



75
YEARS

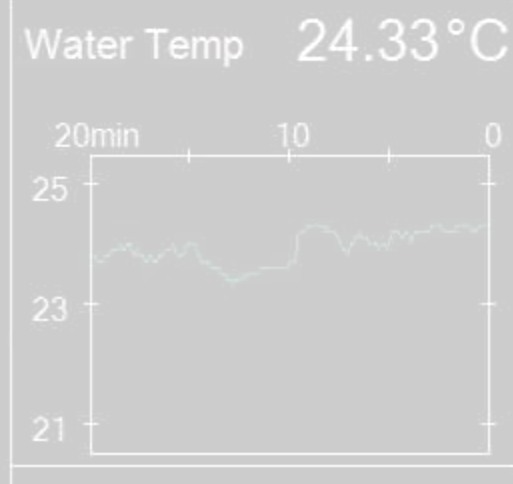
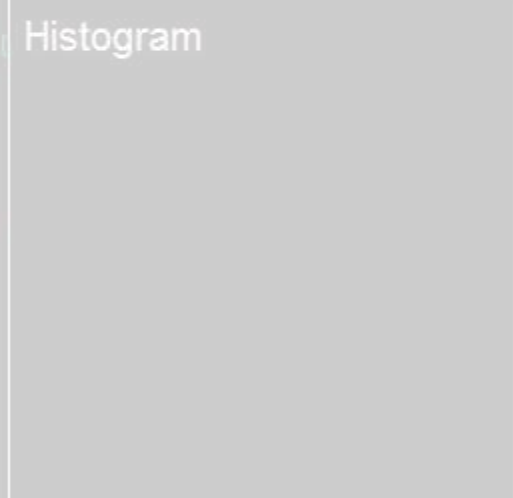
AS NEW ZEALAND'S MARINE ELECTRONICS EXPERTS

FURUNO



FURUNO
C1 0.3 kn 67°
C3 0.1 kn 325°

FURUNO SONAR RANGE 2022



⊕
➡ 9999m
⬇ 0m
B W

◇ → 3017m
W ➡ 5109m
⬇ 0m
S 21.4kn
C NW/N
B N/W

20kHz



FSV-25 MK2
Full-Circle OMNI

80kHz



FSV-85 MK2
Full-Circle OMNI

180kHz



FSV-75
Half-Circle Scanning

55/68kHz



CSH-5L MK2
Full-Circle OMNI

85kHz



CSH-8L MK2
Full-Circle OMNI

60/113/162kHz



CH-37BB
Sector Scanning

60/88/150/180/240kHz



CH-500
Searchlight Scanning

60&153 kHz or 85&215 kHz



CH-600
Dual Searchlight Scanning

Full-Circle Color Scanning Sonar

Model **FSV-25 MARK-2** **NEW**



Scanning Method

Full Digital Beam Forming

Frequency

20 kHz

Ranges

60 to 5000 m

Transmitter

PDM Half-Bridge

Receiver

Straight Amplifier, Full Digital Beamforming

Hoz Mode Beam Width

TX: 360° x 7°; RX: 12° x 10° (-3dB, full width)

TX: 360° x 10°; RX: 16° x 14° (-6dB, full width)

Vert Mode Beam Width

TX: 360° x 29°; RX: 12° x 10° (-3dB, full width)

TX: 360° x 47°; RX: 18° x 13° (-6dB, full width)

Tilt Angle

-5° to 60° (downward)

Vertical Search Range

0° to 60° (downward)

Hull Unit Travel

1200mm or 1600mm

Raise/Lower Time

12 sec or 16 sec

Display Monitor

Not included (Black-box type)

Resolution

1280 x 1024 (SXGA), Dual HDMI display output

Colour

32-Colour

Power supply

Processor 12-24VDC,

Transceiver/Hull Unit 100/110/115/220/230VAC

[Click here](#) to visit website for further details

FSV-25 MK2 continued...

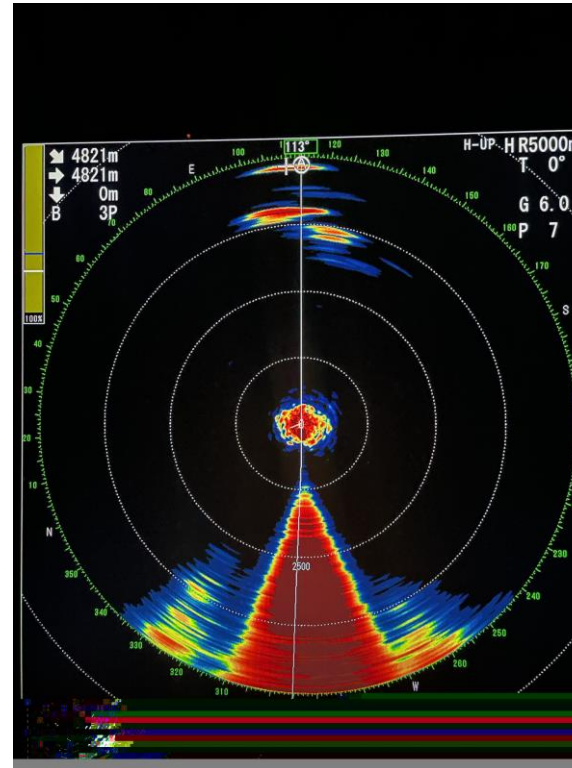
Full-Circle Color Scanning Sonar

Model **FSV-25 MARK-2** **NEW**

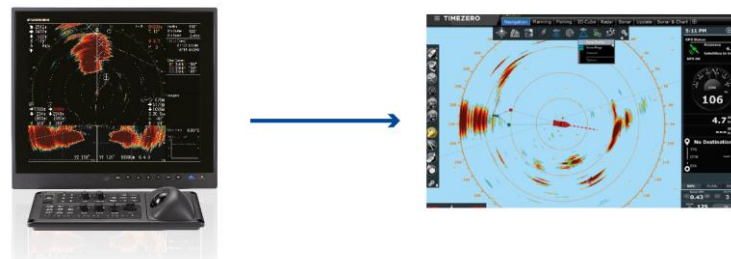
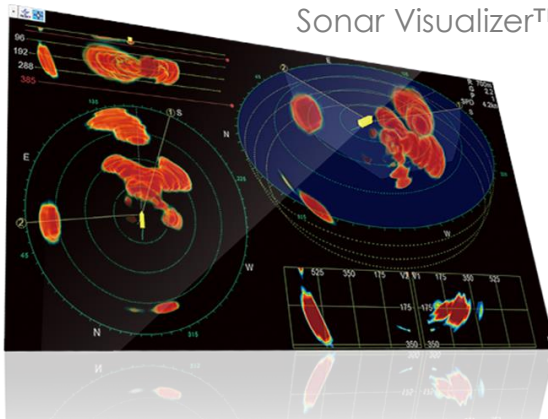
FURUNO

Key Features:

- #1 Sonar - longest search range available on the market!
- Detection range has been greatly improved (by about 30%) over FSV-30/35 generation
- New Control Unit and Remote Controller for quick and easy operation
- Auto filter for clear and uninterrupted performance
- Automatic target lock function for easy tracking of fast-swimming fish
- Stabilization function for unwavering performance
- Echo strength distribution histogram
- Graphical hull-unit indicator
- Up to 20 Fishing Marks



Optional F3D-S3D
Sonar Visualizer™

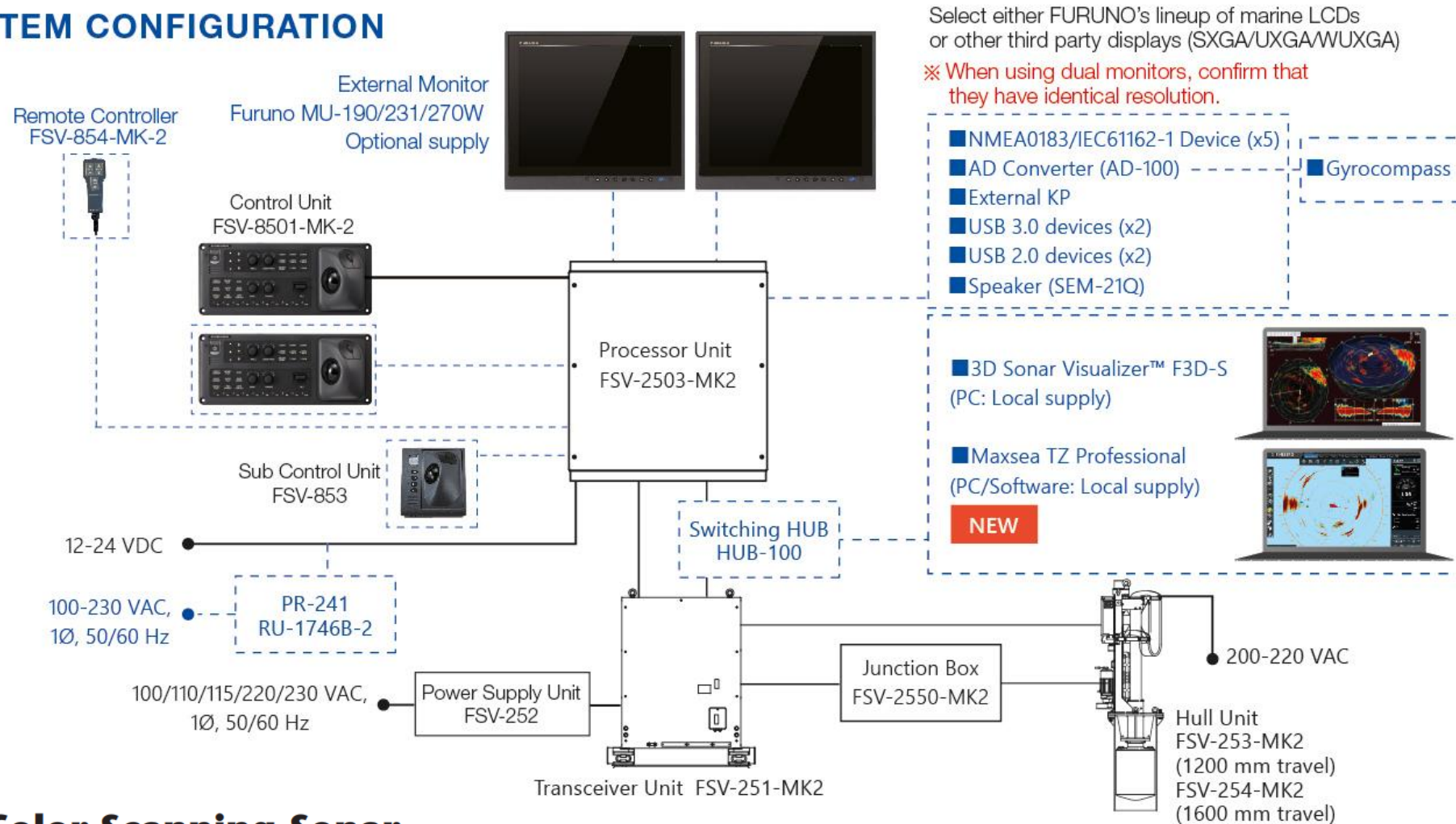


Optional TZ Professional Sonar Overlay

Optional:

- 3D Sonar Visualizer™ F3D-S
- Wired Remote and Sub Control Unit options available
- Export of echo data to TZ Professional software

SYSTEM CONFIGURATION



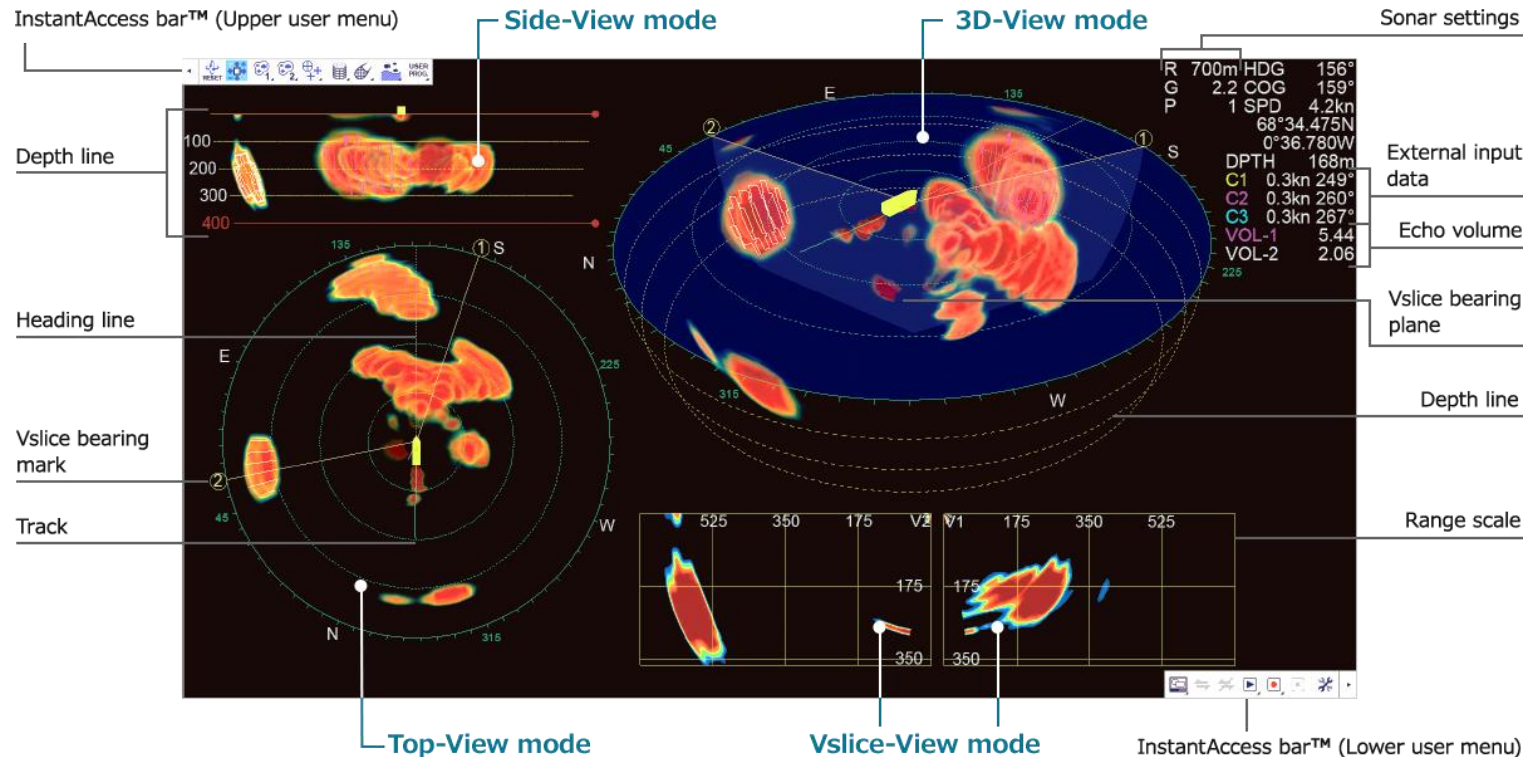
Full-Circle Color Scanning Sonar

Model **FSV-25 MARK-2** **NEW**

F3D-S Optional 3D Sonar Visualizer™ (for FSV-25 / FSV-25 Mk2)

Sonar Visualizer™ F3D-S is a new product that works in conjunction with the FSV-25/FSV-25S to show fish and sonar information in 3 dimensions.

