

# AquaScan™

*Precision Side Scan Sonar*



# ***AquaScan Overview***

The ***AquaScan***<sup>™</sup> is a portable high-resolution, precision side scan sonar. It is designed exclusively for shallow water seafloor surveys up to 250 meters of slant range.

Ease of use, portability, and cost efficiency make the ***AquaScan***<sup>™</sup> a perfect choice for side scan marine survey applications.

The sensor unit is extremely compact, interfaces directly to a standard laptop PC and comes complete with sensor unit and Windows<sup>®</sup> PC based Software

# *AquaScan Components*

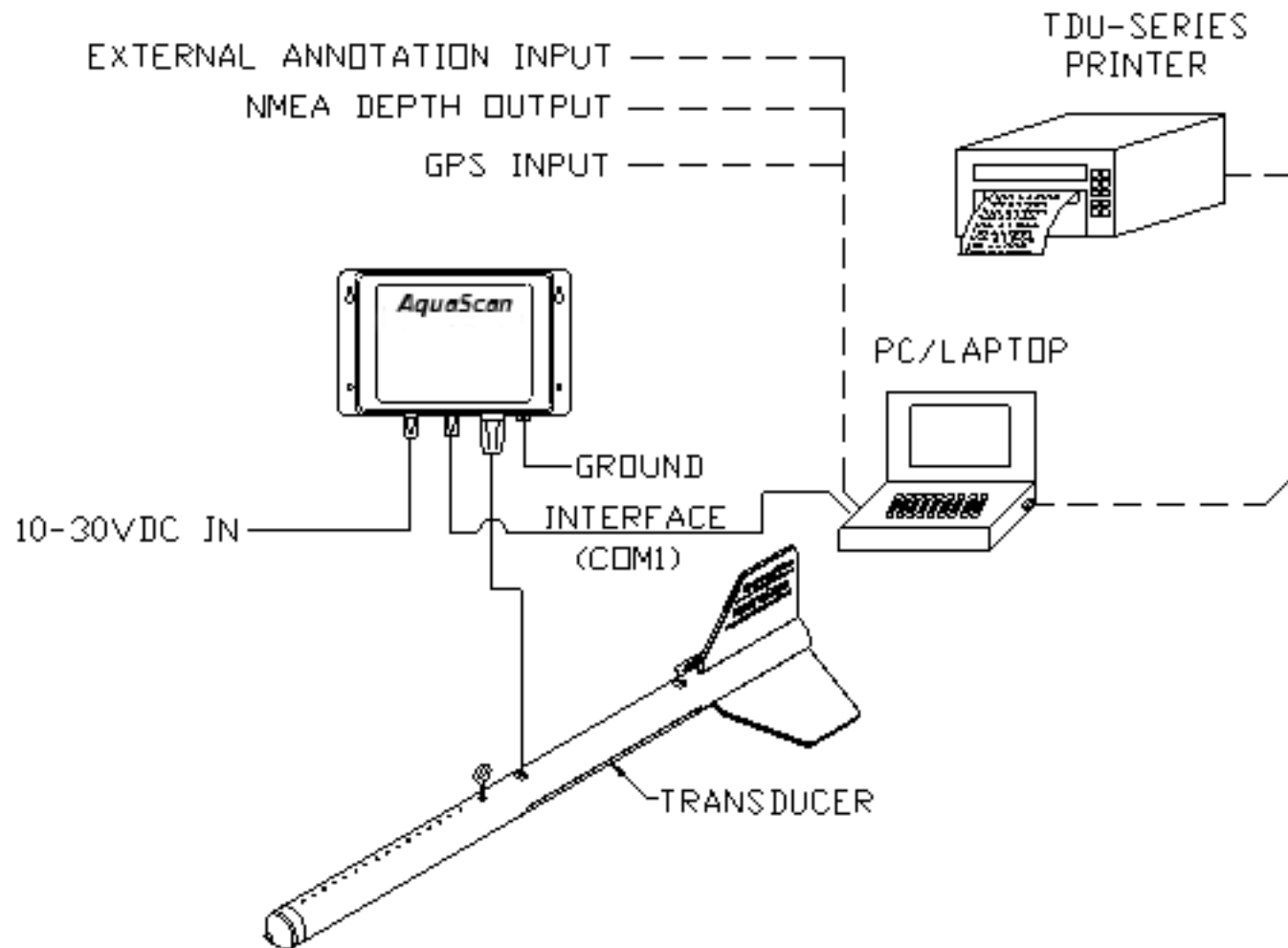


- Towfish and 50m of transmission cable weigh a total of 28lbs(12.7Kg)
- 49"(124cm) in length
- 13" in(32.4cm) diameter at maximum diameter



