romberg based dynamic gravity system designs spanning over 60 years. It represents the next generation zero length spring tension / beam velocity sensor optimized for marine gravity survey applications.

NEW FEATURES

- Smaller sensor/gimbal (30%)
- Lighter sensor/gimbal (30%)
- New slip ring technology on the gimbal makes for a more robust and reliable stable platform
- Larger pitch (35° vs. 22°) and larger roll (35° vs. 25°) ranges
- Double oven temperature control
- Temperature controlled electronics
- Lockable gimbal
- System ships with gimbal installed in frame
- Greatly reduced frame size: (56 x 61 x 76 cm vs. 71 x 56 x 84 cm)
- Greatly reduced weight (109 kg vs. 121 kg, including UPS and electronics)

SPECIFICATIONS

COMPONENT	VARIABLE	SPECIFICATIONS
SENSOR	TYPE:	Zero length spring tension / beam velocity with feedback
	STATIC RANGE:	20 Gals static range (worldwide)
	DYNAMIC RANGE:	+/- 0.5 g
	DRIFT (LONG TERM ON POWER):	0.1 mGal per day *
STABILIZED PLATFORM	PLATFORM PITCH:	± 35 degrees
	PLATFORM ROLL:	± 35 degrees
	PLATFORM PERIOD:	4 minutes (.707 damping coefficient)
	PLATFORM FEEDBACK CONTROL:	High precision MEMS IMU
CONTROL SYSTEM	SOFTWARE CONTROL:	SEA III GUI application (Windows based)
	RECORDING RATE:	20 Hz or 1 Hz selectable
	DIGITAL OUTPUT:	RS-232 / USB
	ADDITIONAL I/O:	Sensor temperature, sensor pressure, 3D linear acceleration, 3D gyros, GPS positioning
SYSTEM PERFORMANCE	RESOLUTION:	0.001 mGal
	DYNAMIC REPEATABILITY:	0.25 mGal @ 50,000 mGal horizontal 0.50 mGal @ 100,000 mGal horizontal 0.50 mGal @ 100,000 mGal vertical
	STATIC REPEATABILITY:	0.05 mGal
	ACCURACY:	< 0.7 mGal
MISC.	OPERATING TEMPERATURE:	0° to 50°C (32° to 122°F)
	STORAGE TEMPERATURE:	-30° to 50°C (-22° to 122°F)
	POWER REQUIREMENTS (AT UPS):	(70 W @ 27°C (81°F) nominal) and (250 W max warmup)
	DIMENSIONS:	56 x 61 x 76 cm (22 x 24 x 30 in)
	WEIGHT:	75 kg (165 lb) sensor 34 kg (75 lb) electronics / UPS Fully integrated system 109 kg (240 lb)
GRAVITY UNITS	1 Gal = 1 cm/sec^2	1 mGal = 10 µm/sec^2
	Earth's gravity varies from 978 to 983 Gals at sea level (full change of 5 Gal).	
*	Drift rate specification for instrument on power and in long-term continuous operation.	

SPECIFICATIONS SUBJECT TO CHANGE. PART NUMBER: 700781000 REV B

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