

# Joystick/DP System

## With IMJ panel

## Precise Maneuvering

***With EMRI Joystick/Dynamic Positioning System***





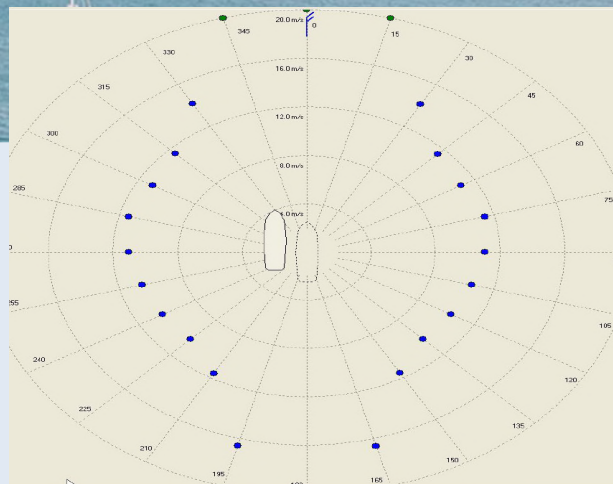
# Automatic position keeping for safe and efficient maneuvering

*The Joystick/Dynamic Positioning System from EMRI provides excellent maneuvering capabilities with user friendly modes of operation.*

- ▶ **Automatic and Manual Control**
- ▶ **Flexible Console Design**
- ▶ **Customizable Panel Options**
- ▶ **Training Mode**
- ▶ **Intuitive Operation**
- ▶ **Limited Time needed for Sea Trial**
- ▶ **Easy to Read High Brightness Display**

The Joystick/Dynamic Positioning system is based on many years of experience with design of intuitive and safe navigation equipment together with an extensive database of ship models. Every system is thoroughly tested at the factory before delivery, to ensure high standard performance and to save valuable time during sea trial. This is typically performed and approved with an onboard visit length of one or two days.

The JS/DP-panel is designed with a programmable, high brightness display with day and night view, which gives the navigator relevant information at all times during maneuvering with the easy to use automatic and manual control modes.



## Capability Plots

The EMRI Joystick/Dynamic Positioning System is preceded by a series of Capability Plots. This is a polar diagram of the ship & the system's ability to resist wind and current.

EMRI's capability plots are computer simulations, examining the delivered control system's performance against theoretical vessel specifications.

## ▶ Flexible console design

On Cruise Liners and Giga Yachts with plenty of console space, the EMRI JS/DP-panels can be directly dropped down in the cut-outs on the consoles for easy "plug' n play".

On Mega Yachts with tighter console design the JS/DP-panels can be integrated into the overall foil-design, utilizing a common layout of buttons, texts and lamps. The system thereby appears to be a nicely integrated shipyard design.

## ▶ Training

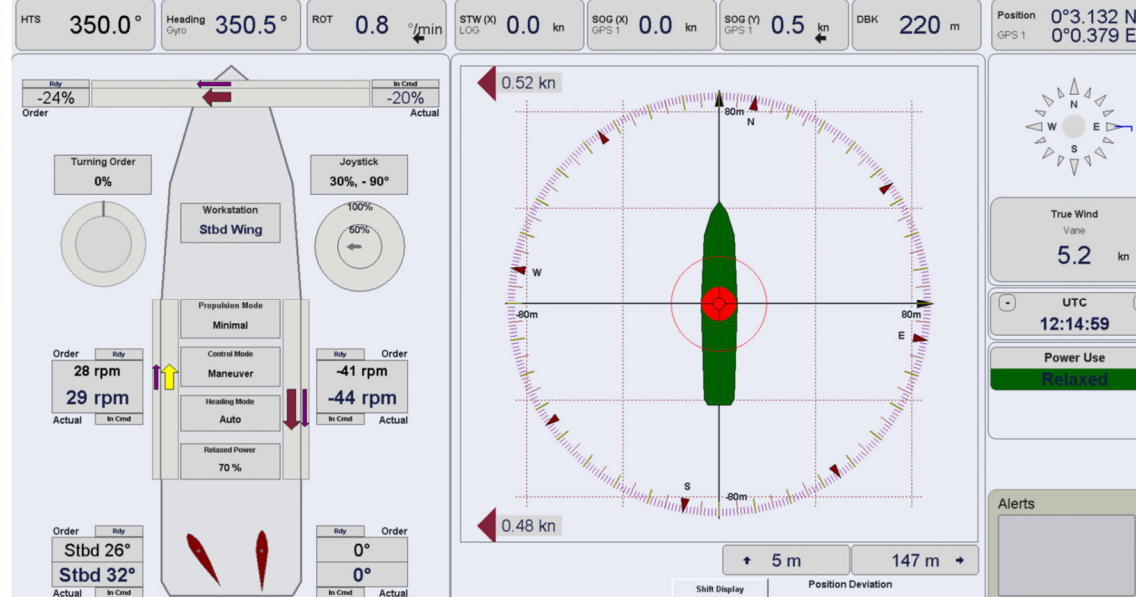
Whenever the vessel is alongside the crew can perform onboard training with the system, or at sea depending on the number of control panels. Data collected during the sea trial is used in a built-in computer model, providing a realistic setting when using the training mode.



