

FURUNO®

For midwater and deepwater trawlers

COLOR NET RECORDER

Model CN-24

- 8-color presentation on a 14-inch CRT with selectable back ground color
- Clear presentation including trawl net behavior and fish school locations relative to the net position
- Variety of display modes: Downward, Dual (upward & downward) and True Depth
- New transmitter unit with 175 kHz features deep water/bottom trawl operation and long distance data transmission in 33 kHz
- High-quality and low-noise picture for detailed observation of vertical net opening
- On-screen digital readouts of water temperature at transmitter, net location, ship's lat/long, time, ship's speed/course with an appropriate external nav sensor



The CN-24 is a new color net recorder for midwater and deepwater trawlers. It presents trawl net behavior showing the net mouth opening, net location in the water, fish entering the net and water temperature at the net. Echoes are presented in 8 colors on a 14-inch CRT.

The headrope-mounted transmitter sends sounding and temperature data to the ship. It allows deep water sounding and longer range data transmission. The data is digitized to minimize the effects of underwater noise and distortion due to seabed, surface, thermocline or random noise. The on-screen signal level indicator assists in deploying the paravane receiver for the best reception in all sea conditions.

There are three display modes: Downward, Dual (upward & downward) and True Depth. In True Depth, the transmitter position and fish schools are displayed relative to sea surface. In Downward and Dual modes, targets are displayed relative to the transmitter position. The Historical mode offers observation of Downward mode picture for up to six hours and of the True Depth or Dual mode picture for up to two hours.

The water temperature at the net is plotted across the screen and shown digitally at the top of screen. Also shown digitally is the transmitter's depth. Ship's position, speed, course and time are presented when an appropriate navigation sensor is connected.



The future today with FURUNO's electronics technology.

FURUNO ELECTRIC CO., LTD.

9-52 Ashihara-cho, Nishinomiya City, Japan Telephone: +81 (0)798 65-2111

Telefax: +81 (0)798 65-4200, 66-4622, 66-4623

Catalogue No. NPG E-47c

SPECIFICATIONS OF CN-24

DISPLAY UNIT

1. Display

14-inch color CRT, 8-color presentation with selectable background color

2. Display Mode

Downward, Dual (upward/downward), True Depth

3. Range Scales

(1) Upward/Downward mode

Four customized ranges up to 80, 160, 320 or 640 m (260, 520, 1040 or 2080 ft, 40, 80, 160 or 320 fa, 45, 90, 180 or 360 p/b) *Upward and downward ranges can be independently selected*

(2) True Depth mode

Four customized ranges are selected and easily changed on the MENU screen:

Meters: 0-3, 0-4, 0-5 0-1999, 0-2000 m
 Feet: 0-10, 0-11, 0-12.... 0-6999, 0-7000 ft
 Fathoms: 0-2, 0-3, 0-4 0-1099, 0-1100 fa
 Passi/Brazas: 0-2, 0-3, 0-4 0-1199, 0-1200 p/b

Phased Range (Max Depth):

2000 m, 7000 ft, 1100 fa, 1200 p/b in 1 m/ft/fa/p/b steps

4. Picture Advance

OFF (freeze), 1/8, 1/6, 1/4, 1/2 or 1/1 scan lines/tx 5/10/15/30/60/90/120/(360°) minutes/full screen, for historical presentation

* Downward mode only

5. Temperature Indication

Historical plotting with digital readout

Range: -5°C to +40°C in 0.1°C steps

Scale: 10°C, automatic phasing

6. Data Output/Input (Optional interface kit is required)

Output: Net depth and water temperature in CIF format

Input: Ship L/L, Ship speed/course and Time in NMEA 0183 or FURUNO CIF

7. Power Supply

10 to 40 VDC, 100 W

115/230 VAC, with optional rectifier RU-3423

TRANSMITTER UNIT CN-2220

1. Operating Depth

2000 m max.

2. Sounding

Frequency: 75 kHz 175 kHz

Beam width (at -6 dB): 42° 20°

Output: 100 W 100 W

Detection range: 640 m 200 m

Sounding direction: Upward and downward

3. Data Transmission

Frequency: Choice of 33, 40 or 50 kHz

Mode of signal: FSK for synchronization, FM for data

Beam width: 34° approx. (33 kHz)

(at -3dB) 32° approx. (40 kHz)

28° approx. (50 kHz)

Output: 2.4 W or 10 W (switchable)

Transmission range*: **depending on sea condition*

3800 m max. (33 kHz) } at 2.4 W output

3000 m max. (40 kHz) }

2200 m max. (50 kHz) }

4500 m max. (33 kHz) } at 10 W output

3600 m max. (40 kHz) }

2800 m max. (50 kHz) }

4. Temperature Sensor

Measurement Range:

