

For trawlers

## WIRELESS TRAWL SONAR

Model TS-834

- **Wireless Transmission System** reduces installation cost compared with "wired" System
- **Presents trawl net behavior, fish school locations** relative to net locations with high quality and low-noise picture
- **Vertical Scanning Window** for detailed observation of net mouth opening
- **Down Sounding Window** showing the clearance between foot rope and seabed
- **Zoom (x 2.0) window**

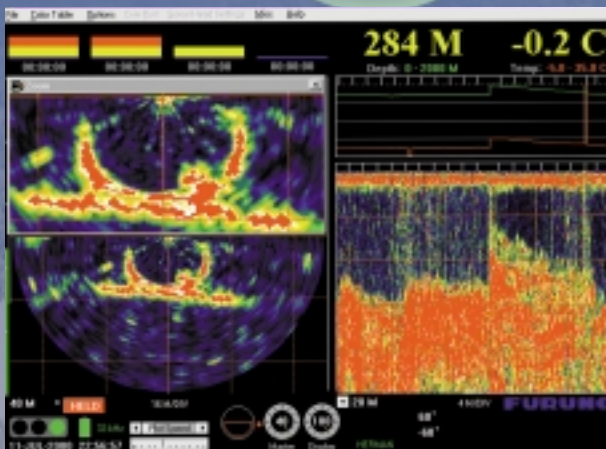
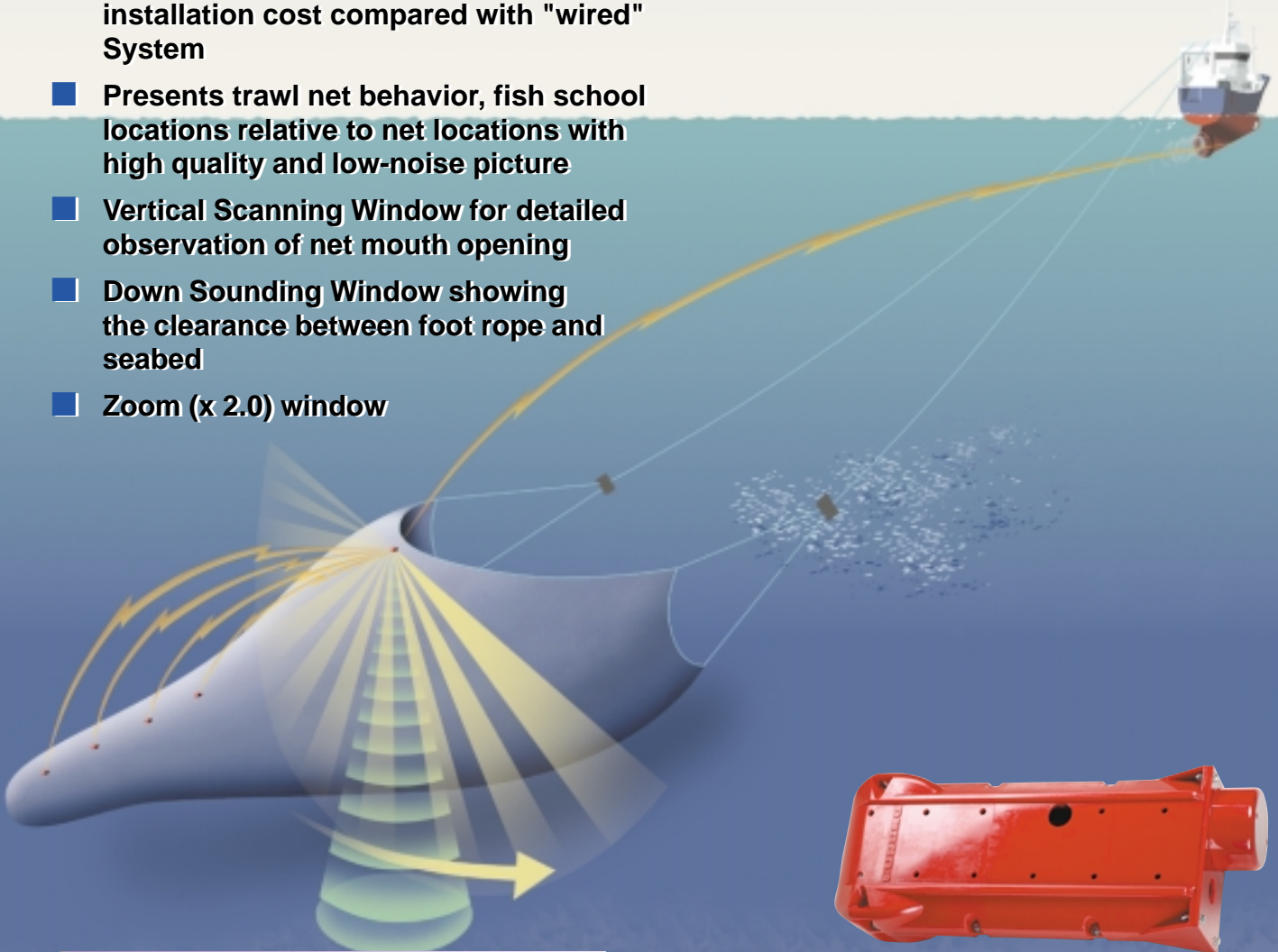


Photo: TS-834



Photo: CS-400

The TS-834 is a new Wireless Trawl Sonar for trawlers. It presents trawnet behavior, showing the net mouth opening, net location in the water, fish entering the net and water temperature and depth at the net.

