o ICOM

INSTRUCTION MANUAL



MARINE PLOTTER MXP-5000 DISPLAY UNIT MXD-5000

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

Icom Inc.

FOREWORD

Thank you for purchasing Icom's **MXP-5000** MARINE PLOTTER and **MXD-5000** DISPLAY UNIT.

IMPORTANT

READ THIS INSTRUCTION MANUAL CAREFULLY before attempting to operate the Marine Commander.

SAVE THIS INSTRUCTION MANUAL. This manual contains important safety and operating instructions for the MXP-5000 and MXD-5000.

EXPLICIT DEFINITIONS

| WORD | DEFINITION |
|-------------------|---|
| △DANGER! | Personal death, serious injury or an explo- sion may occur. |
| ∆ WARNING! | Personal injury, fire hazard or electric shock may occur. |
| CAUTION | Equipment damage may occur. |
| NOTE | If disregarded, inconvenience only. No risk of personal injury, fire or electric shock. |

For Users in California (U.S.A.)

The MXP-5000 uses a Coin Lithium Battery which contains Perchlorate Material—special handling may apply.

See http://www.dtsc.ca.gov/hazardouswaste/perchlorate

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SUPPLIED ACCESSORIES

Qty.

MXP-5000 (MAIN UNIT)

| DC power cable | 1 |
|---|----|
| Ferrite EMI Filter | 1 |
| • OPC-1897 (Connection cable: D-SUB 25 pin) | 1 |
| Spring washers (M5) | 12 |
| Flat washers (M5) | 12 |
| • Nuts (M5) | 6 |
| • Bolts (M5×30 mm) | 6 |
| • Fuse (FGB 7.5 A for a 24 V power source) | 1 |

• Spare fuse (FGB 15 A for a 12 V power source) 1

MXD-5000 (DISPLAY UNIT)

| Front cover | 1 |
|---|-------|
| Mounting bracket kit | 1 set |
| - Mounting bracket | 1 |
| - Knob bolts | 2 |
| - Hex head bolts (M6×30 mm) | 5 |
| - Flat washers (M6) | 10 |
| - Spring washers (M6) | 10 |
| - Nuts (M6) | 5 |
| Mounting bolt (M6×35 mm) | 4 |
| Flat washers for wall mounting (M6) | 4 |
| Spring washers for wall mounting (M6) | 4 |
| Nuts for wall mounting (M6) | 4 |
| • Cap | 4 |
| - | |

EX-3187 (DISPLAY EXTENSION UNIT)

| Self-tapping screw | v (A0 4×20 mm) 2 | |
|--|------------------|--|
| • Flat washers (M4 | | |

FCC INFORMATION

• FOR CLASS A UNINTENTIONAL RADIATORS:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CAUTION: Changes or modifications to these equipment, not expressly approved by Icom Inc., could void your authority to operate these equipment under FCC regulations.

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PRECAUTIONS

Common (MXP-5000/MXD-5000/EX-3187):

 \triangle **WARNING! NEVER** let metal, wire or other objects touch any internal part or terminals of these units. This may result in an electric shock.

 \triangle **WARNING! NEVER** touch these units with wet hands. This may result in an electric shock or damage these units.

DO NOT place these units near heating equipment or in direct sunlight or where hot or cold air blows directly onto them.

DO NOT use or place these units in areas with temperature below $-20^{\circ}C$ ($-4^{\circ}F$) or above $+60^{\circ}C$ ($+140^{\circ}F$).

DO NOT place these units in areas that will block air passage or put anything around these units. This will obstruct heat dissipation.

DO NOT use harsh solvent such as benzine or alcohol to clean these units, as they will damage these units' surfaces.

KEEP these units out of the reach of children.

For MXP-5000 (Main unit):

▲ **WARNING! NEVER** apply AC voltage to the DC input terminals of the Main unit. This may pose a fire hazard, result in an electric shock or damage the Main unit.

▲ **WARNING! NEVER** apply more than 32 V DC to the DC input terminals of the Main unit or use reverse polarity. This may pose a fire hazard or damage the Main unit.

▲ **WARNING! NEVER** cut the DC power cable between the DC plug and fuse holder. If an incorrect connection is made after cutting, the Main unit may be damaged.

▲ **WARNING! NEVER** open the bottom cover of the Main unit. There are no user adjustment points. This may result in an electric shock and incorrect reassembly may cause a fire hazard.

DO NOT place the Main unit in excessively dusty environments.

