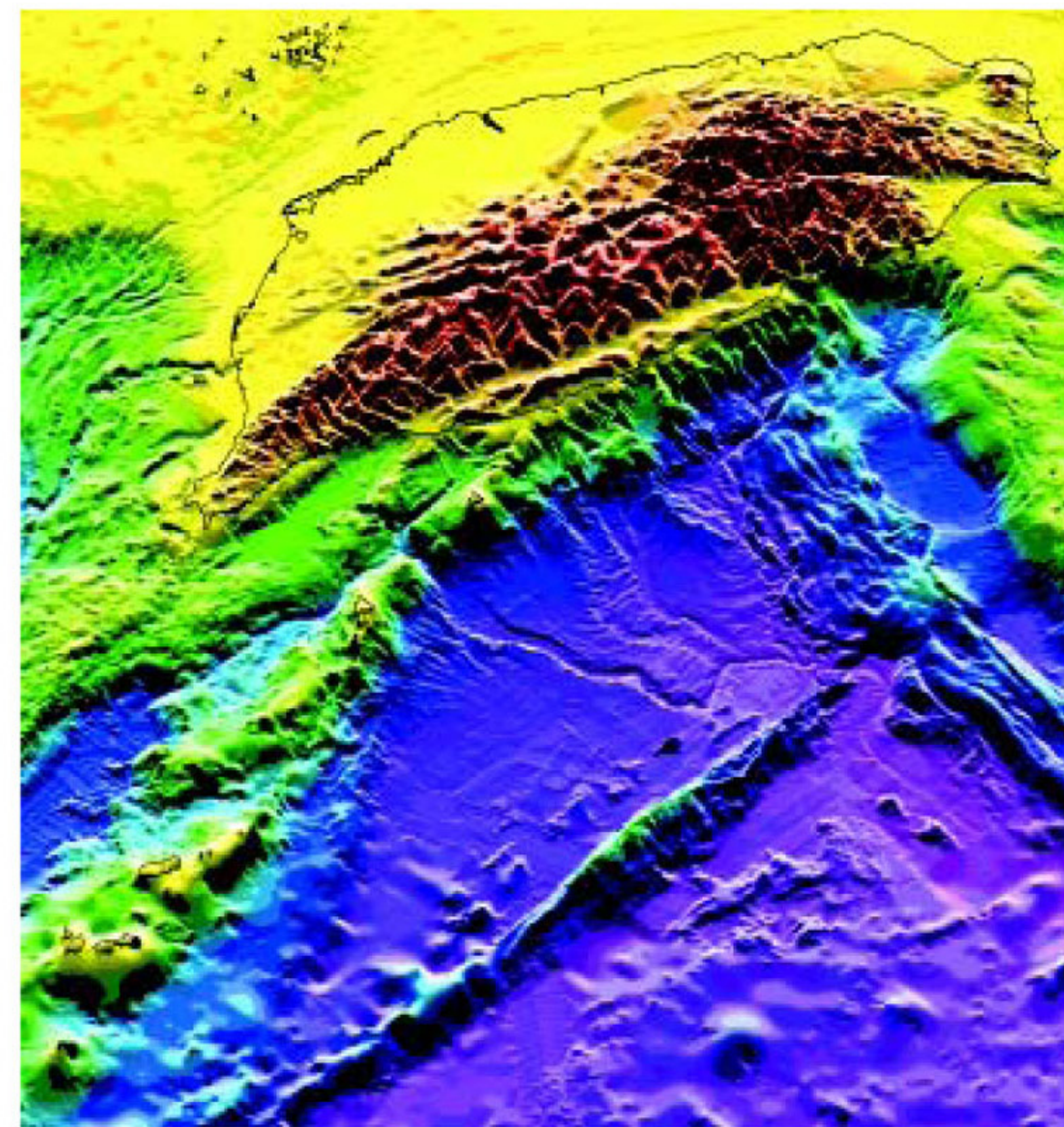


# HY1690

## 近海测深仪

Deep Sea Survey Echosounder



- 大功率发射探测声波 / 最大测深可达 10000 米
- 高增益接收电路
- 抗干扰设计 / 空间滤波 / 时间滤波 / 动态跟踪门
- 采用大容量高速工控机
- 全量程水深数据保存

