

In-Field Geophone Acceptance Testing Portable BD3



Portable Bird Dog 3 Features:

- Simultaneously test up to three single-axis geophones or geophone strings; or one 3C geophone
- Embedded computer – Small, light-weight and portable
- Test data stored in unit for later download and retrieval

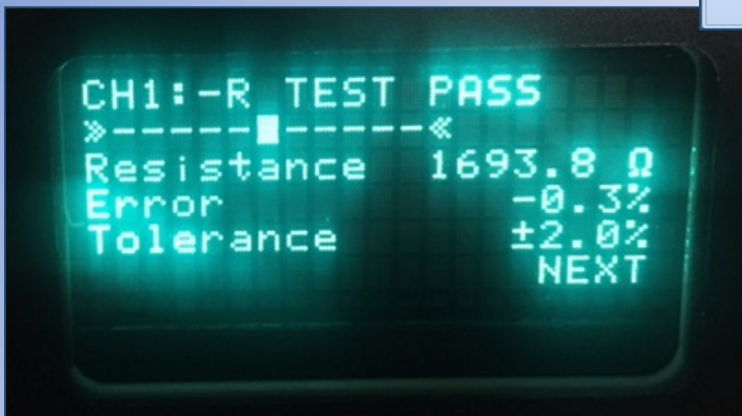


Included PC Software Features:

- Data offloading and report printing
- Includes MS Excel compatible interface for statistical analysis and report creation

| Geophone Settings | | Type | PS2 3C | New | Auto fill specification |
|--|------|------|--------|---|-------------------------|
| Coil Resistance (R _c , Ohm) | 3600 | | | Shunted Impedance (Z _{ts} , Ohm) | 2850 |
| Moving Mass (M, gram) | 2.7 | | | Case to Coil Motion (Disp, cm p.p) | 0.4 |
| Drive Frequency (F _d , Hz) | 12 | | | Temperature (deg C) | 20 |
| Shunt Resistor (Enter 0 for none) (R _d , Ohm) | 0 | | | Tolerance Settings | |
| Natural Frequency (F _n , Hz) | 2 | | | Frequency Tolerance (+ / -) % | 5 |
| Open circuit Damping (B _o) | 0.5 | | | Damping Tolerance (+ / -) % | 10 |
| Shunted Damping (B _l) | 0.5 | | | Sensitivity Tolerance (+ / -) % | 10 |
| Open circuit Sensitivity (G _o , V/cm/s) | 0.22 | | | Resistance Tolerance (+ / -) % | 5 |
| Shunted Sensitivity (G _s , V/cm/s) | 0.22 | | | Impedance Tolerance (+ / -) % | 5 |
| Shunted Resistance (R _{cs} , Ohm) | 3600 | | | Distortion Tolerance % | 0.2 |

| Type | Rc, Ohm | M, gram | Fd, Hz | Rd, Ohm | Fn, Hz | Bo | Bl | Go, V/cm/s | Gs, V/cm/s | Rcs, Ohm | Zts, Ohm | Disp | Temp | Freq |
|--------------------|---------|---------|--------|---------|--------|-------|--------|------------|------------|----------|----------|--------|------|------|
| roy 4.5 | 395 | 11 | 12 | 10000 | 4.5 | 0.65 | 0.7347 | 0.234 | 0.225 | 380 | 864.9 | 0.40 | 20 | |
| HS-1,LT | 3800 | 23 | 12 | 0 | 2 | 0.61 | 0.61 | 0.787 | 0.787 | 3800 | 5718.3 | 0.1524 | 25 | |
| HS-1,LT_4_5 undamp | 3800 | 23 | 12 | 0 | 4.5 | 0.27 | 0.27 | 0.787 | 0.787 | 3800 | 6126.9 | 0.254 | 25 | |
| HS-1,LT_4_5 60% | 3800 | 23 | 12 | 10700 | 4.5 | 0.27 | 0.5988 | 0.787 | 0.581 | 2804.1 | 4136.4 | 0.254 | 25 | |
| HS-1,LT_4_5 70% | 3800 | 23 | 12 | 7320 | 4.5 | 0.27 | 0.6987 | 0.787 | 0.518 | 2501.4 | 3554.6 | 0.254 | 25 | |
| Omni 2400 | 2400 | 7.8 | 15 | 0 | 15 | 0.57 | 0.57 | 0.52 | 0.52 | 2400 | 5591.2 | 0.0508 | 25 | |
| Omni 2400 damped | 2400 | 7.8 | 15 | 11800 | 15 | 0.57 | 0.6994 | 0.52 | 0.432 | 1994.4 | 3808.1 | 0.0508 | 25 | |
| PS-10R | 1800 | 14 | 12 | 20000 | 10 | 0.51 | 0.7 | 0.858 | 0.788 | 1651.4 | 6457.4 | 0.254 | 20 | |
| PS-10R 3C | 1800 | 14 | 12 | 0 | 10 | 0.51 | 0.51 | 0.858 | 0.858 | 1800 | 9349.8 | 0.254 | 20 | |
| GS-32CT 20C | 395 | 11.2 | 12 | 1000 | 10 | 0.316 | 0.7 | 0.275 | 0.197 | 283.2 | 658.8 | 0.152 | 20 | |
| HP102 | 395 | 11.2 | 12 | 1000 | 10 | 0.316 | 0.7012 | 0.275 | 0.197 | 283.2 | 658.8 | 0.152 | 20 | |
| PS 4.5 B Sigma | 375 | 11.3 | 12 | 20000 | 4.5 | 0.6 | 0.6637 | 0.288 | 0.283 | 368.1 | 1173.1 | 0.40 | 20 | |
| PS2 3C | 3600 | 2.7 | 12 | 0 | 2 | 0.5 | 0.5 | 0.22 | 0.22 | 3600 | 2850 | 0.40 | 20 | |



Portable BD3 Hardware Features:

- Bright, high-contrast screen readable in any light
- Internal battery for all-day use
- Designed rugged for outdoor use in the field



In-Field Geophone Acceptance Testing **Seismic Source**

Portable Bird Dog 3

A Versatile In-Field Quality Control Tool:

- 32-bit ADC chip for lower noise and increased accuracy
- 8 Gbytes of Data Storage - Expandable to 16
- GPS based time and location saved for every record
- Test data saved in non-volatile memory for later download and retrieval
- Connects to PC via Ethernet or optional Wi-Fi to download results for display, analysis, report generation and archival



Portable BD3 with Geophone Test option Includes:

- Three Channel Portable Bird Dog 3 Unit with:
 - Charger for Internal Battery
 - CAT5 Computer Interface Cable
- Portable BD3 Geophone QC kit with:
 - Geophone Wiring Harness:
 - Tests one 3-Component Geophone
 - Tests one 1-Component Geophones or Strings
- Available options include:
 - Hydrophone Test Option



Portable Bird Dog 3 with Geophone Test option Specifications

| Performance | | Physical | |
|--------------------|------------------------------|--------------|-------------------------------|
| A/D | 32 bit sigma delta converter | # Channels | 3 |
| Dynamic Range | 126 dB | Temperature | -40°C to +85°C |
| % THD | 0.0012 % | Humidity | 0 to 100% |
| Crosstalk | Better than -125 dB | Size | 11" x 5" x 3.25" (w/o handle) |
| CMRR | > 100 dB | Weight | 5 lbs (2.27 kg) |
| Noise Floor (@2ms) | < 0.09 μ V RMS | Data Storage | 8GB CompactFlash (Internal) |
| Input Impedance | 200k Ohms | | |

