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## DIDSON-DH (Diver-Held) Sound Metrics Corp

DIDSON-DH is a prototype diver-held sonar developed for NSW-PC. DIDSON-DH is a Dual-Frequency Identification Sonar with a handle on the back and an external battery that can be mounted on the sonar or on the diver. The sonar connects to the NSW-PC mask-mounted display which has SVGA color resolution.

The Coast Guard had input on the initial design and requested that the DIDSON-DH be “convertible” meaning that it could also be operated remotely as a standard DIDSON. They wished to mount it on a shaft off the keel of a boat. DIDSON-DH can be operated remotely with the same topside software used with a standard DIDSON. The system comes with 100 feet of cable and a topside breakout box to allow remote operations.

The diver controls are easy. The four control switches (momentary push switches activated with the thumb) are labeled F1, F2, F3, and F4. The basic controls are

- F1+F3 (push two switches simultaneously) Turn on or turn off the sonar
- F3 Increase max range on display
- F4 Decrease max range on the display (range resolution increases with less max range)
- F2 Capture. Store a snippet of “video” in the sonar memory. The snippets can be transferred to the topside computer after the dive.
- F1 Zoom. Images the top half of the current display with twice the range resolution.

That’s it! These are the basic commands and for many divers the only commands they will need to worry about.

### *The display shows:*

Acoustic images with range markers (feet, meters, or yards) at 4-20 frames/s

Control functions: Zoom, Capture, and Range change

Status indicators: Bottle Pressure (PSI), Depth (feet, meters), Battery Gauge (time left)

Test Warnings: High temperature, Potential leak, Low battery voltage



## DIDSON-DH Diver-Held Version

### Identification Mode

Operating Frequency	1.8 MHz
Beamwidth (two-way)	0.3° H by 12 ° V
Number of beams	96
Range	1m - 15 m

### Detection Mode

Operating Frequency	1.1 MHz
Beamwidth (two-way)	0.4° H by 12° V
Number of beams	48
Range	1m -35 m

### Both Modes

Max frame rate (window length dependent)	4-20 frames/s
Field-of-view	29°
Focus	1 m to max range
Battery Duration	2.5 hours
Sonar weight in air	7.7 kg (17 lbs)
Battery weight in air	2 kg (4.5 lbs)
System weight in Water	Neutral
Sonar Dimensions	43 cm (including 13 cm handle) by 20 cm by 17 cm
Battery Housing Dimensions	18 cm by 13 cm diameter
Depth rating	90 m (300 feet)
Control	Four switches on handle or Ethernet

### Scope of Supplied Components

- 1 DIDSON-DH
- 2 External battery packs
- 1 Battery charger
- 100 feet of cable for remote operation
- 1 Topside Box for remote operation
- 1 6-ft data transfer cable for transferring images from the sonar to the topside computer
- 1 Manual
- Software for topside computer

### **Sales and Information:**

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