HGS (INDIA) LIMITED

SPECIFICATION SHEET – DX-6-16 Seismograph

DX-6-16 Seismograph has all the features NOT found in nodal acquisition systems…
(and it does nodal recording, too!)

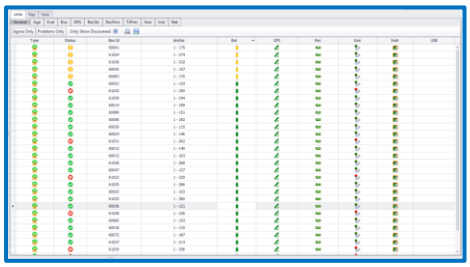
- Real-time Command & Status
- Real-time Quality Control
- Real-time Data Collection
- Simultaneous Active & Passive
- Automated Deployment
- Cabled & Wi-Fi links

DX-6

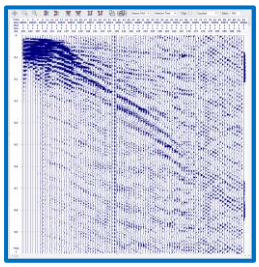
6 Channel Seismograph

Advanced software for complete control for Real-Time Operation, QC and Results

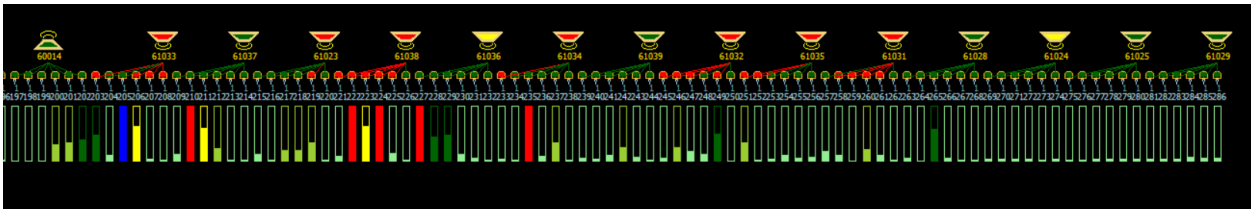
Map Display shows field equipment with satellite, road, or terrain background



Icon-based status provides battery and GPS plus test status for each node



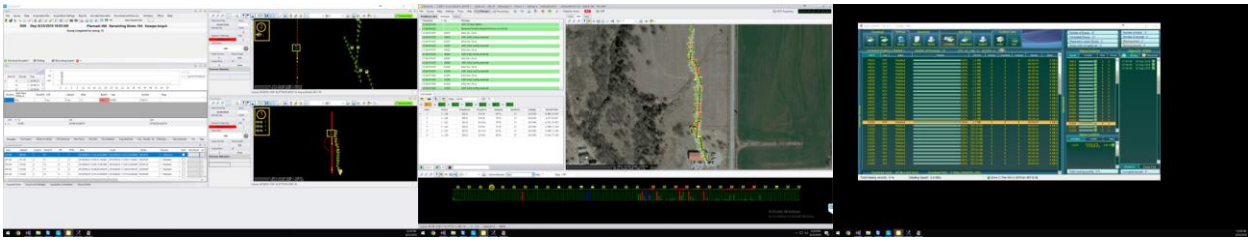
Data displayed on-screen as it arrives includes Vibroseis correlation and both straight and diversity vertical stacking



Schematic display of line deployment with real-time noise monitor

HGS (INDIA) LIMITED
158, Sector-4, IMT Manesar, Gurugram-122050 Haryana INDIA
Tel: +91 (0124) 4681800
Email: sales@hgsindia.com

Wi-Fi or Cabled Network Operation - 6 channel Node for Real-Time Operation



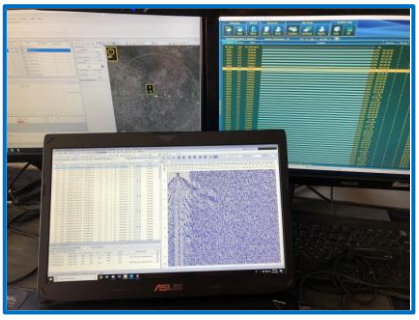
Left: SourceLink Console *Center: Observer Console* *Right: Data Management Console*

DX-6 seismograph nodes can be linked together with cables or Wi-Fi for real-time operation. This includes system status and control, plus real-time data collection, file harvest and SEG-Y output.

