


Reliable measurements.



MARSlite/HD

**Portable digital seismograph
with up to 4.3 gigabytes hard disk**

 **lennartz
electronic**

MARSlite/HD is the ultra-high recording capacity incarnation of our successful **MARSlite**. While the standard **MARSlite** records on rewriteable magneto-optical disks, **MARSlite/HD** accommodates a 3.5" SCSI hard disk. Currently, capacities up to 4.3 gigabytes are available.

MARSlite/HD takes recording capacities to dimensions that are more than adequate even for the most demanding of applications. With the 4.3 GB hard disk version you get **more than two months** of continuous recording at three channels and 125 samples per second.

Very much like its MO-based sibling, **MARSlite/HD** is extremely power conscious. With a trigger duty cycle of 10%, 8 ms sampling, 3 channels, a **GPSlite** receiver in 3 hours power cycling mode, and an **LE-3Dlite** three-component 1 Hz seismometer, power consumption is only about 120 mA @ 12 V DC!

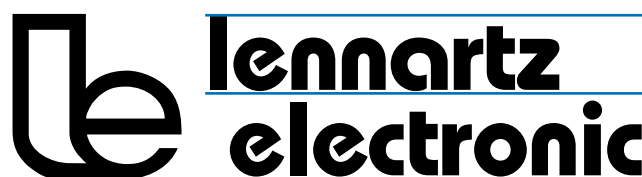
Once you've taken a full hard disk to the lab, you can retrieve data easily. We supply retrieval and conversion software in C source code, so you can compile it on the operating system of your choice (ready-to-run executables for PC/DOS and SPARC/Solaris are also supplied). Linux? Other Unix variants? No problem, as long as you have a C compiler and a SCSI interface.

Like **MARSlite**, the **/HD** version features a graphics display and menu system, so you do not need a PC in the field for setting up the instrument, or controlling input data.

MARSlite continuous recording capacity, 3 channels			
Sample interval [Useable signal bandwidth]	540 MB Optical Disk	2.1 GB Hard Disk	4.3 GB Hard Disk
4 ms [100 Hz]	4 days 6 hours 24 min	16 days 14 hours 13 min	33 days 23 hours 24 min
8 ms [50 Hz]	8 days 12 hours 48 min	33 days 4 hours 26 min	67 days 22 hours 48 min
16 ms [25 Hz]	17 days 1 hour 36 min	66 days 8 hours 52 min	135 days 21 hours 36 min

Technical data

Description	Seismological data acquisition system, three channels, 20 bits dynamic range.
A/D converters	One separate ADC for each channel, max. sampling rate 250 Hz (4 ms). Other sampling intervals 8, 16, etc., down to 256 ms.
Preamplifier	Four sensitivities user-selectable; full scale voltages approx. ± 4.1 V, ± 1 V, ± 250 mV, ± 65 mV.
Digital filters	Zero-phase FIR filters, passband is $0.4 \times$ sampling frequency (max. 100 Hz passband).
Trigger	STA/LTA or STA/Level trigger with pre- and post-event times.
Monitor channel	Continuous visual representation of long-term seismic activity, simulated helicorder plot.
Recording	on 3.5" SCSI hard disk (5400 rpm), capacity auto detect feature. Simple, fully documented partitioning scheme and data format; retrieval software (C source) supplied.
Timing	Built-in battery-buffered real-time clock and crystal oscillator; DCF-77 and GPS (NMEA-0183) decoders.
Power supply	External 12 V DC; 90 mA typical (no disk activity)
Dimensions	$179 \times 150 \times 265$ mm ³ = 7.4 liters ($7 \times 5.9 \times 10.9 = 450$ cubic inches), 6.5 kg (including disk drive).
Options	7.2 Ah battery pack (2.9 kg); matching GPSlite time signal receiver. Plug compatible with all LE-3D seismometers.



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