- Show fish, peaks and sea floor data in a 3 dimensional “real world” view.
- The seabed can be removed from the picture to leave just what you want to see... Fish.
- Clearly see the size and shape of midwater fish marks to assess the best way to fish them and, with careful and simple adjustment of the depth line control, remove the seabed echoes to visualize fish schools close to the seabed.



[Click here](#) to visit website for further details

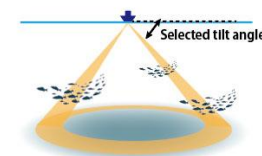
FURUNO

3D Sonar Visualizer™

Model F3D-S

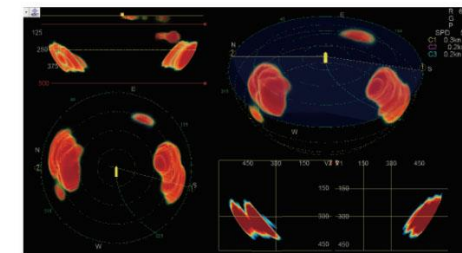
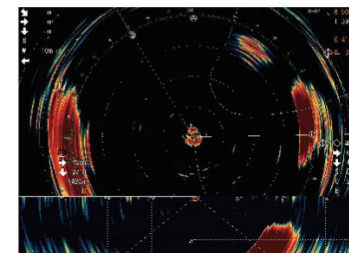
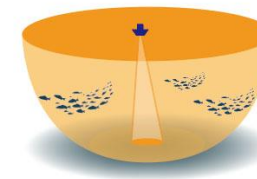
FSV-25/FSV-25S

Tilt: arbitrary (The setting of the degree is needed.)

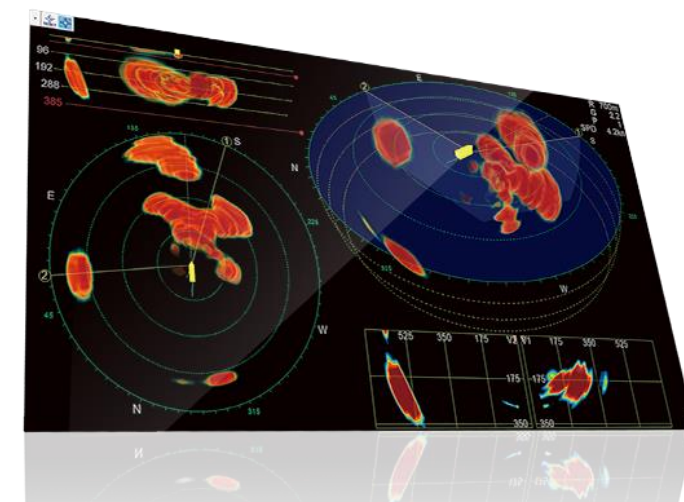


3D Sonar Visualizer™

Tilt: NA (The setting of the degree is not needed.)



Screenshots taken at the same moment



F3D-S continued....

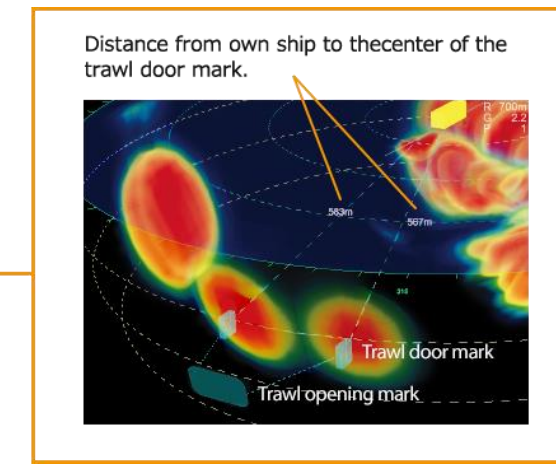
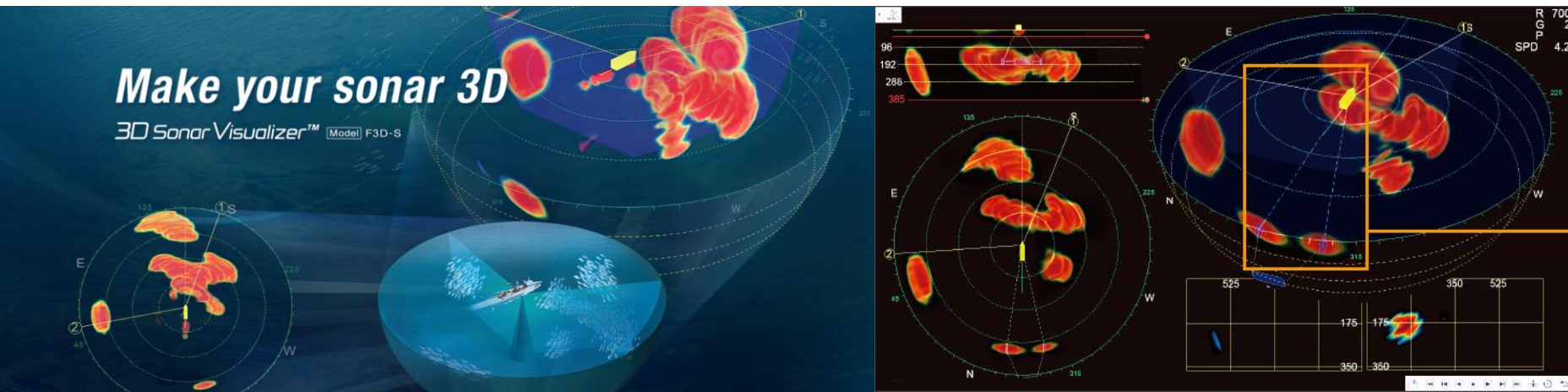
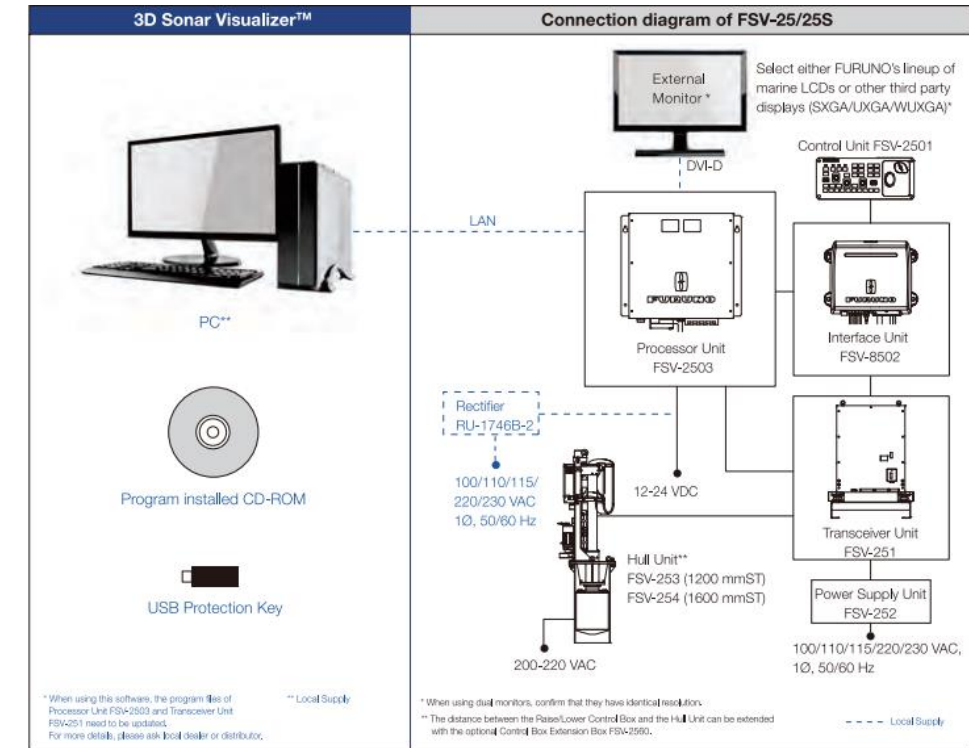
3D Sonar Visualizer™

Model F3D-S

Features:

- 360° 3D visualization of fish schools and gear
- Store and replay both screen images and equipment settings
- 4 Display Views: 3D, Top View, Side View and Vertical Slice
- InstantAccess bar™ for direct access to menus
- Easy and immediate entry of common marks: Echo Area, Event, Purse Net, Trawl, etc.
- Trawlers: Display Trawl door, net and wire in the 3D representation image. When a fish school is detected, trawl marks assist in positioning the doors and net for a big catch
- Purse seiners: generate a visual 3D representation image of the net to compare size and depth of both the fish schools and the net for better and faster decision making.

FURUNO

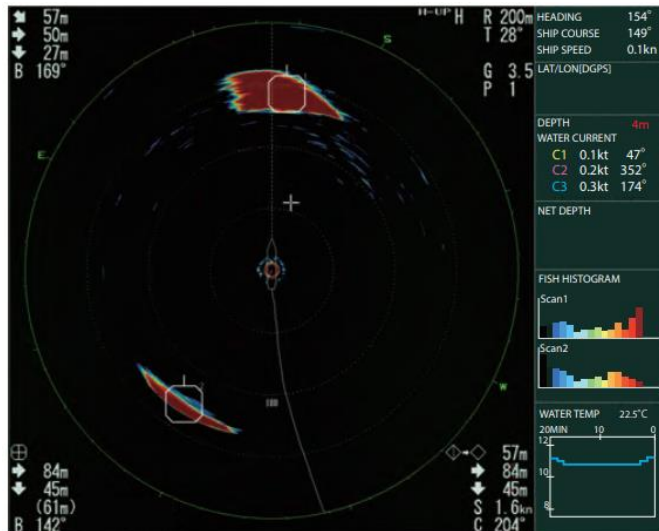


FSV-85 MK2 Full Circle OMNI Scanning Sonar, 80kHz

FURUNO

Full-Circle Color Scanning Sonar

Model **FSV-85 MARK-2** **NEW**



Scanning Method

Frequency

Ranges

Transmitter

Receiver

Hoz Mode Beam Width

Vert Mode Beam Width

Slant Mode Beam Width

Tilt Angle

Vertical Search Range

Hull Unit Travel

Raise/Lower Time

Resolution

Colour

Power supply

Full Digital Beam Forming

80 kHz

60 to 2000 m

PDM Half-Bridge

Straight Amplifier, Full Digital Beamforming

TX: 360° x 10.7°; RX: 12.6° x 10.1° (-6dB, full width)

TX: 12.7° x 118.2°; RX: 12.6° x 12.1° (-6dB, full width)

TX: 206.7° x 12.1°; RX: 12.6° x 12.0° (-6dB, full width)

-5° to 90° (downward)

0° to 90° (downward)

800mm or 1100mm

8 sec or 11 sec

1280 x 1024 (SXGA)

32-Colour

Processor 12-24VDC

Transceiver/Hull Unit 200-220VAC

[Click here](#) to visit website for further details

FSV-85 MK2 continued...

Key Features:

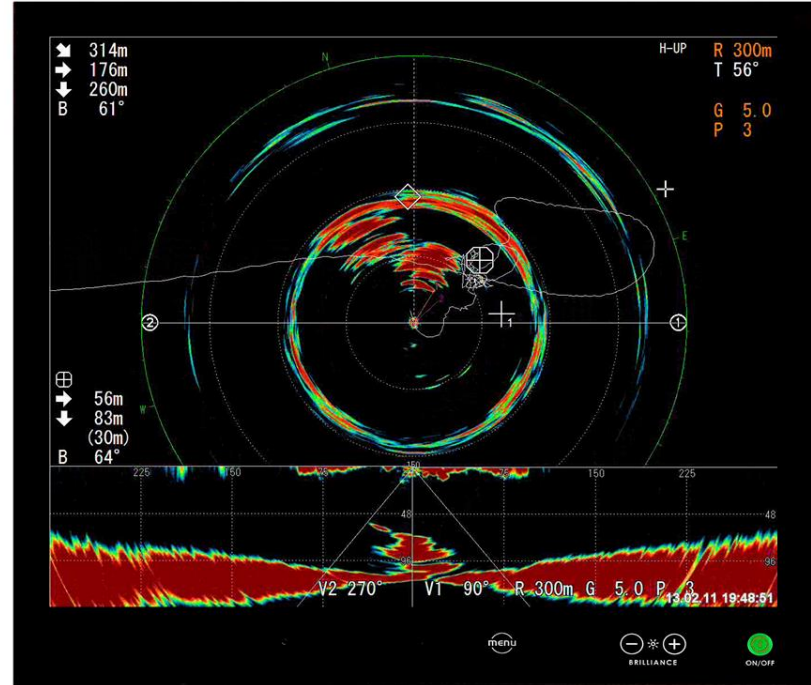
- Various searching modes available including horizontal, slant and dual mode
- Fish estimate feature to compare the volume of two schools of fish
- High resolution for long range detection
- Target lock function for fish tracking
- Fish concentration and histogram display to help you decide when/where to set your net
- Auto filter for clearer images
- Stabilization function
- Storage and playback of Sonar images
- User-Friendly, Programmable, Intelligent Controls
- Short raise/lower time of the transducer & intuitive position indicator
- Dual Display



