PIOTRONICS PY-GP7FP QUICK MANUAL

THANK YOU FOR CHOOSING PIOTRONICS GPS CHART PLOTTER WITH FISHFINDER

Disclaimer:

In support of the company's policy of continuous product improvement, the information contained in this manual is subject to change without any prior notice.

Scope of Supply

a. Display Unit

b. Quick release mounting

c. Screen protector Cover

d. PY-GP7FP Quick Manual

e. GA-07 External GPS antenna with 10 meters cable

f. Standard accessories pack included:

    1 Power/data cable with 8pin

    1 SMA to BNC cable connector

    1 Seal ring for embedded installation

    (21.91*13.6cm)

    2 spare fuses (F2AL250v)

    3 desktop mounting screws (1.5*0.5cm)

    4 panel mounting screws (1.5*0.2cm)

    4 ring double sided tape

g. Dual Frequency Thru-Hull Transducer or Dual Frequency Transom Mount Transducer with 10 meters cable

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SAFETY INSTRUCTIONS

<u>Safety Instructions for the Operator</u>

WARNING

Do not open the equipment.

Only PIOTRONICS, its service agent or qualified personnel can open the equipment.

Do not disassemble or modify the equipment.

Fire, electrical shock or serious injury can result.

Immediately turn off the power at the switchboard if the equipment is emitting smoke or fire.

Continued use of the equipment can cause fire or electrical shock. Contact a PIOTRONICS agent for service.

Use the proper fuse.

Use of a wrong fuse can damage the equipment or cause fire.

Be sure the power supply is compatible with the equipment.

Incorrect power supply may cause the equipment to overheat and a hazard.

The operating temperature range -15℃ to 55℃ for the display unit.

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Use of the equipment out of those ranges may damage the equipment.

Use a dry, soft and lint-free cloth to wipe your display screen.

Incorrect material to clean may cause scratch or damage on the screen

<u>Safety Instructions for the Installer</u>

WARNING

Do not open the cover unless totally familiar with electrical circuits and service manual.

Improper handing can result in electrical shock.

Turn off the power at the switchboard before beginning the installation.

Fire or electrical shock can result if the power is left on.

Be sure that the power supply is compatible with the voltage rating of the equipment.

Connection of an incorrect power supply can cause fire or equipment damage.

Use the proper fuse.

Use of a wrong fuse can damage the equipment or cause fire.

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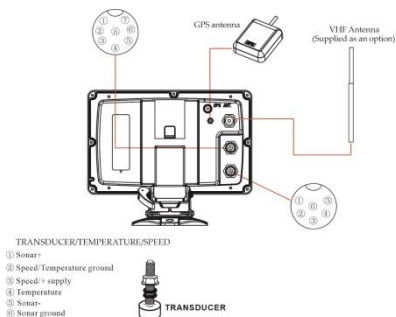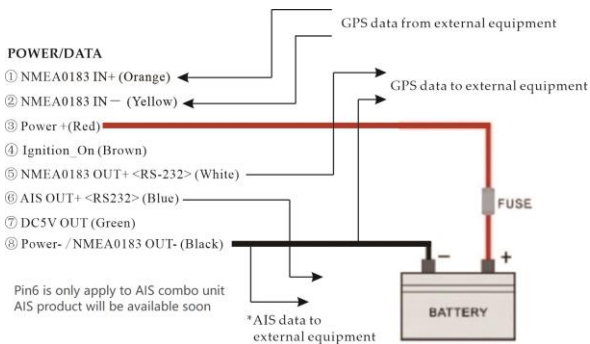
The Connectors on the rear panel

【The figure shows how these connectors look like on PIOTRONICS PY-GP7FP unit】

GPS Antenna

VHF antenna (supplied as an option, to be continued)

Power/Data cable

Transducer/Temperature senor

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INTERCONNECTIONS

POWER/DATA

① NMEA0183 IN+ (Orange) ← GPS data from external equipment

② NMEA0183 IN − (Yellow) ← GPS data to external equipment

③ Power +(Red)

④ Ignition_On (Brown)

⑤ NMEA0183 OUT+ <RS-232> (White)

⑥ AIS OUT+ <RS232> (Blue)

⑦ DC5V OUT (Green)

⑧ Power- / NMEA0183 OUT- (Black)