There are 4 windows to present vertical scanning, down sounding, temp/depth graph and zoom. The vertical scanning image offers shape of the net mouth and the relation between the net and the seabed. The information helps keep the net opening stable. In the zoom window, you can zoom-up where the cursor is placed.

The underwater unit allows deep water sounding and long range data transmission up to 3,000 m. In the underwater unit, information such as scanning, sounding, temp and depth is encoded to minimize the effect of unwanted noise and distortion. The information is sent to the receiver unit up to four times a second via acoustical link. The transmitting frequency is selectable from 33 kHz and 43 kHz.

Up to 4 units of an optional catch sensor can be mounted on the cod end to watch the catch of fish. The data from the catch sensor is transmitted to the receiver unit as well.

## SPECIFICATIONS OF TS-834

### GENERAL

#### Display Mode:

Normal (vertical scanning, down sounding, temp/depth graph, zoom), Playback (for stored data), History

#### Presentation Color on echogram:

Full color (2 types of contrast selectable for day or night time operation), Green, Green/blue, Green/yellow, Blue, Amber, Grey (normal/reverse)

### UNDERWATER UNIT (Transmitter)

**Operating Depth** 2,000 m

#### Acoustical link

**Frequency:** 33 kHz or 43 kHz

**Update:** 4 times/sec

**Transmission range:** 3,000 m

#### Vertical Scanning Sonar

**Frequency** 330 kHz Fan Beam (3° x 18°)

**Ranges** 10, 20, 30, 40, 50 and 150 m

**Sector Size** 180°

**Scan Step** 3.6°

#### Down Sounder

**Frequency** 120 kHz

**Ranges** 7.5, 10, 15 and 150 m

#### Temperature Sensor

**Measurement range** -5°C to +35°C

#### Depth Sensor

**Measurement range** 0 to 2,000 m

#### Pitch/Roll Sensor

**Measurement range** ± 45°

#### Power Supply

6 VDC, 25 AH

**Operating time:** 20 h

**Charge time for battery** 6 h

### CATCH SENSOR CS-400

#### Frequency

ch 1: 69.75/70.25 kHz

ch 2: 72.25/72.75 kHz

ch 3: 74.75/75.25 kHz

ch 4: 77.25/77.75 kHz

#### Operating Time

1000 h

#### Power Supply

3 alkaline batteries

### RECEIVER UNIT (Specify when ordering)

**Bottom transducer**

40B-6B (for 43 kHz),

33B-6B (for 33 kHz)

**Paravane receiver**

ND-8733 (for 33 kHz),

ND-8740 (for 43 kHz)

**Cable strength:**

1,000 kg

**Tilt angle:**

15°, 25° or 35°

### ENVIRONMENTAL CONDITIONS

#### EMC, Vibration, Climatic

Complies with IEC 60945

### POWER SUPPLY

115/230 VAC

### EQUIPMENT LIST

#### Standard

- |  |        |
|--|--------|
| 1. Underwater Unit (including battery)             | 1 unit |
| 2. Surface Processor Unit                          | 1 unit |
| 3. Spare Battery                                   | 1 unit |
| 4. Battery Charger                                 | 1 unit |
| 5. Software for PC                                 | 1 unit |
| 3. Installation Materials and Standard Spare Parts | 1 set  |

#### Optional

- Receiver Unit
- Spare Battery
- Catch Sensor CS-400
- Battery Charger

### Specification of recommended PC

**OS:** Windows 95, 98 Me, NT, 2000, XP

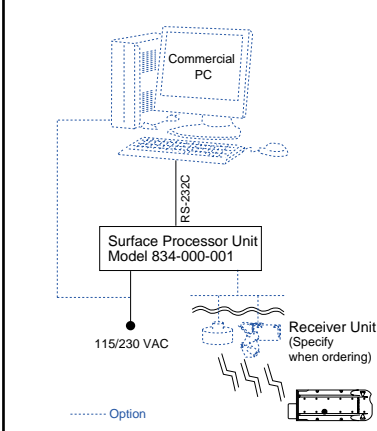
**CPU:** Pentium 100 MHz or better

**Memory:** 1 GB

**Ram:** 32 MB

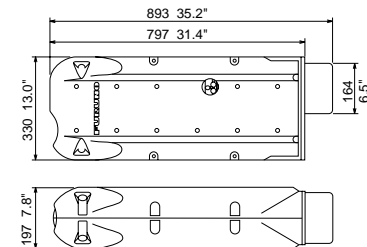
**Resolution:** 800 x 600 x 256 Colors

### INTERCONNECTION DIAGRAM



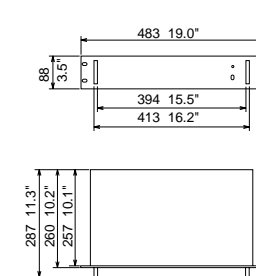
### Underwater Unit

31 kg, 68.3 lb



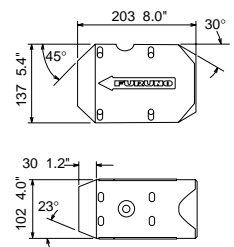
### Surface Processor Unit

5 kg, 11.0 lb



### Catch Sensor

2 kg, 4.4 lb



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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02081Y Printed in Japan