

## Energy sources MultiJack



MultiJack energy source is designed to supply operations of sparker and boomer sound sources that are typically used for high resolution (HR), ultra-high-resolution (UHR) marine seismic surveys and VSP.

MultiJack is a unique energy source with the fastest charging rate available on the market, which results in possibility to acquire marine seismic profiles with the highest possible trace density and lateral resolution, correspondingly.

In addition to the standard mode of operation with a single source, MultiJack energy sources can be combined in an array to implement the latest shooting technologies:

- Flip-flop mode
- Multi-level source
- Simultaneous source
- Coded shooting

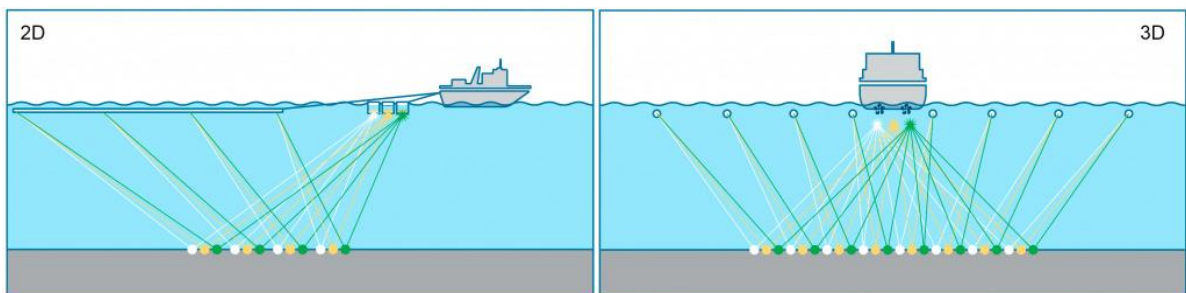
Flip-flop shooting became an industry standard acquisition technique for 3D oil and gas surveys, while still seldom used in shallow seismic projects. Our MultiJack sources support flip-flop shooting mode to improve efficiency and ready to serve

seismic parties, who are on the leading edge of marine engineering seismic acquisitions.

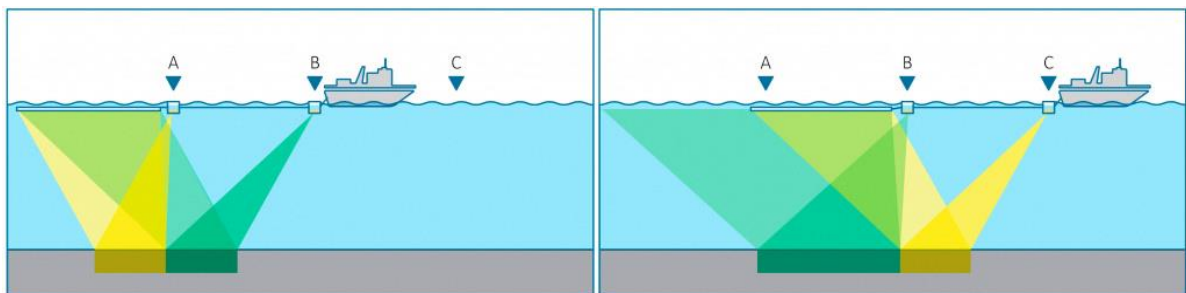
The use of multilevel sources allows to achieve a pre-defined source directivity, with modifying the source signature shape and its spectral characteristics. The application of multilevel sources in conjunction with impulse-code sequences makes it possible to use a ghost wave as a source of useful signal.

