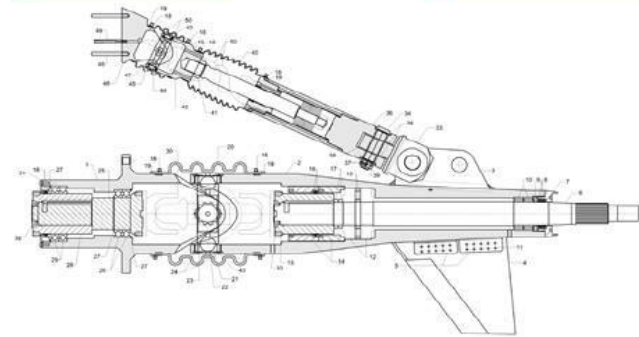




PROPULSION SYSTEM SURFACE PROPELLERS



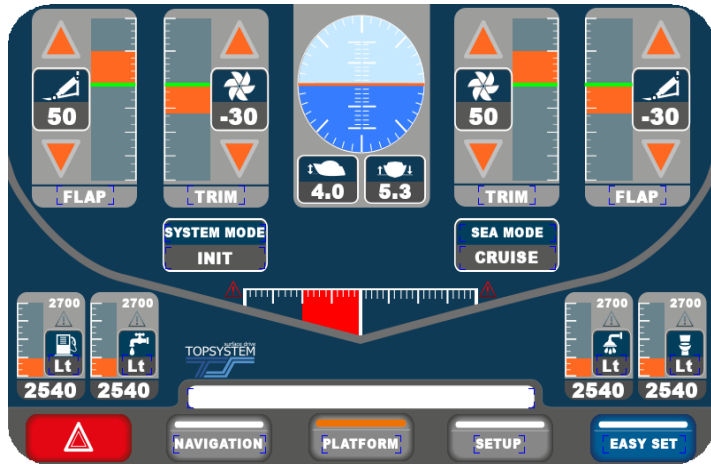
ITALIAN INNOVATION AND TECHNOLOGY
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SURFACE DRIVES



EASY SET TRADE MARK - EXCLUSIVE PRODUCTS

The electronic system device, employs a software which automatically adapts to the propulsions' position depending on the boat loading conditions and on the revolutions of the engine. It is by intervening on both , trim and flap (INTERCEPTORS) that the vessel achieves its highest performance.



EASY SET

Trim – flap - pitch –roll automatic control system



TOUCH SCREEN 10"