Full-Circle Color Scanning Sonar

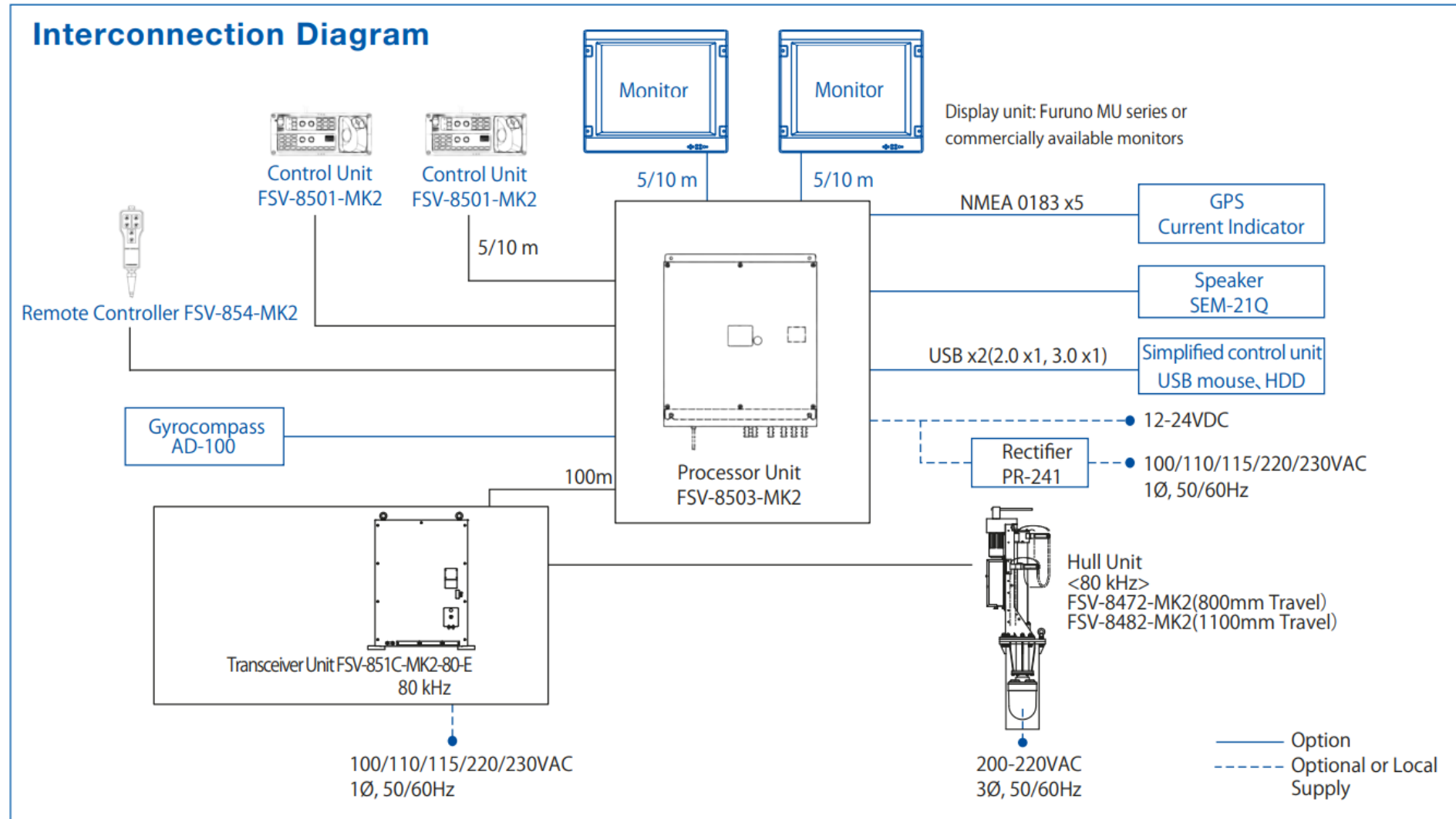
Model **FSV-85 MARK-2**

FURUNO



Optional:

- Wired Remote and Sub Control Unit options available



Full-Circle Color Scanning Sonar

FSV-75

Half Circle OMNI Scanning Sonar, 180kHz

Model FSV-75 **NEW**

FURUNO



Scanning Method

Full Digital Beam Forming

Frequency

180 kHz

Ranges

50 to 1900 m

Beam Width

TX: Hoz. 180° x 10.7°; Vert. 6° (-3dB @ 180kHz)

RX: Hoz. 6°; Vert. 6° (-3dB @ 180kHz)

Scanning Angle

-175° to +175°

Elevation Angle

0° to 90° (downward)

Hull Unit Travel

800mm or 1100mm

Raise/Lower Time

8 sec or 11 sec

Resolution

1280 x 1024 (SXGA)

Colour

32-Colour

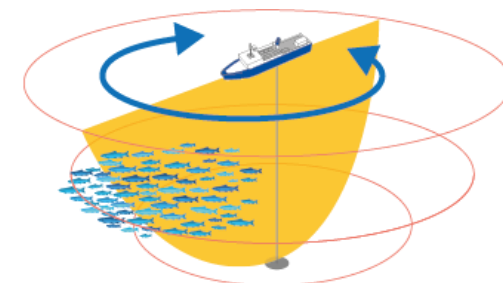
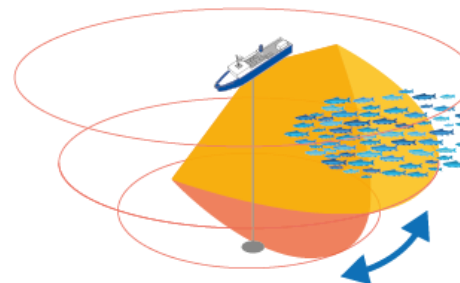
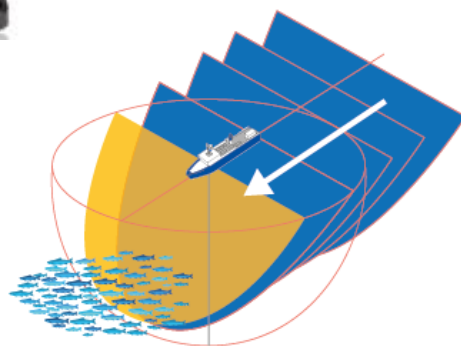
Power supply

Processor 12-24VDC

Transceiver 100/110/115/220/230VAC

Hull Unit 200-220VAC

[Click here](#) to visit website for further details



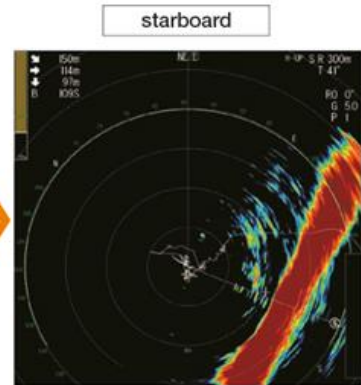
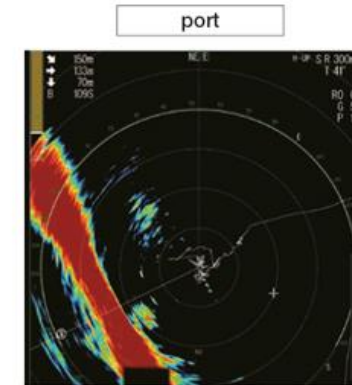
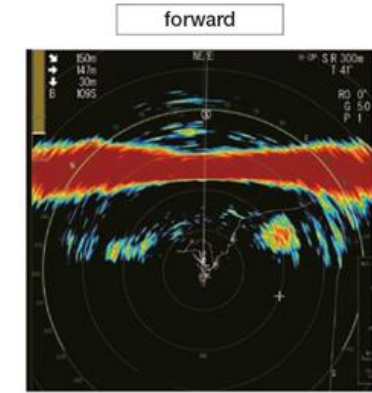
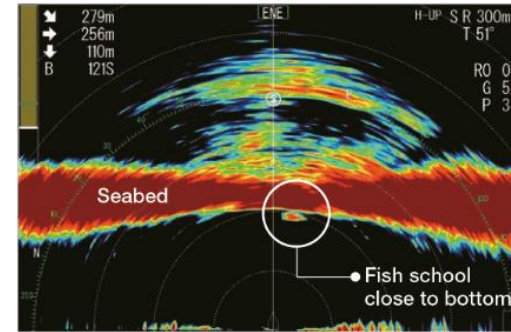
FSV-75 continued...

Model **FSV-75** **NEW**

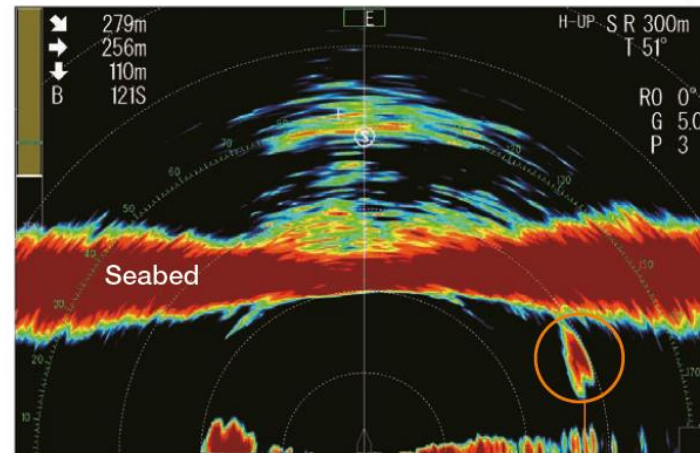
Key Features:

- The most advanced half-circle sonar with unparalleled image detail
- Detailed echoes near the seabed thanks to enhanced detection capabilities
- High frequency (180 kHz) allows clear and easy discernment between fish and seabed, or fishing net and school of fish
- Perfect to search for fish with rapid movement such as skipjack or tuna
- Fan-shaped beam, higher scanning speed, wider range, the performance of half-circle Sonar taken to a whole new level
- On screen "Retract Transducer" indicator for quick adjustment and damage prevention.
- Quick and easy operation!
- Robust Tank guide and Hull Unit
- Fast lower/retract time
- Optional: 3D mode (license)

FURUNO



From Port to Starboard in only 8 seconds!



Fish school



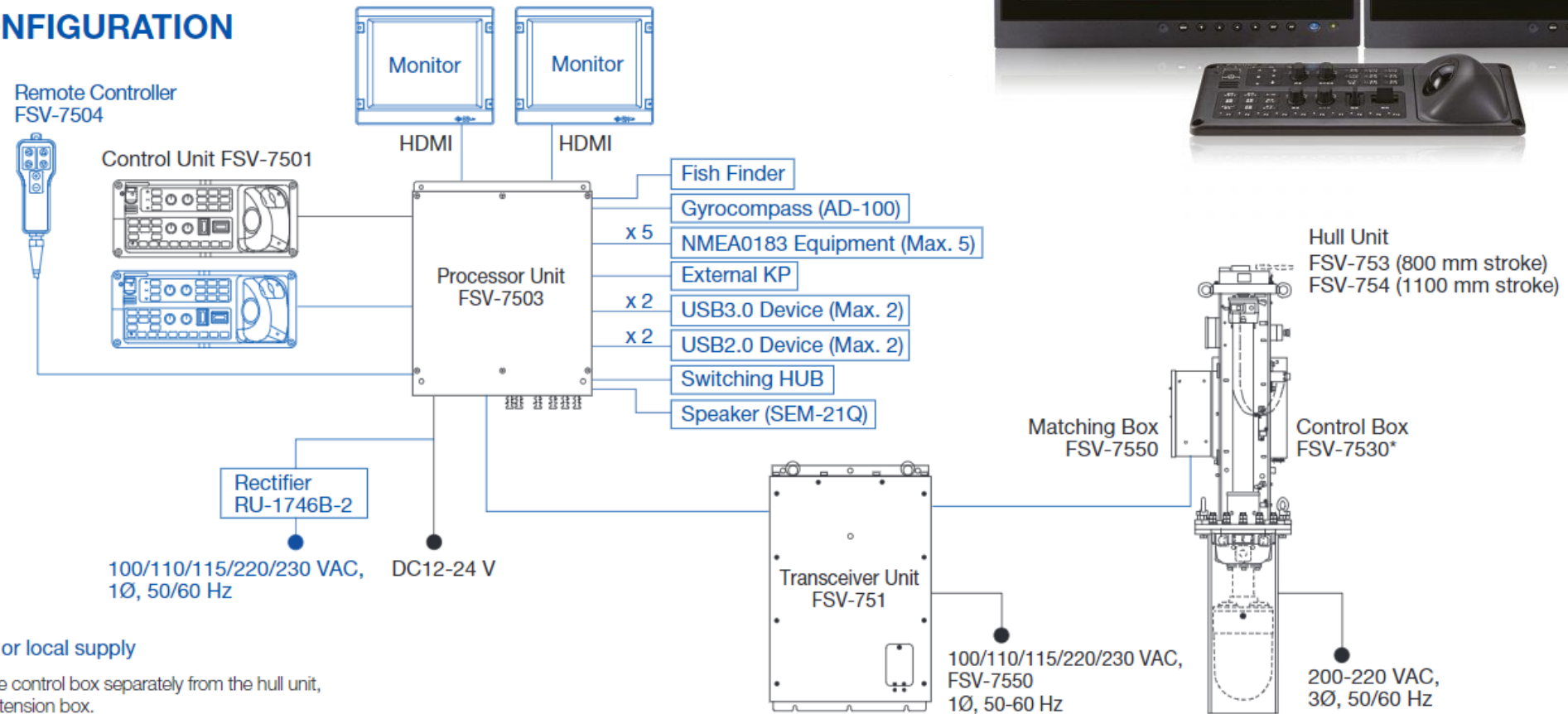
FSV-75 continued...

FURUNO

Model **FSV-75** **NEW**



SYSTEM CONFIGURATION



Blue line : Option or local supply

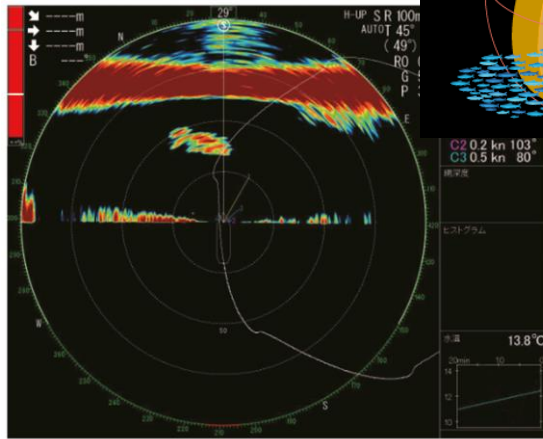
*: When mounting the control box separately from the hull unit, use the optional extension box.

FSV-75 continued...

