

## 125A-03 Texan Data Sheet

The 125A-03 Miniature Seismic Recorder 'Texan' is ideally suited to for crustal refraction and reflection studies. The Texan is a self contained unit incorporating a low-noise differential input amplifier, 24-bit analog-to-digital converter, solid state memory and easily accessible batteries (D cells).



*The 125A-03 'Texan' Seismic record. Image courtesy of RefTek, a Trimble brand.*

In crustal scale refraction experiments, hundreds of instruments are deployed over several hundred kilometres for two to four days duration. For this type of survey the Texan can be deployed independently with predefined time windows. A hub is used to setup up to 15 Texans at a time and provides power, a connection to the host computer via USB, and timekeeping signals from a GPS receiver.

After setup, the Texans are deployed for recording, a state LED displays the operating condition for the Texan. This feature clearly informs the user that the battery voltage is sufficient, time is set, the acquisition program loaded, and the unit is either ready to acquire or is acquiring data. During the recording session, the Texan can be retimed or data may be downloaded to the workstation for processing.

### **Applications;**

- Active source crustal studies.
- Refraction and reflection.
- Exploration 3-D noise testing.
- Tomographic arrays.
- Aftershock studies.
- Micro-zonation survey

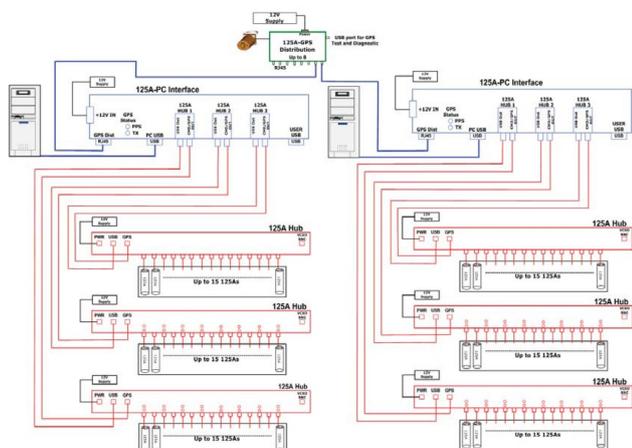
## Product Dimensions

| Physical          | Dimensions (L x W x H) | Weight |
|-------------------|------------------------|--------|
| (instrument only) | 19.6cm x 7.6cm x 7.6cm | 1.1kg  |

## Technical Specifications

|                               |  |
|-------------------------------|--|
| <b>A/D Conversion:</b>        | ?-? modulation, 256KHz base rate. 24-bit two's complement (3 bytes per sample).            |
| <b>Gain:</b>                  | Variable Gain x4-x256 (by factor or 2).  |
| <b>Full Scale Input:</b>      | 5 Vpp- 78.125 mV (by factor of 2)  |
| <b>Sample Rate:</b>           | 1000, 500, 250, 200, 125, 100, 50 sps.   |
| <b>Memory:</b>                | USB flash drive, 256 or 512MB.   |
| <b>Trigger:</b>               | Record windows are programmed by operator. up to 1000 trigger times can be programmed.     |
| <b>Record Length:</b>         | From 1s up to the capacity of the memory.  |
| <b>Time Base:</b>             | 2.048MHz, electronic control. $\pm 0.1$ ppm from 0 to 50°C, $\pm 0.3$ ppm from -20 to 0°C. |
| <b>Communication:</b>         | USB 2.0.   |
| <b>Power:</b>                 | Internal- 1.6 VDC to 3.0 VDC<br>External - 5-15 VDC.                                       |
| <b>Operating Temperature:</b> | -40°C to 60°C  |
| <b>Environmental:</b>         | Water Immersion without leaking in up to 2m of water for 48hours. Air tight to 2.5 psi.    |
| <b>Shock:</b>                 | Survives 1m drop on any axis.  |

## Gallery



*125A\_03 Texan Hub Schematic, illustrating the requirements for retiming a large network of Texans.*