## DP display

The Dynamic Positioning display application can be shown on the navigation system supplier's computer, or a computer delivered by EMRI.

VDU pictures are designed to each vessel's maneuver-devices.



## Control modes

The Joystick/Dynamic Positioning System provides the navigator with a set of control features that are simple and safe to use.

### Maneuver Control

Can be used for manual steering using the joystick when performing low speed maneuvering e.g., in and out of ports. In order to assist the navigator, the system offers an Auto Heading feature and a Wind Correct feature. When activated, the vessel will automatically maintain the set heading and compensate for impacts caused by the wind.

### DP Control

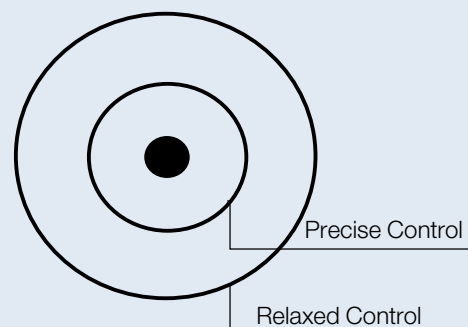
By the use of thrusters and rudders, the system ensures that the vessel will maintain a specific position when Dynamic Positioning is activated. In DP Control, the navigator can choose to use the Auto Heading feature, which will automatically keep the vessel at the specified heading or use the Wind Heading feature, to automatically set the vessel up against the wind in order to optimize fuel consumption during position keeping.

When in DP Control the navigator can plan the next maneuver by getting a visualization of the vessel's movement before the plan is executed. A shadow vessel will be shown on the Dynamic Positioning display application using the actual vessel position as reference.



## Relaxed mode

In order to achieve better fuel efficiency, the system has a relaxed steering feature, which can be activated when using Maneuver control or DP control. In Maneuver control, it provides the most relaxed fuel saving heading keeping, by minimizing use of rudder movements. In DP control it will allow the vessel to drift around in a larger specified radius, thereby minimizing the use of power to keep the vessel at a precise spot.



The settings for precise control and relaxed control are individually set up for each vessel according to specifications.



## Service tools

The system performs continuous logging of machine interface and navigation data for remote upgrading and service. All it requires is a laptop, an ethernet cable and a trained ETO.

## ► Panel options

The IMJ series of panels are designed to be customizable by offering different panel layouts for individual users. The simplest panels are operated by a joystick and a tiller while more complex panels can have a mini wheel for turning power or steering control, or an Azimuth lever if that is desired. The panels are designed so they can easily replace old systems for improving the human machine interface with minimum change to how the system is operated.

### Large panel integration

Levers, display and pushbuttons can be delivered as individual modules to be built into yard- or owner specific console layouts. The modules can be mounted in the console from the bottom up in order to create a visually streamlined look in the console.

### Lever options

Levers from various makers can be used to fulfill special design needs if the electrical interface is approved. Panels can also be designed with el-shaft controlled levers in the system.

### Push button options

Special push button design may be developed to fit a uniform bridge design.

### Portable option

The portable panel is hooked on bulkhead or railing mounted hooks. The panel can be used on multiple workstations, limiting the needed number of panels for minimizing costs and needed console space. It can be stowed away, when not used.

The portable panel is watertight and delivered with a rugged cable with rugged connectors to make it more robust against wear.



## ► Need a quotation?

If you have a specific project that you would like to discuss, don't hesitate to contact [sales@emri.dk](mailto:sales@emri.dk). Together we will find the correct solution.

A good starting point is to determine needs and general scope. Here some typical topics that can be useful to prepare, before the technical discussion:

### Questions to prepare

- Vessel (Name or IMO number)
- Class (classification society)
- Notation (DP class)
- Number of workstations (indoor)
- Number of workstations (outdoor)
- Number of Bow Thrusters
- Number of Main Propellers
- Number of independent Rudders