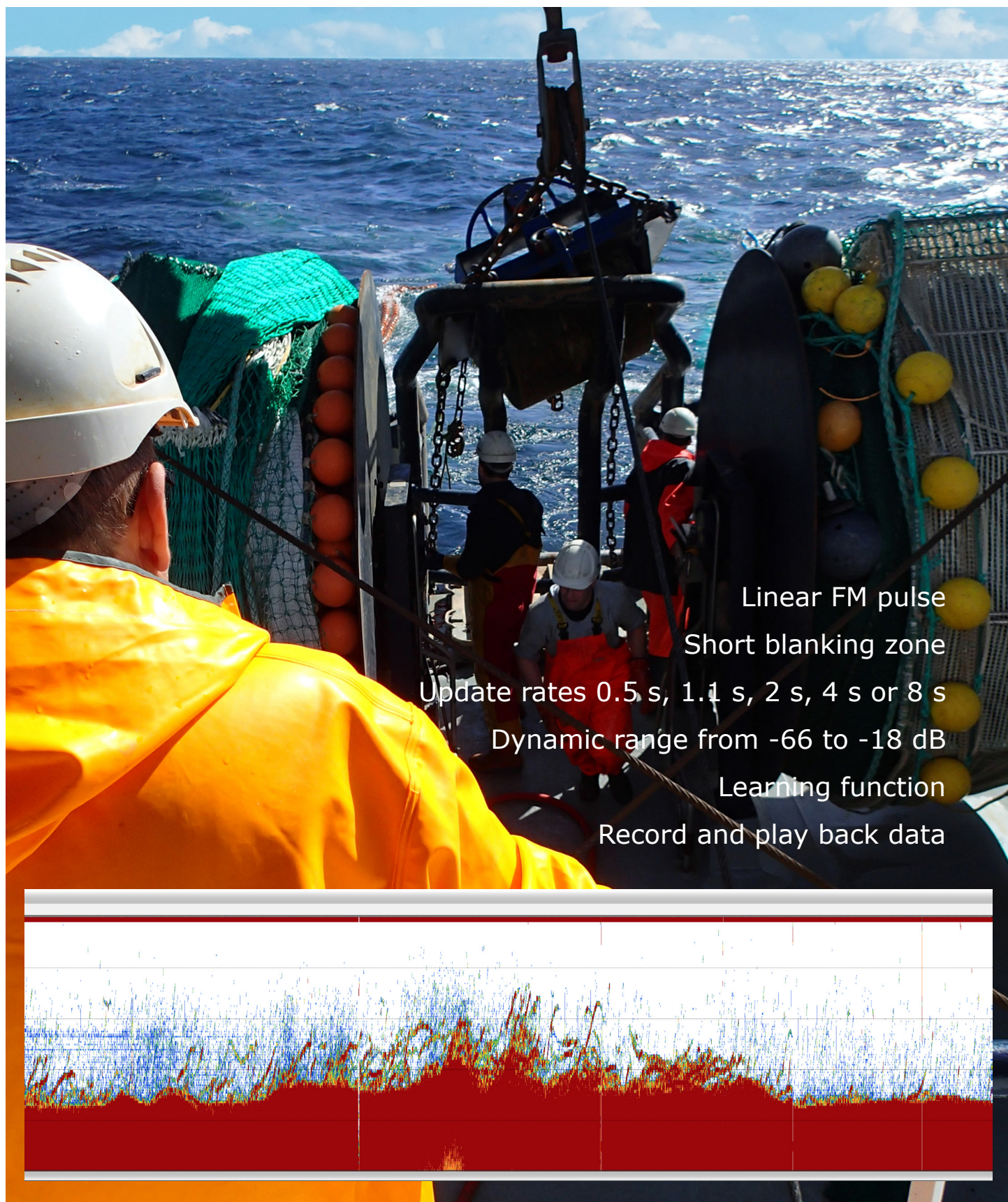# Simrad PX TrawlEye
Wireless echo sounder for pelagic and bottom trawls

