



### SPECIFICATIONS Z3000 NODE (REMOTE DATA ACQUISITION UNIT)

|                              |   |
|------------------------------|---|
| OPERATING DEPTH*             | 3000 meters   |
| WEIGHT IN AIR                | 213 lb (97 kg)  |
| WEIGHT IN WATER              | 110 lb (49 kg)  |
| SIZE                         | 21 inches diameter by 10.5 inches high                      |
| OPERATING TEMPERATURE RANGE* | -10 to +60 degrees C (Battery Charging: 0 to +45 degrees C) |
| BATTERY TYPE                 | Rechargeable Li-Ion   |
| OPERATING LIFE*              | Maximum 60 days (@ 2ms Sample Interval)                     |
| DATA STORAGE                 | 32GB NAND Flash Memory                                      |

Signal Conditioning Specifications @ 2ms, 25°C, 31.25Hz, internal test, unless otherwise indicated:

|                            |  |
|----------------------------|--|
| SEISMIC DATA CHANNELS      | 4  |
| ADC RESOLUTION             | 24 bits  |
| SAMPLE INTERVALS           | 0.5, 1, 2, 4 milliseconds                              |
| PREAMPLIFIER GAIN          | 0, 12, 24, 36 dB                                       |
| LOW-CUT & DC OFFSET FILTER | OUT to 60Hz in 1Hz increments, 6dB/octave              |
| ANTI-ALIAS FILTER          | Fixed by Sample Interval (214.5Hz @ 2ms), Linear Phase |
| TOTAL HARMONIC DISTORTION  | 0.0006% @ 12dB gain, -3dB Full Scale                   |

EQUIVALENT INPUT NOISE  
(Channel Inputs Terminated)

| GAIN<br>dB | GEOPHONES<br>uVrms | HYDROPHONE**<br>uVrms |
|------------|--------------------|-----------------------|
| 0          | 1.8                | 1.8                   |
| 12         | 0.6                | 1.5                   |
| 24         | 0.4                | 1.5                   |
| 36         | 0.4                | 1.5                   |

|                                   |  |
|-----------------------------------|--|
| DC OFFSET                         | <10% of Input Noise with DC Offset Filter enabled  |
| FULL SCALE INPUT SIGNAL           | 2500 mV pk @ 0dB<br>625 mV pk @ 12dB<br>156 mV pk @ 24dB<br>39 mV pk @ 36dB<br>120dB @ 0dB Preamp Gain |
| DYNAMIC RANGE                     | Geophone Channels: < -100dB, Hydrophone**: < -80dB   |
| CROSSFEED                         | Geophone Channels: >90dB, Hydrophone**: >40dB  |
| COMMON MODE REJECTION RATIO       | 0.50%  |
| GAIN ACCURACY, CHANNEL TO CHANNEL |  |

|                  |  |
|------------------|--|
| TIMING ACCURACY* | Corrected Post-Acquisition: +/- 1ms (or one half sample interval)<br>Uncorrected: +/- 35 ms at 60 days |
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|----------------------|---|
| SENSOR CONFIGURATION | 1 Hydrophone, 3 sets of Orthogonal Geophones<br>(3 geophones in series for each axis) |
|----------------------|---|

|                       |   |
|-----------------------|---|
| GEOPHONE TYPE         | Oyo-Geospace GS-30CT  |
| GEOPHONE SENSITIVITY* | 1.500 V/in/sec (3 geophones in series at 0.500 V/in/sec each) |
| GEOPHONE LOW-CUT*     | 10Hz (-3dB)   |

|                         |                      |
|-------------------------|----------------------|
| HYDROPHONE TYPE         | High Tech HTI-96-MIN |
| HYDROPHONE SENSITIVITY* | 8.9 V/Bar            |
| HYDROPHONE LOW-CUT*     | 10Hz (-3dB)          |

|                    |   |
|--------------------|---|
| TILT INDICATION    | +/- 1.5°  |
| AZIMUTH INDICATION | +/- 5° (at Latitudes within +/- 50° of the Equator) |

|                    |  |
|--------------------|--|
| SELF-TEST FEATURES | Internal Noise (preamp inputs terminated)<br>Internal THD<br>Internal Gain Accuracy<br>Internal CMRR<br>Internal Crossfeed<br>Internal Impulse<br>Sensor Impedance |
|--------------------|--|

\*Not fully verifiable at acceptance testing prior to system shipment.

\*\*Channel includes high-impedance low-cut filter for directly-coupled Hydrophone interface.

Fairfield Industries reserves the right to change specifications without notice to provide the best possible product.