

# IRIS INSTRUMENTS

## SYSCAL Pro "deep marine"



SYSCAL Pro unit

**10 CHANNELS MARINE**

**RESISTIVITY SYSTEM**

**50 A OUTPUT CURRENT**

- 10 simultaneous reception channels
- **50 A – 2800 W – 56 V**
- GPS input
- Internal or external (computer) storage

### SYSCAL Pro "deep marine":

This version has been specifically designed for marine survey in high conductive medium (like salt water) thanks to the high output current capability.

### Marine survey with GPS:

a GPS/Sounder can be directly connected to the unit by a serial link for a continuous recording of the location of the 10 channels and of the water bottom all along the profile.

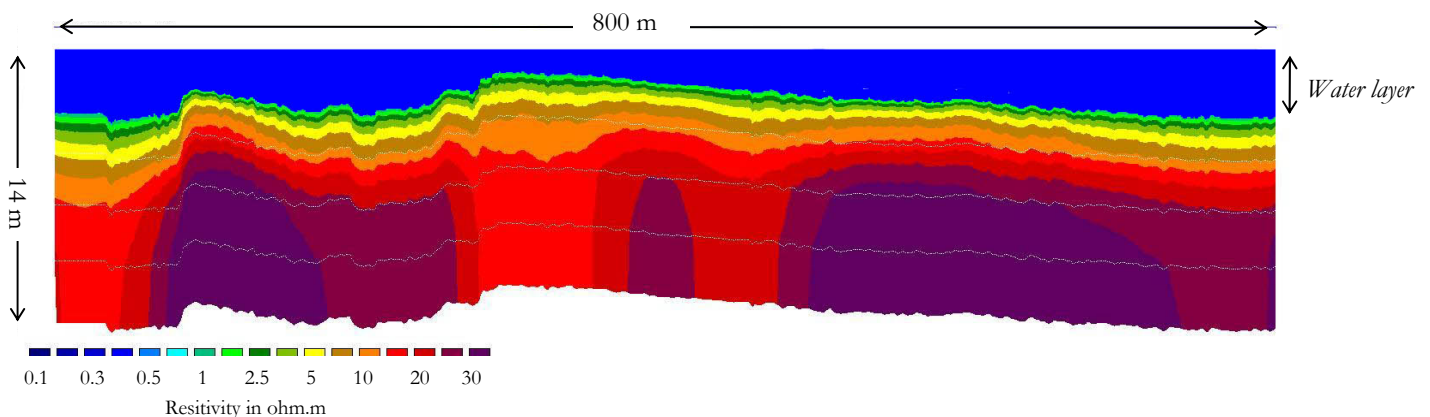
In that mode, using the 10 reception channels, a set of 10 resistivities is measured and stored approximately every 2 seconds.

### Graphite electrodes:

Specific cables with graphite electrodes can be supplied to fit to that environment ; this allows to get low resistance values and to avoid corrosion due to water contact.

### Sysmar software:

A specific remote PC software (SYSMAR) can be used for setup and data storage (no memory limitation) and for a graphical picturing in real time of the resistivity pseudo-section.



*Inversed Resistivity section (3000 data points acquired in 10 minutes)*

# SYSCAL Pro "deep marine"

## SYSCAL PRO "deep marine" CONFIGURATION

The marine cable made of 13 takeouts (2 for the current injection and 11 for the voltage reception) is connected to the SYSCAL Pro unit by the front panel plugs.

In thick water layer conditions, a specific cable can be submerged and dragged on the bottom.

The standard spacing between takeout is 4 meters ; cable with other spacing can be supplied to match your requirements.



*Graphite electrodes floating cable connected to SYSCAL Pro 10 channels*

## DATA MANAGING

Data are continuously transferred into the computer and can then be processed by the PROSYS software (data managing software for SYSCAL unit).

From this software, one has the opportunity to visualize graphically the apparent resistivity section and process the data (filter, add data files...).

Then, one can export the data to "txt" file or to interpretation software like RES2DINV software for pseudo-section inversion to true resistivity 2D section.

## TECHNICAL FEATURES

### OUTPUT SPECIFICATIONS

- Current: up to 50 A
- Voltage: up to 56 V (4 DC 12V batteries connected in serie)
- Power: up to 2800 W
- Pulse duration: from 150 ms to 8 s
- Current measurement precision: 2 % typical

### INPUT SPECIFICATIONS

- Measuring process: automatic ranging and calibration
- Input impedance: 100 M $\Omega$
- Input voltage:  
Max. channel 1: 15 V  
Max. channel 2 to channel 10: 15 V  
Protection up to 1000V
- 50 to 60 Hz power line rejection
- Voltage measurement:  
Precision: 0.2 % typical  
Resolution: 1  $\mu$ V
- Noise reduction: automatic stacking number in relation with a given standard deviation value
- SP compensation through automatic linear drift correction

### GENERAL SPECIFICATIONS

- Data flash internal memory: more than 21 000 readings
- Serial link RS-232 communication
- Power supply: 1 internal rechargeable 12V, 7.2 Ah battery for electronics power supply ; 1 to 4 external 12V standard car batteries for transmitter part
- Protection against polarity inversion
- Internal fan cooling system
- Shock resistant fiber-glass case
- Operating temperature: -20 to +70 °C
- Dimensions: 31 x 23 x 28 cm
- Weight: 10 kg

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