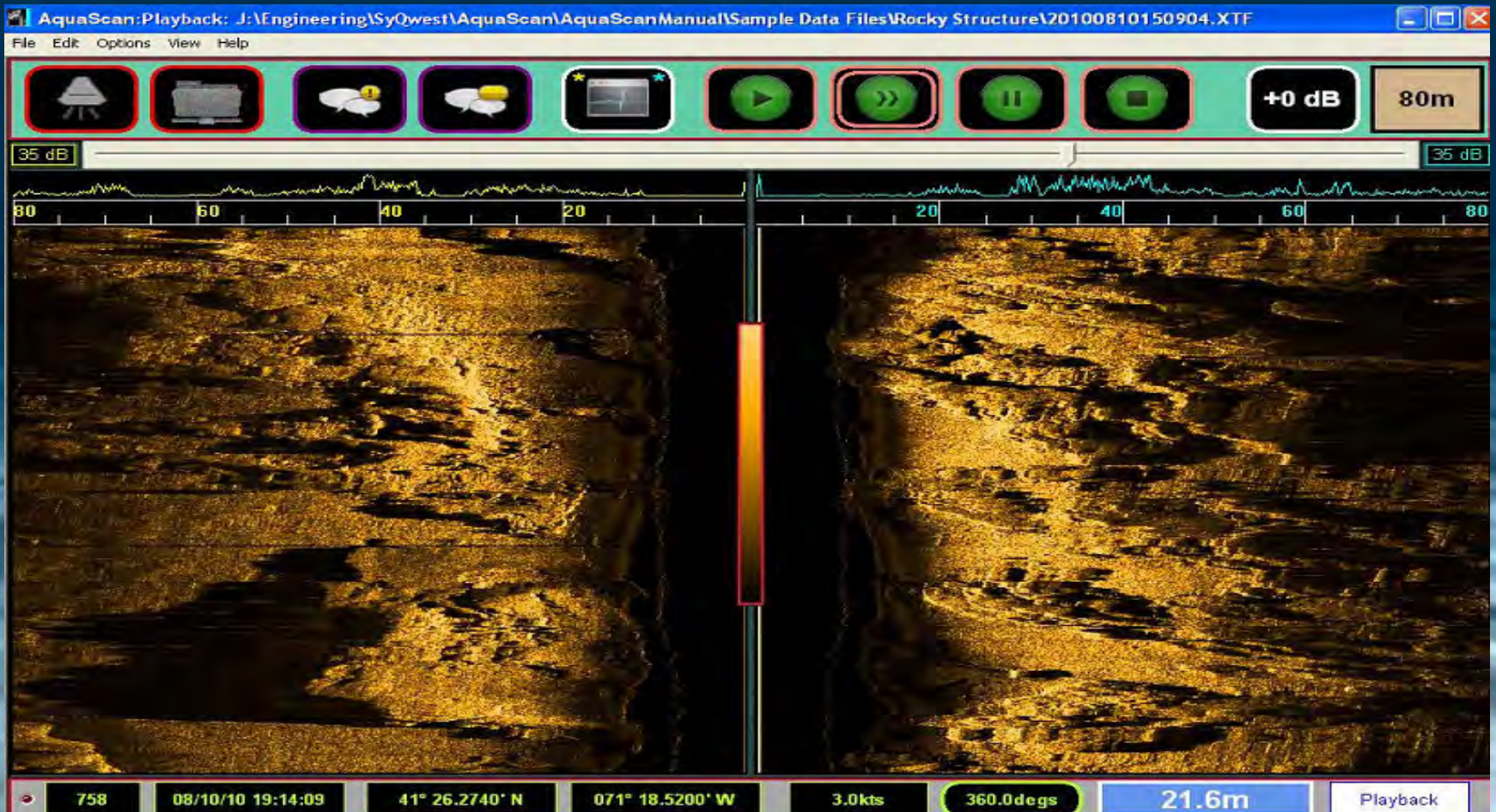
- The Sensor unit weighs 2lbs(.9kgs) and is 10" x 8.6" x 2.5"(LxWxH)