Linear FM pulse

Short blanking zone

Update rates 0.5 s, 1.1 s, 2 s, 4 s or 8 s

Dynamic range from -66 to -18 dB

Learning function

Record and play back data

SIMRAD

TECHNOLOGY FOR SUSTAINABLE FISHERIES

Place the Simrad PX TrawlEye on the headrope of your bottom trawl, or in the intermediate section of your pelagic trawl, to provide a crisp and detailed presentation of the fish in the trawl, bottom condition and gear status.

The Simrad PX TrawlEye provides a real time echogram from the trawl using a wireless link. In addition to the high resolution echogram, the PX TrawlEye also sends up its battery status. This allows you to plan when to charge the sensor.

To ensure long range communication and optimum alignment between sensor and vessel the PX TrawlEye sends up roll and pitch information. When you know the sensor's roll and pitch angle you can also see if you have a bad alignment, or if the PX TrawlEye was tangled in a mesh or similar while shooting your trawl.
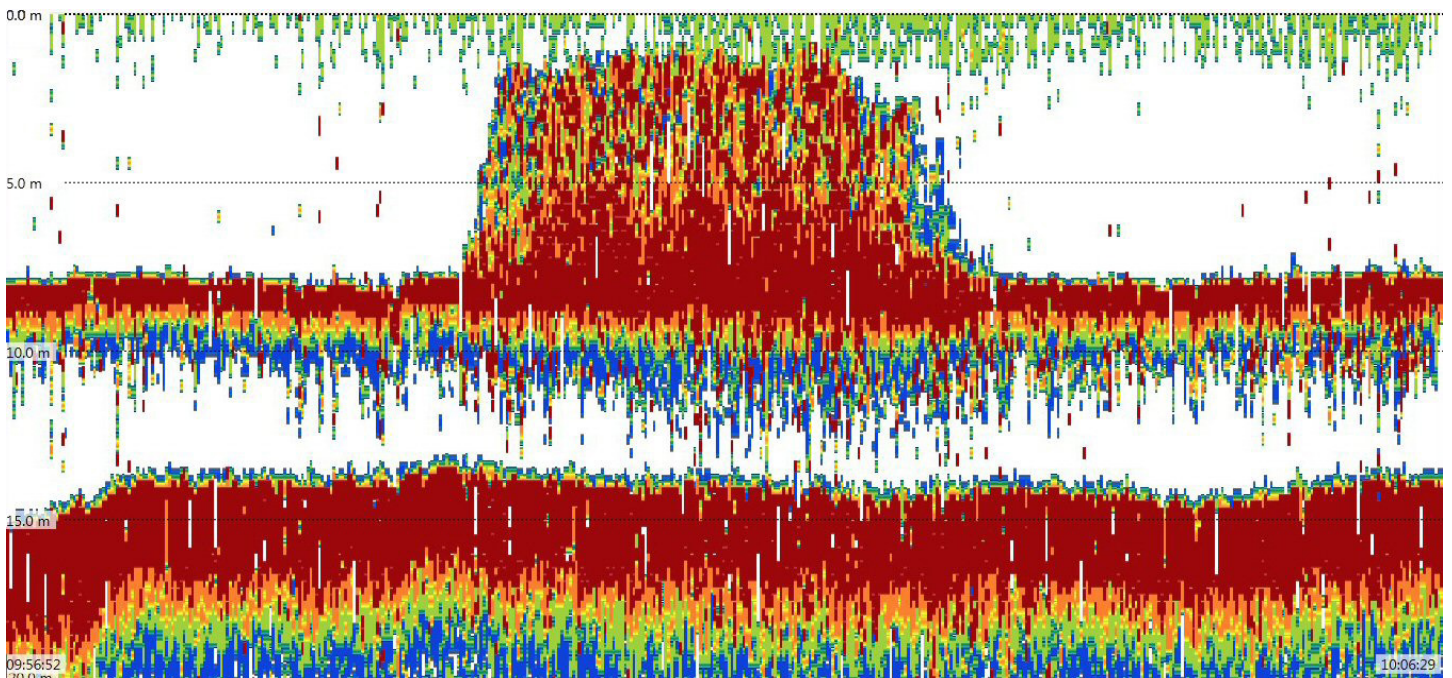
The PX TrawlEye information can be received by the PI Hydrophone. You can even use non-Simrad types, provided that the frequency match. The PX TrawlEye can however not be received by the PI50 or PI60