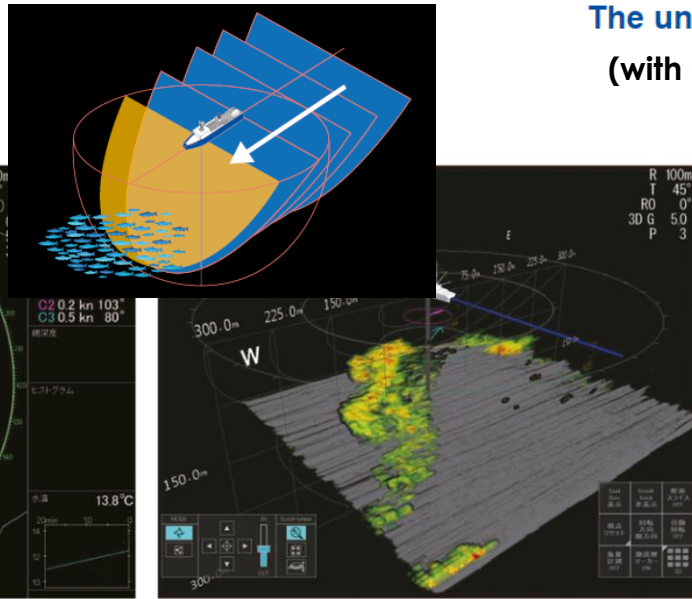
FURUNO

Model FSV-75 **NEW**

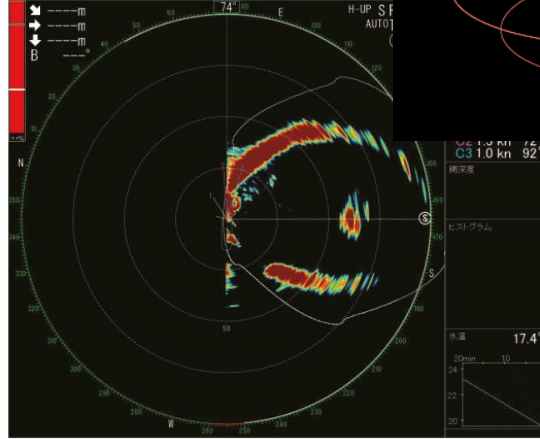
The underwater in 3D! **NEW**
(with Optional 3D license)



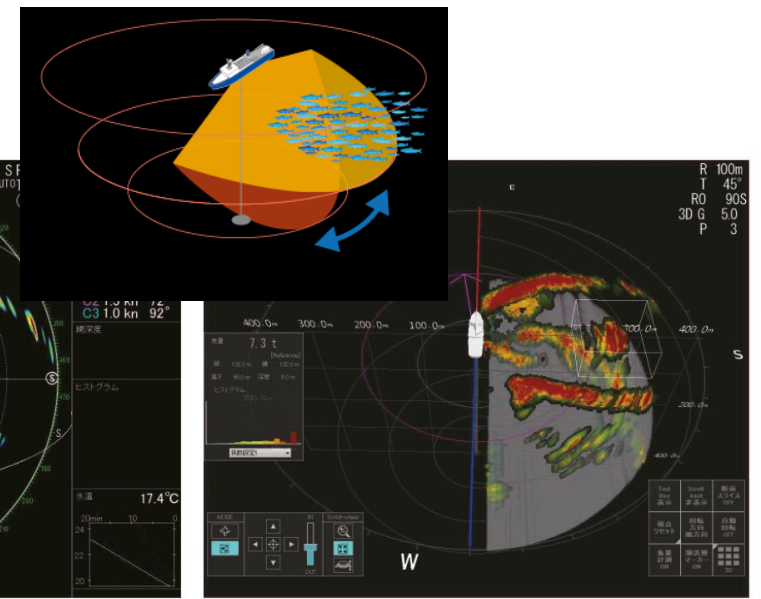
2D display



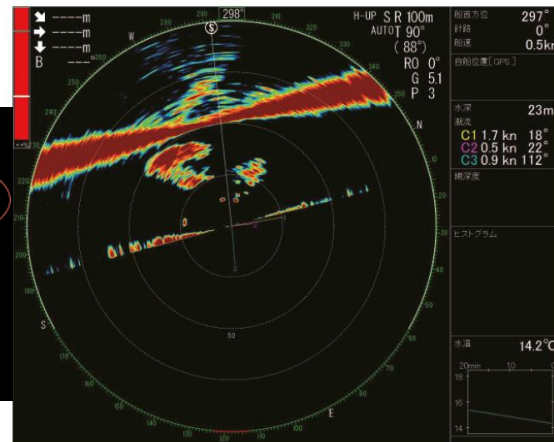
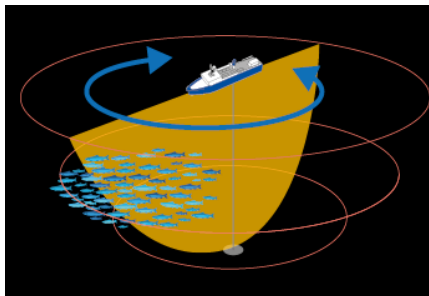
3D display



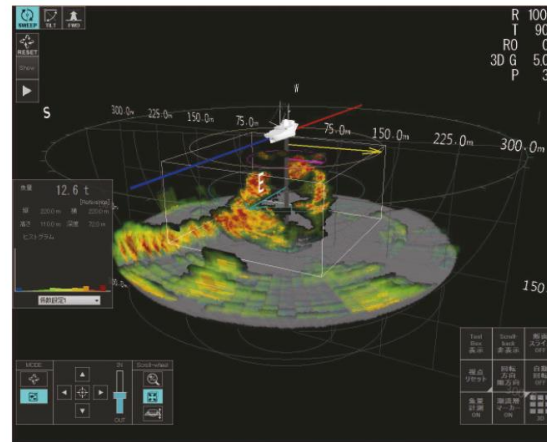
2D display



3D display



2D display



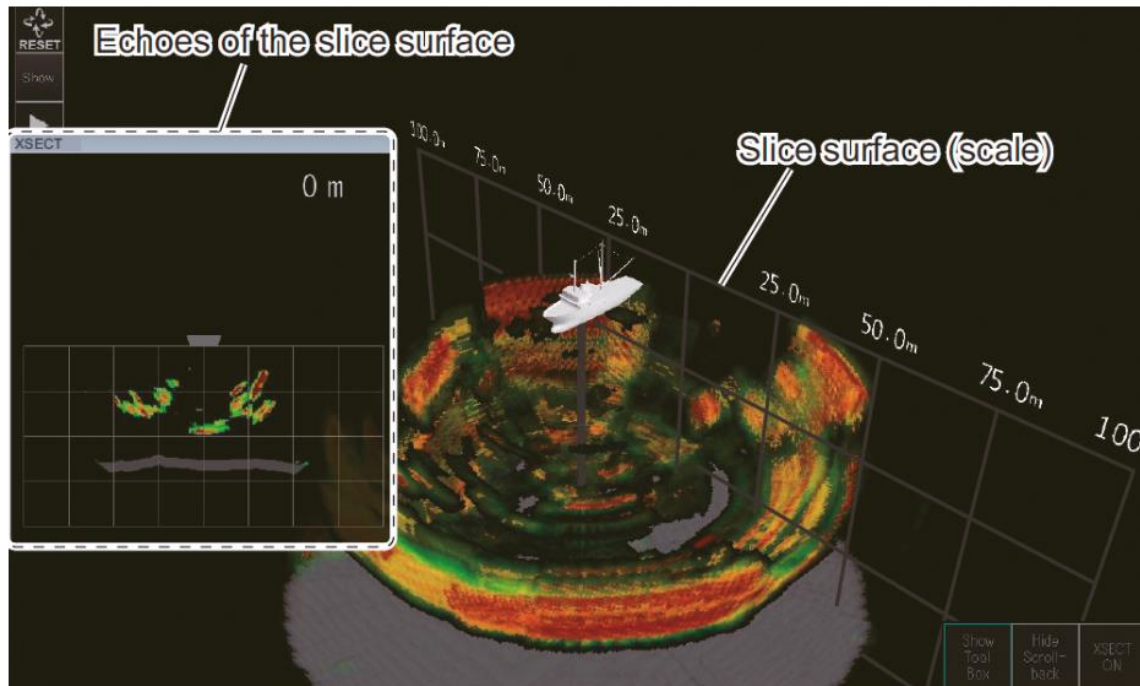
3D display

FSV-75 continued...

FURUNO

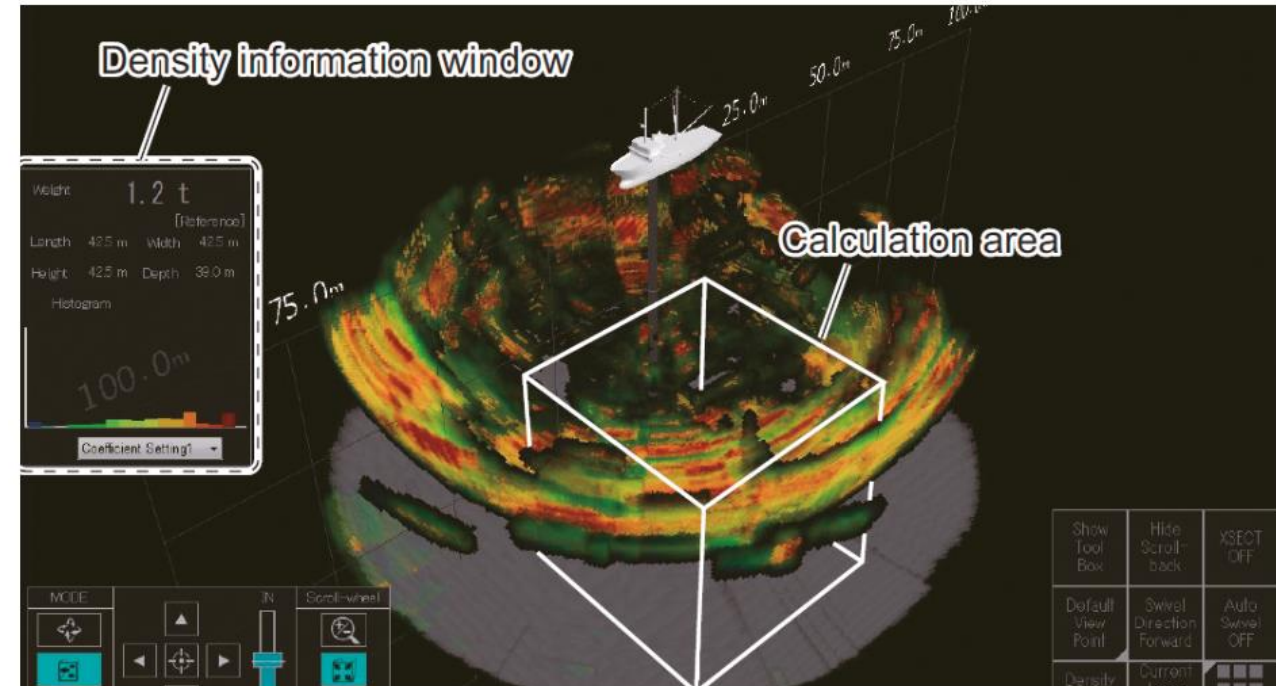
Additional Features with Optional 3D license:

- Density calculation function - virtual "basket" measuring the approximate volume of fish in the selected area
- Cross-sectional slice function to view echoes of the cross-section of a 3D model sliced in a vertical and horizontal plane



Model **FSV-75** **NEW**

The underwater in 3D! **NEW**
(with Optional 3D license)



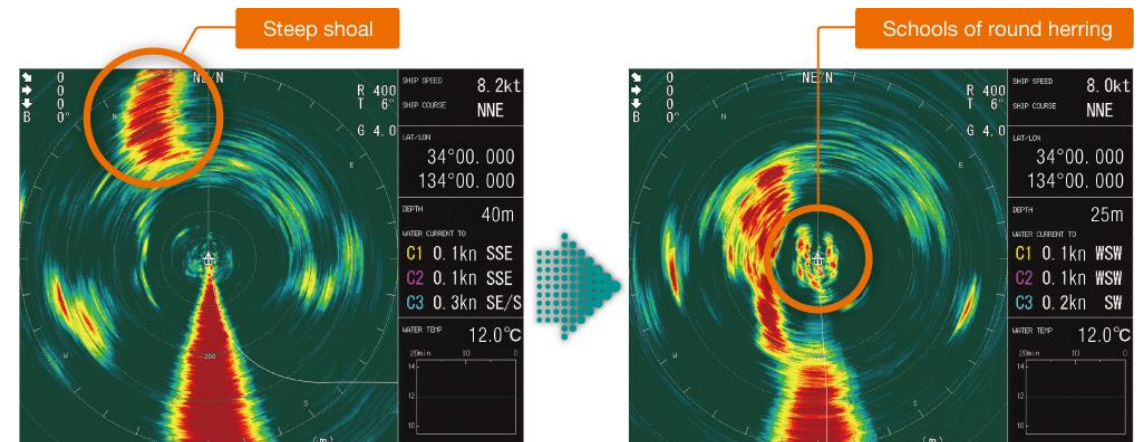
CSH-5L MK2 Full Circle OMNI Scanning Sonar, 55/68kHz*

FURUNO

* Specify frequency on ordering

Model **CSH-5L MARK-2**

| | |
|---------------------|---|
| Frequency | 55 or 68 kHz* |
| Ranges | 50 to 1600 m |
| Hull Unit Travel | 400mm or 600mm |
| Resolution | 1024 x 768 Pixels (XGA) |
| Colour | 16-Colour |
| Manual Tilt | 0° to 55° (in 1° steps) |
| Automatic Tilt Scan | 4° - 52° |
| Power supply | Transceiver 115/230 VAC or 24 VDC with optional DC-AC inverter |

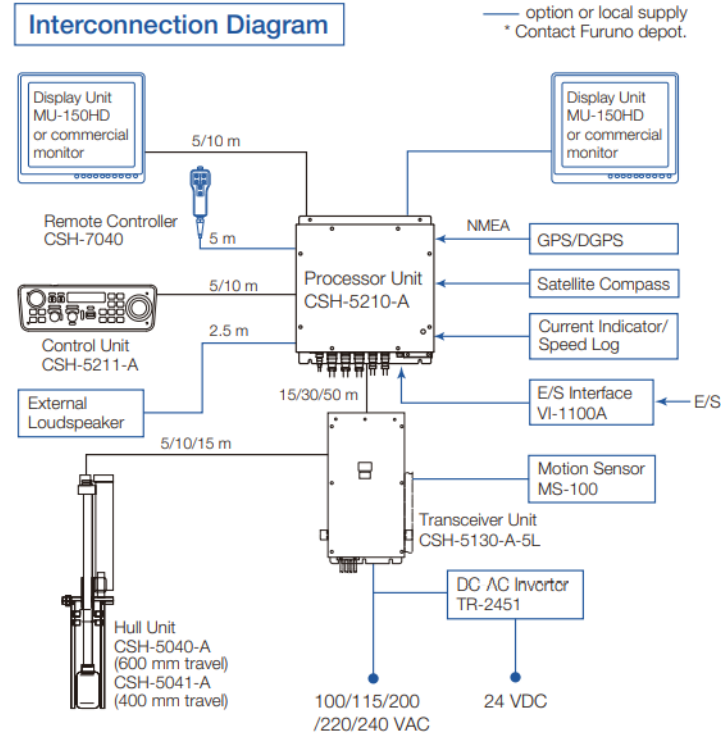


[Click here](#) to visit website for further details

CSH-5L MK2 continued...

