HGS (INDIA) LIMITED

SPECIFICATION SHEET– BOOM BOX 3 Seismic Blasting System

The Boom Box 3 is a New Generation of Seismic Blasters. These units can use GPS timing synchronization for the firing of the shots. This allows the shooters to shoot in Autonomous mode without any VHF Radio communication with the Central Recording System. Individual "Time Slots" are allocated to prevent multiple shooters from firing at the same time. All of the shot information is saved on a non-volatile CF card for later download and analysis.
A built in Wi-Fi unit allows all of the data to be viewed and saved on a small notepad tablet or even a cell phone. This allows critical redundant storage of the shot time (micro second accuracy), up-hole times, and GPS position of the shot. The Boom Box 3 Autonomous unit includes a standard Boom Box 3 plus a removable battery pack with built in GPS and an additional "Safety" fire button. This package provides a complete, compact, light- weight and rugged blaster unit.

Autonomous Mode
No Radios
No
Repeaters
No
Problem!

Boom Box 3 unit

An Integrated System

The Boom Box 3 system is a complete integrated solution for seismic exploration. In Autonomous mode, the SourceLink software allows for all of the daily pre-planned shots to be uploaded to the Boom Box 3 Units. The Boom Box 3 will then only fire the allowed shots; this prevents the shooter from firing shots that are not part of the active patch. The navigation option and near flag detection of the notepad or cell phone software allows the shooter to easily find the shot hole and select the correct source flag.

At the end of the day, all of the shot information from all the shooters can be uploaded to the SourceLink software for complete production reports and analysis. SourceLink also generates the shot time and location files that are required to process the seismic data on the new generation of seismic recording systems. The list of supported recording systems includes nodes from iSeis, GTI, Stryde, Geo- space, Sercel and most other nodal systems.

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

Legacy Mode Support

Seismic Source Boom Boxes have been used by crews all over the world for many years. Most of these units are currently in "Legacy Mode".

- Supports a central recording system encoder
- Supports VHF radio
- Supports
  - Start Messages
  - Ready Messages
  - Shot Quality Control (PFS) Messages
- GPS Information and Up-Hole times sent to the Observer in Real-Time.

Autonomous Mode Support

Seismic Source Boom Boxes support "Autonomous Acquisition mode" recording.

- Shooters all operate independently
- No radios required - No radio troubles
- Observer generates lists of shot points and assigns them to the shooters
- BB3's all records shot locations and information for offloading at the end of the day
- SourceLink software offloads BB3 units, displays acquired shot locations, and generates daily production reports

Digital Blasting Cap Support

The Seismic Source Boom Box 3 also supports digital cap technology. Switching to a digital blasting cap adds another layer of safety to a field crew. Supports multiple manufacturers:

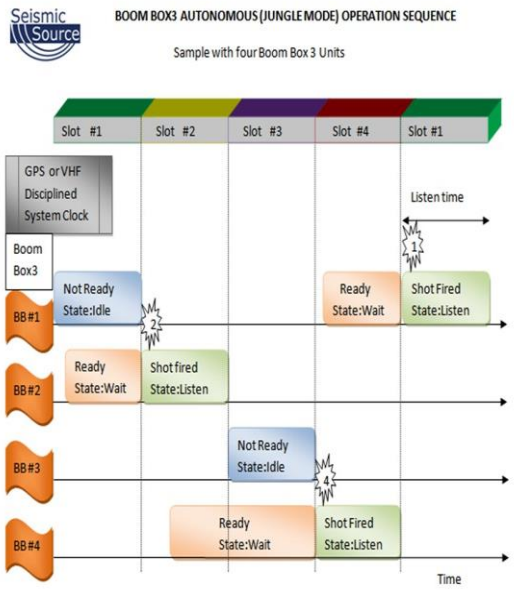
- Austin Powder E□STAR Seismic (external module)
- Dyno Nobel GeoShot (internal module)
- Maxam Riotronic Xs (external module)
- Orica OSEIS and OSEIS II (internal module)

  plus others supported as available
- Digital control boards can be integrated into the BB3 for a smaller, streamlined, and more useful field package.
- BoomBox 3 units removes digital cap delays from internal modules. It then sends a CTB (Confirmation Time Break) to the recording system
- Timing specifications identical to standard electric blasting caps
- Adds the safety of digital caps to any field crew.

