sara

DoReMi©

Technologies for seismology, engineering and geophysics

The DoReMi© seismograph is a digital telemetry system with the recording electronics embedded in the cable.This architecture has several benefits, especially in the modularity and possibility to operate in any position of the seismic line.

◆ Each channel works as a single seismograph, and when linked with other elements, creates a network that is easy to transport using its cable wheeler. The system is fully modular, allowing you to purchase the exact number of channels you need, ranging from 1 to 255.

◆ A lightweight and durable rechargeable battery is built in the main interface. When not used, the system enters standby mode to preserve battery power.

◆ By having the A/D converter very close to the geophone, most of the electromagnetic noise that affects other instruments is eliminated. Digital transmission prevents signal loss and crosstalk along the cable. The system architecture offers also other benefits:
• add cable extensions
• overcome obstacles
• replace individual channels
• share channels with working partners
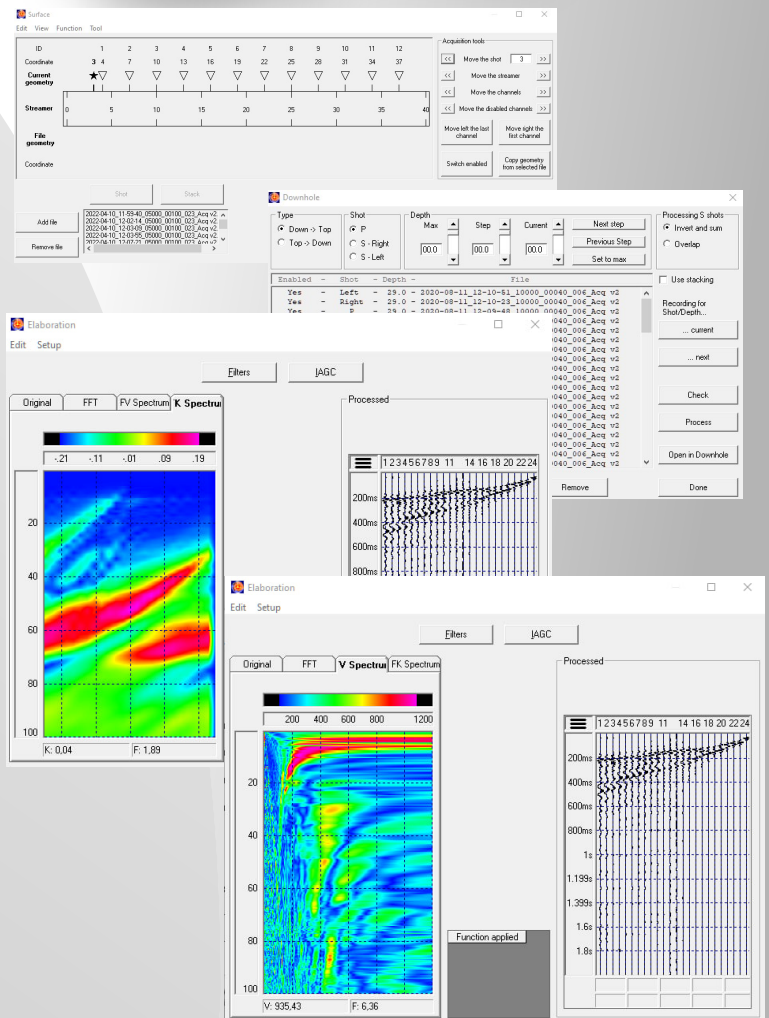• roll-along procedures can be strongly simplified

◆ The software, available in Italian, English, and Chinese, is flexible and providing a lot of tools to simplify the on-site data quality checks, some of them are:
• Pre-shot noise monitoring
• Downhole data acquisition management
• Surface acquisition management
• SH shots signal inversion and overlapping
• Data interlacing and roll-along acquisition
• Refraction and HVSR preview
• Filtering, frequency spectrum, **FK** and **FV spectrums**
• Compatability of data output with any processing software

◆ Typically used for MASW surveys, it can be used for any other seismic survey:
• Refraction (GRM and Tomography)
• Reflection (1D and 2D)
• ESAC/SPAC, ReMi and HVSR
• Water search (SSV)
• Downhole / Crosshole (with SS-BH-5C)

◆ Entirely designed and produced in-house, our company guarantees fast customer service, training, customization, and consultation. With over 15 years of heavy operation and hundreds of clients worldwide, the system has proven to be one of the most reliable and practical systems on the market.

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Specifications:

No. of bits	16	24
AD converter type:	SAR	SIGMA DELTA
Converter input span:	5 V	5V
S/N ratio @ 500 SPS:	96 dB (@ 27db gain)	140 dB
S/N ratio @ 5000 SPS:	94 db (@ 27 db gain)	130 dB
S/N ratio @ 20000 SPS:	92 db (@ 27db gain)	105 dB
Input type:	For geophones	For geophones
Input impedance:	>20 kΩ	>20 kΩ
Common mode rejection:	> 80 dB	> 80 dB
Band pass:	2 - 200 Hz	DC - 400 Hz
Filters (IIR o 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.:	< 0.2 us	< 0.2 us
Maximum samples:	30000	40000
Sampling rates:	200Hz to 50000 Hz	200 Hz to 20000 Hz
Maximum connectable channels:	255	255
Power supply:	18Vdc embedded NiMh battery	18Vdc embedded NiMh battery
Power consumption:	≈ 0.3 W per Ch.	≈ 0.3 W per Ch.
Nominal battery worktime (24ch):	300 shots @ 0.5ms / 2s	300 shots @ 0.5ms / 2s
Instrument chain max length:	1000 m	1000m
Best results geophones:	4.5 Hz High Gain 80 V/m/s	4.5 Hz High Gain 80 V/m/s
Interdistance geophones:	5m (customizable at order)	5m (customizable at order)

No. of bits	16	24
Connector:	XLR 4 poles	XLR 4 poles
Geophones connector:	Split spring	Split spring
Diagnosis:	Memory	Memory + Vdc
BUS communication:	115 kbps	115-300kbps
DATA transfer to PC:	USB	USB
Data Format:	.drm, SEG-2, SEG-Y, .saf, .csv	.drm, SEG-2, SEG-Y, .saf, .csv
Operating temperature:	-20 / +70 °C	-20 / +70 °C
Storage temperature:	-40 / +90 °C	-40 / +90 °C
Maximum number of power booster:	8	8
Humidity:	0 - 100 %	0 - 100 %
Certifications:	CE	CE