Simultaneous source (or multi-shooting) technology allows to achieve a number of significant advantages comparing to single source acquisition:

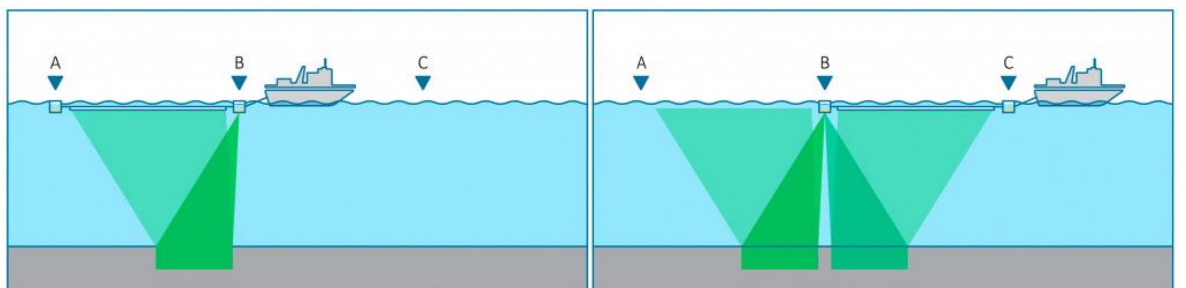
### Increase in the detail of research by using several nearby sources



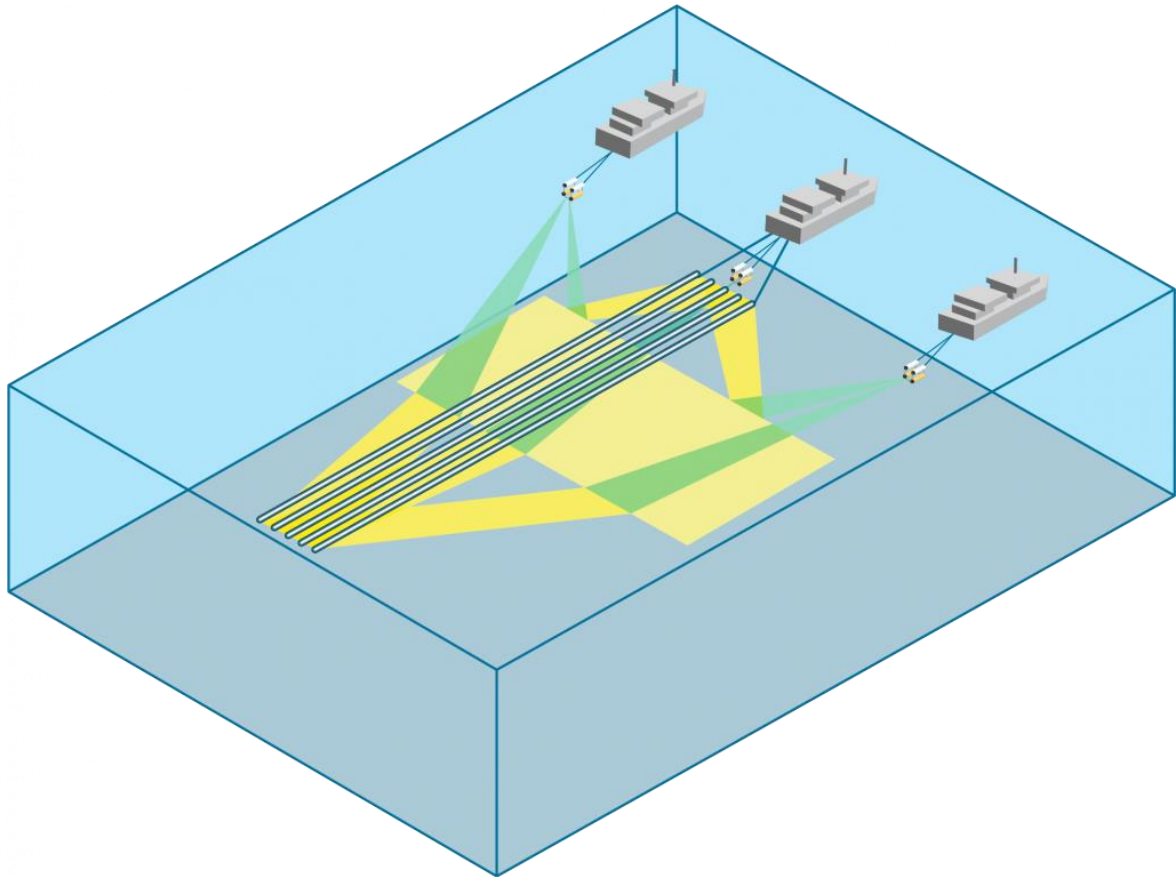
### Increase in the detail of research by using several nearby sources