Key Features:

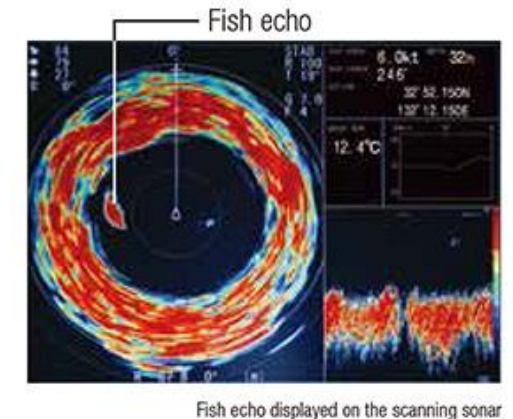
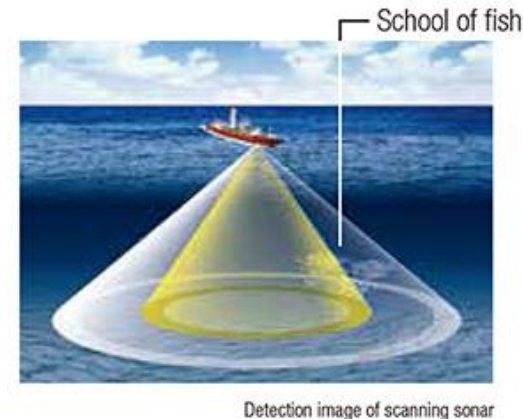
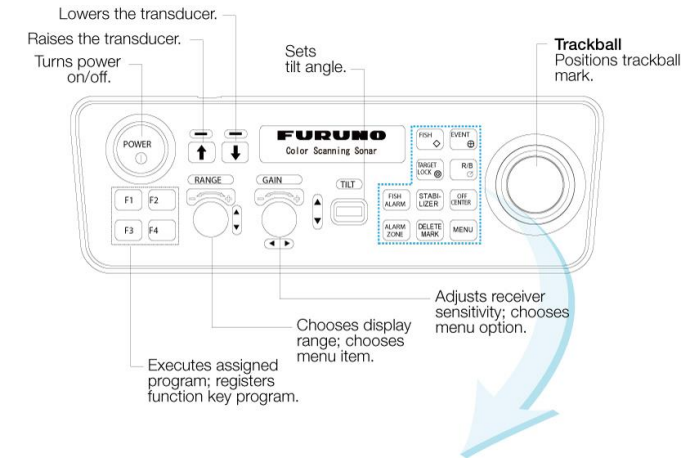
- Full-circle scanning sonar detects and instantaneously displays fish schools and underwater conditions
- Vivid 16-color display assists in recognition of bottom structure, concentration and distribution of fish schools
- Four user-programmable function keys for quick set up according to fishing conditions or specific functions
- High power transmitter ensures reliable operation under any conditions
- With the CSH-5L MARK-2 you can confidently fish in shallow areas and increase your catch
- Rapidly detects and displays individual fish, schools of fish and changing underwater conditions.
- Fish distribution and seabed conditions are shown in 16 colours, 360° around your vessel
- Automatic tilt scanning (suitable for trawlers & purse seiners)
- Blackbox configuration



FURUNO

* Specify frequency on ordering

Model **CSH-5L MARK-2**



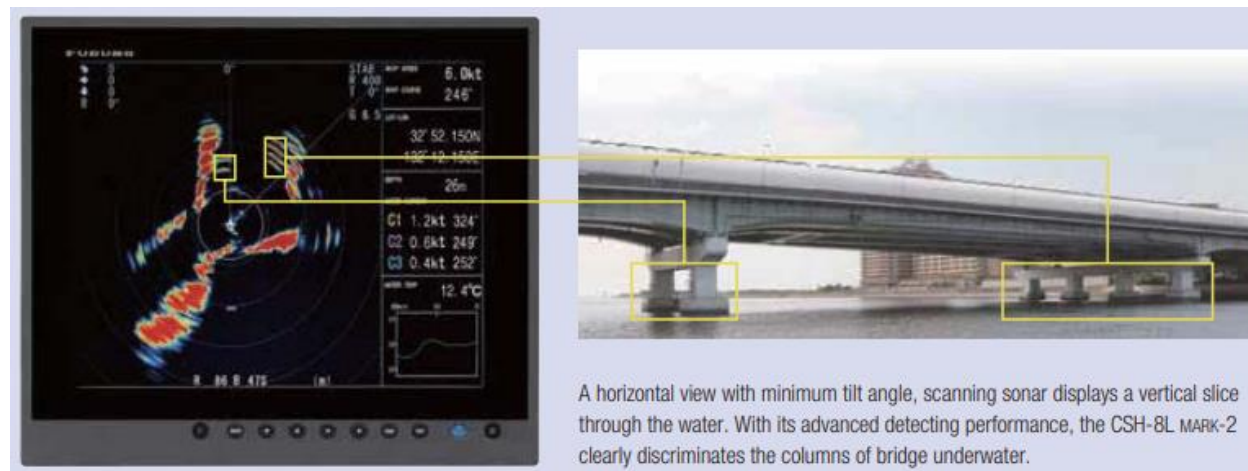
CSH-8L MK2 Full Circle OMNI Scanning Sonar, 85kHz

FURUNO

Model **CSH-8L MARK-2**



| | |
|---------------------|---|
| Frequency | 85 kHz |
| Ranges | 50 to 1600 m |
| Hull Unit Travel | 400mm or 600mm |
| Resolution | 1024 x 768 Pixels (XGA) |
| Colour | 16-Colour |
| Manual Tilt | 0° to 55° (in 1° steps) |
| Automatic Tilt Scan | 4° - 52° |
| Power supply | Transceiver 115/230 VAC or 24 VDC with optional DC-AC inverter |



A horizontal view with minimum tilt angle, scanning sonar displays a vertical slice through the water. With its advanced detecting performance, the CSH-8L MARK-2 clearly discriminates the columns of bridge underwater.

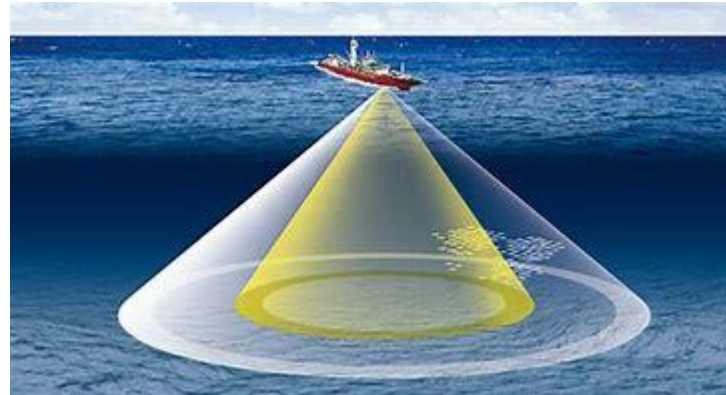
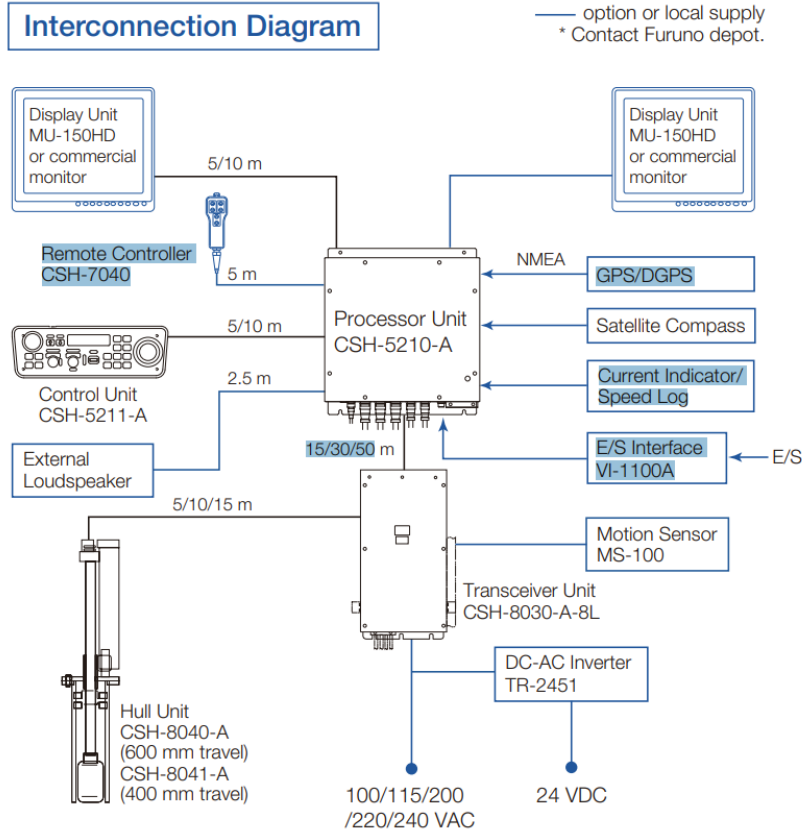
[Click here](#) to visit website for further details

CSH-8L MK2 continued...

Model **CSH-8L MARK-2**

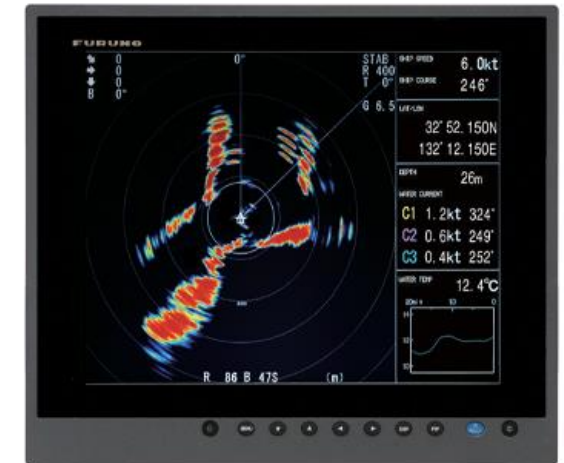
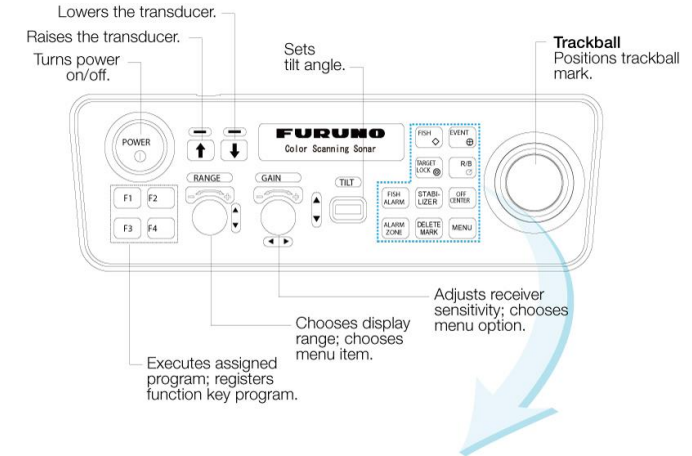
Key Features:

- Full-circle scanning sonar detects and instantaneously displays fish schools and underwater conditions
- Vivid 16-color display assists in recognition of bottom structure, concentration and distribution of fish schools
- Four user-programmable function keys for quick set up according to fishing conditions or specific functions
- High power transmitter ensures reliable operation under any conditions
- With the CSH-8L MARK-2 you can confidently fish in shallow areas and increase your catch
- Rapidly detects and displays individual fish, schools of fish and changing underwater conditions.
- Fish distribution and seabed conditions are shown in 16 colours, 360° around your vessel
- Automatic tilt scanning (suitable for trawlers & purse seiners)
- Blackbox configuration



FURUNO

* Specify frequency on ordering



CH-37BB

Sector Scanning Sonar, 60/113/162kHz*

FURUNO

* Specify frequency on ordering

Model **CH-37BB**



Frequency

60/113/162kHz*

Ranges

Full-circle mode: 12 ranges from 30 to 1600 m

Vertical-fan mode: 12 ranges from 10 to 1000 m

Full Circle Training

45° or 6° steps through 360°

Scanning sectors: 45°, 90°, 135°, 180° or 225°

Sector center can be set in any direction in 15° steps

Tilt Angle: +5° to 90° (in 1° steps)

Vertical-fan Mode

Vertical scan: 6° or 3° steps

Selectable from: 36°, 60°, 96°, 120°, 156°, and 180°

Sector center can be set in any direction in 15° steps

Training: 6° steps manually or 15° steps automatically

Hull Unit Travel

400mm or 600mm

Resolution

1024 x 768 Pixels (XGA)

Colour

16-Colour

Power supply

24VDC (or AC with Rectifier)

[Click here](#) to visit website for further details

CH-37BB continued...

