

NAVITRON SYSTEMS LTD

NT951G SMALL SHIP AUTOPILOT

Fully Type Approved
Notified Body 0191/05



ISO 11674 & IMO A342 (IX) as
amended by MSC 64/67 Annex 3

Purpose designed by Navitron Systems Limited for professional use on Magnetic and/or Gyro based commercial vessels of all types to approximately 2000 gross registered tonnes, the Navitron NT951G is a powerfully equipped and technologically advanced Autopilot which remains simple to operate.



- **Dual Mag Inputs:-**
Sensor Coil and/or NMEA.
- **Dual Gyro Inputs:-**
1:1 Synchro and/or NMEA.
- **Programmable ROT:-**
(Degress/Sec).
- **Built in Off Course Alarm.**
- **Automatic Stability:-**
Compensates for Rudder speed variations.
- **Heading / VDR Out:-**
NMEA, Step by Step and Furuno Heading.
\$HTD & \$RSA VDR

Model NT951G Dims 296mm x 175mm x 110mm (depth)

Equally at home in new build and retrofit applications over an exceptionally wide range (fishing vessels, tugs, dredgers, ferries, coasters, survey and support units etc.) the NT951G Autopilot offers traditional Navitron performance and reliability reinforced by full type approvals to latest IMO and ISO standards.

Comprehensively intelligent, standard features of the NT951G Control Unit include Dual Mag and Gyro Heading Inputs, Serial data outputs for Radar Stabilisation/Nav Computer/VDR use etc, fully Automatic Stability Compensation to accommodate Two Speed Rudder Systems and programmable Rate Of Turn.

Simple to operate via a traditional and clearly marked rotary Course Setter, the NT951G is immediately compatible with existing Navitron equipment including Watch Alarms, Heading Repeaters, Rudder Angle Indicators and Power Steer Controls.

- Full P.I.D Intelligence.
- Servo Drive Heading Repeater (Standby mode).
- Auto Trim (Automatic Permanent Helm).
- Digital Heading and ROT data display.
- Bargraph and digital Rudder Angle display.
- Operator variable control panel illumination.
- 11 - 40Vdc Power Supply compatible.
- Solid State Output stages (11 - 40 Vdc / 5A max.)
- Fully programmable installation parameters.



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NT951G

Outline Specifications

All Navitron Autopilot systems are covered by comprehensive warranty terms and are supplied standard complete with Mag Heading Sensor Coil, Rudder Reference Unit and Control Unit incorporating 11 - 40Vdc 5A rated solid state switches for the control of solenoid hydraulic steering systems. Various optional equipment includes dual solenoid and dual channel analogue outputs (-10V to +10V) for independent dual rudder and analogue steering system control respectively.

NT951G Autopilot Input/Output Specifications

Inputs: -

Supply Voltage Range	11-40Vdc
Power Consumption	2.5W (@24Vdc)
Illumination Max	8.1W (@24Vdc)

Mag Heading Input Ports

Navitron Heading Sensor Coil mounted above/below Existing Mag Compass	Coil type HSC1 or HSC2
Resolution	0.25°
NMEA 0183 Heading Sentence from Electronic Compass (Priority as shown)	XX HDM XX HDG XX HCC XX HDT
Resolution	0.1°

Gyro Heading Input Ports

Isolated 1:1 Synchro available in Gyro	400Hz Excitation from Autopilot
Resolution	0.25°
NMEA 0183 Heading Sentence from Gyro (Priority as shown)	XX HDT XX HDM XX HDG XX HCC
Resolution	0.1°

Follow Up Rate (Minimum)

All Heading Input types	30° / Sec
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Operator Controls

Yaw	Illumination
Rudder	Mode Switch
Counter Rudder	Off Course Alarm
Rudder Limit	Gyro/Mag Selector
Turn Rate	Auto Trim

Operating Temperature Range	-20 to +60 °C
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Compass Safe Distance	0.6m
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Mechanical Data

Width	297mm
Height	176mm
Depth – behind bezel	110mm
Weight	3.3kg

Outputs: -

NMEA 0183 (Isolated RS422)

Update Rate	Selectable @ 1Hz, 10Hz or 20Hz		
Sentence types (Mag/Gyro v Update Rate)	Hz	Mag	Gyro
	1	HCHDM HCHDG APHDM APHDG	HEHDT AGHDT
	10	HCHDM (5Hz) HCHDG	HEHDT ADHDT (5Hz)
	20	HCHDM	HEHDT
Resolution	0.1°		
Autopilot Status Data	1	APRSA APHTD	AGRSA AGHTD

Furuno Format

Update Rate	Selectable @ 5Hz or 40Hz
Resolution	Selectable @ 0.166° or 0.1°
Signal Amplitude	Selectable @ 5Vdc or 12Vdc

Step by Step

Steps per Degree	Selectable @ 3, 6, 12 or 24
Signal Amplitude	5Vdc

Navitron Serial Data

To Navitron Digital Repeaters Etc

Solenoid Switching

Polarity	Selectable Common +VE/-VE
Max Rating	5A @ 40Vdc

Panel Alarms

Power Fail	Off Course
Steering System Fail	Rudder Limit
Heading Input Fail	Turn Rate Limit
Alarm Test facility	Remote Engaged