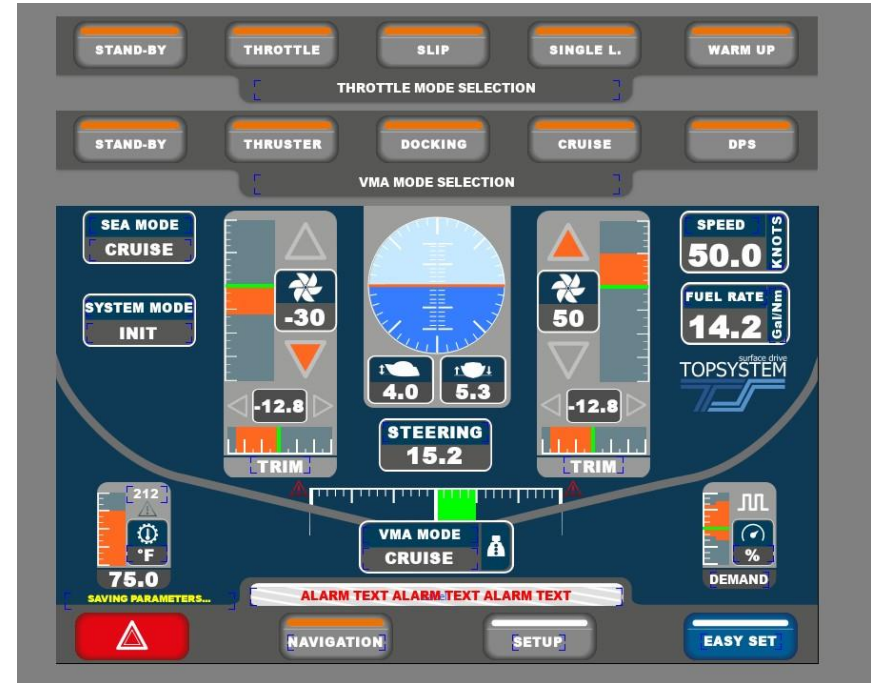
NAVICO SIMRAD INTEGRATION

TOUCH SCREEN 7"

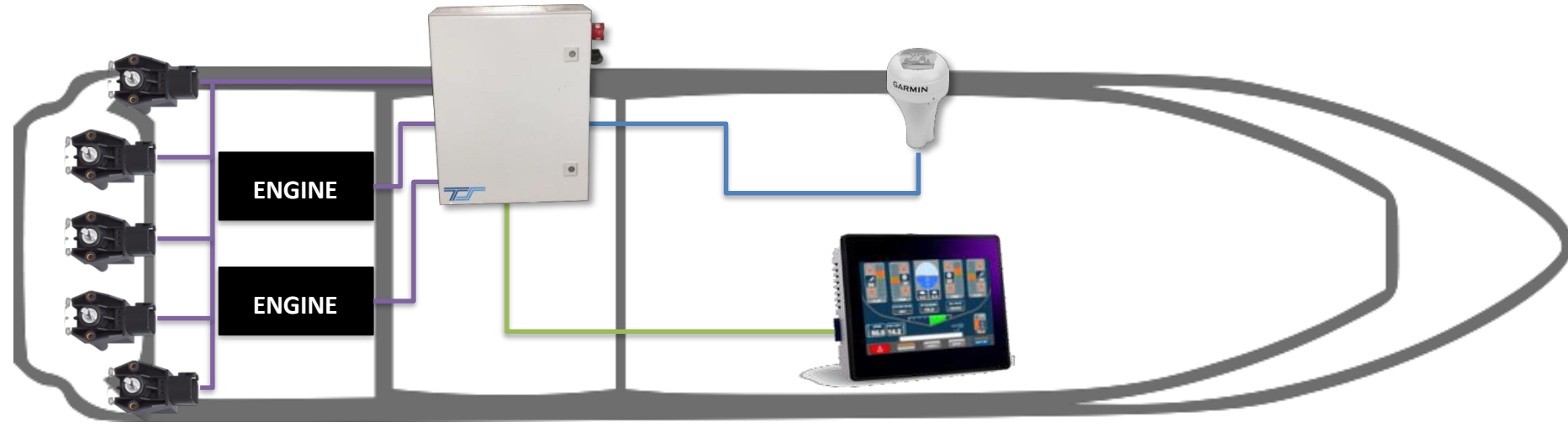


Functions:

- control of trim tabs and shaft trimming
- steering assistance
- roll stabilization
- steering limitation at high speed
- maneuvering assistance
- shaft parking
- engine data monitoring
- aft platform control



Hardware overview



Service levels

1. Free-access service page

- Check single units status
- Check communication with peripherals
- Read firmware version
- **Take pictures of SYSTEM STATUS page, ALARMS page and HISTORY page and send them to TopSystem service office!**

2. Password-protected service page

- Check input signals status
- Manual comands (be careful)
- Calibrate the system after hardware replacement

