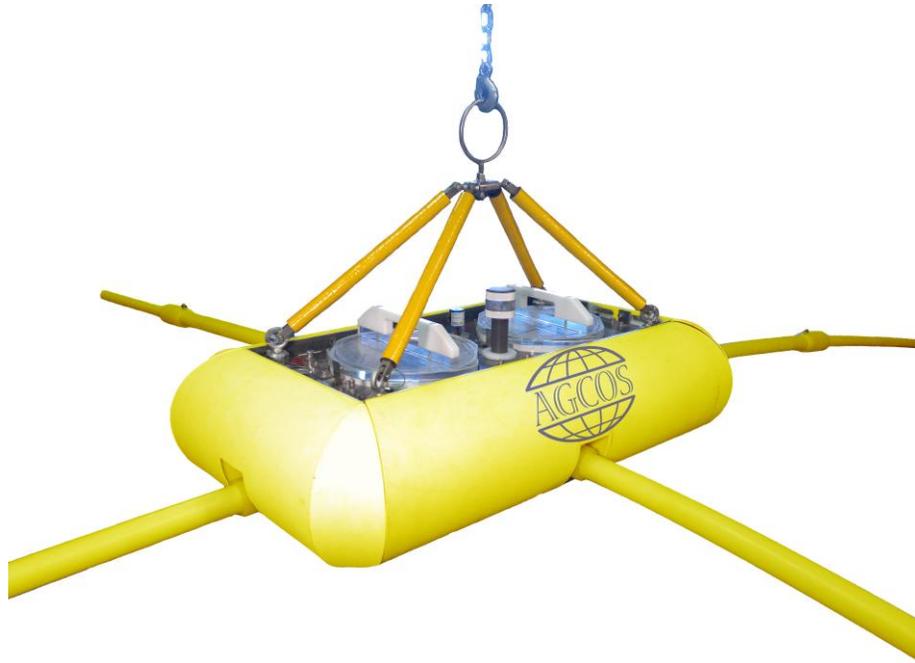




# SMMT

## 2-CHANNEL SHALLOW MARINE EM RECEIVER



### APPLICATION:

SMMT receivers are designed for carrying out shallow marine EM surveys in transition zones at depths of up to 50m. They are based on high-precision and highly-sensitive land geophysical equipment for electroprospecting surveys and are built in such a way, that equipment can easily be used for land surveys or for simultaneous marine and land EM data acquisition as well.

SMMT receivers are platforms made out of non-magnetic composite materials. They consist of EM acquisition units mounted in airtight underwater housings, acoustic devices for system retrieval from the deep, primary and emergency retrieval systems, an underwater and surface location systems, 2-way communication modules, and 10m electric dipoles in the form telescopic booms with special underwater electrodes for measuring electric field.

SMMT systems can be successfully used for natural resource exploration (oil and gas), monitoring, earthquake research, and other environmental and geophysical applications. MT technology is also widely used in scientific research, such as the study of the deep structure of the earth's crust and upper mantle.



## SPECIFICATION:

- Unlimited number of receivers working in the data acquisition system;
- Wireless communication between the individual units, i.e., complete independence of each individual receiver, with high accuracy GPS synchronization between instruments working within the system;
- Ability to use 5, 3 and 2 channel instruments in one system, and, if necessary, instruments with larger or smaller numbers of channels;
- Ability to carry out simultaneous synchronized soundings offshore and onshore;
- Ability to carry out surveys and data processing using a remote reference site and to apply robust processing to increase the accuracy of data and to suppress natural noise sources (agitation of aqueous surface, instability of underwater currents, etc.), as well as cultural noise;
- Digital data recording method to a solid-state removable memory;
- Ability to work with GPS-synchronized geophysical controlled current sources;
- A temperature stable quartz resonator;
- Data acquisition units keep high level of synchronization in frequency range up to 40 hours without GPS synchronization due to an internal quartz resonator;
- A digital filter, that could be turned off, for all commercial frequencies (50 or 60 Hz), even and odd harmonics, which fall into the frequency range (suppression no less than 40 dB);
- Underwater enclosures with quick access to the data acquisition unit and power source;
- Special underwater low-noise non-polarizing electrodes;
- High pressure-rated marine connectors and cables;
- Seabed platform with a digital compass accurate to 1 (one) degree or better;
- Primary and emergency instrument retrieval system;
- Seabed and on-surface instrument location and communication system;
- Underwater platform equipped with depth, temperature and pressure sensors;
- Five-meter orthogonal telescopic electric dipoles allow to launch systems from small size vessels.

Supported EM methods:	MT, CSEM
Number of channels :	2 electrical
Maximum depth of deployment:	50m
Dynamic range:	130 dB
ADC:	24 bit
Input resistance:	>1 MΩ
Frequency range:	320 Hz ... 0.00002 Hz
Filters:	50 Hz, 60 Hz, harmonics and notch filters, high pass and low pass filters
Data Transfer Modes:	Removable Flash Card
Synchronization:	GPS
Temperature Range :	-20°C...+50°C
Power Supply:	12V
Weight on deck:	150 kg
Wet weight:	40 kg
Electrical dipole length:	10m
Dimensions:	135 x 81 x 33 cm

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