receivers, you need a dedicated receiver; the SR70.

The PX TrawlEye is equipped with a composite echo sounder transducer enabling advanced LFM pulses; Linear Frequency Modulation (also known as "Chirp"). The PX TrawlEye can be configured to suit various fisheries by programming it with the bridge computer. You can change pulse length, pulse type, sounder gain, echo range, communication power and other operational parameters.

This echogram from the PX TrawlEye shows Sand eel in the tunnel of the trawl.

Performance specifications

We are continuously working to improve the quality and performance of our products. Technical specifications may therefore be changed without prior notice.

Hydrophone communication

- Frequency range: 39 to 49 kHz
- Communication channels: 8
- Beam width: 40 to 50 degrees
- Output power: User selectable in four steps
- Maximum range: Approximately 2000 meters depending on sea conditions, noise level, sensor alignment and output power

Echo sounder

- Operational frequency: 200 kHz
- Range steps: 5, 7.5, 10, 15, 20, 25, 30, 50 and 100 m
- Beam width: 33 degrees
- Ping rate: 1.1 to 8 s (0.5 s in fast mode)
- Pulse length: 64 μs, 128 μs, 512 μs, 1024 μs or 2048 μs
- TVG: 20, 30, 35 or 40 log R

Battery

- Type: LiFePO4, 4200mAh
- Operational duration: 10 to 100 hours depending on output power and update rate
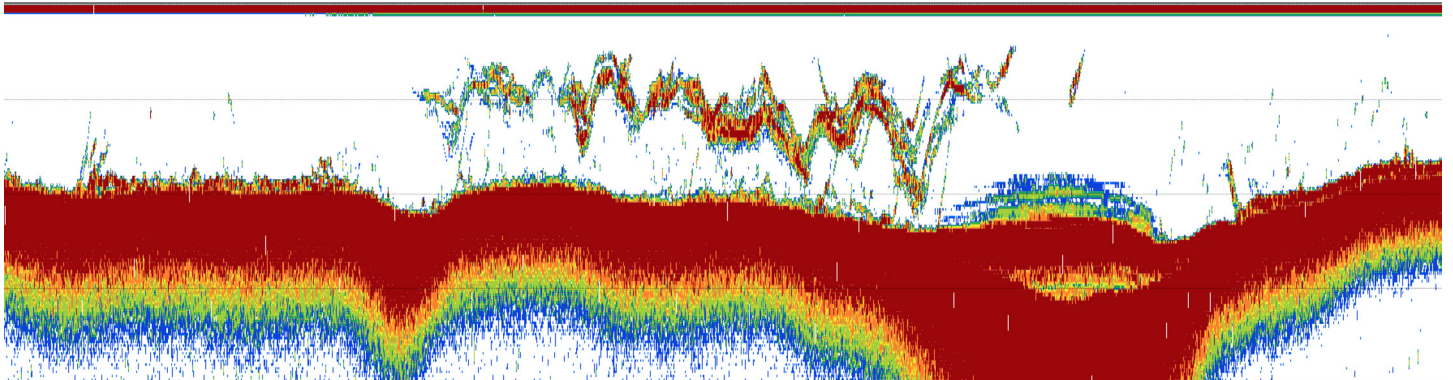- Charging time: 2 to 3 hours