-5°C to +40°C, 20°F to 100°F (± 0.5%)

5. Power Supply

12 VDC, Alkaline dry cell (std.) or Ni-Cd battery pack (option)

6. Operating Time (depending on output power)

10 h (2.4W), 5 h (10W)

PARAVANE RECEIVER

1. Frequency and Beam Width (at -3 dB point)

Choice of ND-8733 (33 kHz/34°), ND-8740 (40 kHz/30°) or

ND-8750 (50 kHz/28°)

2. Cable Strength

1000 kg

3. Transducer Tilt Angle

15°, 25° or 35°

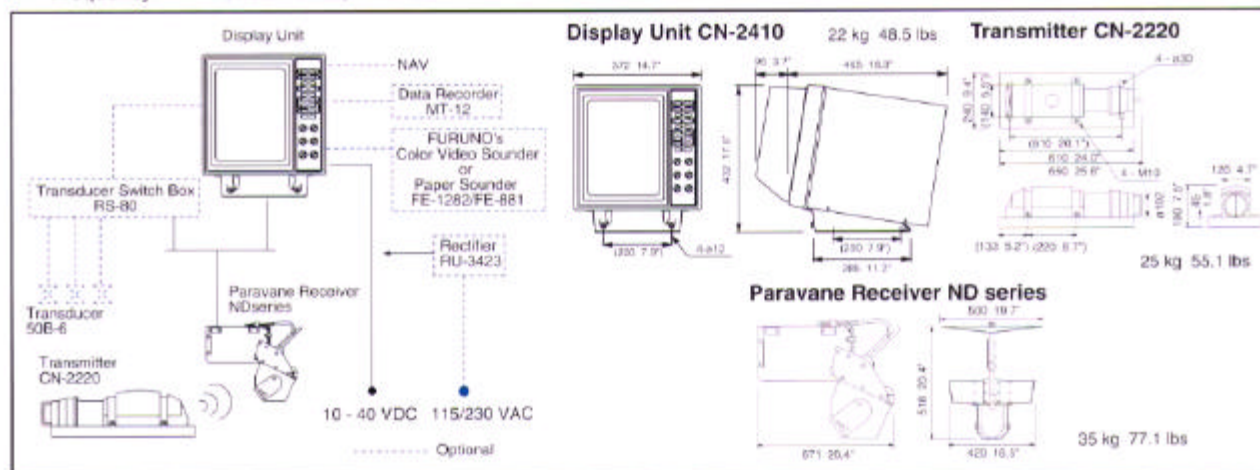
EQUIPMENT LIST

Standard

- | | |
|--|--------|
| 1. Display Unit CN-2410 (w/sun visor & CRT filter) | 1 unit |
| 2. Transmitter Unit CN-2220 (75 or 175 kHz) | 1 unit |
| 3. Paravane Receiver ND series | 1 unit |
| 4. Alkaline dry cell LR-20 | 8 pcs |
| 5. Installation Materials and Standard Spare Parts | 1 set |

Optional

- Transducer Switch Box RS-80
- Ni-Cd Battery Pack BP-2 (for transmitter unit)
- Battery Charger BC-8
- Bottom Transducer 50B-6
- Transducer Tank T-228
- Data Recorder MT-12 (Interface Kit OP01-7 required)
- E/S Interface Kit OP01-5
- Switch Box Interface OP01-13
- MT-12 Interface OP01-7
- Rectifier RU-3423 for 115/230 VAC mains



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

FURUNO U.S.A., INC.
 Camas, Washington, U.S.A.
 Phone: +1 360-634-9330 Telefax: +1 360-634-9400

FURUNO (UK) LIMITED
 Donned, Hampshire, U.K.
 Phone: +44 2392-230300 Telefax: +44 2392-230101

FURUNO FRANCE S.A.
 Bordeaux-Mérignac, France
 Phone: +33 5 56 13 48 00 Telefax: +33 5 56 13 48 01

FURUNO ESPAÑA S.A.
 Madrid, Spain
 Phone: +34 91-725-98-88 Telefax: +34 91-725-98-97

FURUNO DANMARK AS
 Hvidovre, Denmark
 Phone: +45 36 77 45 00 Telefax: +45 36 77 45 01

FURUNO NORGE A/S
 Alesund, Norway
 Phone: +47 70 102950 Telefax: +47 70 127021

FURUNO SVERIGE AB
 Västra Frölunda, Sweden
 Phone: +46 31-709 89 40 Telefax: +46 31-49 70 93

FURUNO SUOMI OY
 Helsinki, Finland
 Phone: +358 9 341 7570 Telefax: +358 9 3417 5716

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