- Survey sound signal sent with large power 10000 meters survey range
- High-gain receive circuit
- Anti-jamming Design/Spatial filtering/Time filtering/Dynamic tracking gate
- Controlled by industrial computer of high capacity and high speed
- Full range of depth data

**HY1690** 近海测深仪是一款用于近海测量的数字回声测深仪，可用于水深在10000米以内的海域测量。该设备由一台主机柜和10.5kHz, 25kHz两只换能器组成。水深数据的采集处理及显示都是通过主机柜进行的。主机柜内部包含了一套高性能的工控计算机系统和两套互为备份的收发机。

HY1690型近海测深仪采用了数字信号处理技术、计算机图形显示技术，实现了测深仪操作与控制的智能化。测深仪的全部操作采用无调节旋钮方式。测深仪以高速数字信号处理器（DSP）为核心，实现发射及接收控制、TVG及AGC控制、回波信号数字化及处理、底回波搜索与跟踪。大功率发射电路、低噪声接收电路以及空间滤波、动态检测阈、TVG补偿、自动增益控制等技术的运用，提高了水深测量的可靠性、稳定性和准确性。确保在海况较差的情况下，仍能针对不同类型海床，实现对水深的实时精确测量。收发机采集到的水深测量数据实时传送入工控计算机内存，大容量磁盘可实现对测量全量程的声图信息存储，并能在检查测量成果时任意检索。

**HY1690** is a digital deep sea survey echosounder for ocean of 10,000 meters. It is composed of a mainframe and dual-frequency transducer. The mainframe, including an industrial computer system of good capability and two mutual backup transceivers, collects and displays the data. HY1690 operates and controls intelligently by the techniques of Digital Signal Process and computer graphics display. The echosounder focuses on Digital Signal Process (DSP) to control backward and steering, TVG and AGC, dispose echo signal, search and follow bottom echo. Lots of techniques used in the machine, such as powerful transmitting circuit, low noise receive circuit, spatial filtering, dynamic threshold detection, TVG compensation and automatic gain control, make the measurement reliable, stable and accurate. The echosounder convinces realtime accurate measurement on different seabed even in condition of rough sea. Data measured by the transceiver is transmitted and saved into the industrial computer. Information of full scale can be saved and searched when checking results in the high-capacity disc.

**HY1690** 近海测深仪  
Deep Sea Survey Echosounder

## 技术参数

### Specifications

#### 技术性能

工作频率: 25KHz/10.5KHz  
换能器:  
高频: 25KHz, 波束角:  $20 \pm 1.5^\circ$   
低频: 10.5KHz, 波束角:  
纵向  $11 \pm 1^\circ$  / 横向  $20 \pm 1.5^\circ$   
测深范围: 1~1200 m @25KHz  
10~10000 m @10.5KHz  
输出功率: 700W @25KHz  
5000W @10.5KHz  
电源要求: 220V (-15%~+10%)  
AC 50Hz  $\pm 6\%$

#### Specifications

Frequency: 25KHz and 10.5KHz  
Transducers:  
High frequency: 25KHz,  $20 \pm 1.5^\circ$   
Low frequency: 10.5KHz,  
 $11 \pm 1^\circ$  /  $20 \pm 1.5^\circ$   
Depth range: 1~1200 m @25KHz  
10~10000 m @10.5KHz  
Output power: 700W @25KHz  
5000W @10.5KHz  
Input power: 220V (-15%~+10%)  
AC 50Hz  $\pm 6\%$

#### 整机配置

主机  
尺寸 650 × 1000 × 1350 mm  
重量 170kg

换能器  
高频:  
尺寸  $\phi 310 \times 250$  mm  
重量 14kg (不含电缆重量)  
安装方式 带 60m 水密电缆, 船底安装  
低频:  
尺寸 875 × 555 × 430 mm  
重量 220kg (不含电缆重量)  
安装方式 带 60m 水密电缆, 船底安装

#### Composition

MAIN UNIT  
Dimensions 650 × 1000 × 1350 mm  
Weight 170kg  
TRANSDUCER  
High frequency:  
Dimensions  $\phi 310 \times 250$  mm  
Weight 14kg (without cable)  
Installation hull-mounted with 60m cable  
Low frequency:  
Dimensions 875 × 555 × 430 mm  
Weight 220kg (without cable)  
Installation hull-mounted with 60m cable

船检认证: 本机由国家船检局 (ZC) 认可, 中华人民共和国船舶检验局船用产品型式认可证书编号: JSX9741001



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