KEEP the Main unit away from heavy rain, and never immerse it in the water.

The Main unit meets IPX4 requirements for splash resistance when the supplied connection cables are connected, and the connector cap is installed on the other connector.

However, if it is dropped, splash resistance cannot be guaranteed because of possible damage to the case or the waterproof seals.

For MXD-5000 (Display unit):

DO NOT place the Display unit in excessively dusty environments.

BE CAREFUL! The Display unit meets IPX7 requirements for waterproof protection when the rear cover, and the access cover on the Front panel is closed. However, if the Display unit has been dropped, waterproof protection cannot be guaranteed because of possible damage to the Display unit's case or the waterproof seal.

For EX-3187 (Display extension unit):

KEEP the Display extension unit away from heavy rain, and never immerse it in the water.

The Display extension unit meets IPX4 requirements for splash resistance when the connection cables are connected.

However, if it is dropped, splash resistance cannot be guaranteed because of possible damage to the case or the waterproof seals.

MXP-5000 (Main unit)



GROUND TERMINAL

Connect a ground wire to ground to prevent electrical shocks.

ODC POWER INPUT TERMINALS

Connect the 12 V/24 V DC power source through the DC power cable.

③ DATA IN/OUT CONNECTOR [DATA IN/OUT]

Connect an Icom AIS Transponder, Marine VHF transceiver or navigation equipment.

See page 14 for the [DATA IN/OUT] connector information details.

EXTERNAL DISPLAY CONNECTOR [EXT-DISPLAY]

Connect an external monitor or a PC monitor with a D-sub 15-pin connector (DE-15).

The monitor shows the same display as the MAIN display.

- The monitor resolution of 800 × 600 pixels or higher is required.
- The monitor shows the same display as the MAIN display.

MAIN DISPLAY UNIT CONNECTOR [MAIN] SUB DISPLAY UNIT CONNECTOR [SUB]

Connect the MXD-5000 Display unit. Two display units can be connected.

6 BLACK BOX CONNECTORS

Connector 1 to 3

Connect a black box unit such as, an MXR-5000R/T Radar unit, an MXF-5000 Fish finder unit or another MXP-5000 Main unit.

- Connector 4
 - Not used.

If you connect an MXR-5000R/T or MXF-5000 to this connector, these units will not operate.

VIDEO IN CONNECTORS

Four video inputs, such as onboard cameras, can be connected. An RCA type connector is used for these connectors. NTSC or PAL format is compatible.

8 NMEA2000 CONNECTOR [NMEA2000]

Connect NMEA 2000 sensors to monitor, the engine, fuel, engine temperature, wind, GPS, Compass and STW.

HEADING CONNECTOR [HEADING]

Connect a heading sensor. This connector is the same as port 2 of the [DATA IN/OUT] connector. See page 14 for the [DATA IN/OUT] connector information details.

OPS RECEIVER CONNECTOR [GPS]

Connect the MXG-5000 GPS receiver.

♦ Front panel

MXD-5000 (Display unit)

POWER/DISPLAY BRILLIANCE SWITCH [Ů/BRILL]

- *While the MarineCommander's power is OFF* Push to turn ON the MarineCommander's power.
- While the MarineCommander's power is ON
 - ➡ Push to open Quick Menu 1.
 - The Quick Menu 1 includes the Display Brilliance, Radar TX setting, Panel Brilliant and Color Palette.
 - Push two or more times to increase or decrease the display brilliance level.
 - Hold down for 3 seconds to turn OFF the MarineCommander's power.

WAYPOINT/MAN OVERBOARD SWITCH [WPT/MOB]

- Push to open the Waypoint screen.
 The Waypoint window appears.
- When a crew member falls overboard, hold down for 3 seconds to mark the man overboard point on the screen.
 - The MOB readout shows the bearing and distance to the MOB point. (Position and bearing data are necessary.)
 - Hold down [MOB] for 3 seconds to cancel the function.

8 RANGE UP/ DOWN SWITCHES [+]/[-]

Push [+] or [-] to set a suitable screen range.

FOCUS/DISPLAY LAYOUT SWITCH [FOCUS/LAYOUT]

- ➡ Push to change the active screen.
 - An orange border indicates the active screen.
- Hold down for 3 seconds to open the display selection screen.

