## SPECIFICATIONS OF GP-3500/3500F

### **GPS RECEIVER CHARACTERISTICS**

1. Receiver Type Twelve discrete channels, C/A code, all-in-view, Integral WAAS receiver processor

2. Receive Frequency L1 (1575.42 MHz) 3. Accuracy GPS: 10 m (95%) DGPS: 5 m (95%)

WAAS: 3 m (95%) 12 seconds typical (Warm start) 4. Time to first fix

5. Tracking Velocity 6. Geodetic System WGS-84. NAD-27, and others

7. DGPS Capability Optional internal DGPS beacon receiver kit

### **PLOTTER CHARACTERISTICS**

1. Display

GP-3500: 10.4" TFT Color LCD, 480(W) x 640(H) pixels GP-3500F: 10.4" TFT Color Transflective LCD, 480(W) x 640(H) pixels

2. Map Scale 0.125 to 1.024 nm

Between 85°N and 85°S 3. Latitude Limits

1 sec to 99 min 59 sec or 0.01 to 9.99 nm 4 Plot Interval 5. Display Modes Course plot, Nav Data, Compass Display 6. Presentation Modes TM North-up, Course-up

Up to 80,000 points for ship's track points and 7. Memory Capacity

3500 waypoints and 200 planned routes

(Max. 35 waypoints/route)

8. Voyage Planning Waypoint navigation or route navigation 9. Alarms Arrival/anchor watch, XTE, proximity alert ship speed, depth\*, water temperature\*\*,

\*GP-3500F or Depth sensor required.

\*\*Temperature sensor required.\*\*\*GP-3500F only. **10. Interface** (IEC-61162-1, NMEA 0183 ver. 1.5/2.0)

AAM, APB, BOD, BWC, DBT\*\*, DPT\*\*, GGA, GLL, MTW\*, RMA, RMB, RMC, VTG, WPL, XTE, ZDA

DBT, DPT, HDG, HDM, HDT, GGA, GNS, GLL, MTW, RMA, RMC, TLL, TTM, VHW, VTG, ZDA \*Depth sensor required \*\*GP-3500F only

11. Cartography

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Camas, Washington, U.S.A.

Bordeaux-Mérignac, France

**FURUNO (UK) LIMITED** 

**FURUNO FRANCE S.A.S.** 

FURUNO MiniChart, NAVIONICS® Nav-Chart™ or C-MAPNT Chart note: Choose from two units that accept either C-MAPNT Charts or Navionics® Nav-Chart™/Furuno MiniCharts when ordering.

### **ECHO SOUNDER**

1. Display Modes Normal (single- or dual-frequency), Bottom-lock,

Bottom Zoom, Marker Zoom, A-scope

50 and 200 kHz 2. Frequency

3. Output Power 600 W/1 kW (specify when ordering) 4. Basic Ranges 8 basic ranges customized to max 1200 m 5. Range Shift

**ENVIRONMENTAL CONDITIONS** (IEC 60945 testing)

## 1. Temperature

-15°C to +55°C Display Unit: -25°C to +70°C Antenna Unit:

2. Water resistance

IPX2 (IEC 60529), CFR46 (USCG) Display Unit: IPX6 (IEC 60529), CFR46 (USCG) Antenna Unit

### **POWER SUPPLY**

12 - 24 VDC, GP-3500: 25 W, GP-3500F: 30 W

## **EQUIPMENT LIST**

### Standard

1. Display Unit GP-3500/3500F 1 unit 2. Antenna Unit GP-017S 1 unit 3. Antenna Cable 15 m 1 pc 4. Installation Materials and Standard Spare Parts 1 set

1. FURUNO MiniChart Card

2. Remote Controller

3. NMEA Cable 5/10 m MJ-A6SPF0012-050/100

4. Antenna Cable 30/50 m CP20-01700/01710

Antenna Mounting Base

13-QA330 (Pipe mount), 13-QA310 (Offset bracket), 13-RC5160 (Handrail mount)