Networked Operation Features:

- DX-6 equipped systems monitor noise and other environment conditions in real-time, no more "shoot-blind" acquisition
- DX-6 optional components include:
  - Line Interface Units connect to multiple lines and the Central Computer
  - The Central Computer manages spread, controls acquisition and collects data to generate SEG-Y files
- Same DX-6 node can be used for autonomous GPS controlled operation
- Central Computer can be moved off-line
- Wi-Fi links can be used to "skip" line across roads or water and over or around obstacles.

DX-6 Node with existing battery, cable, and geophones



Source Tracking & QC, Data Offload, and Shot Records All in Real Time

Autonomous Operation - *Deploy a station anywhere at any time!*

DX-6 seismograph nodes are equipped to record data autonomously. Each node comes with internal GPS, plus 8 GB flash memory. A DX-6 node can be deployed anywhere, and at any time.

Autonomous Operation Features:

- Internal GPS disciplines clock, locates the node, and organizes internal file structure
- Internal memory plus optional external memory for data security and long-term operation
- Records with geophones, hydrophones, microphones and/or accelerometers
- Includes full featured, complete software package for data collection, file creation and SEG-Y output
- Same DX-6 node can be used with Wi-Fi or cabled network for real-time operation

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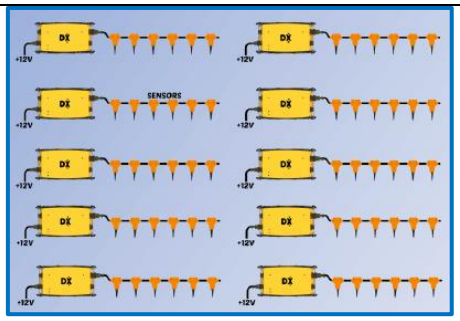
Managed Operation - *Deploy a receiver spread and actively manage it!*

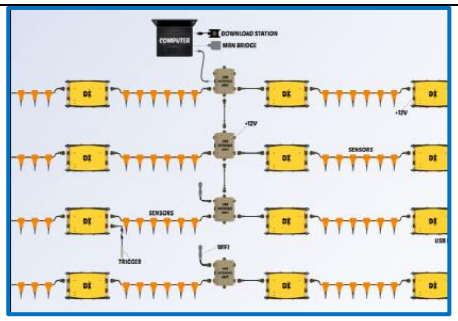
DX-6 seismograph nodes can be linked together with cables or Wi-Fi for real-time operation. This includes system status and control, plus real-time data collection, file harvest and SEG-Y output.

Real-Time Operation Features:

- Supported 2D, 3D, and random spreads
- 600+ channels per line
- 32+ lines per spread
- Nodes automatically deployed using GPS
- System supports SEG-P1, GPX, & SPS files
- Nodes can be networked using cables or Wi-Fi
- Includes full featured, complete software package for data collection, file creation and SEG-Y output
- Same DX-6 node can be used with Wi-Fi or cabled network for real-time operation



DX-6 Receiver Spread configured for Autonomous Acquisition



DX-6 Receiver Line networked via Cables & Wi-Fi plus the Central Computer

DX-6 Node Options

DX-6 seismograph nodes are available in two different configurations. The first version is optimized for flexibility. With six channels on one connection and POE-equipped Wi-Fi compatible connections on the other, this box can be used for autonomous projects, and down-hole projects as well as cabled acquisition. The second version has symmetrical connections for use with legacy equipment, like batteries, cables and geophones.
Both versions of DX-6 nodes can be used in any field application.

