GEObit

IES Innovative Environmental Scientific Pty Ltd ABN: 46 611 085 842

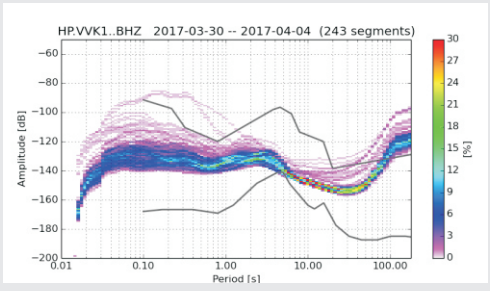
AUSTRALIAN & NZ DISTRIBUTOR

Monitoring the earth

C100 wide band Seismometer 10sec-98Hz

- 3 axis velocity sensor
- Low power consumption
- Borehole /surface type
- Only 50mm diameter
- Up to 150m depth
- Smart elastic clamping
- Guiding wheels driver
- Wide input voltage range
- Build-in test line
- Wide Response 10sec - 98Hz
- High Sensitivity 1500V/m/s
- Velocity feedback design
- Operation Range: -20 +70°C
- Local & Regional Seismicity Monitoring

The C-100 is a three-component velocity equivalent output seismic sensor. The unit is recommended for local and regional seismicity and micro-seismicity monitoring. **The sensor electronics are integrated with the SRI32L/S digitizer. This makes the difference with the S-100 unit.** The design is based on the force-balance principle, Using three geophone elements, the bandwidth is extended to lower frequency of the original geophone's natural frequency. Actually three generations of the C-100 sensor have been implemented. Several low and upper corner frequencies provided through different senor configuration. Thus 10s, 5s, 2s and 1s low cut frequency corner is available as well as 50, 80 and 100 Hz high cut frequency corner. The sensitivity is 1000V/m/sec for the Mk1 version while it has been increased to 1500V/m/sec for the Mk2 and Mk3 versions



The default cable length of the sensor is approximately 20 meters but it can be extended up to150 meters. The sensor electronics are housed inside the back box leaving the main sensor unit area free of electronics. Thus any damage risk is dramatically minimized and no rason for sensor uninstallation for repair. Two sensor types are provided, one borehole type and one surface type. Both have similar characteristics. The borehole type is housed into an 50mm diameter casing while the surface type unit's dimansions are only 115x90x55 mm. No mass-lock or centering is required that makes an easy connection with the digitizer. The settling time of the unit is very short, only thirty seconds. Sensitivity is 1500V/m/sec (differentially) thus providing a very sensitive seismic sensor. A test line is also provided for calibration and testing. The sensor is ideal for local and regional earthquake seismology as well as human or induced micro-seismicity monitoring.

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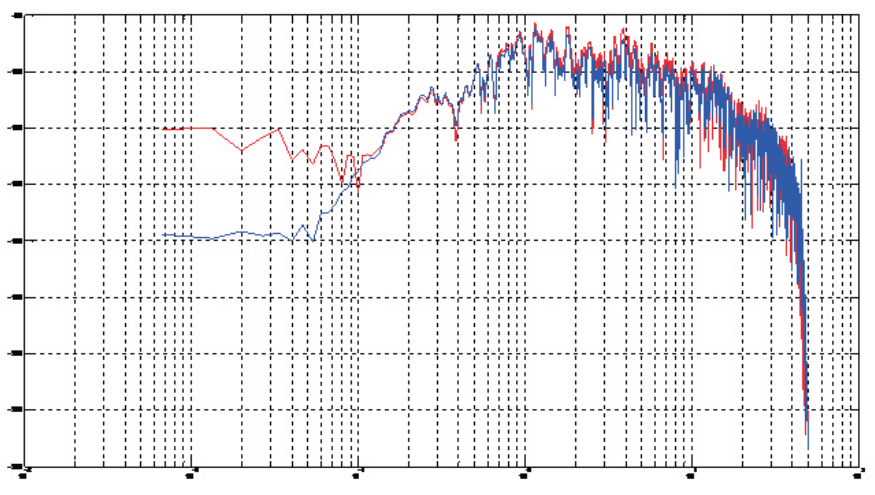
Instrument Specifications

GENERAL	
Number of channels:	3
Orientation	Vertical, North-South, East-West
Geophone resistance	375 OHms
Power	+12Vdc/0.4W, +/-12Vdc/0.09W
Mounting	Borehole type
FORCE BALANCE ELECTRONICS	
Sensitivity	1500 V/m/sec
Noise Level	Below NLNM into recording band
Bandwidth	10sec to 98Hz
PHYSICAL	
Cable length	Standard 20m
Size (geophone enclosure)	180mm length, 50mm diameter
Weight (geophone enclosure)	600g
ENVIRONMENT	
Temperature range	-20 to +70 °C
Humidity	100%, IP67 enclosure.
Submersible	1000 meters

Optional versions with corner frequency 1sec, 2sec and 5sec are available.



C100 (red) vs Guralp3T (blue) PSD plot

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