6. Rectifier PR-62 for 115/230 VAC mains

Temperature Sensor T-02MSB (GP-3500F)

8. Speed/Temperature Sensor ST-02MSB/ST-02PSB (GP-3500F)

9. Internal DGPS Beacon Receiver Kit GR7000A-3500-NN-019S

(including Internal Beacon Receiver Board and DGPS Antenna Unit GP-019S)

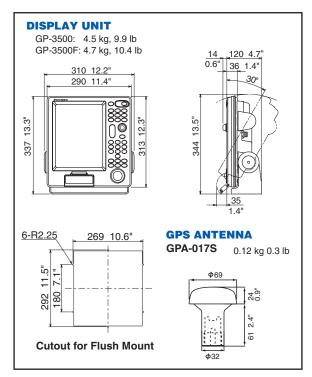
## Transducers (Specify when ordering GP-3500F)

520-5PSD (Plastic thru-hull), 520-5MSD (Bronze thru-hull),

520-5PWD (Plastic transom), 525ST-MSD (Bronze thru-hull w/speed/temp sensor) 525ST-PWD (Plastic transom speed/temp sensor)

1 kW (Optional matching box MB-1000 required)

50B-6, 50B-6G, 200B-5, 200B-5S, 50/200-1T, 50/200-12M



Madrid, Spair

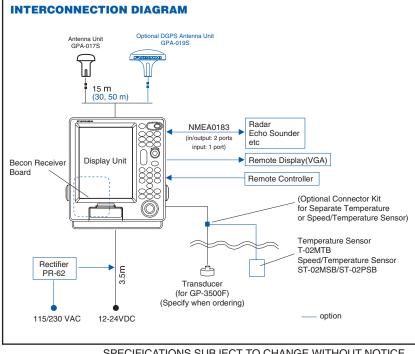
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## 



## GPS/DGPS/WAAS VIDEOPLOTTER

with integral Echo Sounder

Models GP-3500/3500F

- Accuracy enhanced with built-in WAAS
- 10.4" high-definition TFT LCD for optimum viewing during daytime and nighttime
- Display of ship's tracks, waypoints and planned route on a precision electronic chart
- **Dual interchangeable Card Slot Works** with C-MAPNT Charts or NAVIONICS® Nav-Charts™/FURUNO MiniCharts
- Stores up to 80,000 ship's tracks and marks, 3,500 waypoints, 200 planned
- 50/200 kHz dual-frequency echo sounder, selection of 600 W or 1 kW (GP-3500F)
- Optional MiniMemory Card for storage of ship's tracks and marks
- Remote Controller available as option



www.furuno.com

# User friendly key arrangement and menu structure give straightforward operation for a wide variety of fishing vessels

The GP-3500F employs the dual frequency 50/200 kHz

information on fish, fish schools and bottom. The range

range is changed, an entire echogram will be redrawn so

that the contour line can be shown seamlessly. The GP-

3500F incorporates unique target position output feature. It outputs the Lat/Lon position and depth of a target

temperature sensor is connected) to the plotter display as

the navigator with great comfort thanks to its user-friendly

CURSOR CENTER PLOT

Nav Data

Enter

knob

Planned

-Trackball

route

can be changed manually or automatically. When the

sounding module as standard. It presents detailed

specified by cursor and temperature data (when a

a mark. The information is also stored in the internal

Operation is simple and straightforward by using

softkeys, enter knob and trackball. You can operate

The GP-3500 series is Furuno's new high performance GPS/DGPS/WAAS VideoPlotter designed for a wide variety of fishing vessels and pleasure craft. The compact, 12-channel antenna unit offers extremely accurate position fixes - 10 m for the basic GPS, 5 m for the DGPS and 3 m where WAAS (or EGNOS) is available.