⑤ UP, DOWN, LEFT, RIGHT KEYS **[**▲] **[**▼] **[**◀] **[**▶]

- Push arrow [▲], [▼], [◀] or [▶] to move the cursor up, down, left or right on the active screen.
 Push the dot to move at an angle.
- In the Menu screen, push [▲] or [▼] to select an item.
- In Quick Menu 1 or Quick Menu 2, push [◀] or
 [▶] to select an item.
- In Quick Menu 1 or Quick Menu 2, push [▲] or
 [▼] to select an option or adjust a level.

6 SUB MENU SWITCH [SUB]

On the Menu screen, push to enter the Sub Menu.

MENU SWITCH [MENU]

Push to select the Menu screen.

♦ Front panel



③ CLEAR SWITCH [CLEAR]

Push to cancel the current function.

While opening the Menu screen, push to cancel and return to the upper menu, or cancel the Menu screen.

SELECTION DIAL [DIAL]

- In the Menu screen, rotate to select a menu item or option.
- In Quick Menu 1 or Quick Menu 2, rotate to select an option or adjust a level.
- On the Plotter screen
- Rotate to set the heading position.

ENTER SWITCH

- In the Menu screen, push to access the selected menu or function.
- Push to access Quick Menu 2.
 On the Plotter screen
 - Quick Menu 2 includes the Center Ship and Perspective Angle functions.

On the Radar screen

• Quick Menu 2 includes the GAIN, SEA, RAIN, Radar TX menu and Heading line OFF functions.

On the Sounder screen

• Quick Menu 2 includes the GAIN 50kHz, GAIN 200kHz, STC 50kHz and STC 200kHz control functions.

SD CARD PORT

Insert an SD Card which contains C-MAP MAX chart* by JEPPESEN.

- * Chart data is not supplied by Icom.
- An unmount operation should be performed before removing the SD Card. If you do not unmount the SD Card, the MarineCommander[™] will stop operating.



1 USB MEMORY PORT

Connect a USB memory stick.

 An unmount operation should be performed before removing the USB memory stick. If you do not unmount the USB memory stick, the MarineCommander[™] will stop operating.

1 PANEL DESCRIPTION

♦ Display



1 DATA-BAR

Shows various information on palettes 1 to 4.

A total of 20 options are selectable.

The Selectable options are Date/Time, Position, COG/ SOG, COG, SOG, Heading/STW, Heading, STW, Depth/ Temp., Depth, Temp., Trip Log, Waypoint, XTE, ETA/ TTG, ETA, TTG, Cursor, Startus and Wind.

PALETTE1

Shows various information.

(Default: Position)

Shows the current position data* in latitude/longitude.

- *Depending on the presetting, Loran-C Time differences are displayed instead of the position data.
- When the position data is invalid, the position data is shown in red for 1 minute. After 1 minute has passed, "----" (invalid data) will appear.

3 PALETTE2

Shows various information.

(Default: COG)

Shows your vessel's course over ground.

• "T" shows true north bearing, and "M" shows magnetic north bearing.

4 PALETTE3

Shows various information.

(Default: SOG)

Shows your vessel's speed over ground. If no speed data is found, "——" will appear.

6 PALETTE4

Shows various information.

(Default: Depth)

Shows the current depth of the sea bottom, under the vessel.

When a companion lcom fish finder is not connected to the main unit, or the sea bottom is not detected, "----" (invalid data) will appear.

6 CROSS HAIR CURSOR

Appears and moves on the screen when $[\blacktriangle]$, $[\blacktriangledown]$, $[\blacktriangledown]$ or $[\blacktriangleright]$ is pushed.

♦ Display



STATUS-BAR

- Shows the status data.
 - A total of 19 options are selectable.

The selectable options are Date/Time, Position, COG/ SOG, COG, SOG, Heading/STW, Heading, STW, Depth/Temp., Depth, Temp., Trip Log, Waypoint, XTE, ETA/TTG, ETA, TTG, Wind and Cursor.

• When several options are set to be displayed, the data will be displayed in order.

(Default: Date/Time)

Shows the current time.

• "--:--" appears when no time data is received.

- Shows the current date.
 - "----/--" appears when no date data is received.
- When a menu or dialogue is displayed on the screen, an operation guide for that is displayed here, instead of the status data.

8 FOCUS BAR

This field shows and selects the icons. When this bar is selected, the color of the bar changes to orange.

ODSC MESSAGE ICON

Blinks when there is an unread message.

(DTRANSCEIVER ICON

Appears when a companion lcom transceiver is connected to the Main unit.

1 FISH FINDER ICON

- Display as an animation when a companion lcom fish finder is connected and operating.
- Appears, but not as an animation, when the fish finder is connected but not operating.
- An "X" appears on the icon when the fish finder is not connected to the main unit.

