

# EduGeo



The SR04 digitizer is available in the EDUGEO version. It is a high-performance instrument, but designed for private individuals and organizations rather than professionals.

With this instrument is possible to record earthquakes at home and to publish the recordings on the Internet.

Using it with a PC and the SEISMOWN software suite you will have a fully functional seismic station. It is possible to order the system with built-in sensors or using your own sensors.

# Semplicity

The EDUGEO seismograph is designed for earthquake recording for personal use and for educational purposes. Reliable and simple, in just a few minutes it is ready to operate and record seismic signals.

It comes with all necessary cables, software, GPS antenna and carrying case, with a complete printed user's manual.

The unit is equipped with two RS232 ports; one for the seismic data and the other for reading the GPS coordinates. Nevertheless the primary purpose of the GPS is to obtain perfect synchronization with the UTC time (Greenwich standard time). This feature is a must for sharing data with public seismic networks.

### **Educational**

The instrument can be successfully used in schools and for training. Low cost and compact, it allows people to become familiarized with seismic recording. A professor can use it in the classroom for physics lectures on a variety of physics laws, from harmonic motion to structural analysis.

Our clients include many public and private institutes such as the University of Bergen (Norway) and INGV (Rome). EDUGEO is used by many Civil Defense Volunteer Groups in Italy, for example: Gruppo Volontari di Protezione Civile di Foligno (Perugia), EC Arpinum (Frosinone), Protezione Civile Gruppo Lucano, etc... many schools, such as the Liceo Spallanzani in Tivoli, the Liceo Montanari in Verona, etc... and other private users, the majority of which belong to the Italian Experimental Seismic Network IESN ww.iesn.it

## Connectivity

The software supplied with the instrument allows the creation of "virtual seismic drums" or "virtual helicorders," images that can transmitted on the WEB to publish the seismic activity in near real

For example you can visit this web page: http://www.sara.pg.it/drums/drum\_UPRP\_EHZ.gif where you can find a seismic trace of the last 24 hours.

#### **Technical Features**

12V (instrument provided with power supply unit) Power supply:

Power consumption: Number of channels:

A/D Converter: 24 bit  $(\Sigma \Delta)$ >120dB @ 100SPS Dynamic range:

Sampling: simultaneous on all channels

10,20,25,50,100,200 Sampling rates:

Resolution: approx. 2 nm/s between 0.1 and 10Hz (2 x 10-9 m/s)

Real Time Clock: +/-10ppm (-20/+50°C) Sync. Real Time Clock: via modulated PPS

preamplified with 10mt cable and BNC connector CPU: AVR RISC processor @ 11.592MHz

Data interface: RS232, USB cable supplied Data format: SADC20 binary protocol

Baud rate: 38400 baud, n,8,1 GPS data interface: RS232

GPS data format: NMEA; 4800 baud, n,8,1 Housina: Aluminum (IP54)

Operating temperature: -10/+50°C 155x140x110 mm Dimensions: Weight:

with 4.5 Hz sensors: 2000g (approx.) 3400g (approx.) with 2 Hz sensors: CF

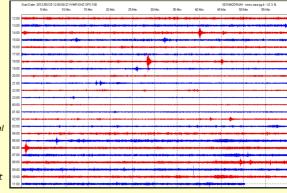
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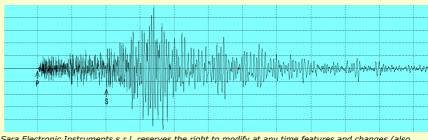
GPS antenna:



At right, an example of the Virtual Seismic DRUM plotted by

Below an earthquake M6.0 recorded by an EduGeo system at about 500km from the epicenter.





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