



**Sound Metrics Corp.**  
Using sound to make sound measurements

## Using DIDSON™ in Fisheries

### INTRODUCTION

DIDSON (Dual-Frequency Identification Sonar) makes counting fish or understanding their behavior in turbid water a lot easier. DIDSON is simple to use and works in shallow, rock-bottomed rivers and around structures (dams, screens, and entry ways) where other acoustic equipment has been ineffective. There are over 74 DIDSONs used for fisheries applications in over 12 countries around the world. Some have been deployed for over 5 years.

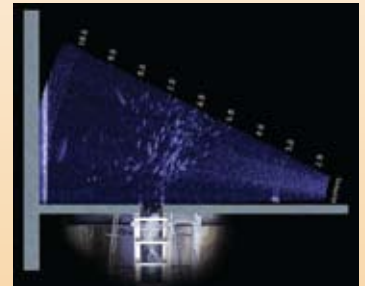
DIDSON uses acoustic lens technology which forms acoustic images with greater detail than found in conventional sonars. Some call it an acoustic movie camera. DIDSON mounts off the sides of boats, along river-banks, at dams, or in trawl nets among other places. DIDSON is a rugged, non-invasive, non-destructive sonar that provides an intuitive (almost video-quality) display.

### APPLICATIONS

DIDSON helps estimate fish abundance, understand fish behavior, differentiate between upstream and downstream movement, assess fish habitat, and do these activities in rivers with high turbidity and debris loads.

### FEATURES

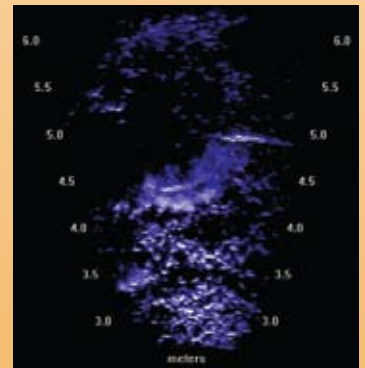
- Almost Video-Quality dynamic images for behavior studies
- Auto and manual abundance counts
- Background Subtraction for highlighting fish moving over rocky, debris abundant river bottoms.
- Detection of motion can trigger data recording to catch rare fish passages
- Record at preset or random times for specified durations on daily basis for hands-free interval sampling
- 30-watt power consumption
- Optional sensor for sonar heading, roll, and pitch
- Links to your Laptop via Ethernet Port for DIDSON data display and control



*DIDSON on a dam*



*Fraser River sturgeon*



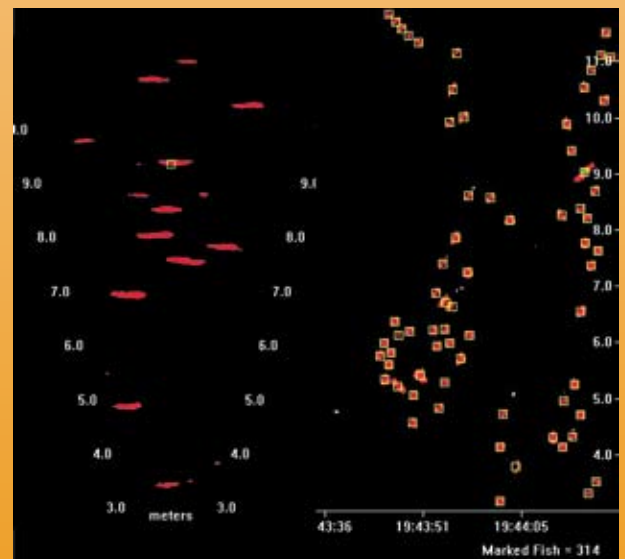
*Female salmon digging redd*



*DIDSON used in a trawl net*



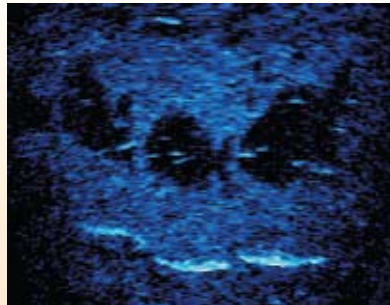
*Tripod "lunar lander" mount*



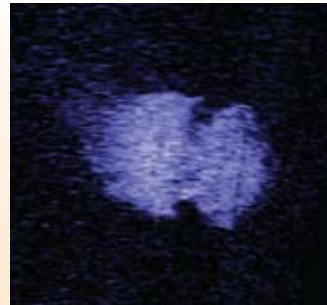
*Software extracts fish count, size and direction of travel*



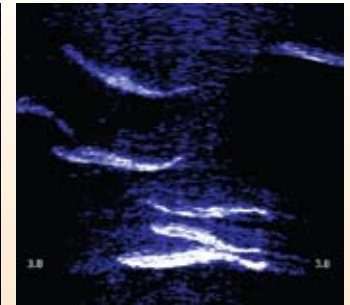
DIDSON set up to check the short lamprey run on the Yukon River



Carp and their acoustic shadows



Jellyfish in the Sea of Japan



Salmon swimming

## Specifications of the DIDSON

### Identification Mode

- Operating Frequency 1.8 MHz
- Beamwidth (two-way) 0.3° H by 14° V
- Number of beams 96
- Range 1 m - 15 m

### Detection Mode

- Operating Frequency 1.1 MHz
- Beamwidth (two-way) 0.6° H by 14° V
- Number of beams 48
- Range 1 m - 35 m

### Both Modes

- Max frame rate 4-20 frames/s  
(window length dependent)
- Field-of-view 29°
- Focus 1 m to max range
- Sonar weight in air (300m) 7.7 kg (17 lbs)
- System weight in Water (300m) .60 kg (1.32 lbs)
- Sonar weight in air (1000m) 9.55 kg (21 lbs)
- System weight in Water (1000m) 1.65 kg (3.6 lbs)
- Sonar weight in air (3000m) 13.9 kg (30.5 lbs)
- System weight in Water (3000m) 6.1 kg (13.4 lbs)
- Sonar Dimensions 30 cm by 20 cm by 17 cm
- Depth rating 300 m, 1000 m, or 3000 m
- Data Transfer 100/10BaseT

The Long Range (LR) system uses lower frequencies (0.7 MHz and 1.2 MHz) and has a maximum range of 80 m.

## Scope of Supplies

- DIDSON
- 50-ft cable
- Topside Box
- Power Supply
- Manual
- Software CD for topside computer
- Transit Case for the sonar and accessories

Available cable lengths: 50, 100, 150, 200, 500 feet

*Optional sensor for sonar heading, roll and pitch*



DIDSON 300m



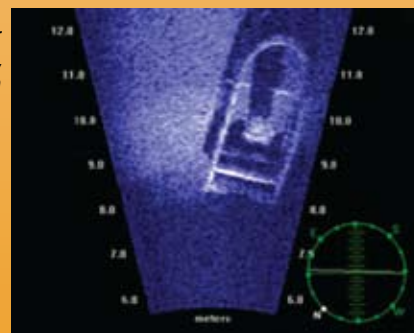
RAL in place

DIDSON 300m

RAL moving to storage position

RAL stored

The DIDSON 300 has an optional Remote Auxiliary Lens (RAL) for choosing two vertical angles to enhance bathymetry, 3D, and close-up inspection images.



Transit Case

Visit [www.soundmetrics.com](http://www.soundmetrics.com) for sonar movies and information



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