DAQ-4/DX-6 Configuration 1:

The first DX-6 configuration is designed for flexibility and to maximize a crew's options.

Two Network Ports:
- Data - 6 Channels & Ethernet
- Connection - Ethernet with POE

Battery Port:
- 3 Pin Connector - Sigma compatible
- Supports 12-volt Batteries

Auxiliary Port:
- Ruggedized USB for Data Backup
- External Trigger

DAQ-4/DX-6 Configuration 2:

The second DX-6 configuration is designed to use a crew's existing equipment.

Two Network Ports:
- Up-side - 3 Data, Battery Power & Ethernet
- Down-Side - 3 Data, Battery Power & Ethernet

Battery Port:
- 8 Pin Connector - Seistronix compatible
- Supports 12-volt Batteries

Auxiliary Port:
- Ruggedized USB for Data Backup
- External Trigger

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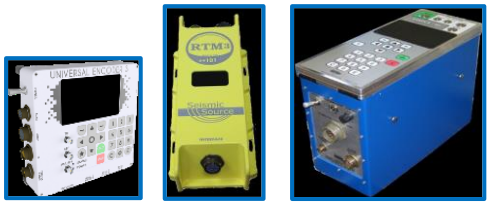
DX-6 Line Tap Box: DX-6 Line Tap Boxes connect together individual lines, as well as the line to the central recorder. Line Taps can be connected using CAT-5 cable, standard ruggedized tap cables, twisted pair extenders for extra distance, or Wi-Fi should be there to overcome obstacles between the line and the truck.	
Expandability & Flexibility: DX-6 seismograph nodes are compatible with the entire line of Seismic Source Co source control electronics. This includes the Force 3 Vibroseis controller, the Boom Box 3 dynamite blaster, and the Remote Trigger Module for mechanical impact sources. The DX-6 system is also compatible with the Universal Encoder 3. Use the UE3 for precise source operation with any source type.	

DX-6 16 Seismograph Specifications		
Electrical		
A/D Converter	24-bit sigma delta (24 bits stored)	
Preamp Gain	x1, x4, & x16 (0 dB, 12 dB, & 24 dB)	
Max Input (x1 gain)	±3.25 volts (2.30v RMS)	
Max Input (x16 gain)	±0.217 volts (0.153v RMS)	
Sample Rates	125, 250, 500, 1k, 2k, 4k, 8k, 16k, 32k & 64k, SPS	
Bandwidth	DC to 27Khz	
Max Input Voltage	7V Peak-to-Peak	
Input Impedance	100KΩ	
Clock Sync (on request)	GPS or Ethernet	
Ethernet Network 1	100Base-T or 10Base-T (user selectable)	
Ethernet Network 2	100Base-T or 10Base-T (user selectable)	
Network Links	Can be either Cabled or Wi-Fi	
Memory (Internal)	8 Gb (standard, can be upgraded)	
Memory (External)	16 Gb (standard, can be upgraded)	
Performance (at 500 sps)		
Dynamic Range	125 dB (x1 gain)	122 dB (x16 gain)
Distortion	0.0001 % (x1 gain)	0.0001 % (x16 gain)
Noise	1.2 µV RMS (x1 gain)	0.15 µV RMS (x16 gain)
CMRR	< -125 dB (x1 gain)	< -122 dB (x16 gain)
Trigger Accuracy	± 1 µsec at all sample rates	
Physical		
Case Type	Aluminium and ABS plastic	
Size	11.5” x7.25” x 2.25” (292mm x 184mm x 48mm)	
Weight	3.1 lbs. (1.4 kg)	
Power Requirement & Draw	9-28 volts DC | 2 watts at 12 volts	
Data Format	SEG-Y, SEG-D, ASCII or miniSEED	

Ordering Information	
Item Description	**HGS Part No.**
DX-6 Seismograph	MK000528

Version 1.1

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