PAIS UNIT ICON

Appears, but with an "X" below the icon when the AIS unit is not connected to the Main unit.

The "X" disappears when an AIS unit is connected to the Main unit and an AIS signal is received.

BRADAR ICON

- Appears when a companion Icom radar unit is connected and is in the stand-by mode.
- Appears and rotates when the radar is operating.
- Appears with "SAVE" (but doesn't rotate) when the radar is in stand-by in the save mode.
- Appears with "SAVE" and rotates when the radar is operating in the save mode.
- An "X" appears on the icon when the radar is not connected to the main unit.

(GPS RECEIVER ICON

Appears when position data is received.

• An "X" appears on the icon when the position data is not received, or is invalid.

2

INSTALLATION AND CONNECTIONS

Connection

CAUTION: Before making connections, be sure to disconnect the DC power cable from the power source.



Mounting the Main unit

First, drill four \$5.5-6 mm (0.22-0.24 in) holes to mount the Main unit, using the unit's base as a pattern.

Securely mount the Main unit to a flat surface which supports more than approximately 7 kg (15 lb), using the six supplied bolts (M5×30 mm).

CAUTION: KEEP the Main unit at least 1 meter (3.28 ft) away from your vessel's magnetic navigation compass.



Power source requirement

- CAUTION: Before connecting the DC power cable, check the following important items. Make sure:
 Output voltage of the power source is 12 V/24 V DC.
 DC power cable polarity is correct. White : Positive ⊕ terminal Black : Negative ⊖ terminal Green* : Ground * Main unit side is thinner black.
 Fuse rating of the DC power cable is correct. (The 15 A fuse is pre-installed.) 7.5 A : For a 24 V power source 15 A : For a 12 V power source

Ground connection

To prevent electrical shocks and other problems, ground the Main unit through the [GND] terminal. For best results, connect a heavy gauge wire or strap to the nearest grounding point on the boat. The distance between the [GND] terminal and the ground point should be as short as possible.

Installing the Display unit

Location

Select a place for installation which meets the following important conditions:

- The display unit should be placed near the wheel in the cabin so that the operator may easily view the radar screen while facing the bow.
- To minimize interference, KEEP the unit AT LEAST THE COMPASS SAFE DISTANCE away from the compass and the navigation receiver. The distance is stated on the rear panel serial number label.
- Select a position where there is no danger of salt or fresh water spray or immersion.
- Select a location where it is easy to perform maintenance or adjustments after installation.
- Select a location which can support the weight of the display unit.
- DO NOT select areas subject to extreme heat, cold, vibrations or direct sunlight.

♦ Mounting

The mounting bracket supplied with the display unit allows "dashboard" or "overhead" mounting.

- Hold the mounting bracket up to the selected location, and mark pilot holes for the five installation bolts.
- ② Drill five holes, according to the diagram, as shown to the left. (Fig. 1)
- (3) Install the bracket using the bolts, nuts or washers. Attach the display unit to the bracket using the knob bolts, and adjust the display for the desired viewing angle. (Fig. 2)

Mounting Bracket Diagram (Fig. 1)

• Mounting Bracket installation (Fig. 2)



♦ Wall mounting

The display unit can be mounted to a flat surface, such as an instrument panel, using the mounting bolts ($M6\times35$ mm).

- ① Remove the four bolts from the four corners of the display unit.
- (2) Carefully cut a hole in the instrument panel, or wherever you plan to mount the display unit.
- ③ Drill four holes for the mounting screw.
- ④ Slide the display unit through the hole.
- (5) Attach the four corners of the display unit using the supplied flat washers, spring washers, nuts and mounting bolts (M6×35 mm).



Unit: mm (inch)

• Dimensions



2

Front cover attachment

The supplied front cover can be attached to the front of the display unit.



Bolt cap attachment

The supplied bolt caps can be attached to the four corner bolts to protect them from dust and moisture.



Removing or connecting the EX-3187's cable

To install the display cable though a hole in a wall where as the display connector cannot pass through the hole, remove the cable from the EX-3187 or the Display unit. Then pass it through the hole, as shown below.

CAUTION: NEVER cut the display cable or display extension cable.

- ① Remove the four screws from the corners of the EX-3187.
- ② Unscrew the Sealing Nut from the Sealing tube.
- ③ Unscrew the inside Nut from the Sealing tube.
- ④ Remove the five connectors from the board, as shown below.
- (5) Remove the cable from the EX-3187's case.
- (6) After installing the removed cable at the desired place, replace the connectors and the Sealing Nut.



