NJoy

NAVIS ENGINEERING

Joystick Control System

QUALITY SYSTEM CERTIFICATION DNV ISO 9001

TEHTY SUOMESSA MADE IN FINLAND

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NJoy

Description

NJoy our newest generation of Joystick control system. System features manual control of engines and thrusters with single joystick as well as automatic position keeping.

Despite having same functionality and operation philosophy, NJoy is not a full scale dynamic positioning system. It is designed to be operated by navigator offering much more simple control comparing to DP.

This solution is the best for small work boats and yachts, which require smart and intelligent automatic functions with combination of precise manual control but without complicated DP GUI or DP certification.

More than 2000 systems
delivered since 1992

www.navisincontrol.com

For each type we offer systems engineered to your specific operational needs or requirements.

Overview

- Auto functions based on fast and precise DP algorithms
- Type approved Autopilot could be integrated part
- One control panel for both: Autopilot and NJoy systems
- Same sensors for Autopilot and NJoy systems
- Compact
- Remote support and fine tuning
- Simple and intuitive GUI
- Panels could be installed under solid foil or glass

We delivered our first Joystick control system to Christensen Shipyard in 2008 for 50m custom yacht “Remember When” since than we help to get the control over the intricate propulsion back to the captain on board of yachts and shadow vessels from 24m and up to 120m length, mono and multihulls.

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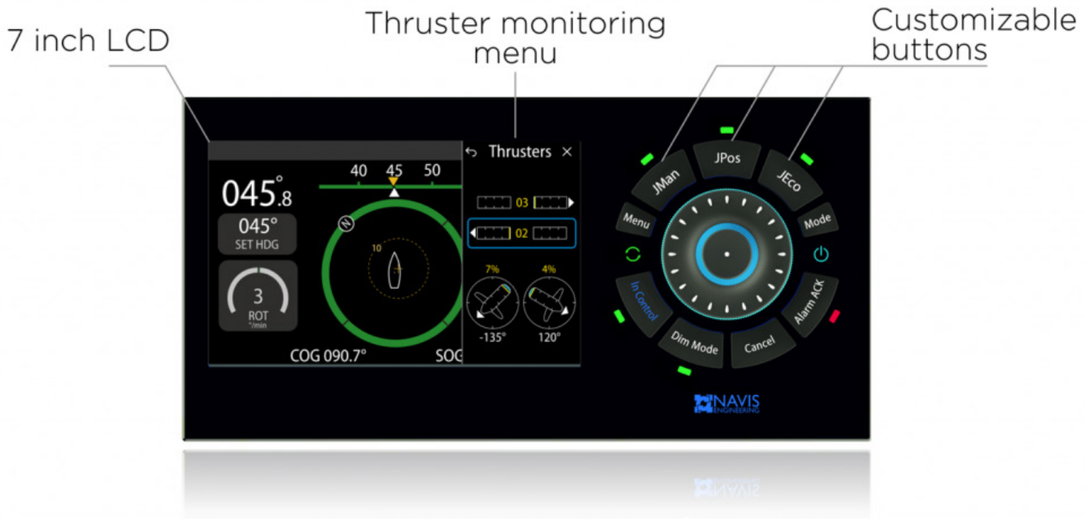
System **Highlights**

- **Analogue interface: 16 DI, 16 DO, 16 AI, 8 AO**
- **8 RS422 sensors + 1 dual RS port**
- **2 PCP connection points or 2 additional control panels only**
- **DGPS**
- **GYRO (Heading)**
- **Wind sensor**
- **… nothing else, no VRS required**



Thruster monitoring menu

Thruster selection\deselection for allocation

Real-time thruster command & feedback

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Zones unavailable for mevement