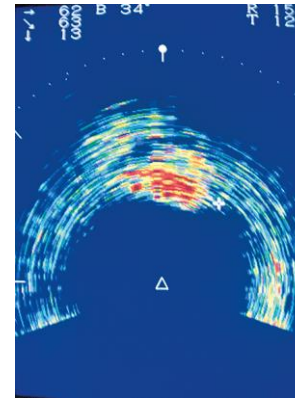
FURUNO

* Specify frequency on ordering

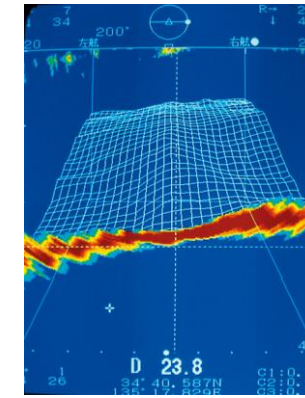
Model **CH-37BB**

Key Features:

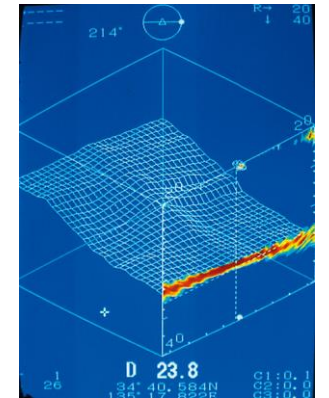
- Full-circle, sector or vertical-fan scanning display modes
- Historical seabed image using unique 3D graphics processor
- Choice of 60, 113 or 162 kHz
- Normal or fast scanning
- 8 or 16 color presentation
- Displays ship's position, heading, intended course line, and water currents when interfaced with appropriate sensors
- One-touch selection of optimum sonar settings with user-programmable "custom" function keys
- The optional MS-100 motion sensor electronically stabilizes the sounding beam for up to 20° roll/pitch for a steady picture presentation.
- The dual mode for easy evaluation of distribution of fish school at vertical/horizontal planes



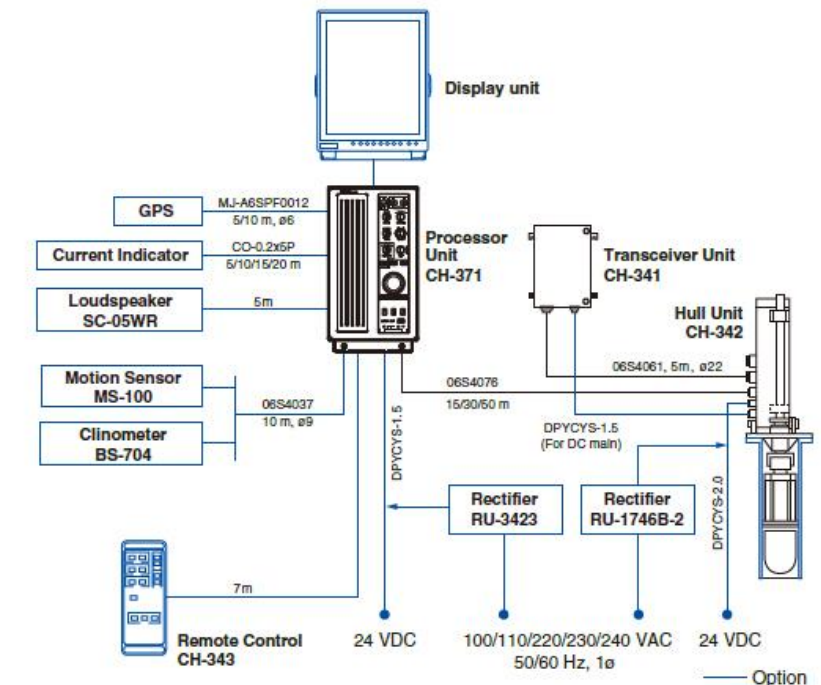
ZOOM



VERTICAL WITH 3D
OVERLAY FORE AFT



VERTICAL WITH 3D
OVERLAY OBLIQUE



CH-600 Dual Frequency Searchlight Scanning Sonar, 60&153 kHz or 85&215kHz*

FURUNO

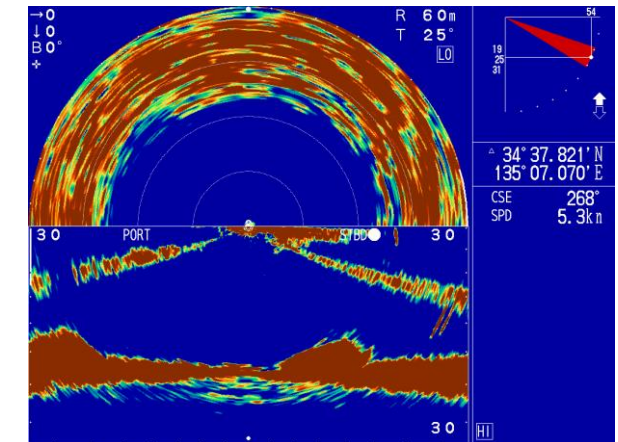
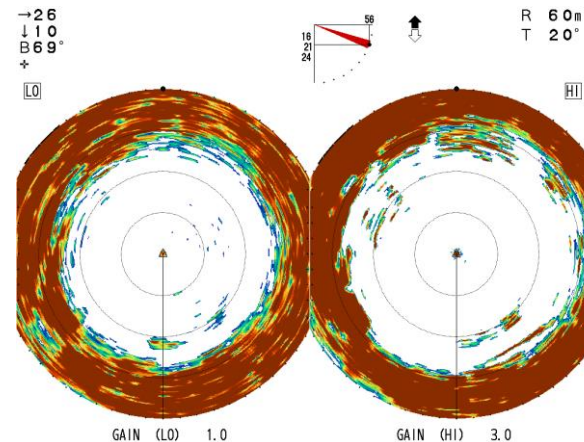
* Specify frequency on ordering

Model **CH-600**



| | |
|------------------|---|
| Frequency | 60&153 kHz or 85&215 kHz* |
| Ranges | Horizontal: 10 to 2400 m, 15 steps (user selectable) Vertical: 10 to 600 m, 15 steps (user selectable) |
| Stabilization | Built-in motion sensor |
| Hull Unit Travel | 250mm or 400mm |
| Resolution | 1024 x 768 Pixels (XGA) |
| Colour | 32-Colour |
| Display | FURUNO 12.1-inch display or Blackbox type |
| Power supply | 12-24VDC (or AC with Rectifier) |

[Click here](#) to visit website for further details

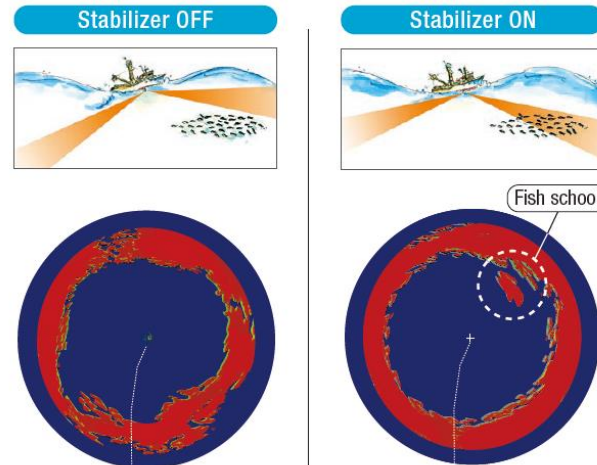


CH-600 continued...

Model **CH-600**

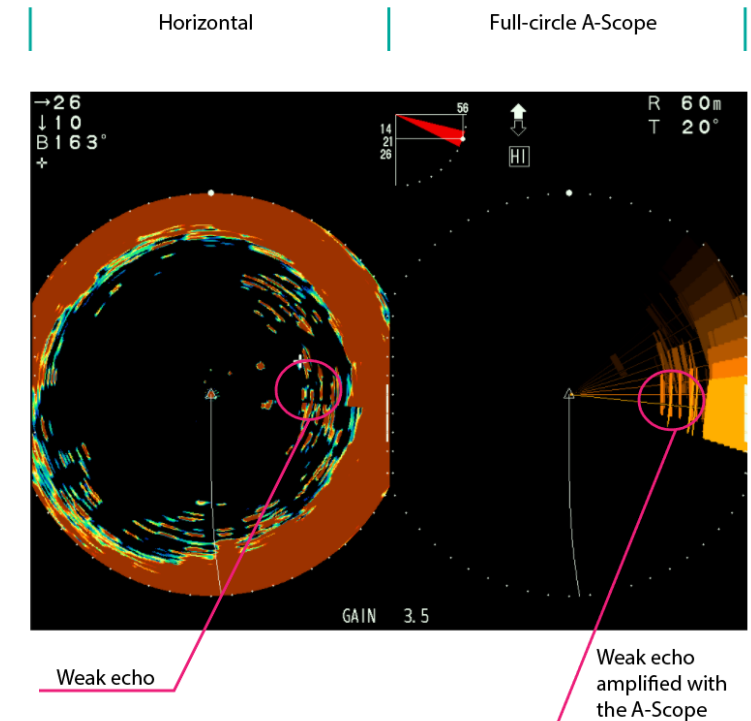
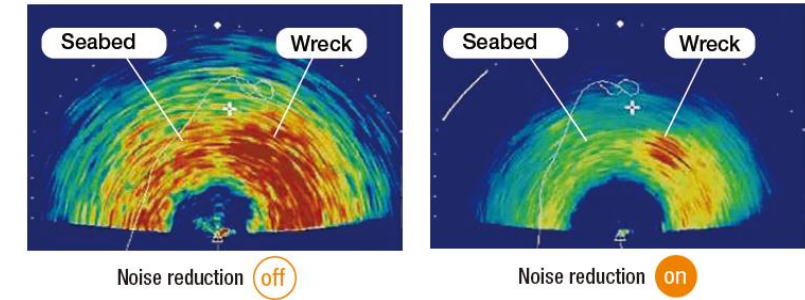
Key Features:

- Two frequencies combined to increase your chances of finding fish
- The low frequency will serve to cover a wide area horizontally around the ship
- The high frequency can be used in a vertical profile mode to help identify fish school, including their size and their movement
- The dual-frequency can reveal the presence of sardines
- Incredibly fast training speed means less tracking failures. The CH-600 is one of the most comprehensive and fastest sonars of its kind.
- Built-in motion sensors provide a stabilized target presentation in rough sea conditions
- Reverberation reduction function
- Full-circle A-Scope mode and audible target detection
- Image clarity and high-resolution echoes
- Various display modes



FURUNO

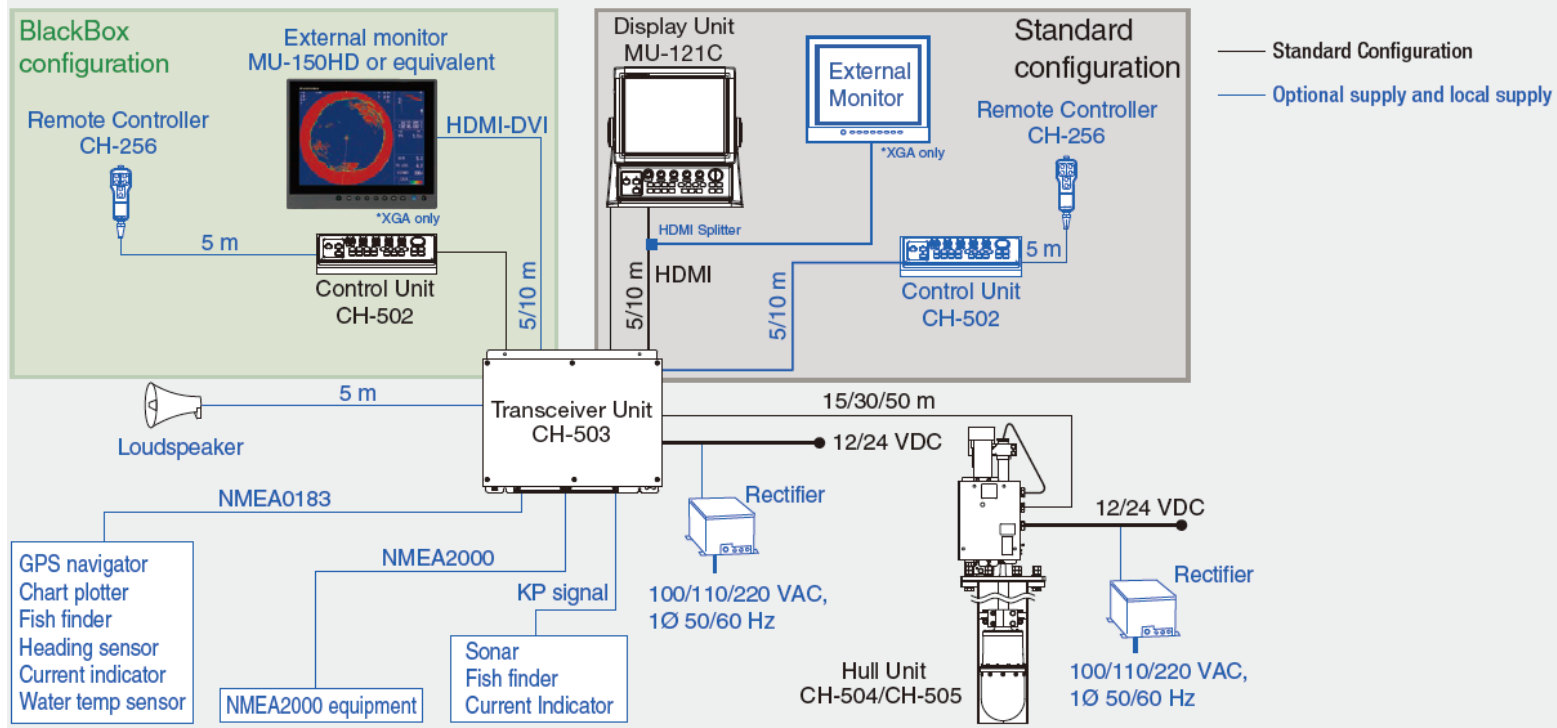
* Specify frequency on ordering



CH-600 continued...