### The possibility to determine kinematic and dynamic characteristics of geological medium at depths exceeding the length of recording system



The acquisition of seismic data over a wide range of azimuths due to non-longitudinal towing scheme of several sources



The use of code sequences also makes it possible to work with amplitudes of generated signals that are much smaller than the source signals amplitudes in a standard seismic survey with a single generation of the signal at each shot point. At the same time, the total energy of the recorded signal is preserved without loss in data quality. The acquisition of seismic data over a wide range of azimuths due to non-longitudinal towing scheme of several sources.

An important feature of MultiJack system while working in an array is its exceptional simplicity — all units are controlled by a single MultiJackPad remote control, which allows to set up and monitor all valuable parameters remotely. This is a unique solution on the market, which allows completely separate high voltage blocks from instrument room equipment. Acquisition with MultiJackPad is safer than ever.

MultiJack energy sources are balanced by the maximum pulse energy and charge rate so that it is guaranteed to provide standard observation steps at a typical vessel speed of 3–5 knots.

**The standard set of MultiJack energy source consists of:**

- MultiJack Unit
- Sync connector (2 pc.)
- Power cable
- Universal switching module for connecting the source
- Documentation Kit

**In addition to MultiJack energy sources the following items can be purchased:**

- MultiJackPad remote control
- Sparker and boomer with towed coaxial HV power cable
- Towed hydrophone streamer
- Seismograph
- Spare parts kit

Additionally, deck winches for HV cable and streamer with slip ring can be purchased to provide fast and safe deployment and recovery of UHR marine equipment during field operations.

Geodevice team is ready for cooperation and developing customized equipment for special customer's needs and ideas.

Please, contact us for generating the most suitable high resolution marine acquisition setup for your purposes. We will consider all the requirements and provide you with the best solution to achieve high quality image, starting from acquisition up to final data delivery.

We provide trainings, technical support and consultancy services, as well as processing of high-resolution marine seismic surveys.

MultiJack model	500HP1.5	1250HP1.5	2500HP3.0	5000HP6.0	10000HP12	25000HP12	50000HP12
Maximum pulse voltage	4 kV (6 kV (option))						
Type of charger	pulse charger						
Trigger mode	external/repetitive/manual						
Support of survey technologies	conventional, Flip-flop, simultaneous source, coded and multi-level source						
Operating energy	50-500 J	50-1 250 J	50-2 500 J	50-5 000 J	50-10 000 J	50-25 000 J	50-50 000 J
Charging rate	1 500 J/s	1 500 J/s	3 000 J/s	6 000 J/s	12 000 J/s	12 000 J/s	12 000 J/s
Minimum period of operation at the minimum pulse energy	0.13 s	0.13 s	0.26 s	0.15 s	0.1 s	0.1 s	0.1 s
Minimum period of operation at the maximum pulse energy	0.4 s	0.9 s	0.9 s	0.9 s	0.9 s	2.1 s	4.2 s
Minimum distance between shot points on maximum pulse energy and vessel speed is 3-5 knots	0.6-1 m	1.4-2.3 m	1.4-2.3 m	1.4-2.3 m	1.4-2.3 m	3.3-5.5 m	6.5-10.8 m
Power mains	110 or 220 V, 50 Hz			380 V, 50 Hz			
Maximum power consumption	1/2/3 kW	1/2/3 kW	1/2/3/4/5/6 kW	12 kW	12/24 kW		
Overall dimensions	54x41x27 cm		58x56x50 cm	58x59x69 cm	depends of customization		
Weight	20 kg	26 kg	74 kg	99 kg	depends of customization		

	<b>MultiJackPad</b>
Purpose of use	remote control of MultiJack
Maximum length of communication line	100 m
Overall dimensions	24 × 19.8 × 10.9 sm
Weight	1.5 kg







