

# 12Channels

# FURUNO®

Accurate, cost-effective

## MARINE DGPS NAVIGATOR

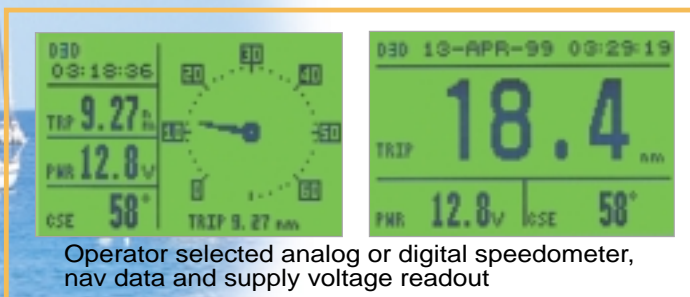
with 320 nm Videoplotter

### Model GP-36

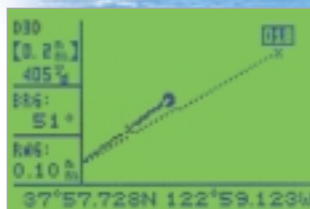
- 12 parallel channel GPS receiver
- Accurate vessel position, course, speed and waypoint data using built-in DGPS receiver
- Automatic DGPS station selection
- Miniaturized combination GPS/DGPS antenna
- Vessel position shown as L/L, Loran-c or Decca LOPs
- Ultra clear 4.5" monochrome LCD
- 1000 track point memory
- Up to 950 waypoints in memory
- 50 routes with up to 30 waypoints each
- Negligible power consumption
- 14 Plotter scales from 0.02 to 320 NM
- 8 Highway scales from 0.2 to 16 NM
- Man Overboard (MOB) emergency key



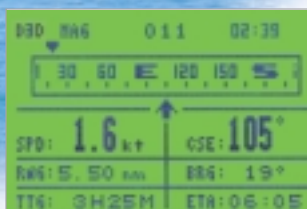
Compact mini antenna



Operator selected analog or digital speedometer, nav data and supply voltage readout



Plotter Mode



Steering Mode



Highway Mode

The FURUNO GP-36 is a high performance GPS navigator with a built-in DGPS receiver. It consists of a slim profile antenna and compact display unit.

The GPS receiver operating in the standard positioning system (SPS) provides an accuracy of 50-100 m. This accuracy may not always be acceptable to the navigators in harbors, harbor approaches and specific applications. The GP-36 with its built-in DGPS receiver provides much higher position accuracy of 5 m in DGPS service areas.

The GP-36 presents a variety of unique display modes such as Plotter, Highway, Steering, Nav and two Programmable modes. In the Highway or Steering mode you can quickly determine the best course to steer to the next waypoint. Navigation data including the vessel's position in L/L, Loran-C or Decca TD's, speed, course, range and bearing, ETA/TTG to a target waypoint or MOB position are emphasized in large, easy-to-see characters.

The programmable mode permits you to customize the display layout so the navigation data you are interested in is displayed in optimized large characters.



The future today with FURUNO's electronics technology

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Catalogue No. N-841b

TRADE MARK REGISTERED  
MARCA REGISTRADA

# SPECIFICATIONS OF GP-36

## RECEIVER CHARACTERISTICS

### 1. GPS

**Receiver Type** Twelve discrete channels, C/A code, all-in-view  
**Receive Frequency** L1 (1575.42 MHz)  
**Time to First Fix** 12 seconds typical (Warm start)  
**Tracking Velocity** 900 knots  
**Geodetic Systems** 171 datums ( WGS-84 and others)

### 2. DGPS

**Reference Stations** Automatically selects the best beacon station or manual frequency selection (All DGPS stations in the world are in memory)  
**Frequency Range** 283.5 - 325.0 kHz (all ITU regions), 0.5 kHz steps  
**Coverage** 200 km approx from a reference station  
**Sensitivity** 6 dBμV (MSK 100 bps, 10<sup>-3</sup> BER)  
**Antenna Gain** 6 dB  
**Receiving System** Single superheterodyne, IF: 455 kHz  
**Modulation and format** Minimum Shift Keying (MSK) in RTCM SC104 format

### 3. Accuracy

**With DGPS** 5 m approx (95% of the time)  
**Without DGPS** 50 m approx (95% of the time, SA on)

### 3. Position Indication

L/L, Loran-C or Decca TDs

### 4. Memory Capacity

1,000 points total for own ship's track, 950 waypoints (registered by cursor, L/L or TDs entry), 50 routes (containing up to 30 waypoints/route)

