

## 151 Observer Data Sheet

The 151 series Broadband Seismometer, "Observer", is a force-balance feedback sensor available with frequency bandwidth 0.0083 Hz (120 sec) -50 Hz, and 0.016 Hz (60 sec) - 50 Hz, flat to velocity. The "Observer" with frequency bandwidth 0.033 Hz (30 sec) - 50 Hz is available upon request. The 151 "Observer" contains three independent sensors (one vertical and two horizontal) with built-in electronic feedback circuit, control and power conversion circuits, featuring low noise, large dynamic range and easy installation and use.



*151B with carry handle. Image courtesy of RefTek, a Trimble Brand.*

The Observer has built-in levelling and mass lock/unlock facilities. The levelling mechanism includes two bubble levels, three adjustable feet and three locknuts which are located on the seismometer's chassis (see photo below).

The Observer has built-in mass zero-position adjusting mechanism to perform automatic mass adjustment. As soon as the seismometer is powered it checks the zero position of each component's mass and automatically adjusts the zero position if needed. Monitoring and adjustment of the mass can also be performed via the 130 family High Resolution Recorders using Sensor Control Board, RT527-B01.

The Observer is a low noise seismometer. The low self noise performance makes the 151-120 an ideal seismometer for local, regional, and global seismicity studies in different installation configurations, including observatory and portable, surface and posthole applications.

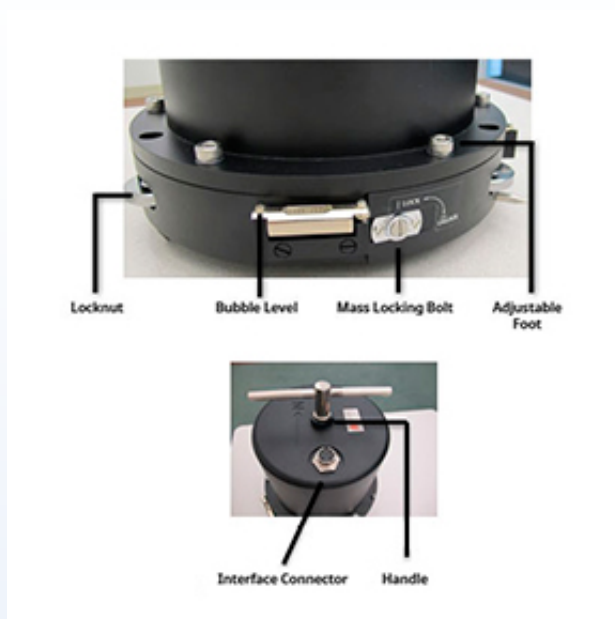
### Product Dimensions

Physical	Dimensions (L x W x H)	Weight
(instrument only)	24cm x 24cm x 27cm	12kg

### Technical Specifications

<b>Sensor Type:</b>	Triaxial, Orthogonal.
<b>Feedback:</b>	Force-balance with Capacitive Displacement Transducer.
<b>Frequency Bandwidth:</b>	151B-120 0.0083 Hz (120 sec.) – 50 Hz. 151B-60 0.0166 Hz (60 sec.) – 50 Hz.
<b>Sensitivity:</b>	2000 V/m/s.
<b>Full Scale Output:</b>	±20 V Peak-to-Peak Differential.
<b>Dynamic Range:</b>	>140 dB @ 5 Hz
<b>Self-Noise:</b>	Below NLNM from 145 sec. to 10Hz.
<b>Output Impedance:</b>	

## Gallery



*151 features and controls. Image courtesy of RefTek, a Trimble Brand.*