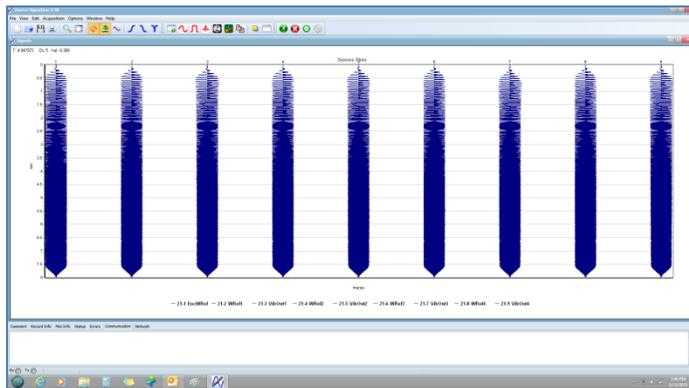


11 Channel Bird Dog 3

QC Multiple Vibrators at Once

A General Purpose QC Tool:

- Additional Functionality when compared with Standard Bird Dog 3-3
- 32-bit, high speed, ADC chips for lower noise and increased accuracy
- 8 Gigabytes of Data Storage, Expandable to 16
- GPS based time and location saved for every record
- Stable and rugged unit for use in all conditions
- Eleven-Channels, unit checks multiple vibrators at once to save time and effort
- All test data saved in non-volatile memory for later download and retrieval
- Connects to PC via Ethernet or optional Wi-Fi, provides control, data download and real time display and analysis of data and results

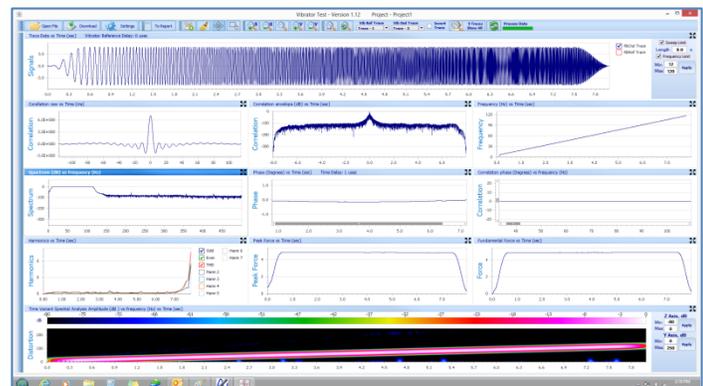


Vibrator QC Software Features:

- Time and Frequency Domain Tests
- Measures Output Force and Phase Error
- Measures Distortion and Start Time Differences
- Records and Prints all Test Results

Vibrator QC Software Results:

- Amplitude and phase displays
- Force and distortion analysis
- Start Time Verification
- Verifies correct ground force calculation and polarity
- Accelerometer Test



On-Site Vibrator Testing

Bird Dog 3



Vibrator Testing Features:

- QC vibrator performance in the field
- Independent QC for one Vibrator
- Wireless Test for Five Vibrators
- Check Zero Time for Ten Vibrators
- Three different sets of inputs: BNC Coax, "Vibe Wireline Cables" or "Octopus Harness"
- Uses two independent accelerometers (provided with system)
- Run wireline tests when recording system cannot
- Portable unit is easily moved between fleets
- Assures clients that vibrators are running correctly

Vibrator QC System Includes:

- Eleven Channel Bird Dog3 Unit
 - CH1 - True Reference (from Doghouse or Vibrator)
 - CH2, 4, 6, 8 & 10 - Independent Mass Accelerometer from Vibrators
 - CH3, 5, 7, 9 & 11 - Independent Baseplate Accelerometer from Vibrators
- Bird Dog 3 Vibrator QC kit with:
 - Two Magnetic Accelerometers
 - Five Vibrator Wireline Harnesses
- Power Cable
- Computer Interface Cable



Bird Dog 3 11 channel unit Specifications

Performance	
A/D	32 bit sigma delta converter
Dynamic Range	126 dB
% THD	0.0012 %
Crosstalk	Better than -125 dB
CMRR	> 100 dB
Noise Floor (@2ms)	< 0.09 μ V RMS
Input Impedance	20k Ohms
Available Tests	Geophones, Vibrators and Accelerometers

Physical	
# Channels	3
Temperature	-40°C to +85°C
Humidity	0 to 100%
Size	14" x 5½" x 3" (356 x 140 x 76 mm)
Weight	3.4 lbs (1.55 kg)
Data Storage (Internal 8GB CF)	480 hours for 3 channels @ 2ms