

# FURUNO

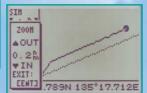
# MARINE GPS/WAAS NAVIGATOR

Model GP-32

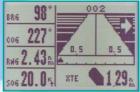
- Improved accuracy with built-in WAAS receiver
- 4.5" Silver Bright LCD display
- Multiple display modes to suit a variety of navigational requirements
- Up to 999 waypoints, 50 routes and 1,000 track points
- One-touch waypoint entry
- Customizable NavData screens
- Track Back feature stores waypoints at user defined intervals for early trace-back cruise
- Waypoint & Route upload/download through RS-232C port



**Speedometer** 









1.13 TRIP (NM) SOG (KT)

Customizable display

### WAAS receiver designed for coastal ships, fishing boats and pleasure craft. The powerful processor performs high-speed processing of position fixing and augmentation using WAAS correction. It comes with an easy to use track plotter which stores up to 1,000 track points.

The GP-32 is an advanced GPS navigator with a

This compact and cost-effective unit offers extremely accurate position fixes. It is accurate to 10 meters, and with WAAS mode activated, it's accurate to within 3 meters.

The display modes include Plotter, Nav Data, Steering, Highway, Speedometer and two customizable mode. The Steering mode provides an intuitive indication of course to steer and crosstrack-error (XTE). The Highway mode is useful when you are heading for your fishing ground or following a series of waypoints along a planned

The user-friendly design permits easy and straightforward operation with minimum key strokes. The system has various alarm functions to warn of arrival to or departure from a predefined area (arrival/anchor watch), XTE exceeding a preset limit, Alarm Clock and more.

### WAAS, Wide Area Augmentation System

is a GPS navigation system which applies correction data by means of geostationary satellites. The US FAA has been testing this system and others using Satellite-Based Augmentation Systems (SBAS). As the WAAS utilizes the same frequency as the GPS, a single antenna can receive GPS and WAAS signals. At the moment two Inmarsat GEOs are available, i.e., AOR-W and POR. Similar systems are under development in Japan (MSAS: MTSAT Satellite-based Augmentation System) and Europe (EGNOS: European Geostationary Navigation Overlay System). They are said to be fully interoperable and compatible. Major contributors of an error in a

single frequency GPS system is a 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 WAAS satellite via the master earth station. The Inmarsat or communication satellite broadcasts the differential corrections to users.



For more info, visit the FAA web at http://gps.faa.gov/





The future today with FURUNO's electronics technology.

### **SPECIFICATIONS OF GP-32**

**GPS/WAAS** 

**Receiver Type** GPS: Twelve discrete channels. C/A

code, all-in-view. WAAS receiver: standard fitted in Display Unit

L1 (1575.42 MHz)

Receive Frequency Time to First Fix 12 seconds typical (Warm start)

**Tracking Velocity** 999 knots

**Geodetic Systems** WGS-84 (and others)

**DGPS** 

**Reference Stations** Automatic or manual selection **Frequency Range** 283.5 - 325.0 kHz (all ITU regions),

0.5 kHz steps

**Accuracy** 

**GPS** 10 m (95%) **DGPS** 5 m (95%) 3 m (95%) WAAS

**Display** 

4.5" diagonal 95(W) x 60(H) mm LCD, 120 x 64 pixels

**Display Modes** 

Plotter, Highway, Steering, Speedometer, Nav Data and

2 pages Customizable display

**Memory Capacity** 

1,000 ship's track points 999 waypoints with comments 50 routes, 30 waypoints/route

**Alarms** 

Arrival, Anchor watch, XTE, Speed, WAAS/DGPS, Time, Trip, Odometer

Language

English, Spanish, French, German, Dutch, Italian, Portuguese, Vietnamese, Indonesian, Japanese

Interface

Output (NMEA 0183 ver 1.5/2.0/2.1);

AAM, APB, BOD, BWC, GGA, GLL, GTD, RMA, RMB, RMC,

VTG, XTE, ZDA

Input:

YMWPL (YEOMAN wpt data in NMEA 0183)

DGPS data in RTCM SC104 ver 2.1

**DGPS Capability** 

RTCM SC104 v.2.1 format in RS232C from FURUNO GR-80

**DGPS** Beacon Receiver

**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** 

12-24 VDC, 240-120 mA

#### **EQUIPMENT LIST**

Standard

1. Display Unit accommodating WAAS receiver 1 unit 2. Antenna Unit GPA-017 with 10 m cable 1 set 3. Installation Materials and Spare Parts 1 set

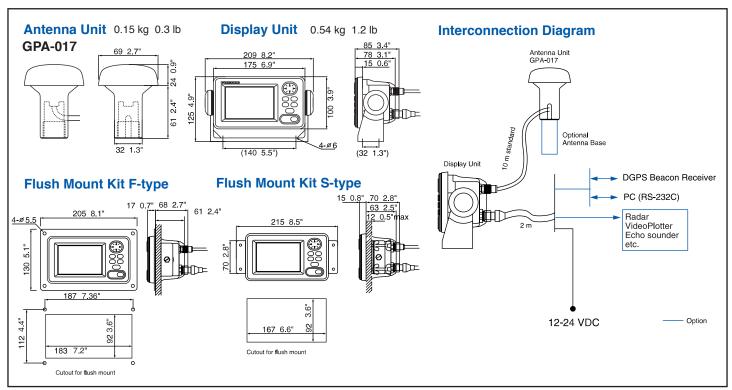
Option

1. Antenna Base

CP20-01111 (Pipe mount), No. 13-QA330 (Deck mount),

No. 13-QA310 (Offset bracket), No. 13-RC5160 (Handrail mount)

2. Flush Mount Kit F type (OP20-18/29) or S type (OP20-17)



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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