



The DoReMi seismograph is an innovative instrument which distributes along the cable all the electronics needed to record a seismic signal.

This architecture has several benefits which on the whole make the system very convenient to use in any operating conditions.

It is not possible to list all of its features and practical uses on this page, therefore we invite you to visit our web site at www.sara.pg.it for further information.

Simplicity & Flexibility

Each channel itself is a seismograph that, linked to the other elements, creates a network, easy to transport in its cable wheeler. The system is fully modular; you can purchase the exact number of channels you need, from 1 to N .

Energy

A rechargeable battery is embedded in the main interface. The system goes into standby as not in use, so the battery is lightweight and durable.

Precision

With the a/d converter placed VERY near to the geophone, most of the electro-magnetic environmental noise, affecting other instruments, is eliminated. Transmission is digital, so no signal loss or crosstalk can happen along the string.

Completeness

The system allow you to run a wide range of surveys using seismic sources or just ambient noise.

User friendly

Since the channels are completely independent, you can: add cable extensions, overcome obstacles, replace channels without the need to change the entire cable and share channels with working partners.

Reliability

Entirely designed and produced inside our company, we guarantee fast customer service, training, customization and consultant. After 12 years of heavy operation and hundreds of clients worldwide the system has proven to be one of the most reliable and practical system in the market.

Software

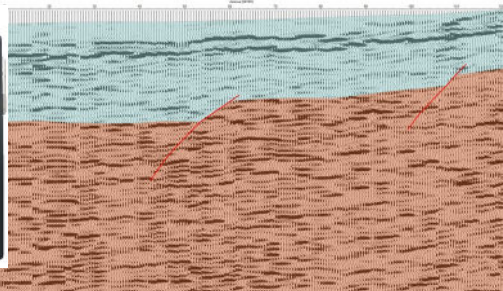
The software, available in Italian, English and Chinese, is flexible and able to drive all system features as well as several tools for a first on-site data check.

Several functions for facilitating field operations include: pre-shot noise monitor, downhole data rearrangement, SH shots inversion and overlapping, data interlacing and roll-along, refraction and HVSR preview, filtering, frequency spectrum and more.

For data processing we recommend use of our GeoExplorer, ReflexW and Geopsy covering all types of geophysical analysis.

Technical Features

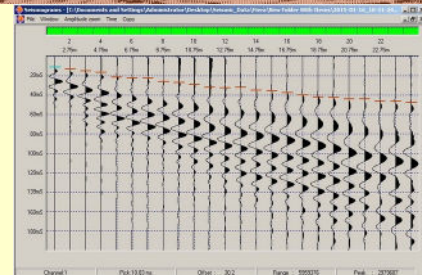
No. of Bits	16 (96dB dynamic range)	24 (144dB dynamic range)
A/D Converter Type	SAR	SIGMA DELTA
Converter Input Span	5 V	5 V
S/N Ratio @ 500 SPS	96 dB (@ 27dB gain)	140 dB
S/N Ratio @ 5000 SPS	94 dB (@ 27dB gain)	130 dB
S/N Ratio @ 20000 SPS	92 dB (@ 27dB gain)	105 dB
Input Type	for geophone	for geophones
Input impedance	> 100 k Ω	> 20 k Ω
Common Mode Rejection	> 80 dB	> 80 dB
Band pass:	2-200 Hz	DC-400 Hz
Filters (IIR or 0 Phase):	Low pass, High pass, notch and customizable	Low pass, High pass, notch and customizable
Max Sampling Lag Between Ch.:	< 30 ppm	< 30 ppm
Max Error Between Trigger Ch.:	< 0.2us	< 0.2 us
Memory per channel:	64000 bytes	128000 bytes
Maximum Samples:	30000	40000
Sampling Rates:	200 Hz to 50000 Hz	200 Hz to 20000 Hz
Maximum Connectable Channels:	255	255
Power Consumption:	\approx 0.3 W per Ch.	\approx 0.3 W per Ch.
Instrument Chain Max Length:	1000 m	1000 m
Best results geophones:	4.5 Hz High Gain 80 V/m/s	4.5 Hz High Gain 80 V/m/s
Diagnosis:	Memory Status (OK / Fault)	Memory Status (OK / Vdc)
BUS Communication:	115200 baud, N, 8,1	115200/230400, N, 8,1
DATA transfer to PC:	USB	USB
Data format:	.drm, SEG-2, SEG-Y, .saf, .csv	.drm, SEG-2, SEG-Y, .saf, .csv



Applications

Typically used for MASW surveys, it can be used for any other seismic surveys like:

- Refraction
- Reflection
- Tomography
- HVSR
- ESAC/SPAC and ReMi
- Water search
- Landslide survey
- Downhole / Crosshole



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