

12 Channels

FURUNO®

# MARINE GPS NAVIGATOR

with 320 nm VideoPlotter

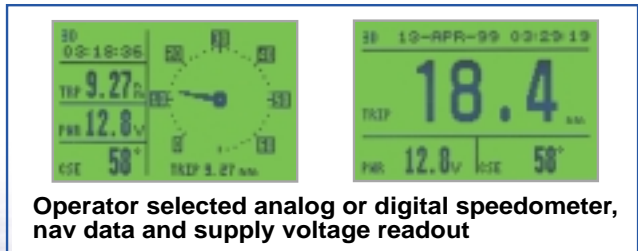
## Model GP-31



High sensitivity mini antenna



- 12 parallel channel GPS receiver
- 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

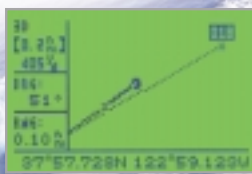


The Furuno GP-31 is a stylish GPS Navigator designed for years of accurate, reliable use. Its compact, waterproof housing and adjustable mounting bracket make it easy to locate and install. Using a multi-channel, super sensitive GPS receiver and mini antenna unit, the GP-31 provides continuous navigation data at sea.

Varied, easy to use display modes are easily selected using soft key controls. Display modes available include Plotter, Highway, Steering, Navigation Data, and two programmable modes.

The GP-31 may be interfaced with a compatible Autopilot for efficient steering. When using the graphic 3D Highway or Plotter mode, it is simple to steer directly towards your destination. The programmable mode permits you to customize the display layout so the navigation data you are interested in is displayed in optimized large characters.

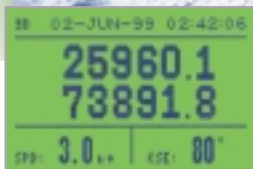
A complete range of useful navigation data, including vessel position (L/L or LOPs), speed, heading, MOB position, range, bearing, TTG and ETA to a selected waypoint are shown on a large, clear, back-lit LCD.



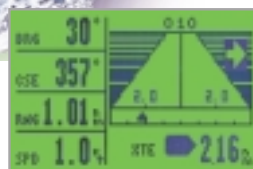
Plotter



Steering



Nav  
(Loran-C LOPs)



Highway



© The future today with FURUNO's electronics technology

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TRADE MARK REGISTERED  
MARCA REGISTRADA

# SPECIFICATIONS OF GP-31

## RECEIVER CHARACTERISTICS

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

## PROCESSOR/DISPLAY CHARACTERISTICS

- Display**  
 4.5" diagonal 95(W) x 60(H) mm LCD, 120 x 64 pixels
- Display Modes**  
 Plotter, Highway, Steering Display, Nav Data Display and Programmable Mode
- Position Indication**  
 L/L, Loran-C or Decca TDs
- Memory Capacity**  
 1,000 points total for ship's track  
 950 waypoints (registered by cursor or L/L, TDs entry),  
 50 routes (30 waypoints/route)
- Alarms**  
 Arrival, Anchor watch, XTE, speed, DGPS, Time, Trip

## 6. Interface

Output (NMEA 0183 ver 1.5/2.0):  
 \$GPBWC, \$GPGGA, \$GPGLL, \$GPRMC, \$GPRMB, \$GPVTG, \$GPZDA, \$GPAPB, \$GPBOD, \$GPXTE, \$GPAAM \$RMA, \$GTD (For position entry in LORAN-C)  
 Input:  
 \$YMWPM (YEOMAN wpt data in NMEA0183)  
 DGPS data in RTCM SC104 ver 2.1

## 7. DGPS Capability

RTCM SC104 v.2.1 format in RS232C from FURUNO GR-80 DGPS Beacon Receiver  
 Accuracy: 5 m approx., 95% of the time

## ENVIRONMENT (IEC 60945 test method)

Temperature  
 Display unit: -15°C to +55°C  
 Antenna unit: -25°C to +70°C  
 Waterproofing  
 Display unit: IPX5 (IEC 60529), CFR46 (USCG)  
 Antenna unit: IPX6 (IEC 60529)

## POWER SUPPLY AND POWER CONSUMPTION

12-24 VDC, 120-160mA

## EQUIPMENT LIST

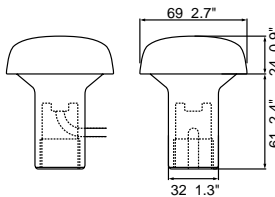
### Standard

- Display unit GP-31 with 2 m power/signal cable 1 unit
- Antenna unit GPA-017 with 10 m cable 1 set
- Installation materials and spare parts 1 set

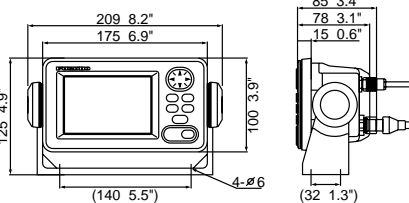
### Optional

- Rectifier  
 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) or S type (OP20-17)
- External DGPS Beacon Receiver GR-80

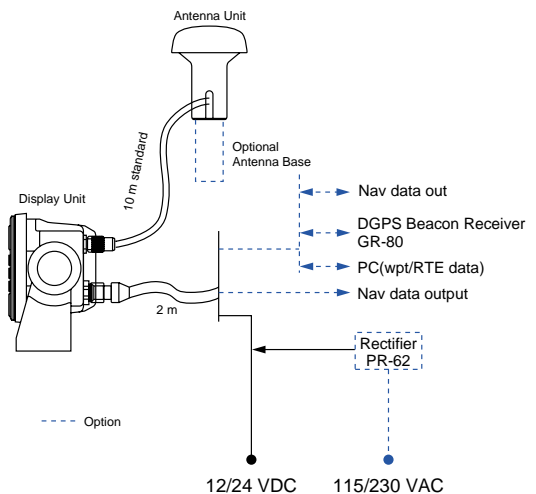
**Antenna Unit** 0.15 kg 0.3 oz



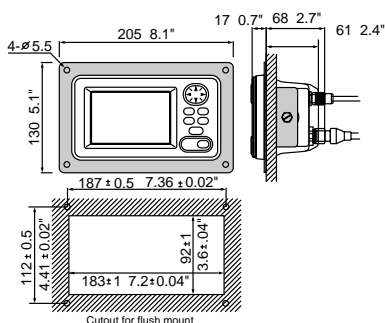
**Display Unit** 0.6 kg 24.7 oz



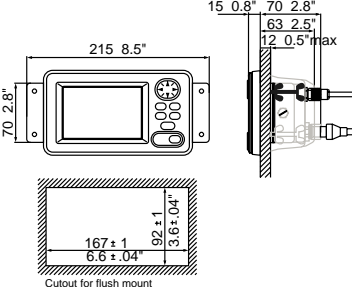
## Interconnection Diagram



## Flush mount kit F-type



## Flush mount kit S-type



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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