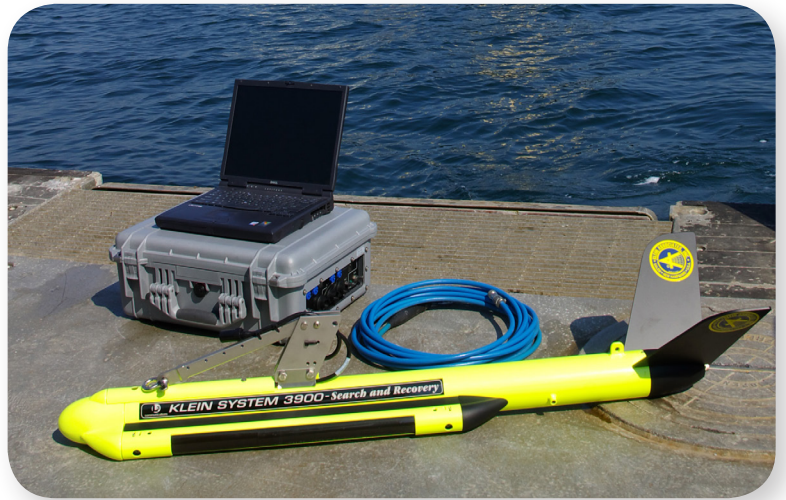


SYSTEM 3900 SIDE SCAN SONAR

DUAL-FREQUENCY SIDE SCAN SONAR FOR SEARCH AND RECOVERY

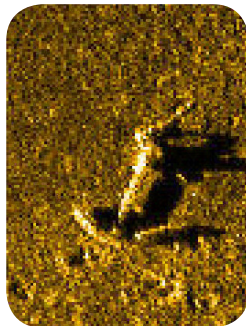
Klein's System 3900 is an extremely high-resolution, digital sonar for use in search and recovery missions that require a portable side scan system. The model is a selectable, dual-frequency system with 445 kHz, which offers excellent range and resolution, and 900 kHz, which offers higher resolution of identified targets. The system is competitively priced and configured to be operated by one person from a small boat in shallow water. The standard system configuration comes complete with a splash-proof Transceiver Processing Unit (TPU), custom-configured laptop and 50 m of lightweight tow cable. The system 3900 towfish electronics are housed in a stainless steel body with phosphorescent finish.

Klein's System 3900 employs the same advanced signal processing and core electronics capabilities found in our popular multi-beam, side scan systems, producing the finest possible side scan sonar imagery available today. Coupled with Klein's world-renowned SonarPro® software, the System 3900 makes survey acquisition fast, easy and provides the operator with powerful tools for the most professional data analysis possible.

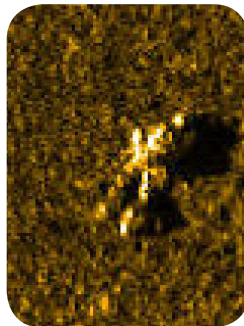


Key Features:

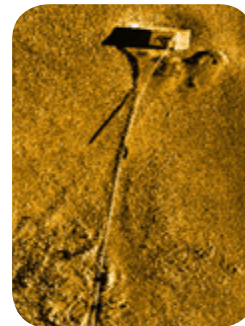
- Very high resolution and long range images
- Lightweight, one-person portable—ideal for small open boat operations
- Special software features for target analysis
- Complete turnkey system ready for field use
- Cost-effective ownership and operation
- Selectable dual-frequency operation (445 kHz and 900 kHz)
- Phosphorescent finish
- Laptop and wireless LAN compatible



Anchor



Drowning Victim



Buoy

SYSTEM 3900 SIDE SCAN SONAR



DUAL-FREQUENCY SIDE SCAN SONAR FOR SEARCH AND RECOVERY

SonarPro® Software

Custom developed software by users of Klein side scan sonar systems operating on Windows. Field-proven for many years, SonarPro® is a modular package combining ease of use with advanced sonar features.



Features:

- Basic Modules: main program, data display, target management, navigation, data recording & playback, and sensor display
- Multiple Display Windows: Permits multiple windows to view different features as well as targets in real-time or in playback modes. Multi-windows for sonar channels, navigation, sensors, status monitors, targets, etc.
- Navigation: Permits underlay of electronic charts
- Survey Design: Quick and easy survey setup with ability to change parameters, set tolerances, monitor actual coverage and store settings
- Target Management: Independent windows permitting mensuration, logging, comparisons, filing, classification, positioning, time & survey target layers, and feature enhancements. Locates target in navigation window.
- Sensor Window: Displays all sensors in several formats (includes some alarms) and responder set up to suit many frequencies and ping rates
- Networking: Permits multiple, real-time processing workstations via a LAN including "master and slave" configurations
- "Wizards": To help operator set up various manual and default parameters
- Data Comparison Real Time: Target and route comparisons to historical data

Specifications:

System 3900 Towfish	
Frequencies	445 kHz, 900 kHz
Beam Width	Horizontal: 0.21 @ 900 kHz 0.21 @ 445 kHz; Vertical: 40
Range Scales	11 settings: 10 to 200 m
Maximum Range	150 m @ 445 kHz; 50 m @ 900 kHz
Depth Rating	200 m standard
Construction	Stainless Steel / flourescent powder coat
Size	122 cm long, 8.9 cm diameter
Weight	29 kg in air
Standard Sensors	Roll, Pitch, Heading
Options	Pressure Sensor
Splash-proof Transceiver Processor Unit (TPU)	
Operating System	VxWorks with custom application
Outputs	100Base Tx, Ethernet LAN, optional wireless LAN
Navigation Input	NMEA 0183
Power	120 watts @120/240 VAC, 50.60 Hz (includes towfish)
Interfacing	Interfaces to all major sonar data processors
Splash-proof	to IP 65 with waterproof connectors
Klein Sonar Workstation	
Basic Operating System	Windows
Sonar Software	SonarPro
Data Format	SDF or XTF or both, selectable
Hardware	Laptop
Options	Ruggedized laptop
Tow Cables	Lightweight 50 m cable; optional armored steel cables

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