BE CAREFUL! The EX-3187 meets IPX4 requirement for splash resistant when the connecting the connection cables. However, once the unit has been opened, splash resistance cannot be guaranteed.

NOTE: About Display Cable

The Display cable can also be removed to install it through a hole in a wall. After installing the cable through the hole, replace the Sealing Nut in the same order as described to the left.

MAINTENANCE AND OPTIONS

Continued, reliable operation of the main unit depends on how you care for your equipment.

The simple maintenance tips that follow can help you save time and money, and avoid premature equipment failures.

Periodic maintenance

- Keep the equipment as clean as possible.
 Use a soft cloth to remove dirt, dust and water.
- (2) Check all hardware for loose screws, bolts, etc.
- ③ Check cables and terminal connections.

Fuse replacement

If the fuse blows or the MarineCommander[™] stops functioning, find the source of the problem and have it repaired. Then, replace the blown fuse with a new, properly rated one, as shown to the right.

▲ **WARNING! BE SURE** the MarineCommander's power is OFF before performing any maintenance.



Fuse rating: 15 A for 12 V power source 7.5 A for 24 V power source

Options

- **EX-3187** DISPLAY EXTENSION UNIT 5 m (16.4 ft) extension cable for the Display unit. Allows you to install the Main unit and Display unit up to 20 m (65.6 ft) apart. (one Display cable+three EX-3187s)
- MXR-5000R/T RADAR UNIT Allows you to add Radar to the MarineCommander™.
- MXF-5000 FISH FINDER UNIT Allows you to add the Fish Finding to the MarineCommander[™].
- MXA-5000 AIS RECEIVER Allows you to receive other vessel's information, such as the vessel name, MMSI code, vessel type, position data, speed, course, destination and more.
- MXG-5000 GPS RECEIVER Allows you to receive GPS information.
- **OPC-1895** CONNECTION CABLE Allows you to connect the Icom MarineCommander™ system. (20 m: 65.6 ft)

Approved Icom optional equipment is designed for optimal performance when used with Icom equipment. Icom is not responsible for the destruction or damage to Icom equipment in the event the Icom equipment is used with equipment that is not manufactured or approved by Icom.

SPECIFICATIONS

♦ MXP-5000 (Main unit)

- DC input voltage
- Power consumption

- : 10.8 V to 31.2 V DC
- : Less than 4.7 A at 12.0 V (With one MXD-5000 at maximum brightness)

Less than 7.7 A at 12.0 V (With two MXD-5000s at maximum brightness)

- Usable temperature range
- Dimensions (projections not included)
- Weight

- : –20°C to +60°C; –4°F to 140°F
- : 360 (W)×88 (H)×228.8 (D) mm; 14.2 (W)×3.5 (H)×9.0 (D) in
- : Approximately 4.25 kg; 9.37 lb

♦ MXD-5000 (Display unit)

- LCD display
- DC input voltage
- Power consumption
- Usable temperature range
- Dimensions (without Bracket)
- (with Bracket)
- Cable lengthWeight
 - (without Bracket) (with Bracket)

- : 12.1-inch SVGA Color display
- : 30 V DC supplied from MXP-5000 (Main unit)
- : Less than 1.0 A (at maximum brightness)
- : -20°C to +60°C; -4°F to 140°F
- : 386 (W)×274 (H)×69.2 (D) mm; 15.2 (W)×10.8 (H)×2.7 (D) in 404 (W)×299 (H)×102 (D) mm; 15.9 (W)×11.8 (H)×4.0 (D) in
- : Approximately 5 m; 16.4 ft
- : Approximately 3.6 kg; 7.9 lb Approximately 4.1 kg; 9.0 lb

EX-3187 (Display extension unit)

DC input voltagePower consumption

Usable temperature rangeDimensions (without Bracket)

- : 30 V DC supplied from MXP-5000 (Main unit) : Less than 110 mA
- : –20°C to +60°C; –4°F to 140°F
 - : 110 (W)×81 (H)×55 (D) mm; 4.3 (W)×3.2 (H)×2.2 (D) in

- Cable length
- Weight (without cable and Bracket)
- : Approximately 5 m; 16.4 ft
- : Approximately 800 g; 1.7 lb