Manual joystick control mode

Manual joystick command

Manual joystick control mode

Thrusters **configuration**

BTT + 2 Rudders + 2 CPP

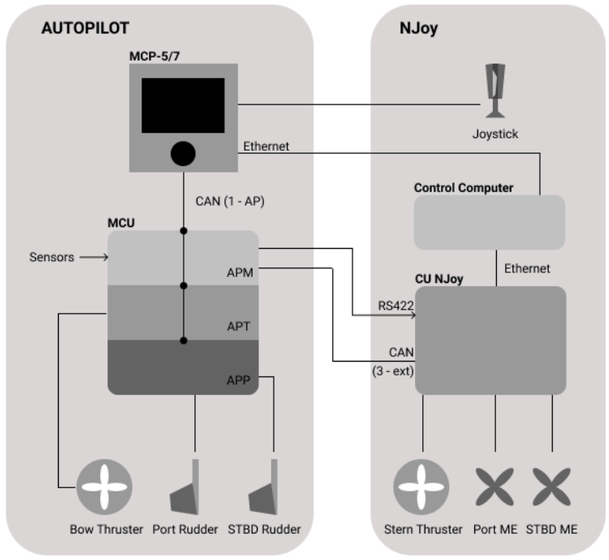
BTT + STT + Rudder + CPP

BTT + 2 AZ

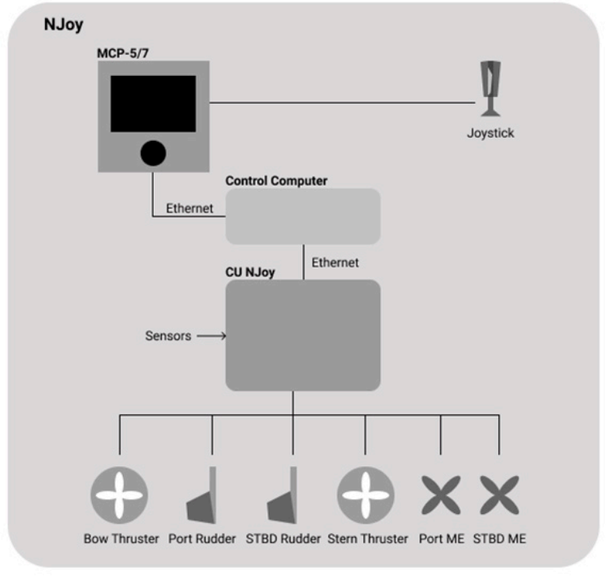
In total interface with propulsion is limited by 8 channels.
F.e. one AZ thruster is 2 channels, One CPP, Rudder,
Tunnel thruster is 1 channel

System **diagram**

NJoy with Certified autopilot



NJoy standalone



Control **Modes**

Standby mode

Ship Control is provided from the Bridge Control Console, using engine telegraph levers, thruster control levers and steering levers or wheel. The system is in operation and is ready for control acceptance.

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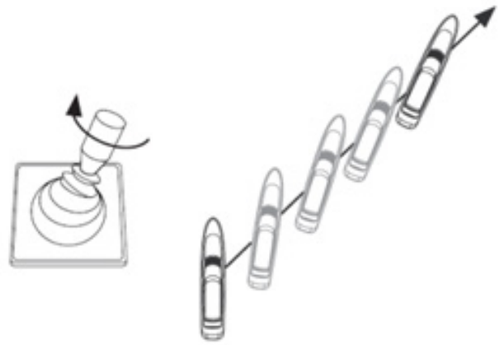
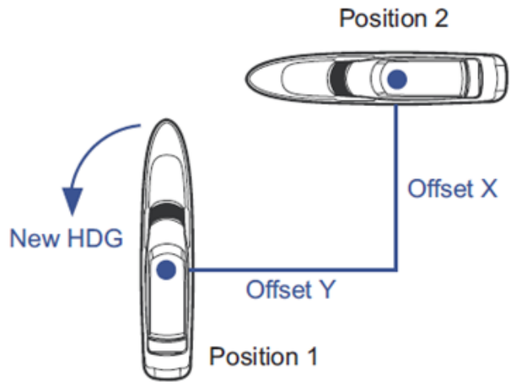


Joystick Auto Position & Heading (Jpos)

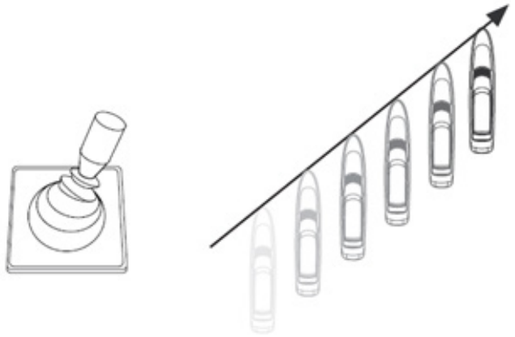
The surge/sway forces and the yaw moment are controlled manually by using the joystick/knob.
• Adjustable joystick gain (sensitivity)



Joystick Auto Position & Heading (Jpos)

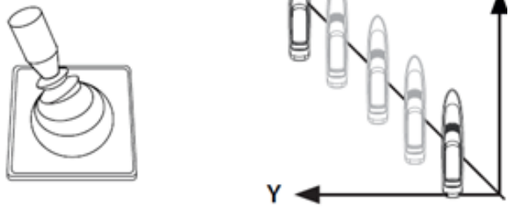
Automatic keeping of the operator selected vessel heading.
• Hold the vessel heading
• Set new heading: absolute value or offset from the previous set-point
• Set rate of turn
• Adjustable heading controller gain
• Heading deviation alarm with adjustable limit

Automatic keeping of the operator selected vessel position.
• Hold the vessel position
• Set new position as offset from the previous set-point
• Set transfer speed
• Adjustable position controller gain
• Position deviation alarm with adjustable limit



Joystick Auto Heading & Manual positioning (JHdg)

Automatic keeping of the operator selected vessel heading.
• Hold the vessel heading
• Set new heading: absolute value or offset from the previous set-point
• Set rate of turn
• Adjustable heading controller gain
• Heading deviation alarm with adjustable limit
The surge/sway forces and the yaw moment are controlled manually by using the joystick/knob.
Adjustable joystick gain (sensitivity)



Joystick Speed Control (Jspd)

Automatic keeping of the operator selected vessel speed vector.

