



## EV860 NAVIGATION SONAR

Critical obstacle detection up to 360° around the vessel

Ice, rocks, reefs and other obstacles pose a serious hazard to any vessel.

Underwater obstacles cannot be detected with radar or visually, only a sonar can do that. Detecting those underwater objects far out in front of the vessel allow for advanced corrective action to avoid catastrophic collisions.

The WESMAR EV860 navigation sonar can be set by the user to scan any sector from 11 to 360 around the vessel. The sector can be oriented in any direction with the simple turn of a knob on the control panel.

The EV860 is equipped with a very robust hydraulic hoist that can deploy or retract the soundome in only 5 seconds.

WESMAR sonars have a highly focused soundbeam that allows for detection of objects that would be otherwise difficult or impossible to detect.

WESMAR has added a new feature to its EV860 sonar to enhance its usefulness in navigation assistance. A portion of the 110kHz transducer is used to create a wide sound beam which scans hundreds of meters in front of the vessel to identify the composition of the bottom which permits the captain to steer the vessel towards desirable areas for anchoring and to avoid bottom features such as reefs which could damage the vessel or themselves be damaged by the ship or its anchor and chain.



The EV860 is equipped with a very robust hydraulic hoist that deploys or retracts the soundome in just 5 seconds.

"The WESMAR worked flawlessly when navigating the channels into the harbor, and the picture on the sonar screen looked good"

— Jorg Walczak,  
Captain of the 407-foot cruise ship  
M/V Ocean Diamond





Research vessel with icebergs in forward view.



The WESMAR EV860 was the navigation sonar of choice for the luxurious cruise ship CRYSTAL SERENITY.



Sonar view spotlighting icebergs surrounding vessel

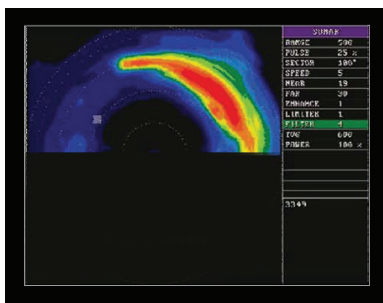
## SONAR OF CHOICE FOR HISTORIC NORTHWEST PASSAGE CRUISE

Only about 10% of the Northwest Passage has been properly charted, according to the US and Canadian Coast Guards. So Crystal Cruises installed WESMAR's navigation and security sonar for underwater surveillance before its 820-foot long luxury cruise ship CRYSTAL SERENITY embarked on its historic 32-day trip through the Passage last summer.

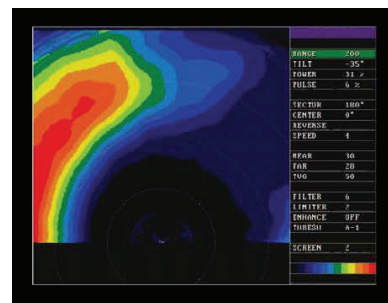
One thousand passengers made the voyage via the Canadian Arctic and Greenland having paid upwards of \$22,000 each. The cruise took passengers through areas of exceptional wildlife sightings, stunning displays of nature, and rare experiences. The cruise was so popular and the ship so elegant, the company has announced they will repeat it again this year traveling the same 32-day schedule leaving from Seward, Alaska, August 15 and arriving New York Harbor, September 16, 2017.

"The WESMAR EV860-110kHz, 10-inch navigation and security sonar is operating on many other cruise ships around the world where operators are unwilling to travel blind to the waters ahead and around the vessel. It is used for detection of icebergs, underwater rocks/pinnacles, and reefs and for scanning harbor entrances for safe passage and anchorages for mooring hazards. The system provides 360 degree monitoring of the water around and under the vessel to protect against groundings and even hostile underwater intruders," says WESMAR.

WESMAR, located near Seattle, WA, has been an industry leader in the design and manufacture of sonar for over 50 years, providing specialized equipment for government, commercial and private. WESMAR sonar is used for navigation, security and fish finding and is operating on vessels operated by navies, municipalities, cruise ships and a wide range of fishing operations around the world.



Wide sound beam which scans hundreds of meters in front of the vessel to identify the composition of the bottom



Sonar shows soft bottom to port.



Sonar directional hand controller



Main control panel

## 10" INCH DIAMETER DOME

| MODEL        | FREQUENCY | BEAM | STABILIZATION | HOIST TYPE        |
|--------------|-----------|------|---------------|-------------------|
| EV860-110-10 | 110kHz    | Dual | Active        | 110 VAC Hydraulic |
| EV860-110-10 | 110kHz    | Dual | Active        | 220 VAC Hydraulic |

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