Additional sensor data

- Update rate: Depends on echo sounder ping rate, and how many sensor values you have chosen to be transmitted
- Roll data update: Every 2 to 60 s
- Pitch data update: Every 2 to 60 s
- Height data update: Every 2 to 8 s
- Temperature data update: Every 2 to 60 s
- Depth data update: Every 2 to 60 s

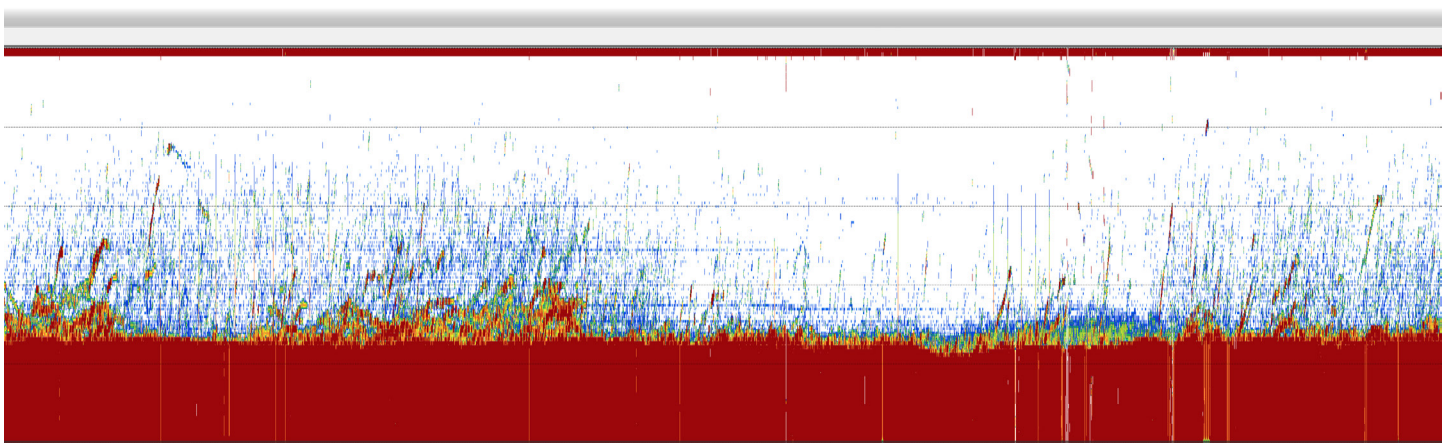Note that temperature and depth data are optional features.

Physical properties

- Depth rating: 1400 meters
- Weight in air: 7.5 kg
- Weight in water: 4.5 kg

This echogram is from a small shrimper. The trawl opening is 10 m, trawl depth is 200 m. Towing speed is 1.6 knots.

This echogram from the PX TrawlEye shows shrimp and fish in a 18 m high trawl at 420 m depth

PX Deployment Pack

The PX Deployment Pack offers a fast and safe way to mount the Simrad PX TrawlEye on your gear.

The PX Deployment Pack is designed to provide easy access and replacement of the PX TrawlEye, whilst still ensuring a safe and sturdy installation.

The unit is made from hard plastic. The base frame is equipped with several mounting holes, which allows you to secure the deployment pack to the gear is a manner that you feel comfortable with. The frame also incorporates carrying handles.

Two metal latches, one on each side, secures the lid in its closed position. The latches are locked to the frame to secure the sensor when deployed.

The PX Deployment Pack is very easy to open. Remove the safety devices you have chosen to use, and swing out the two latches. When the lid is open (as shown), the PX TrawlEye can be lifted out and replaced.

When closed, the PX Deployment Pack provides as safe and secure environment for the PX TrawlEye. Holes in the deployment pack ensures that the relevant transducers have undisturbed "access" to the water. The frame of the PX Deployment Pack offers additional holes to secure the unit to the gear, and even integrated carrying handles.

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