# *AquaScan Interconnection Diagram*



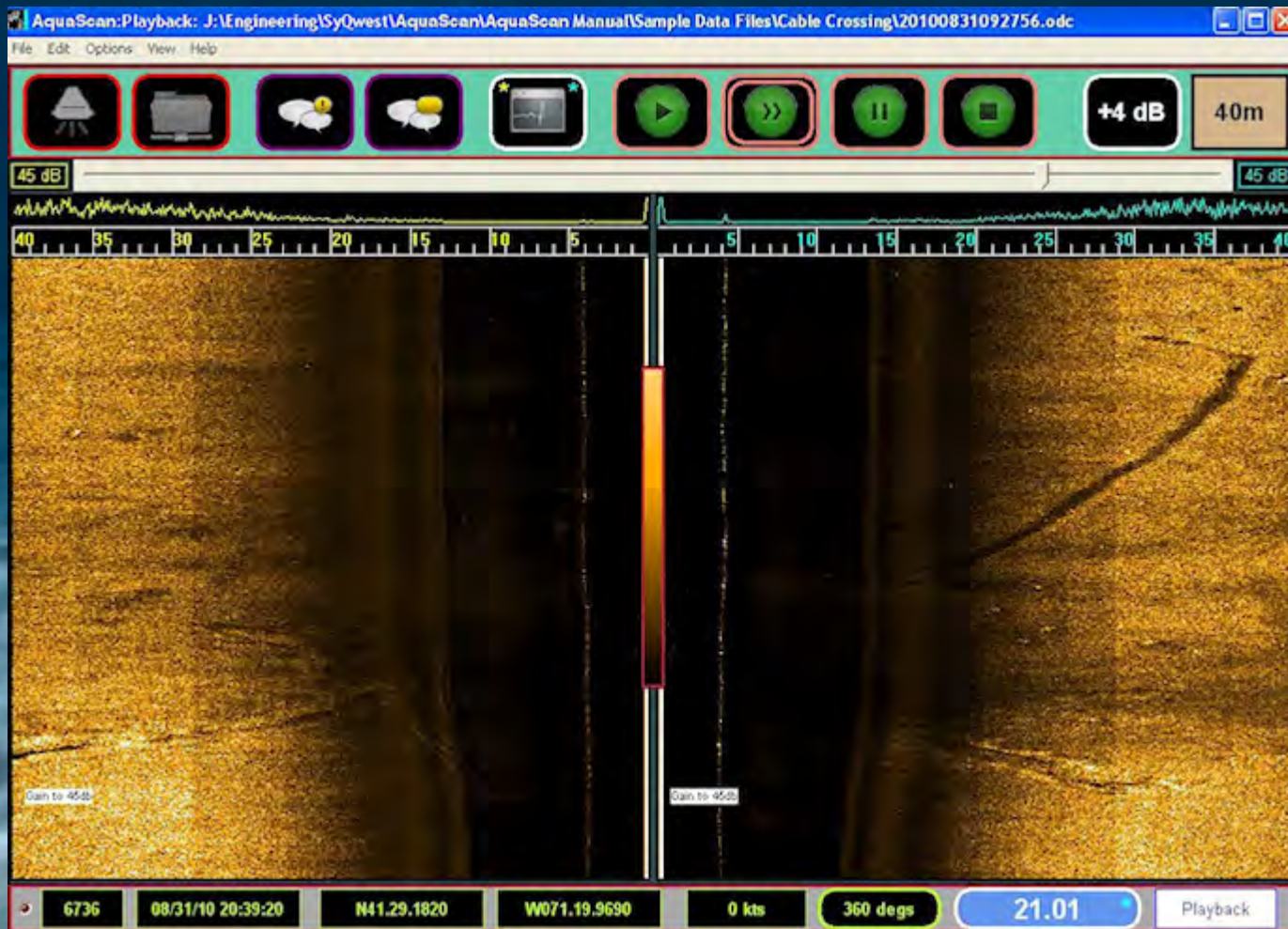
# *AquaScan Data #1*

- Rocky Formations in Narragansett Bay, RI.
- The height of the formations is shown by the shadows

