

# SYSTEM 3000 SIDE SCAN SONAR

## DUAL-FREQUENCY SINGLE BEAM SONAR

### Digital Side Scan Sonar:

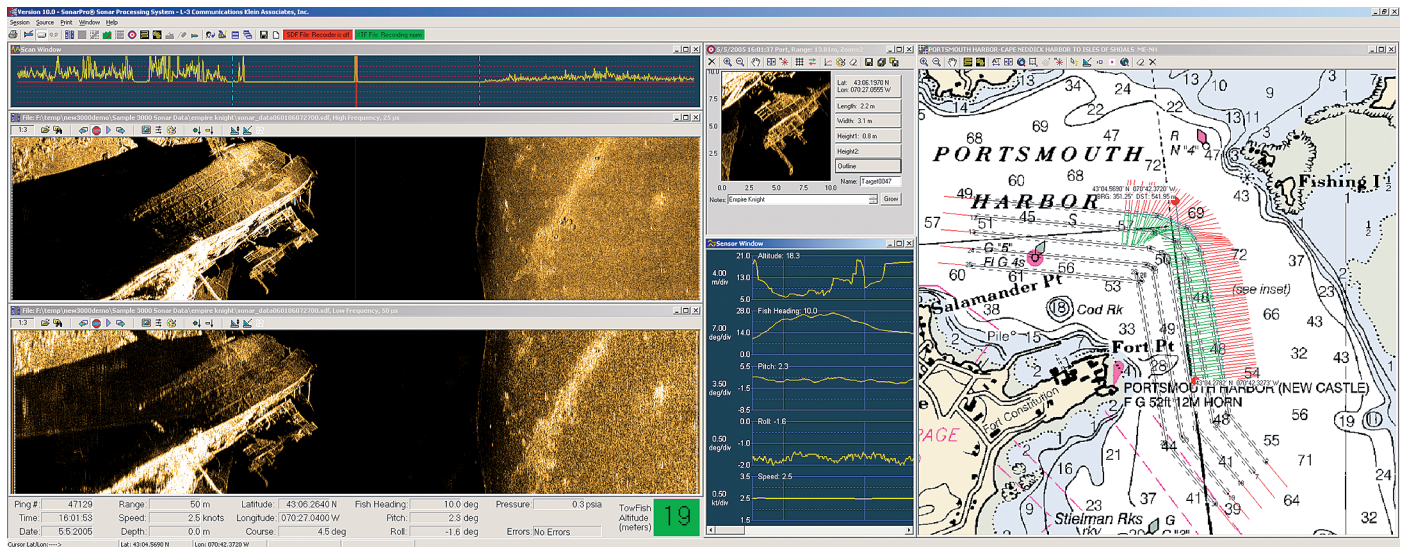
The Klein System 3000 presents the latest technology in digital side scan sonar imaging. The simultaneous dual-frequency operation is based on new transducer designs, as well as the high-resolution circuitry recently developed for the Klein multi-beam focused sonar. The System 3000 performance and price is directed to the commercial, institutional and governmental markets.

### Key Features:

- Advanced signal processing and transducers produce superior imagery
- Cost-effective, affordable
- PC-based operation with SonarPro® software, dedicated to Klein sonars
- Small, lightweight and simple designs - easy to run and maintain
- Easily adapted to ROV's and custom towfish
- Meets IHO & NOAA Survey specifications



### The Difference Is In The Image



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### Specifications:

| System 3000 Towfish   |  |
|---|--|
| <b>Frequencies</b>  | 100 kHz (132 kHz, ± 1% actual)<br>500 kHz (445 kHz, ± 1% actual)                                       |
| <b>Transmission Pulse</b>   | Tone burst, operator-selectable from 25 to 400 µsecs;<br>Independent pulse controls for each frequency |
| <b>Beams</b>  | Horizontal: 0.7° @ 100 kHz<br>0.21° @ 500 kHz<br>Vertical: 40°   |
| <b>Beam Tilt</b>  | 5°, 10°, 15°, 20°, 25° down, adjustable  |
| <b>Range Scales</b>   | 15 settings - 25 to 1,000 meters   |
| <b>Maximum Range</b>  | 600 m @ 100 kHz<br>150 m @ 500 kHz   |
| <b>Depth Rating</b>   | 1,500 m standard;<br>other options available   |
| <b>Construction</b>   | Stainless Steel  |
| <b>Body Length</b>  | 122 cm ( 48 in)  |
| <b>Body Diameter</b>  | 8.9 cm (3.5 in)  |
| <b>Weight</b>   | 29 kg (63.9 lbs) in air  |
| <b>Standard Sensors</b>   | Roll, Pitch, Heading   |
| <b>Options</b>  | Magnetometer, pressure sensor, acoustic positioning, sub-bottom profiler                               |
| Transceiver Processor Unit (TPU)  |  |
| <b>Operating System</b>   | VxWorks® with custom application   |
| <b>Basic Hardware</b>   | Splash-Proof 2 (SP2) TPU   |
| <b>Outputs</b>  | 100 Base-Tx, Ethernet LAN  |
| <b>Navigation Input</b>   | NMEA 0183  |
| <b>Power</b>  | 120 watts @ 120/240 VAC, 50/60 Hz (includes towfish)   |
| <b>Interfacing</b>  | Interfaces to all major sonar data processors  |
| <b>Options</b>  | 19-in rack mount TPU   |
| Tow Cable   |  |
| Klein offers a selection of coaxial, Kevlar® reinforced, lightweight cables, and interfaces to fiber optic cables. All cables come fully terminated at the towfish end. |  |

| Klein Sonar Workstation   |  |
|---|--|
| <b>Operating System</b>   | Windows  |
| <b>Sonar Software</b>   | SonarPro®  |
| <b>Data Format</b>  | SDF or XTF or both, selectable   |
| <b>Data Storage</b>   | Internal Hard Drive, CD/DVD-RW   |
| <b>Hardware</b>   | Industrial PC  |
| <b>Options</b>  | Optional Waterproof Laptops  |
| SonarPro® Software  |  |
| Custom-developed software by users and for users of Klein Side Scan Sonar Systems operating on Windows 7. Field-proven for many years. SonarPro® is a modular package combining ease of use with advanced sonar features. |  |
| <b>Basic Modules</b>  | Main program, data display, information, target management, navigation, data recording & playing, and sensor display.  |
| <b>Multiple Display Windows</b>   | 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.    |
| <b>Survey Design</b>  | Quick and easy survey set up with ability to change parameters, set tolerances, monitor actual coverage and store settings.  |
| <b>Target Management</b>  | Independent windows permitting mensuration, logging, comparisons, filing, classification, positioning, time & survey target layers, and feature enhancements. Locates target in navigation window. |
| <b>Sensor Window</b>  | Displays all sensors in several formats (includes some alarms) and responder set up to suit many frequencies and ping rates.   |
| <b>Networking</b>   | Permits multiple, real time processing workstations via a LAN including "master and slave" configurations.   |
| <b>"Wizards"</b>  | To help operator set up various manual and default parameters.   |
| <b>Data Comparisons Real Time</b>   | Target and route comparisons to historical data.   |

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