

**The CEESCOPE™ is a Complete Hydrographic Package.** With everything in one waterproof case: echo sounder, battery, data logger, and GNSS receiver, the CEESCOPE™ is the easiest survey system to mobilize and move from boat to boat. Simply press the POWER button and high-quality position and echo sounder data are immediately output and recorded. Minimize mobilization time and spend more time surveying. *CLICK on the image to watch the video* 



**Eliminate the need for a Separate GNSS Receiver.** There is no requirement to separately manage GNSS receiver operation and data communication with the acquisition PC. GNSS data are seamlessly merged with echo sounder data in the CEESCOPE<sup>™</sup> with little or no operator involvement needed to configure the GNSS. This reliable, easy to use, and accurate solution minimizes potential downtime and means you are set up and ready to survey as soon as the "on" button is pressed.

**Maximize your Survey Quality with Precise Data Timing.** Up to 20 Hz GNSS data are merged with 20 Hz echo sounder data <u>inside the echo sounder</u>. A 1PPS signal from the built-in GNSS receiver is used to precisely time stamp every packet of data generated. Latency is reduced compared to a traditional survey system with a separate GNSS receiver and echo sounder individually connected to the acquisition PC. Other small digital echo sounders don't use a 1PPS pulse and don't time-stamp survey data.

Reduce the Number of Interconnecting Cables. There are only two or three cables in the complete CEESCOPE<sup>™</sup> hydrographic package: transducer cable, RF antenna cable from the CEESCOPE<sup>™</sup> to the GNSS antenna and the optional Ethernet cable connection to a navigation and acquisition PC. This simplifies the installation and reduces potential for damaged cables affecting system performance. This makes the CEESCOPE<sup>™</sup> ideal for moving between survey vessels or use on small boats.

Record a High Definition Water Column Echogram. The CEESCOPE<sup>™</sup> generates a full water column digital echogram (envelope) available in real time view, and for post processing professional hydrographic survey results. This key capability allows you to be 100% sure about your sounding data quality. In contrast to "digital depth" echo sounders that generate no echogram, the CEESCOPE<sup>™</sup> allows identification of bottom features such as vegetation that may otherwise lead to inaccurate soundings. With a 20 Hz maximum ping rate, surveys are captured with ultimate detail and top-class quality control. *CLICK on the image to watch the video* 



**Use Modern and Thoughtfully Designed Equipment.** Much of the equipment in use for single beam surveying is ageing, cumbersome, heavy, and inconvenient to operate when applying modern day standards. The CEESCOPE<sup>™</sup> uses tiny, powerful processors and benefits from a compact design only possible with modern components. Reliable and supported for years to come, the CEESCOPE<sup>™</sup> - unlike much of its competition – is not already obsolete.

**Benefit from a Waterproof Echo Sounder with Internal Battery.** The CEESCOPE<sup>™</sup> is completely waterproof for use on small open boats. With an internal battery that will operate all day, surveys can be completed without any inconvenient external batteries, power cables, and additional components.

**Record a Complete Survey on Internal and USB Memory.** A complete survey may be recorded, including the full water column echogram, GNSS position data and sounding data. If surveying with no laptop, recorded data may be simply exported to a USB memory device and imported into hydrographic software and edited as usual.

**Benefit from the Convenience of a Touchscreen Display.** Unlike conventional echo sounders requiring a PC interface, all the CEESCOPE<sup>™</sup> settings may be accessed through a convenient color sunlight-viewable LCD touch screen keypad on the unit, making setup, bar check, testing, and operation easy. In addition to the touch screen user interface, most CEESCOPE<sup>™</sup> settings may be changed on the fly using the CEE CONNECT control software running on the acquisition PC.

Work in Extremely Shallow Water. The CEESCOPE<sup>™</sup> is designed to operate in very shallow water with no requirement to adjust the sonar settings. The advanced bottom tracking algorithm will keep a bottom lock across the whole depth range. *CLICK on the image to watch the video*.



**Use AUTO or MANUAL Operation Mode.** For maximum control over the survey, the CEECOPE<sup>™</sup> may be used in AUTO or MANUAL mode. In AUTO mode, all echo sounder parameters are adjusted automatically to achieve the best results for depth and water column data. MANUAL mode allows the user to fine tune the CEESCOPE<sup>™</sup> to provide the best results for any survey feature, such as avoiding vegetation effects or tracking a sub bottom surface in dual frequency operation.

Add Dual Frequency Operation. Every CEESCOPE<sup>™</sup> has a high (HF) and low (LF) frequency echo sounder inside. The second (LF) channel may be activated at the factory before shipment or by a field firmware update completed by simply inserting a USB with the activation file into the USB port. The LF echo sounder is accurate from 0.6m to 200m water depth, providing high resolution bottom and sub bottom data with water column echogram information to allow proper data interpretation.