

Vib Pro™ Vibrator Control System

The Vib Pro Vibrator Control System enables improved Vibroseis crew productivity and provides enhanced imaging. The system consists of a source controller (decoder) unit in each vibrator, an encoder unit in the recording truck, and proprietary software.

Capabilities and Features

- Inherent versatility and reliable telemetry enables improved crew productivity.
 - Digital-coded transmission provides error detection and correction for reliable communications, even in poor radio conditions.
 - Automatic re-transmission and redundant storage of QC data eliminate missed records.
 - Units can be easily programmed as an encoder or decoder. The encoder is compatible with Shot Pro™ II, which enables quick and easy transition between Vibroseis and dynamite operations.
 - An integrated GPS option allows for automated timing synchronization, position information and driver navigation to source positions. The integrated GPS can also function as the base station for differential corrections in the encoder.
- Accurate and versatile sweep generation across all surface terrains ensures delivery of the desired energy that is required for proper subsurface imaging.
 - Digital control improves force and phase locking.
 - 16 different keyboard sweeps are supported, with up to 16 different segments for each sweep.
 - Stored Values custom sweeps, which are stored on an internal PCMCIA flash memory card, are supported.
 - Cosine or Blackman up or down tapers are selectable in 1 ms increments.



Specifications

INPUT/OUTPUT, INC.

Technical

Voltage Input	9 V _{dc} – 36 V _{dc}
Power	36 W
Frequency Range	1 Hz to 500 Hz
Accuracy	
Clock	Automatically adjusted to 0.1 ppm
Start Time	± 20 μs
Start Time Repeatability	± 5 μs
Fire-to-Timebreak Accuracy	± 1 μs
Maximum Number of Vibrators	31
Accelerometer	
Sensitivity	25 mV/g ± 2%
Range	± 380 g
Integrated GPS Option	Typical values. Performance specifications subject to GPS system characteristics, US DOD operational degradation, ionospheric conditions, satellite geometry, baseline length, and multi-path effects.
Position Accuracy	
Single Point L1	1.80 m CEP (Circular Error Probable)
DGPS (L1, C/A)	0.45 m CEP
Time to First Fix	
Cold Start	50 s (No almanac or ephemeris and no approximate position or time.)
Warm Start	40 s (Almanac saved and approximate position and time entered; no recent ephemeris.)
Hot Start	30 s (Almanac and recent ephemeris saved and approximate position and time entered.)
Signal Reacquisition	0.5 s

Physical

Height (without shock mounts)	330 mm (13.00 in)
Length (without shock mounts)	286 mm (11.26 in)
Width (without shock mounts)	140 mm (5.52 in)
Weight (without shock mounts)	9.5 kg (20.95 lb)

Environmental

Operating Temperature	- 40 to + 60 degrees C
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Accessories

Radios, antennas, and cables required to perform vibrator fleet operations are sold separately.

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