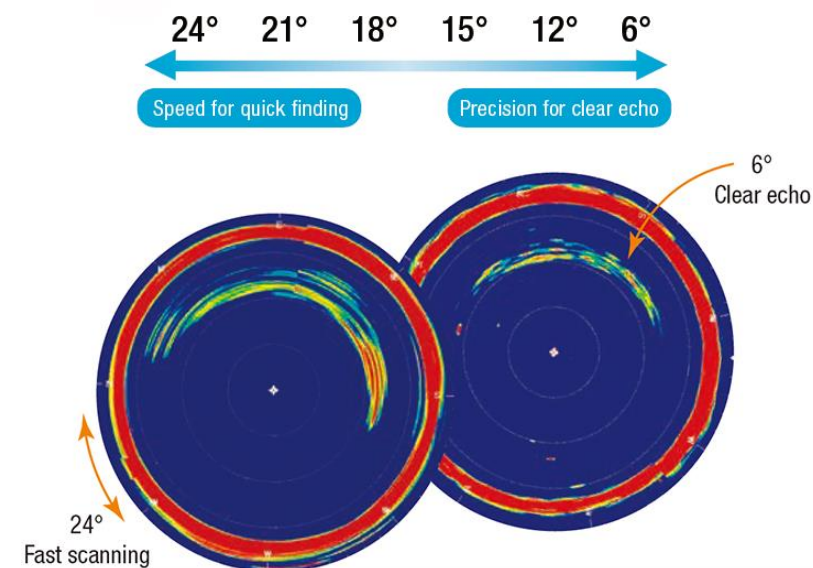
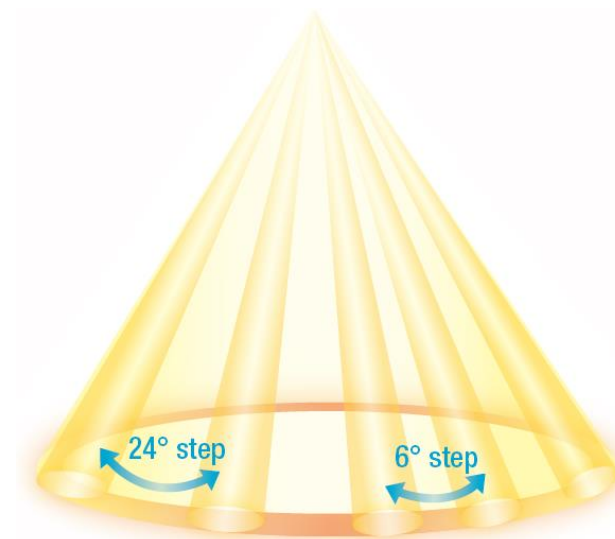
Model **CH-600**

INTERCONNECTION DIAGRAM



FURUNO

* Specify frequency on ordering



CH-500

Searchlight Scanning Sonar, 60/88/150/180/240Khz*

FURUNO

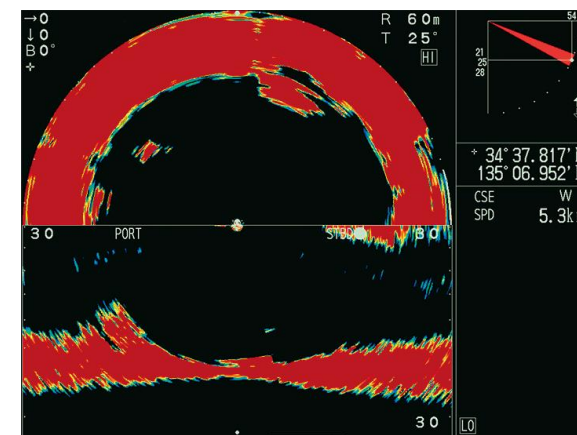
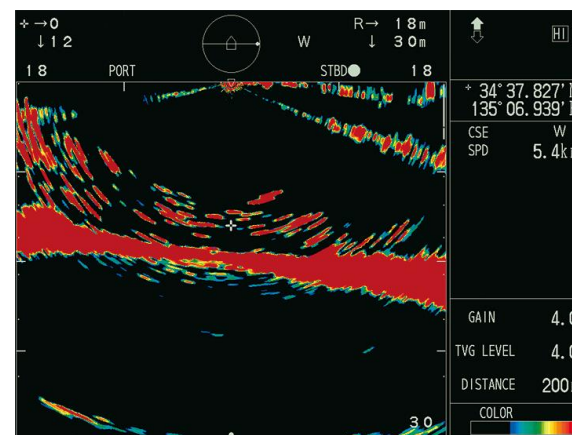
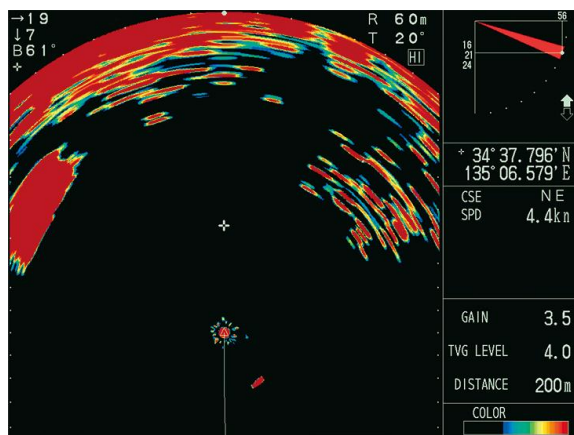
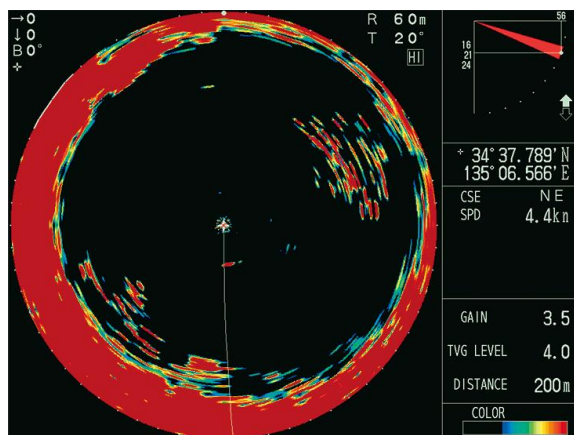
* Specify frequency on ordering

Model **CH-500**



| | |
|------------------|---|
| Frequency | 60/88/150/180/240Khz* |
| Ranges | Horizontal: 10 to 2400 m, 15 steps (user selectable) Vertical: 10 to 600 m, 15 steps (user selectable) |
| Stabilization | Built-in motion sensor |
| Hull Unit Travel | 250mm or 400mm |
| Resolution | 1024 x 768 Pixels (XGA) |
| Colour | 32-Colour |
| Display | FURUNO 12.1-inch display or Blackbox type |
| Power supply | 12-24VDC (or AC with Rectifier) |

[Click here](#) to visit website for further details



CH-500 continued...

Model **CH-500**

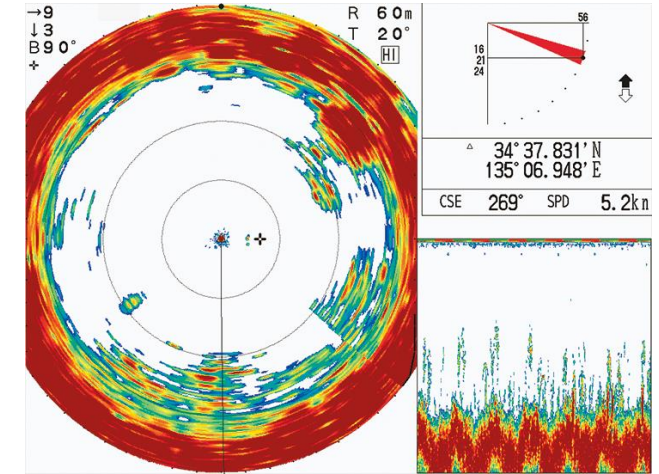
Key Features:

- Incredibly fast training speed means less tracking failures. The CH-500 is one of the most comprehensive and fastest sonars of its kind.
- Smart features to efficiently find local fish
- Built-in motion sensors provide a stabilized target presentation in rough sea conditions
- Reverberation reduction function
- Full-circle A-Scope mode and audible target detection
- Image clarity and high-resolution echoes
- Various display modes



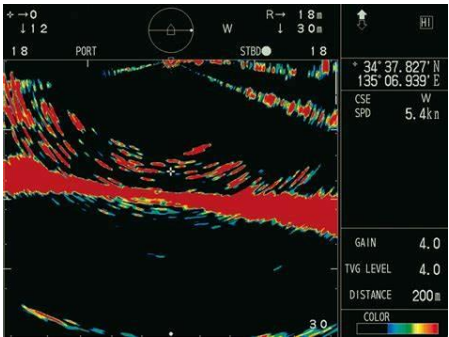
FURUNO

* Specify frequency on ordering



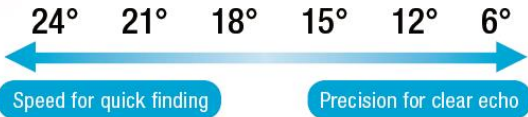
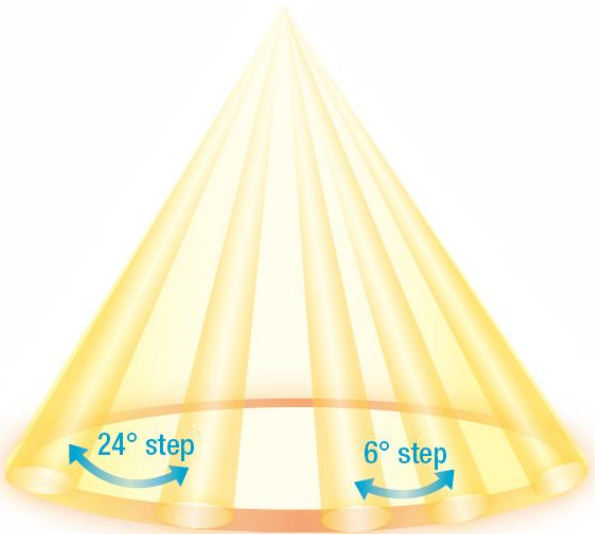
CH-500 continued...

Model **CH-500**

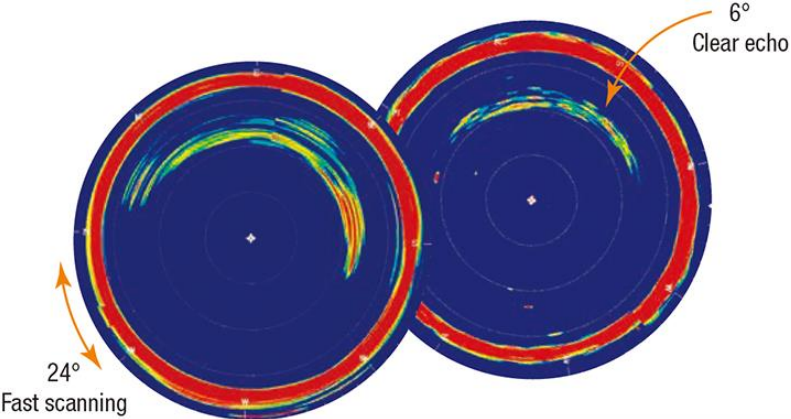
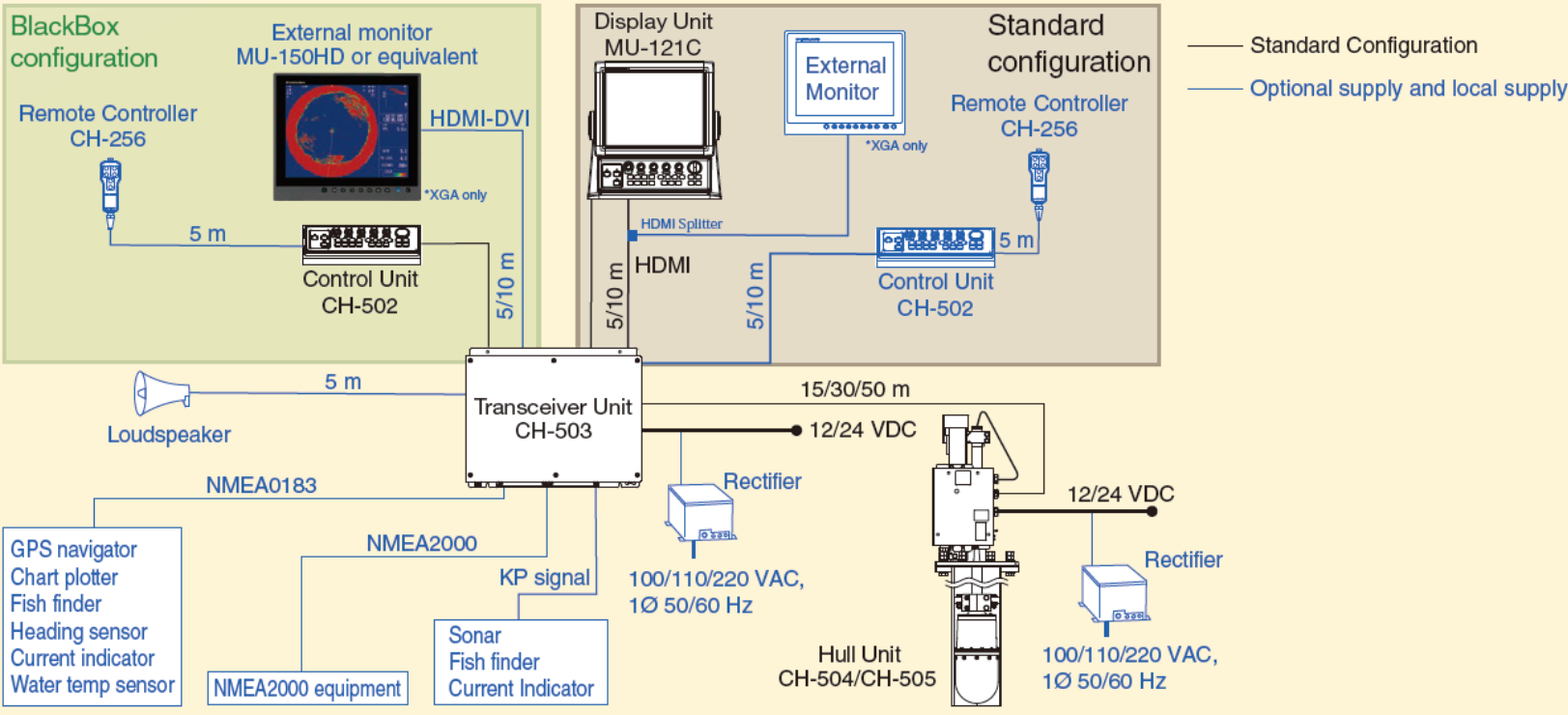


FURUNO

* Specify frequency on ordering



INTERCONNECTION DIAGRAM



FURUNO
C1 0.3 kn 67°
C3 0.1 kn 325°

NZ FURUNO OMNI Sonar Vessel Installations....



100% 70 60 50 40 30 20 10 0
N
9999m
0m
(0m)
W
B

SONAR CLIENT

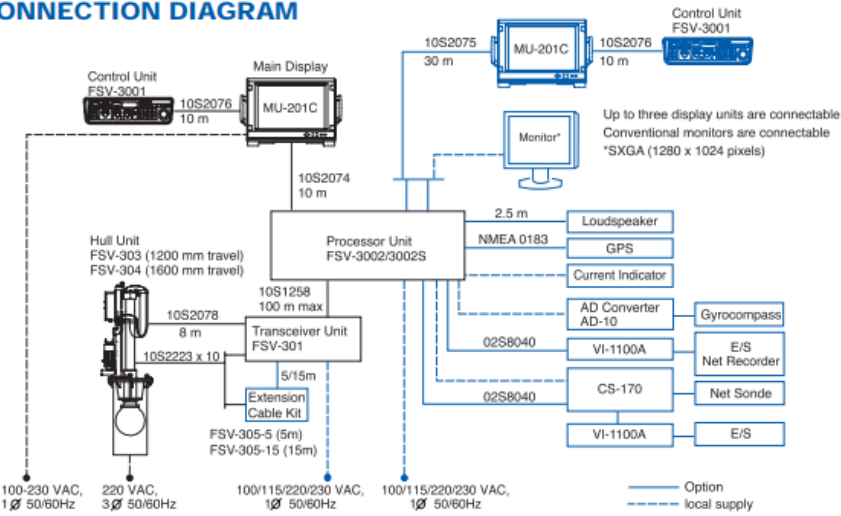
Aurora Fisheries

FURUNO

Models FSV-30/30S

FULL-CIRCLE (OMNI) COLOR SCANNING SONAR, 21-27kHz

INTERCONNECTION DIAGRAM



FV Tomi Maru 87

68m Trawler (Bottom & Midwater)

Targeting:

Hoki, Southern Blue Whiting, Blue Mackerel, Jack Mackerel, Arrow Squid, Barracouta, Ling, Hake.