CAN NETWORK DIAGNOSTIC

CAN ID	BOARD TYPE	BOARD STATUS
001	OM120/135/145 16+16	ONLINE
002	OM120/135/145 16+16	ONLINE
003	OM220 4A TEMP/RES	ONLINE
004	OM220 4A TEMP/RES	ONLINE
005	ELOBAU ANGLE SENS	ONLINE
006	ELOBAU ANGLE SENS	ONLINE
007	NO BOARD	N/A
008	NO BOARD	N/A
009	ELOBAU ANGLE SENS	ONLINE
010	NO BOARD	N/A
011	ELOBAU ANGLE SENS	ONLINE
012	ELOBAU ANGLE SENS	ONLINE
013	NO BOARD	N/A
- - -	NO BOARD	N/A
- - -	NO BOARD	N/A
101	OM900B SLOPE S	ONLINE

CPU LOAD
ACTUAL (%) **41** MAX (%) **46**

CPU FIRMWARE VERSION
V1037 11.01.16 full
NOTE: version must be minimum 10.37

CPU COMMUNICATION STATUS
NMEA0183 **ONLINE**
CPU ENGINE DATA TRANSFER **ON**
SLOPE SENSOR **DISCONNECTED**

CPU INITIALIZATION STATUS
0 - INITIALIZATION OK

SYSTEM DYNAMIC VALUES

	0	80	100
LOAD ACT %	0	0	0
LOAD TOT %	80	0	80
RPM ACTUAL	0	0	0
MOV.DUE TO	IDLE	IDLE	IDLE

MANOEUVR. MODE: OFF
STEERING MODE: OFF

FLAP UP/LO LIMITS: 100 -100
AVG PITCH/ROLL: 0.0 0.0
TARGET PITCH: 0.0

SYSTEM STATUS

ADVANCED SETUP

PARAMETER	STATUS	DESCRIPTION
PLATFORM OPEN CMD	ON/OFF	PLATFORM OPEN EV CMD
PLATFORM CLOSE	ON/OFF	PLATFORM CLOSE EV CMD
PLATFORM LOCK OPEN	ON/OFF	PLATFORM UNLOCK EV CMD
PLATFORM LOCK CLOSE	ON/OFF	PLATFORM LOCK EV CMD
CENTER TRIM UP	ON/OFF	CENTER TRIM UP EV CMD
CENTER TRIM DN	ON/OFF	CENTER TRIM DN EV CMD
CENT. TRANS. OIL LEVEL1	ON/OFF	DISP
PORT TRANS. OIL LEVEL1	ON/OFF	DISP
PORT TRANS. OIL LEVEL2	ON/OFF	DISP
PORT TRANS. OIL LEVEL3	ON/OFF	DISP
CENT. TRANS. OIL LEVEL2	ON/OFF	DISP
STBD TRANS. OIL LEVEL1	ON/OFF	DISP
STBD TRANS. OIL LEVEL2	ON/OFF	DISP
STBD TRANS. OIL LEVEL3	ON/OFF	DISP
CENT. TRANS. OIL LEVEL3	ON/OFF	DISP
PLATFORM MOVING BUZZER	ON/OFF	PLATFORM MOVING BUZZER
PLATFORM ALARM BUZZER	ON/OFF	PLATFORM ALARM BUZZER