• Hold the vessel speed
• Set new speed (digital/joystick input)
• Adjustable speed controller gain

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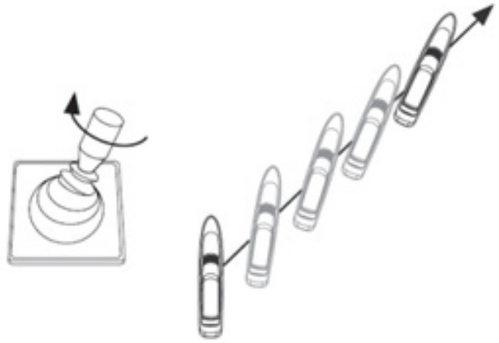

Joystick Auto Heading & Manual positioning (JHdg)

The surge/sway forces and the yaw moment are controlled manually by using the joystick/knob.
• Adjustable joystick gain (sensitivity)

Joystick Auto Position & Heading (Jpos)

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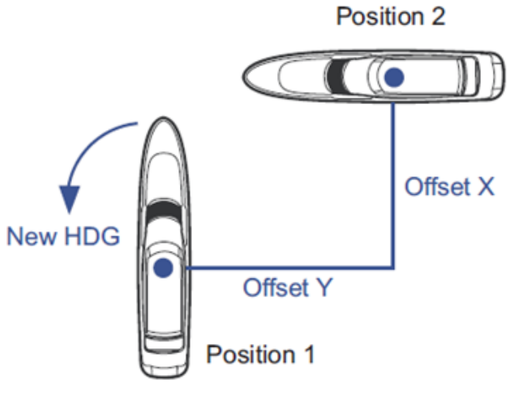
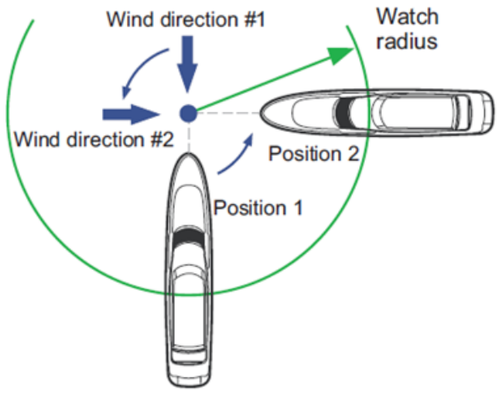
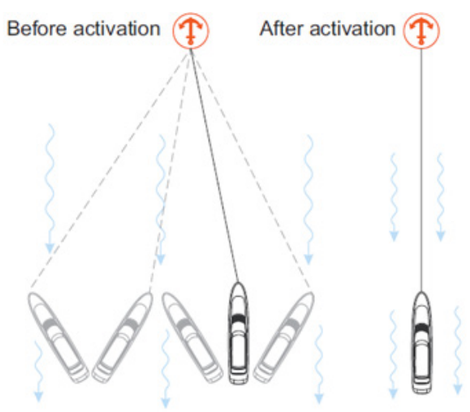


Automatic keeping of the operator selected vessel position.
• Hold the vessel position
• Set new position as offset from the previous set-point
• Set transfer speed
• Adjustable position controller gain
• Position deviation alarm with adjustable limit



Joystick Eco Positioning (JEco)

Automatic keeping of the operator selected area with optimal heading directed against disturbing force (wind and/ or current) to minimize power consumption of propulsion.



Joystick Anchor (JAnc)

The System automatically searches and sets an optimal heading directed against disturbing force (wind and/or current) to minimize yawing by means of only stern propulsion.

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Thrust Allocation

At any given moment the fore-aft and athwart ships forces and rotary moment, which are necessary for ship position and heading control, are calculated.

- **Thrust Limits**
- **Thrust Configuration**

Auto Wind Compensation

When this function is selected, control forces and moments are generated to compensate for wind disturbance.

Alarm System

The built-in alarm generating system includes online diagnostics, message reporting and alarm acknowledgement function.

- **Alert Status System**
- **(red, yellow, green)**
- **Voice Alarms**
- **Online Diagnostics**

Contact Us

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