### 5. Alarms

Arrival, Anchor watch, XTE, DGPS signal, Time, Trip, Speed

### 6. Interface

**Output** (NMEA0183 ver 1.5/2.0)  
 \$GPBWC, \$GPGGA, \$GPGLL, \$GPRMC, \$GPRMB, \$GPVTG, \$GPZDA, \$GPAPB, \$GPBOD, \$GPXTE, \$GPAAM  
**Input** (Only for connection of external DGPS receiver)  
 \$YMWPL (YEOMAN wpt data in NMEA 0183)  
 DGPS data in RTCM SC104 ver 2.1

## ENVIRONMENT (IEC 60945 test method)

### Temperature

Display unit: -15°C to +55°C (Display unit)  
 Antenna unit: -25°C to +70°C (Antenna unit)

### Waterproofing

Display unit: IPX5 (IEC 60529), CFR-46 (USCG)  
 Antenna unit: IPX6 (IEC 60529)

## PROCESSOR/DISPLAY CHARACTERISTICS

### 1. Display

4.5" (95 x 60 mm) Mono LCD, 120 x 64 pixels

### 2. Display Modes

Plotter, Highway, Nav Data, Steering and Programmable Mode

## POWER SUPPLY

10 to 30 VDC, 3 W

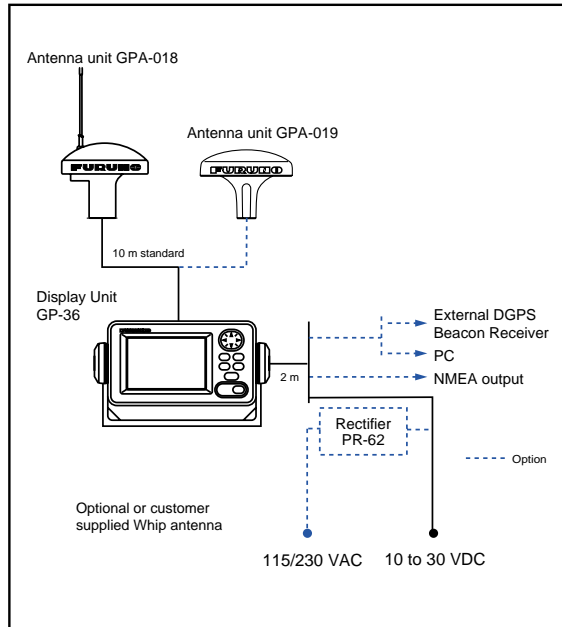
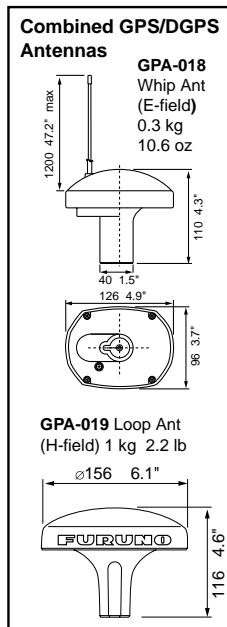
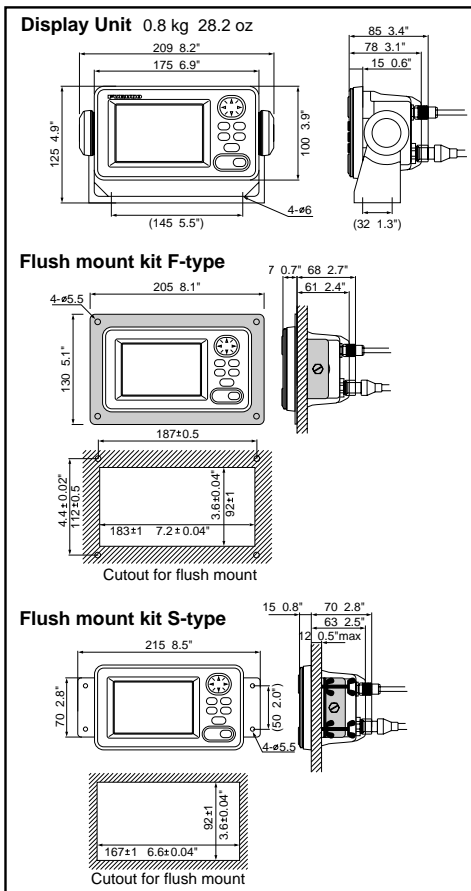
## EQUIPMENT LIST

### Standard

- |   |        |
|---|--------|
| 1. Display unit                                   | 1 unit |
| 2. Antenna unit GPA-018 (E-field) with 10 m cable | 1 unit |
| 3. Installation materials and spare parts         | 1 set  |

### Option

- GPA-019 Loop antenna (H-field)
- Antenna base  
 CP20-01111 (Pipe mount), No.13-QA330 (Deck mount), No.13-QA310 (Offset bracket), No.13-RC5160 (Handrail mount)
- Flush mount kit F-type (OP20-18/29), S-type (OP20-17)
- Rectifier PR-62 for 115/230 VAC mains
- Whip antenna for GPA-018



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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