I/O STATUS

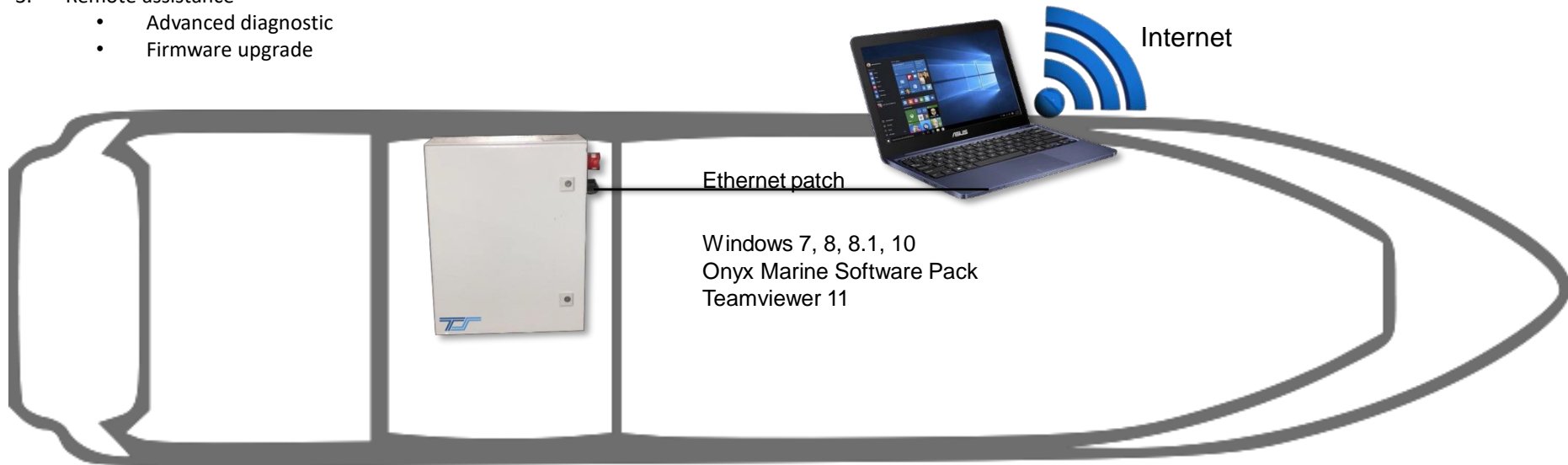
ADVANCED SETUP

WARNING! ON/OFF BUTTONS MAY CAUSE DAMAGE TO THE BOAT

HI OIL TEMP/GRAY ALM ON/OFF PORT STEERING LIMIT CMD
 LL OIL LEVEL BLACK WARN ON/OFF STBD STEERING LIMIT CMD
 HH OIL TEMP/BLACK ALM ON/OFF OIL STDBY PUMP ON CMD
 HYDRAULICS OIL LL ON/OFF DISP
 PANIC BUTTON ON/OFF DISP
 WH ALARM BUZZER ON/OFF