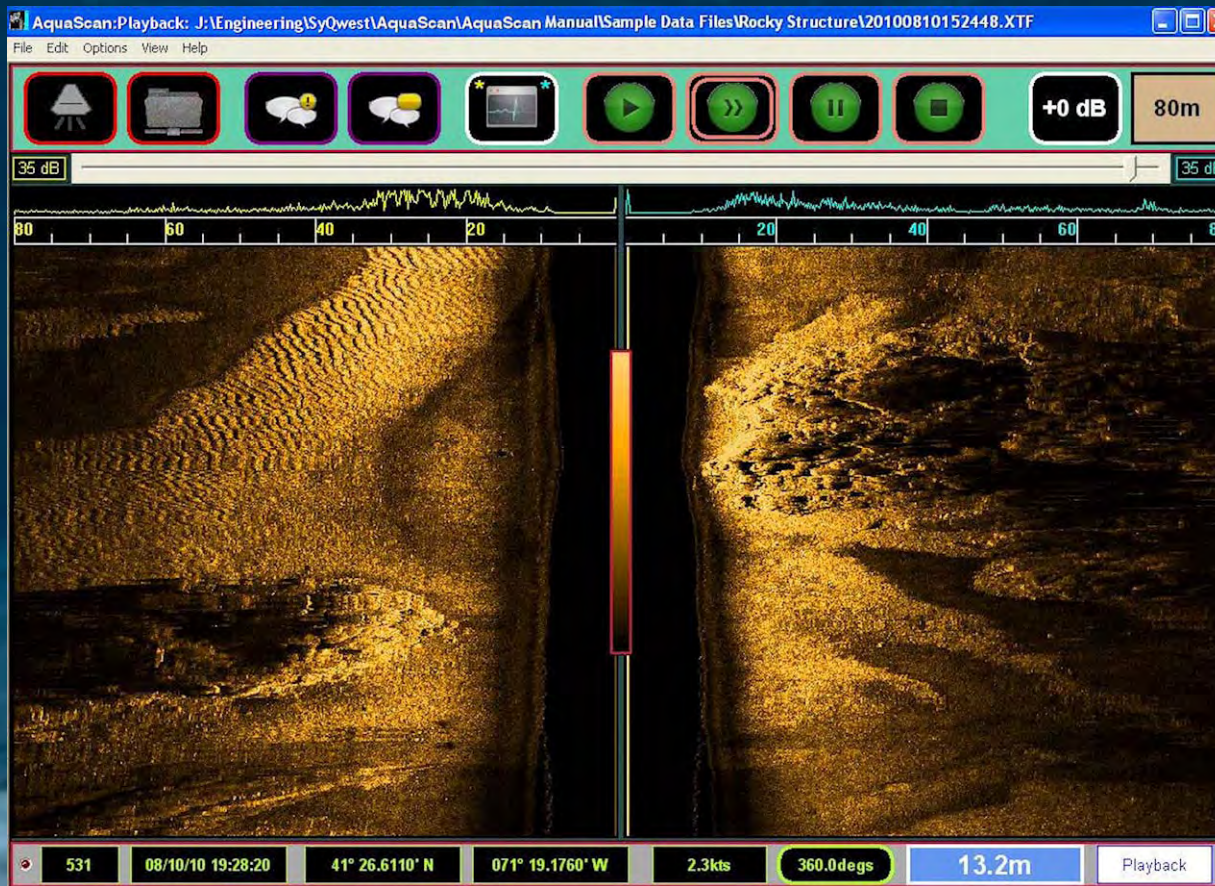


# *AquaScan Data #2*

- Underwater cable crossing from Newport, RI to Jamestown, RI
- The cable is traveling from the top right to the lower left.



# AquaScan Data #3



- The textured ripples recorded on the seabed show the direction of the water current.
- This allows for wave attenuators to be placed in the most efficient manner.
- The intensity of the current can be measured by the height and length of the sand waves.
- Being able to detect the sandy bottom from the rocky bottom allows the user to plan a better route for underwater cables and structures.

