

Source Signature Recorder

Provides T0, Location and Source Quality Control



A General Source QC Tool:

- GPS accuracy for time break collection and source equipment locations.
- 32-bit, high speed, ADC chip for lower noise and increased accuracy for signatures.
- Operates independently of crew, including observer and shooter or operators.
- Can be used with any Vibrator Control System.
- Great for monitoring rental equipment and operators.
- Provides accurate start times that can be used with any nodal recording system.



Operation Modes:

- Dynamite Saves Time Break, Shooter Location and Uphole Phone Data
- Mechanical Impact..... Saves Time Break, Equipment Location and Pop Signature (when equipped with a signature geophone or hydrophone)
- Offshore Airgun Saves Time Break and Gunboat Location
- Vibroseis Saves T0, vibe location, as well as recording Reference and Weighted Sum (Ground Force) signals.

System Features:

- Signature Recording Option provides all necessary information for advanced vibrator projects
- GPS provides accurate time stamp for every record
- Operates on standard 12v battery
- No VHF or UHF radio contact required
- Software can provide real-time, in-cab, quality control including phase, force and distortion measurements
- Standard SEG-Y format



Source Signature Recording System (cont.)



Provides Time Zero, Location and Source Quality Control

On-Board Trigger:

- Can Use Standard Hammer Switch
- Can Trigger from Data Channel
- Adjustable Polarity
- Adjustable Trigger Level



Source Signature Recorder Specification

Electrical	
A/D	32 bit high-speed sigma delta converter
Anti-Alias Filters	85% of Nyquist frequency
Low Cut Filter	User Selectable – DC, 0.1 Hz, 2 Hz
Filter Type	User Selectable – Linear, Minimum Phase
Sample Rates	1/4, 1/2, 1, 2, 4, 8 ms
Max Input @ High Gain	0.31 Volts peak to peak
Max Input @ Low Gain	5.00 Volts peak to peak
Power Wake/Sleep	0.48/0.01 watts per channel
Input Impedance	20k Ohms
Clock Sync	GPS or VHF/Wire
Sensor Types	Passive & Active
Performance	
Trigger Accuracy	$\pm 1 \mu\text{s}$ at all sample rates
Dynamic Range	126 dB
% THD	0.0012 %
Crosstalk	Better than -125 dB
Common Mode Rejection	> 100 dB
Noise Floor (@2ms)	< 0.09 μV RMS

Physical	
# Channels	3
Temperature	-40°C to +85°C
Humidity	0 to 100%
Size	9" x 9" x 2 1/4" (230 x 230 x 56 mm)
Weight	5 lbs (2.3 kg)
Data Storage (Internal 8GB CF)	480 hours for 3 channels @ 2ms
Data Storage (External 16GB USB)	960 hours for 3 channels @ 2ms
Data Format	32-bit float IEEE SEG-Y/SEG-D
LEDs	GPS/Recording LED, Battery LED