Pin6 is only apply to AIS combo unit
AIS product will be available soon

*AIS data to external equipment

FUSE

BATTERY

GPS antenna

VHF Antenna
(Supplied as an option)

TRANSDUCER/TEMPERATURE/SPEED

① Sonar+
② Speed/Temperature ground
③ Speed/+ supply
④ Temperature
⑤ Sonar-
⑥ Sonar ground

TRANSDUCER

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Specification

Waypoints/icons	12000 user waypoints with name and symbol. 3 system waypoints：MOB, Start, Cursor, 10 proximity waypoints
Routes	30 routes up to 170 waypoints each, plus MOB and Track Navigation or Go to Track modes
Tracks	8000 points automatic track log; 10 saved tracks (up to 8000 track points each). Let you retrace your path in both directions
Drawing Marks	1000
Drawing Lines	2000
Drawing Placename	1000
Color for drawing	8
Alarms	XTE, Anchor drag, arrival, speed, voltage, proximity waypoint and time, AIS alarm.

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Palette	Normal
	Daylight exposed to sunlight
	Night in dark environment
	NOAA paper chart colors
Tides	Build in worldwide tide data
Position format	Latitude/ Longitude
Base map	Built-in K-Chart
External Map	SD Cards slot for C-Map MAX and K-Chart
User data storage	Internal backup of user settings, or external SD-card
Plot Interval	5s to 60min or 0.01nm to 10nm
Plotting scales	0.001nm to 700nm
Interface	RS232, NEMA0183 V3.01
NEMA	INPUT, auto scan baud rate：
Sentence supported:	GGA, GLL, RMC, VTG, ZDA, GSA, GSV, DBT, DPT, HDG, HDM, MTW, VHW, MWD, MWV,

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	VPW, VWR, XDR, TLL, VDM, VDO
	OUTPUT, Baud rate selectable: 4800, 9600, 19200, 38400
	GGA, GLL, RMC, AAM, APM, APA, BOD, BWC, BWR, DBT, DPT, HDT, MTW, MWD, VPW, VWR, VWT, RMB, TLL, WPL, XTE, ZDA, ZTG, HDT_FROM_HDG, WCV, ZDL
	OUTPUT FOR AUTOPILOT:
	APB, BOD, XTE, APA
Perspective View	ON/OFF
Celestial	Sunrise/Sunset Moonrise/Moonset

Power Supply

	10.5 to 35VDC, current drain<1.0A at 12V

Physical

Size	243mm(H)X155mm(W)X85mm(D)

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Weight	0.87kg
Display	7-inches Color TFT day-view LCD 800× 600 pixels
Input & Output Port	one opto-isolated input Port one RS232 Output Port
Waterproofing	Display unit： IPX5
Temperature range	Display unit：-15℃ to +55℃ Antenna unit：-25℃ to +70℃

GPS Receiver Characteristics

Receiver	50 parallel channel GPS receiver continuously tracks and uses up to 50 satellites to compute and update your position
Acquisition time	Cold start: 60 seconds average Hot start: 45 second average
Update rate	1/second, continuous

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	Position: 2.5 meters (95%) without S/A
	Velocity: 0.1meter/sec without S/A
	Time：100ns synchronized to GPS time
Dynamics	Altitude：50, 000mMax
	Velocity：500m/s
	Acceleration: 4g Max
Datum	WGS 84 and user define

HD Fishfinder Characteristics

Echo Color	16 colors (including background color) according to echo intensity. The background color is selectable from blue， light blue, white and black.
Basic Range	Meters 5/10/2 0/40/80/150/200/300/600/ 1000
	Feet 15/30/60/12 0/200/400/600/1000/2000/ 3000

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	Fathoms 3/5/ 10/20/40/80/100/150/300/ 600
Range Shift	80 meters, 200feet, 100 fathoms
Zoom Range	Times 2, 3, 4, 6
Bottom Lock Expansion	5/ 10 meters, 10/2Ofeet, 2/ 5 fathoms
Auto Mode	Automatic adjustment of range and gain (200Kand50K 1/ 2 display on each) , Zoom(200KHz and 50KHzzoom) and A-scope Display
Zoom Display	Marker Zoom, Bottom Zoom and Bottom-lock Expansion
Display Advance Speed	Lines/TX: Freeze, 1/8, 1/4, 1/2, 1/1, 2/ 1
TX Frequency	50and200kHz(alternately transmitted)
Power Output	600W
Pulse-length/TX rate	