The all-new processor ensures high-speed updating of graphic presentations including the electronic chart, the vessel's position and motion trend vector, track, waypoints, and so forth. Up to 80,000 ship's tracks, 3,500 waypoints and 200 planned routes can be stored in the internal memory.

Dual interchangeable card slot for chart and memory cards are provided on the front panel. The cartography is selectable among C-MAPNT Chart or Navionics® Nav-Chart™/Furuno MiniChart containing accurate coastlines, depth contours, place names,

aids to navigation such as buoys,

divider

Dual

FURUNO

lighthouses, and other

navigational marks.

FURUNO -25° 45. 9683' N 80°08. 3614' W 0. 40nm 114. 2°M **Electronic** Ship's track Own ship T \$ D 9 interchangeable Card Slot MARK VRM TRACK COLOR

memory.

GPS/WAAS Antenna **GPA-017S** 

> **GPS/DGPS/WAAS VideoPlotter GP-3500:**

COLOR GPS PLOTTER

GP-3500

GPS/DGPS/WAAS VideoPlotter with Echo Sounder **GP-3500F:** 

## **Course Plot** 25° 45. 9683' N 80° 80° 08. 3614' W

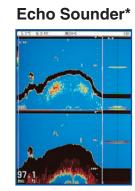
## ●47°37.8163' N 12.8 kt | DET | 588 | 122°24.8665' W 12.0 kt | 15:44 000018 4. 39 m 296. 5° n ETA 17. 15



1. PLOTTER: 629 200 0

Variety of display modes

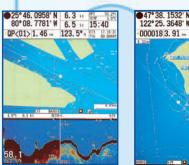
## Compass

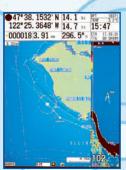


TM North-up mode

Course-up mode

**Combination of** Course Plot and Echo Sounder\*





Selection of display modes

Mode selection is quite easy; push the "DISP" button and select the mode icon by using the "Enter knob". Up to 36 display modes including combination

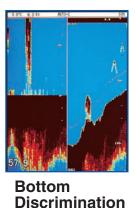
mode are available. The combination mode can be mixed and matched from primary display modes. The primary display modes consist of course plot, compass and sounding (GP-3500F only) mode. If those weren't enough, the operator can arrange the display layout in the menu.

\*GP-3500F only

## **Echo Sounder Display (GP-3500F)**

The GP-3500F incorporates a dual-frequency, 600 W or 1 kW sounding transceiver. Acoustical pulses are emitted from the transducer fitted on the boat hull and echoes are received from fish and bottom. The 200 kHz pulses pinpoint fish schools in shallow water, while the 50 kHz pulses are advantageous to search deeper water. The A-scope display helps to evaluate echo strengths of targets in real time. The underwater scene can be displayed in a split screen with course plot or alone on the full size screen. A water temperature graph can be displayed by incorporating an optional water temperature sensor.





**Dual Frequency** and A-scope

A-scope



## WAAS (Wide Area Augmentation System)

WAAS is a GPS navigation system with differential correction by means of geostationary satellites. This is an extremely accurate system developed by the Federal Aviation Administration (FAA) in the US. Similar systems, using Satellite-Based Augmentation Systems (SBAS), are under development in Japan (MSAS: MSAT Satellite-based Augmentation System) and Europe (EGNOS: European Geostationary Navigation Overlay

System). They are said to be fully interoperable and compatible. As the WAAS utilizes the same frequency as the GPS, a single antenna can receive GPS and WAAS signals. Currently two Inmarsat GEO satellites are available for receiving the WAAS signal: AOR-W and POR. Major contributors of an error in a single frequency GPS system are receiver clock drift and signal delays by refraction. The WAAS reference stations on the earth monitor the GPS constellation and route GPS error data to the satellites via the master earth station. The Inmarsat or communication satellite broadcasts the differential corrections to marine and aviation users.

**Actual Size** 

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