FURUNO



SONAR CLIENT

Independent Fisheries

FURUNO

Model **FSV-35**

FULL-CIRCLE (OMNI) COLOR SCANNING SONAR, 24kHz



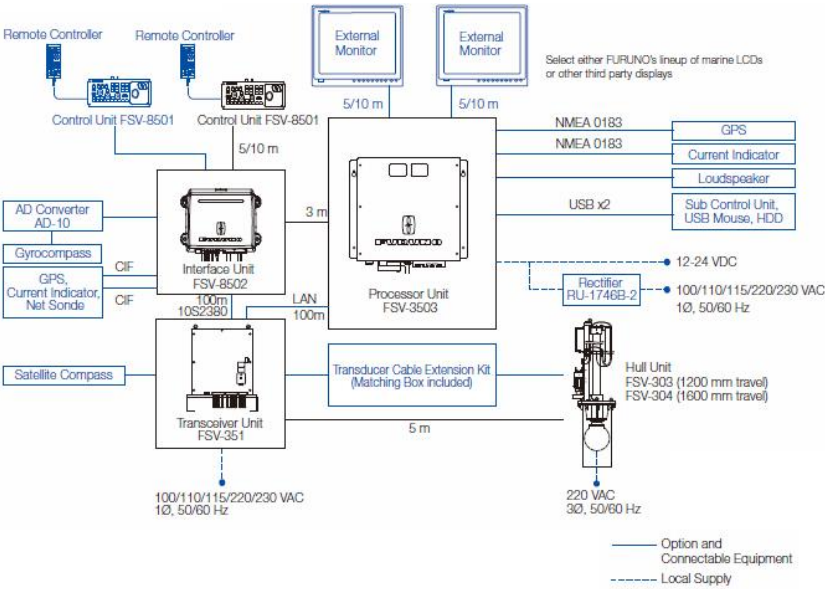
FV Irvinga

104m Trawler (Bottom & Midwater)

Targeting:

Hoki, Southern Blue Whiting, Blue Mackerel, Jack Mackerel, Arrow Squid, Barracouta, Ling, Hake.

FURUNO



SONAR CLIENT



Independent Fisheries

FURUNO

Model **FSV-355**

FULL-CIRCLE (OMNI) COLOR SCANNING SONAR, 24kHz

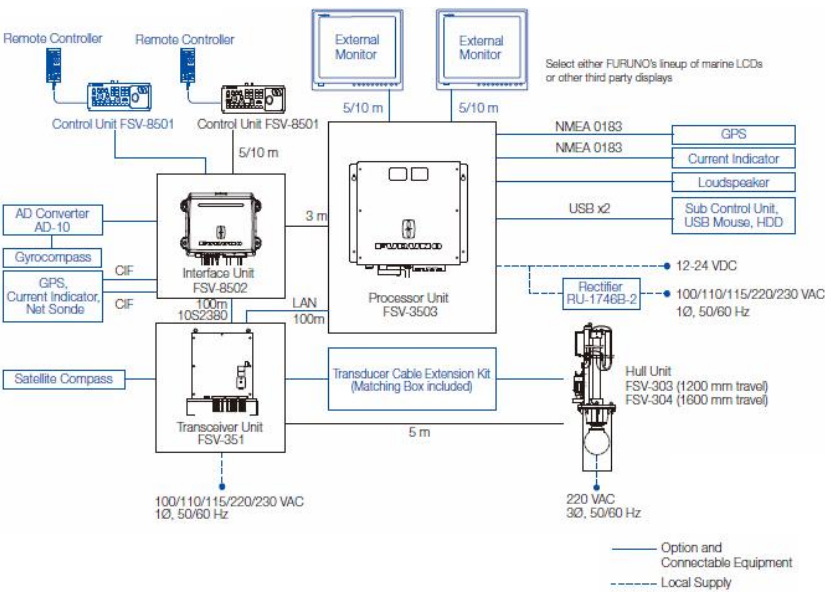


FV Mainstream

104m Trawler (Bottom & Midwater)

Targeting:

Hoki, Southern Blue Whiting, Blue Mackerel, Jack Mackerel, Arrow Squid, Barracouta, Ling, Hake.



Independent Fisheries

FURUNO

Model **FSV-35**

FULL-CIRCLE (OMNI) COLOR SCANNING SONAR, 24kHz

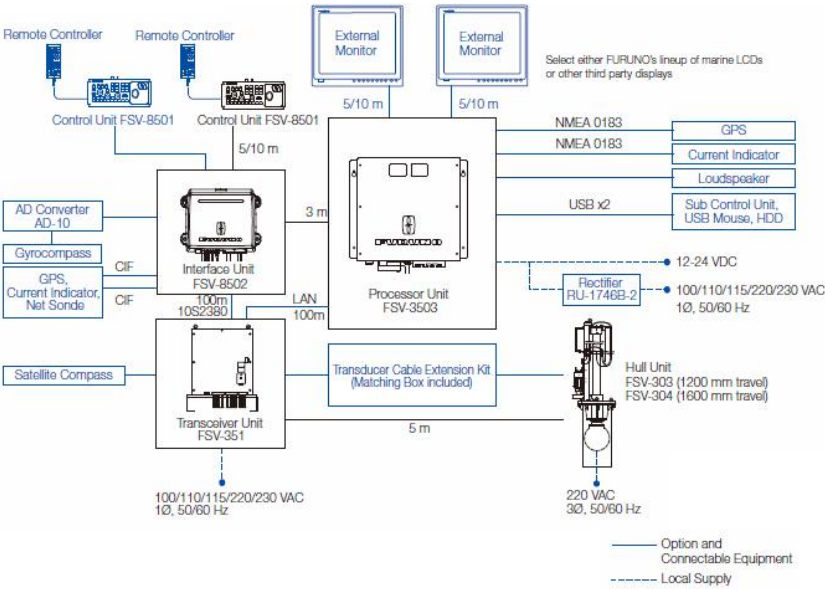


FV Independent 1

104m Trawler (Bottom & Midwater)

Targeting:

Hoki, Southern Blue Whiting, Blue Mackerel, Jack Mackerel, Arrow Squid, Barracouta, Ling, Hake.



SONAR CLIENT

Sealord

FURUNO

Model **FSV-35**

FULL-CIRCLE (OMNI) COLOR SCANNING SONAR, 24kHz



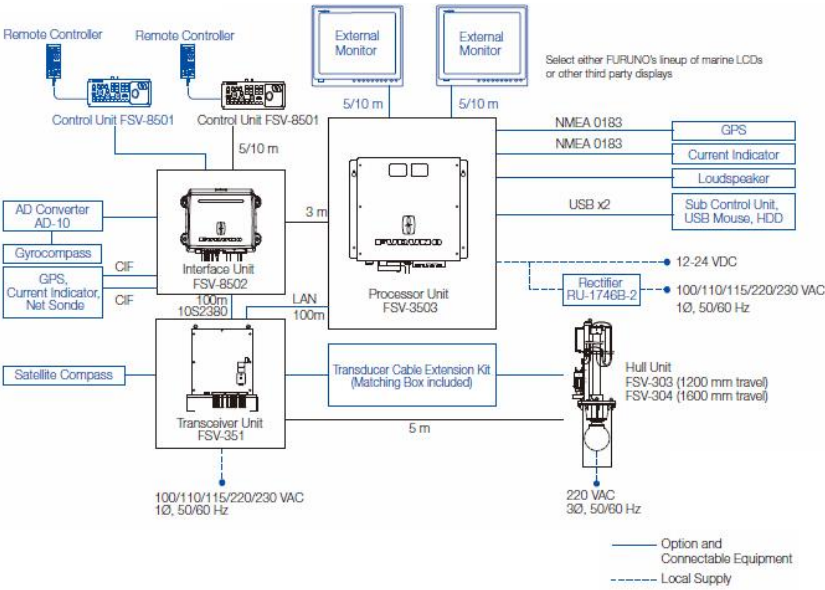
FV Meridian 1

104m Trawler (Bottom & Midwater)

Targeting:

Mackerel, Hoki, Southern Blue Whiting, Arrow Squid, Barracouta.

FURUNO



SONAR CLIENT

Maruha NZ

FURUNO

Models FSV-30/30S

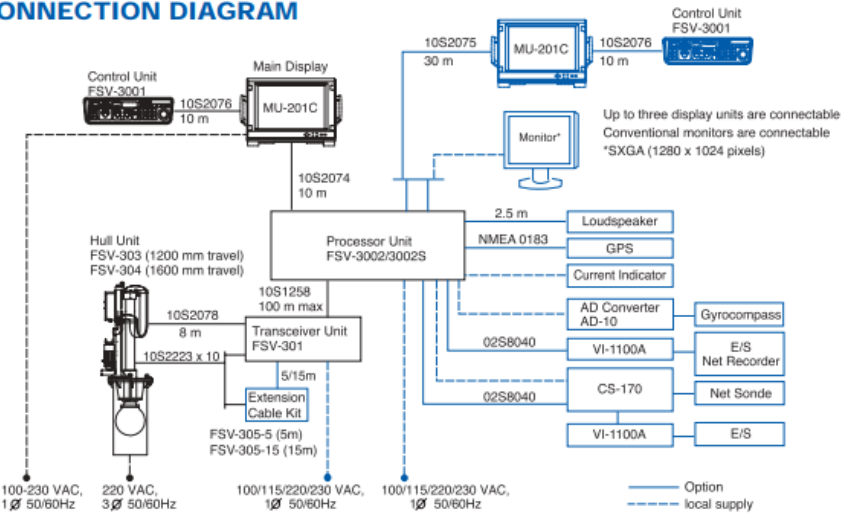
FULL-CIRCLE (OMNI) COLOR SCANNING SONAR, 21-27kHz



FURUNO



INTERCONNECTION DIAGRAM



FV Aleksey Slobodchikov

104m Trawler (Bottom & Midwater)

Targeting:

Hoki, Southern Blue Whiting, Blue Mackerel, Jack Mackerel, Arrow Squid, Barracouta, Ling, Hake.

SONAR CLIENT

Talley's
FURUNO
Model **FSV-35**

FULL-CIRCLE (OMNI) COLOR SCANNING SONAR, 24kHz

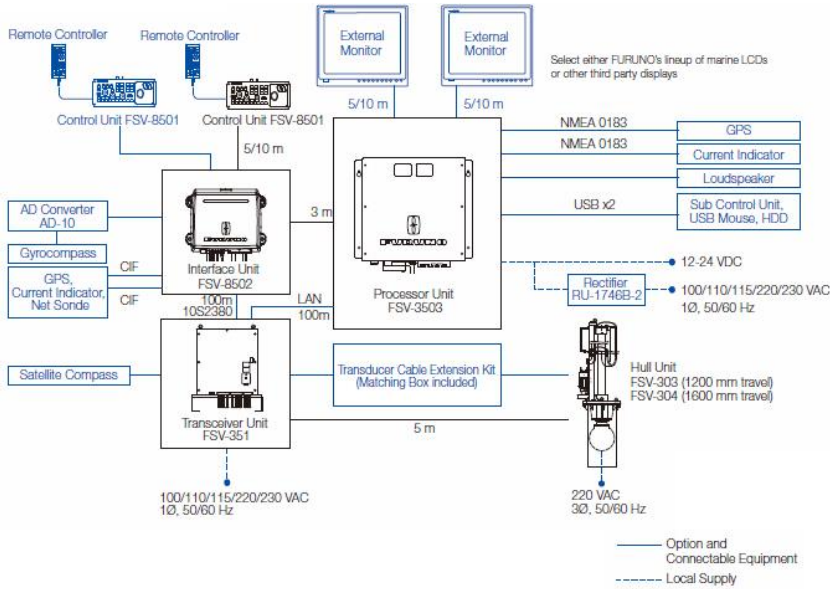


FURUNO

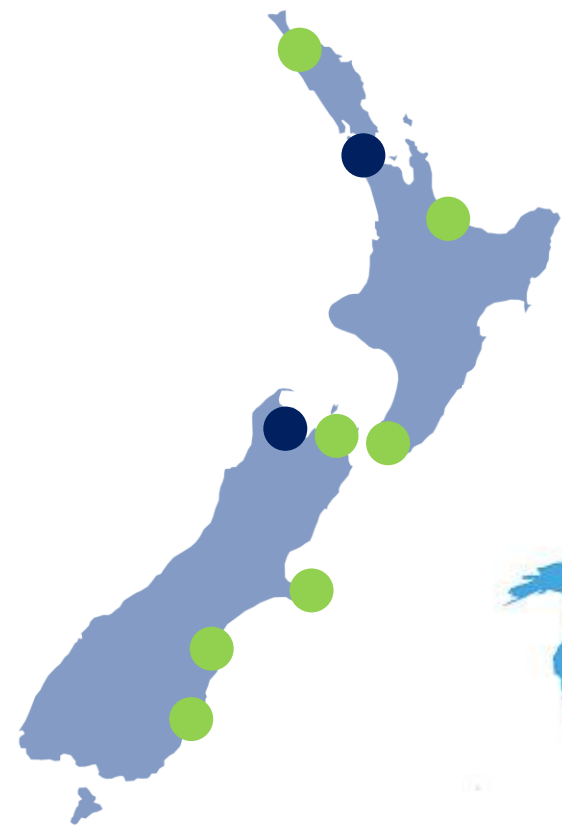


FV Capt. MJ Souza
68m Purse seiner

Targeting:
Skipjack Tuna & Albacore Tuna



ENL LOCATIONS



- ENL Office
- Commercial Dealers



Head Office headquartered in Auckland (NZ)
Commercial Fishing Office in Nelson (NZ)
European WASSP Office in Maldon, Essex (UK)



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Essex, United Kingdom
+44 1621 983 125

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www.wassp.com

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[wasspmultibeam](https://www.facebook.com/wasspmultibeam)



THIS IS OUR WORLD.