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Display End Depth(m)	5	10	20	40	80	150	200	300	600	1000
Pulse-Length(ms) 200K	0.12	0.22	0.32	0.52	0.92	1.02	1.02	1.02	1.02	1.02
Pulse-Length(ms) 50K	0.17	0.27	0.37	0.57	0.97	1.07	1.07	1.07	1.07	1.07
TX Rate (Pulse/min)	2400	1500	857	444	231	125	95	63	38	30

Interference Rejecter	Rejects unwanted signals by comparing last and present echoes in strength.
Alarm	Fish and Bottom alarms, Temperature alarm (sensor required)

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Keypad instruction

(▲)	Plotter function：Moving the cursor upward or to change the setting. Sounder function：Moving the VRM upward.
(▶)	Plotter function：Moving the cursor to the right. Sounder function： Long Press-Activates feeding rate selection for picture advancement Short Press-Setting the depth range (setting upper range limit.
(MENU)	MENU Pressing it once displays the menu of the current Page, pressing it twice enters the main menu. Plotter + Sounder Function： Long press-Activates split ratio selection. Short Press-Displays the menu of the screen that has >50% screen coverage.
(MODE)	Display the seven main screens circularly, turnover the listed interfaces. Plotter Function: Press and hold to change track color. Sounder Function: Press and hold to activate sonar

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	mode selection.
ESC	Withdraw from an optional operation, or display the previous page in reverse-cycle order. Plotter function: Press and hold to switch track ON/OFF.

ENT/◢	Confirms the input or data.
	
	Plotter function：
	
	    Long Press—Activates Drawing Mark option.
	
	    Short Press—Activates waypoint attribute edit window.
	
	Sounder function：
	
	    Long Press—To switch from manual gain to automatic gain and vice versa.
	
	Short Press—To adjust gain level.

🔍	Plotter and AIS Function: Enlarges the scale of the maps and charts. Sounder Function: Decreases the depth range for shallow waters.
🔍	Plotter and AIS Function: Reduces the scale of the maps and chars. Sounder Function: Increases the depth range for deeper water.

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F □□	Plotter function: Display other function (GOTO, tide table, search, etc) menu. Sounder function: Provides signal level selection. Eliminates low intensity echoes (up to light-blue echoes) each level.
MOB	MOB The MOB mark denotes man overboard position.
⏻/☼	Long Press-Turn the power ON/OFF (Hold for more than 3 seconds) Short Press-Adjust the screen brightness and control panel dim.

Get start with your PIOTRONICS

Turning on the power by pressing ⏻/☼ the key until the unit beeps and display the "PIOTRONICS" LOGO. Please wait for the unit totally boots up to show the below WARNING PAGE and press ENT/◢ key to enter to working mode.

Turning off the power by press and hold ⏻/☼ for more than 3 seconds until the screen goes off.

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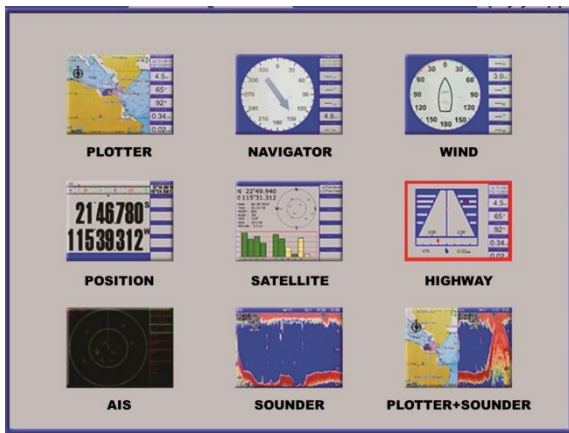**Selecting display mode**

Selecting display mode by (MODE) and (ESC) key. You can select Nine display mode by orders, each time you press (MODE) or (ESC) key, the display mode changes in sequence or reverse sequence.

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Besides, you can long press (ESC) key and use arrow keys to select any display mode as desired and press (ENT/◢) key to enter the display mode. An icon selection window will appear as below:

PLOTTER   NAVIGATOR   WIND

POSITION   SATELLITE   HIGHWAY

AIS   SOUNDER   PLOTTER+SOUNDER

Note: If some display modes cannot be selected (the icon turns grey color)

Please check SETUP Menu whether this display mode is turned off.

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