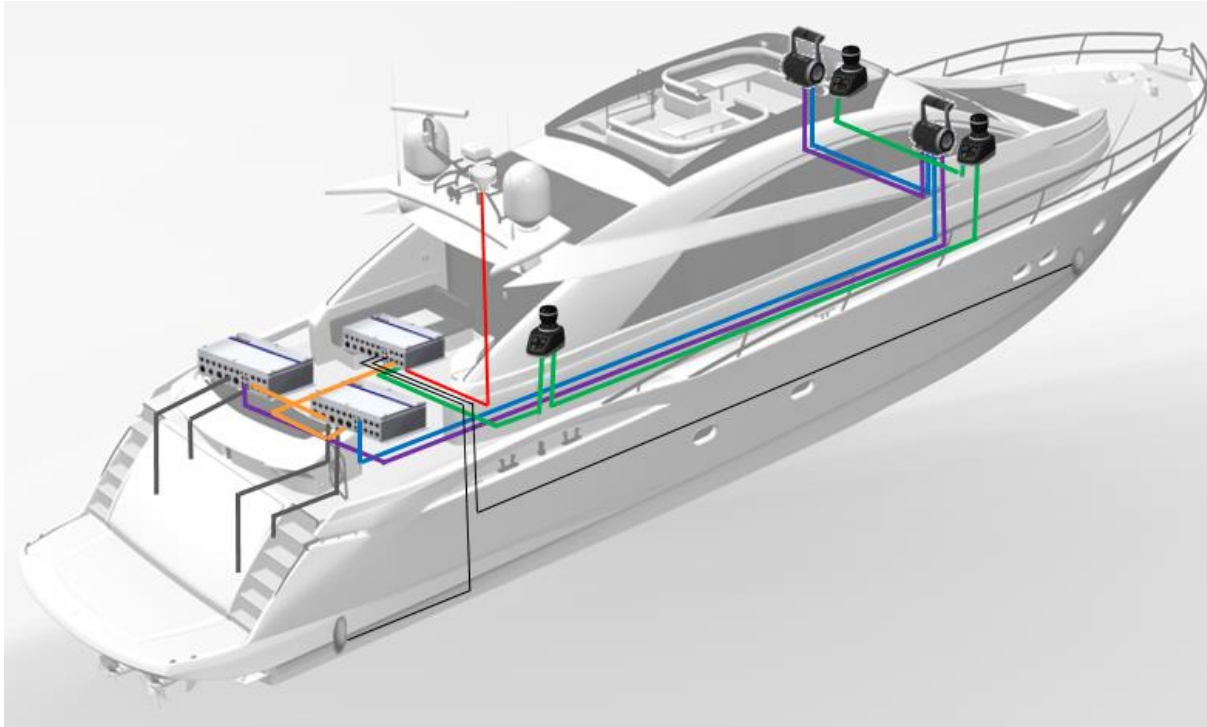
Service levels

3. Remote assistance
 - Advanced diagnostic
 - Firmware upgrade



NEWS 2020: INTEGRATED CONTROL SYSTEM MAREX

Top System EASY SET is innovative control system for surface drive, it is the gateway to connect other systems as the Integrated Control System Marex.



Top System EASY SET is innovative control system for surface drive, it is the gateway to connect other systems as the Integrated Control System Marex.

Marex OS III

Characteristic	Range
Protection category	IP66 (above desk)
Supply voltage	The power supply provided by MPC or EPU
Current consumption	See above
Operating temperature	-25°C to +70°C
Design	CAN bus suitable control head for transmitting signals to the MPC
Interfaces	2 x CAN-Input M12 2 x CAN-Output M12
Variants	<ul style="list-style-type: none"> ▪ With 2 or 3 levers ▪ Color: chrome
Application area	<ul style="list-style-type: none"> ▪ Reversing gear propulsion systems with following functions: <ul style="list-style-type: none"> • Trolling • Warming up • Synchronization • Slip and grip • Alarm



NEWS 2020: INTEGRATED CONTROL SYSTEM MAREX

Top System EASY SET is innovative control system for surface drive, it is the gateway to connect other system. MAREX SYSTEM IS INTEGRATED with Easy Set .

Marex OS3D

Characteristic	Range
Protection category	IP67
Supply voltage	38 V DC -25% / +30% 24 V DC -25% / +30% 12 V DC -20% / +30%
Current consumption	0.13 A : 38 V DC 0.2 A : 24 V DC 0.4 A : 12 V DC
Operating temperature	-25°C to +70°C
Design	Type 530
Number of axis	3 (x,y,z)



Marex OS 3D AVENTICS®

Thruster mode – manual control with paired lever

First Maneuver	Second Maneuver	Combined Maneuver

Marex OS 3D AVENTICS®

3D mode - easy maneuver

Ahead and astern	Lateral movements	Rotational movements



Marex OS 3D AVENTICS®

Thruster mode – manual thruster control

Individual control Specific movements	Combined control Lateral movements	Combined control Rotational movements

Marex OS 3D AVENTICS®

3D mode – complex maneuver

First Maneuver	Second Maneuver	Combined Maneuver

Marex 3D AVENTICS®

Dynamic Positioning Features

Hold Modes	Heading	Position	Requirements	Use Cases/ Benefits
 Heading Mode	Fixed	Floating <i>According to wind and current</i>	Included: New joystick type531 and compass needs to be installed	- Sports Fishing - Keep the view to sunset, skyline, etc. - ...
 Hold Position	Fixed	Fixed	DP-module incl. GPS	- Waiting at watergates, fuel stations, etc. - ...
 Virtual Anchoring	„Natural“ According to wind and current	Fixed range	DP-module incl. GPS	- Keeping position with optimized fuel consumption and noise



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