# *Cape Fear*

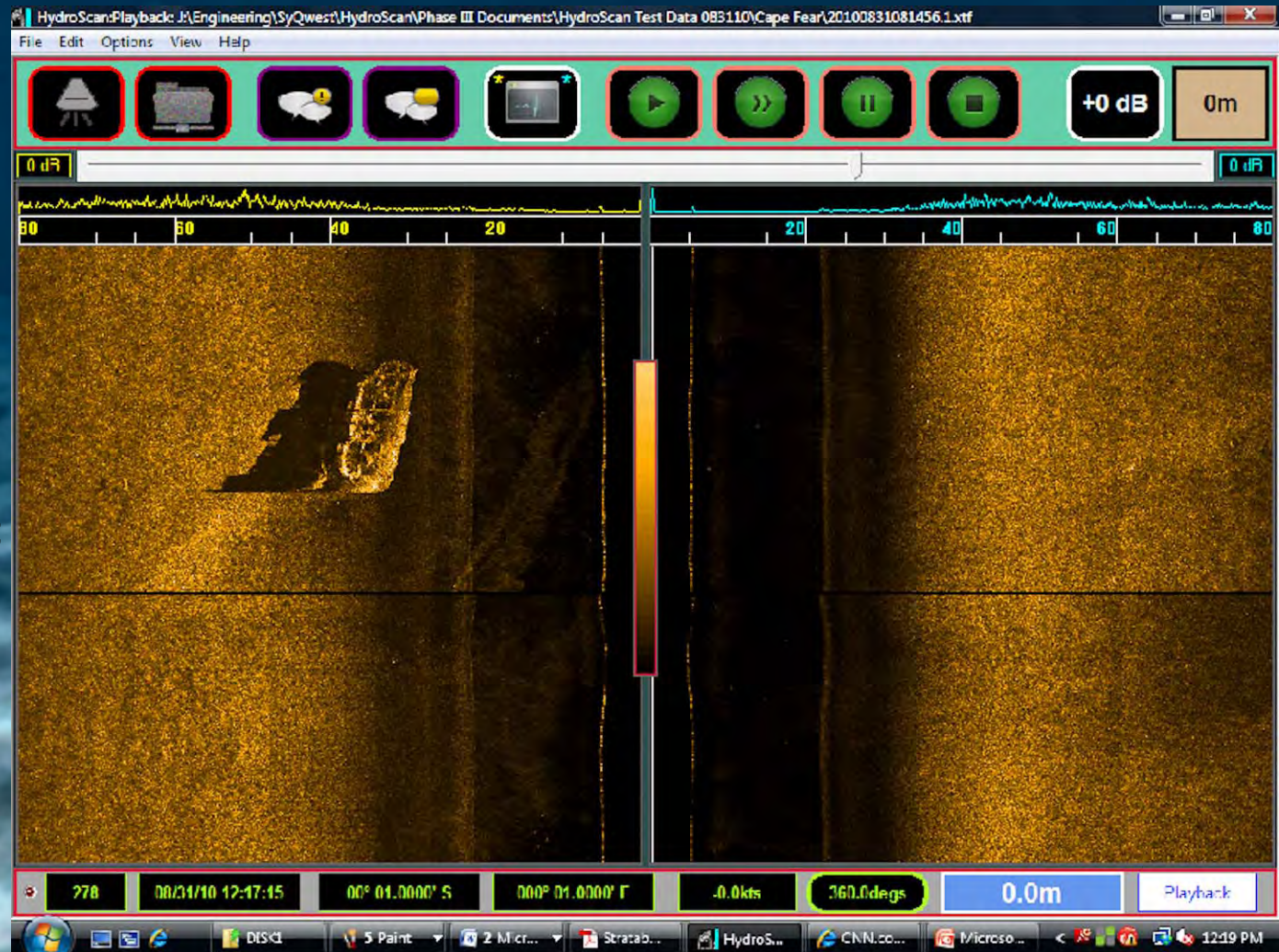


The Cape Fear was a concrete-hull freight vessel that was built in World War I. It measured 267'/46'/25' (length/beam/draft). On October 29 1920 the Cape Fear sank to depth of 180' in Narragansett Bay in Rhode Island after a collision with another freight ship. On August 31, 2010 SyQwest Inc. sailed into Narragansett Bay to record Images of the Cape Fear using the *AquaScan*.

# CAPE FEAR DATA #1

- The Cape Fear is located 180' below the sea surface.
- The image of the Cape Fear can be seen on the left hand side of the data acquisition screen.

- This data was recorded while towing the *AquaScan* at a shallow depth at 3 knots.
- The Shadow of the image clearly outlines the shape of the vessel and confirms it is intact and upright.



# CAPE FEAR DATA #2

On the Right hand side of the data acquisition screen the image of the Cape Fear is visible.

The image was captured by lowering the depth of the *AquaScan*, using the zoom option and towing at 3 knots.

The cargo holds towards the bow of the Cape Fear are visible and approximate measurements of them are 21'x14'.

- The holes in the center of the wreck are the remnants of the bridge and measure approximately 35'x17'.