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

Autonomous BB3 Operation

- Multiple shooters operate in time windows
- GPS timing lets BB3s fire in non-overlapping time slots
- Ideal for use with Continuously Recording systems
- For use in thick vegetation, rugged terrain, or anywhere with poor radio reception
- Accurate shot time and position stored in CompactFlash
- Notebook/Tablet/Cell phone interface for real time QC and redundant shot info backup
- Software support to automatically or manually select nearest source Flag
- Complete software package to combine and process shot information from shooters and generate advanced reports
- Lightweight solution with swappable clip-on battery pack and built-in GPS.



Autonomous BB3 Features

- Large graphical display shows setup information and uphole data
- Diagnostic LEDs shows: Status (for Geophone Resistance and Cap Test) GPS (for Unit Position and DGPS Verification) High Voltage (Cap charged)
- Built-in Wi-Fi for wireless communication with notebook, tablet or phone
- Built-in GPS measures the precise time of each shot with microsecond resolution
- Built-in GPS assists shooter in finding correct shot point
- 32-bit ADC samples uphole data from shot
- Unit stores all shot, GPS and uphole information to Flash Memory card
- Built-in Wi-Fi communication module for fast data downloading.

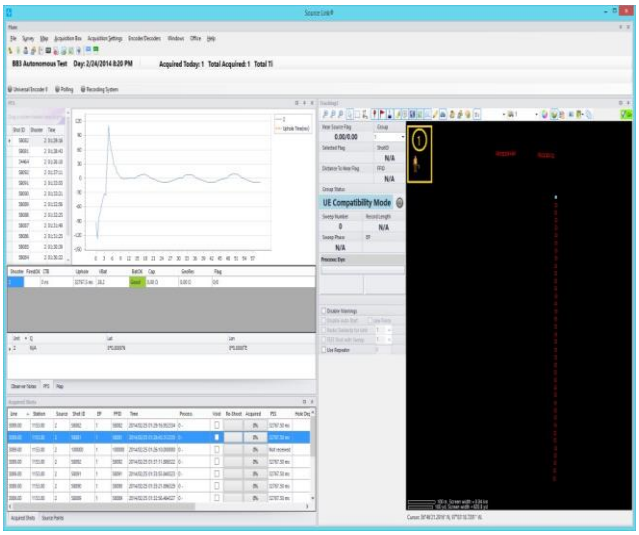
Expandability and Flexibility

The Boom Box 3 is compatible with the entire line of Seismic Source Co source control electronics as well as the iSeis line of nodal seismographs. This includes the Universal Encoder 3, Force 3 Vibroseis controller, and the RTM 3 remote trigger module. Boom Box 3 units are also compatible with DAQlink seismographs plus Sigma 3, Sigma 4 and R1/R1+ nodes.

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

Specifications and Options

- Complete software solution for Autonomous or Conventional crew operation
- Import Shot Data from multiple Boom Box3 units and generate advanced reports
- Option to pick near Source Point automatically at a later time, based on Shot position, even if shooter did not assign Shot Point to shots during the shooting process.
- Simple Shot data import process for specified time or date range
- Advanced map view allows analysis of acquired shots and planning future shots
- Support for different co-ordinate systems
- Feature to load selected patch of source flags to BoomBox3 memory from a large prospect for no tablet operation
- Upload/Download Boom Box parameters and settings
- Assign Autonomous Fleet and slot interval information to Boom Box 3



SourceLink Software

Boom Box General Specifications	
Number of Data Channels	3
Operating voltage	10-36 VDC
Sample rate	0.25, 0.5, 1, or 2 ms user selectable
Shot firing accuracy (radio)	± 20 microseconds
Shot firing accuracy (GPS)	± 1 microsecond
Firing voltage	400 V
Firing current	> 200A (0.5 Ohm Load)
Dimensions	12.0” x 5.6” x 3” (305 x 144 x 76 mm)
Weight	4.5 lbs (2.0 kg)
Operating temperature	-40° to +60° C
Humidity	0 to 99%
Data Storage (Internal 8GB CF)	480 hours (3channels @ 2ms)

Ordering Information	
Item Discerption	**Part No.**
Standard/ Legacy Boom Box3 Encoder System	MK000249
Standard/ Legacy Boom Box3 Decoder System	MK000250
Autonomous Boom Box3 System	MK000112

Version 1.0

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