

HIGH BANDWIDTH ANALOG RECORDERS

High bandwidth recording, playback and analysis of Analog Instrumentation Data

Reach Technologies Inc. has leveraged 18 years of test and measurement product development experience into its line of Portable Instrumentation Recorders. This proven PC-based signal recording, playback and analysis instrument is accurate, reliable and cost effective. Reach Instrumentation Recorders offer all of the advantages of disk-based recording; including random access to data, high capacity, network data transfer capabilities and media reliability.

REACH
TECHNOLOGIES INC.

HBW-ADR



Features and Options

Analog Input

- Supports 8 to 40 analog channels
- DC to 500 kHz bandwidth
- Continuously variable sample rate: 20 ksps - 1 Msps
- 24-bit quantization
- Single-ended and differential with variable gain
- Simultaneous sampling on all channels

Recording

Huge Storage Capacity

- Recording duration limited only by disk size (typically measured in days of recording time)
- Data may be recorded as 8, 16 or 32 bit sample values
- Input and output signal level meters and level history

Archiving

- Recordings are Wave64 files on the NTFS file system on standard PC hard drives
- Removable data drives (2.5" SATA)
- Transfer via GigE network to central server or workstation
- Write to DVD (internal DVD writer)
- Save to USB connected data storage

Other Features

- Removable system drive for classified operating environments
- Signal level display and history display
- Three channel oscilloscope function
- Real-time FFT display of all channels for monitoring
- Real-time high resolution FFT of a single channel
- Third party analysis tools supported directly on the recorder (e.g. MATLAB)

Signal Level History

Signal Levels

High-Res FFT

Control Interface

Folding Keyboard

Carry Handle

Analog I/O

Removable OS Drive

DVD R/W

Removable Data Drives



www.reachtest.com

Monitoring

- Acoustic
- Stress/Strain
- Vibration
- Voice

Industries

- Aerospace
- Transportation
- Sonobouy
- Acoustic Research

Portable Chassis Benefits

- Rugged aluminum construction for field applications
- Large 17" LCD screen for clear real-time analysis display
- Remote operation using Remote Desktop or VNC
- Removable hard drive bays for data security

- Small model holds 1 recording disk and up to 8 channels
- Large model holds 6 recording disks and up to 24 channels
- Large model supports hot standby or mirrored system disk
- Supports the multi-chassis synchronization option

Specifications

Analog Interface

- Signal Type ■ Single-ended or differential
- Sample Rate ■ 20 kps to 1 Mps (continuously variable)

Bandwidth (Input)

- Narrow Bandwidth 48kps:
- DC to 500 kHz (-3 dB)
- DC to 400 kHz (-0.1 dB)

Quantization

- 24 bits

Connector

- 2 x High-Density 68-pin
- I/O connector modules available



File Export

Data is recorded as 16 or 32 bit Wave64 files. User specified portions of these files can be exported in Wave64 or Wave format with conversion between 16 and 32 bit sample sizes. This allows smaller segments of long recordings to be easily created for analysis.

Annotation

Voice

- Bandwidth ■ 10 Hz to 20 kHz (sample rate dependent)
- IRIG-B Time Code
- Level ■ 2 Vp-p In/Out

Signal Inputs

- Input Range ■ +/-1, 2, 5, or 10 V software selectable
- Dynamic Range ■ 103 dB (unweighted)
- Gain Mismatch ■ 0.005 dB (0.1%) inter-channel

Phase Mismatch

THD

Impedance

Coupling

- +/- 10 nS inter-channel
- -70 dB @ -1 dB signal
- 1 M Ω
- DC

Signal Outputs

Output Range

THD

Impedance

- +/-1, 2, 5, or 10 V software selectable
- -41 dB @ -3 dB signal
- 170 Ω

Event Recording

Events are recorded in the Wave file. Events contain time and a text string. There are three sources of events:

User Events

- Local events generated by GUI button press

Network Events

- Events sent by the user over a TCP/IP socket connection

Time Events

- Automatically generated periodic events: 10 sec. / 1 min. / 10 min. intervals used to preserve actual time in Wave files.

Media

Disk Media

Disk Configuration

Archive Media

- 2.5" laptop drives
- RAID 0, 1, 5 etc.
- AIT, SDLT, Ultrium, USB connected media, DVD

Portable Dimensions

	Large	Small
Depth	23.0 cm	15.2 cm
Width	41.3 cm	41.3 cm
Height	32.4 cm	32.4 cm
Weight	13 kg	9 kg

Power

110-240 VAC (50/60 Hz)