5 CONNECTOR INFORMATION

DATA IN/OUT o(***********)o Cable I ine/ Pin Port Specifications Sentence Format Description Pin Name Color Color No SGND 13 Connects to ground. HEADING IN Black 2 Connects to a heading sensor. Pink 23 Input level Port 2 (- -)(-)The data communication speed (baud rate) HDG, HDT, HDM, THS : Less than 2 mA (Heading) HEADING IN can be selected between 4800 bps, 9600 Red 2 Pink 10 (with 2 V applied) bps and 19200 bps. (Default: 4800 bps) (- -) (+) Connects to the Icom MA-500TR or to the Icom MXA-5000 or to an AIS receiver. Black 1 Yellow 17 AIS-2 IN (-) (IEC61162-2) (-) Input level GGA, GNS, GLL, GSA, The data communication speed (baud rate) : Less than 2 mA GSV, RMC, VDM, VTG, can be selected between 4800bps. 9600 (RS-422 balanced ZDA, ALR bps, 19200 bps and 38400 bps. (Default: type) Red 1 38400 bps) Yellow 4 AIS-2 IN (+) (-) . When AIS-2 IN is used, the AIS-1 IN cannot be used. Black 1 Output level Pink 18 AIS OUT (-) (-) : 5 V/40 mA maximum Combines with AIS-2 IN (IEC61162-2) or GNS, GLL, HDT, RMC Port 3 (RS-422 balanced AIS-1 IN (IEC61162-1). Red 1 Pink 5 AIS OUT (+) (AIS) type) (-) Connects to an AIS receiver. Black 1 (IEC61162-1) White 16 AIS-1 IN (-) (-) The data communication speed (baud Input level GGA. GNS. GLL. GSA. rate) is selectable between 4800 bps, : Less than 2 mA GSV. RMC. VDM. VTG. 9600 bps, 19200 bps and 38400 bps. (with 2 V applied) ZDA, ALR (Default: 38400 bps) Red 1 White 3 AIS-1 IN (+) When AIS-1 IN is used, the AIS-2 IN (-) cannot be used. Black 1 AIS Grey 15 Common line for AIS-2. COMMON (-) Black 2 Orange 19 DSC IN (-) Input level Connects to the NMEA input/output con-(- -) : Less than 2 mA DSC, DSE, \$PICOA nector of a transceiver to transmit an In-Red 2 6 DSC IN (+) (with 2 V applied) Orange dividual DSC call. Port 4 (- -) The data communication speed (baud (VHF) Black 2 Output level Grey 20 DSC OUT (-) rate) can be selected between 4800 bps, (- -) : 5 V/40 mA maximum DSC, DSE, GGA, GNS, 9600 bps and 19200 bps for each Input/ (RS-422 balanced GLL, RMC, \$PICOA Red 2 Output port. (Default: 4800 bps) Grev 7 DSC OUT (+) type) (- -) Black 2 GGA, GNS, GLL, GSA White 21 NMEA IN (-) Input level GSV, HDG, HDT, HDM, (- -) : Less than 2 mA MWV, RMC, THS, VHW, Red 2 Connects to a piece of navigation equip-White 8 NMEA IN (+) (with 2 V applied) VTG, ZDA (- -) ment. Port 5 The data communication speed (baud APB, BWC, BWR, DBT, (General Black 2 NMEA OUT Yellow 22 rate) can be selected between 4800 bps DPT, GGA, GNS, GLL, Purpose) (-) (- -) Output level 9600 bps and 19200 bps for each Input/ HDG, HDT, MTW, MWV, : 5 V/40 mA maxi-Output port. (Default: 4800 bps) RMA, RMB, RMC, TTM, NMEA OUT mum Red 2 Yellow 9 VHW, VTG, WPL, XTE (- -) (+)ZDA Red 1 Disconnects between pins 2 and 14 when Grav 2 ALM CLOSE (-) the alarm buzzer sounds. ALM Black 1 AI M Orange 14 Common relay for the alarm buzzer COMMON (-) Pins 1 and 14 are connected together when Red 1 ALM OPEN Orange 1 (-) the alarm buzzer sounds. Black 3 AUX DATA IN 25 Gray Input level (- - -) (-) : Less than 2 mA AUX DATA IN Red 3 12 (with 2 V applied) Grav (- - -) (+) AUX HDT, HDM AUX format Black 3 AUX CLOCK 24 Orange Input level (- - -)IN (-) : Less than 2 mA AUX CLOCK Red 3 (with 2 V applied) Orange 11 (- - -) IN (+)

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Count on us!

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