

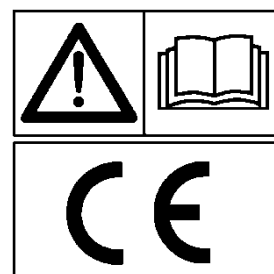
# MASCHIO GASPARDO

**the winning team**



# GENIUS CUT

**EN - USE AND MAINTENANCE**



Cod. F07021029

2014-05

\*) Valido per Paesi UE  
\*) Valid for EU member countries  
\*) Valable dans les Pays UE  
\*) Gilt für EU-Mitgliedsländer  
\*) Válido para Países UE

## INDICE

1.	LOGO BRAND SCREEN .....	3
2.	WORK SCREEN.....	3
3.	MAIN MENU.....	5
4.	DIAGNOSTICS MENU.....	6
4.1	GENERAL INPUTS DIAGNOSTICS MENU .....	8
4.2	GENERAL OUTPUTS DIAGNOSTICS MENU .....	9
4.3	INPUTS IN FREQUENCY DIAGNOSTICS MENU .....	10
4.4	WDO RELAY DIAGNOSTICS MENU .....	11
4.5	ROTOR DIAGNOSTICS MENU .....	12
4.6	HEAD TILTING DIAGNOSTICS MENU .....	13
4.7	MACHINE TILTING DIAGNOSTICS MENU.....	14
4.8	BOOM 1 DIAGNOSTICS MENU .....	15
4.9	BOOM 2 DIAGNOSTICS MENU .....	16
4.10	BOOM 2 EXTENSION DIAGNOSTICS MENU.....	17
5.	FACTORY MENU .....	18
5.1	MOVEMENT CALIBRATION MENU .....	20
5.1.1	MOVEMENT CALIBRATION PAGE .....	22
5.1.2	JOYSTICK DEAD ZONE CALIBRATION PAGE .....	23
5.2	LEVEL 1 PASSWORD MODIFICATION PAGE.....	23
6.	SERVICE INFO SCREEN.....	24
7.	SW INFO SCREEN.....	24
8.	ALARMS SCREEN .....	25

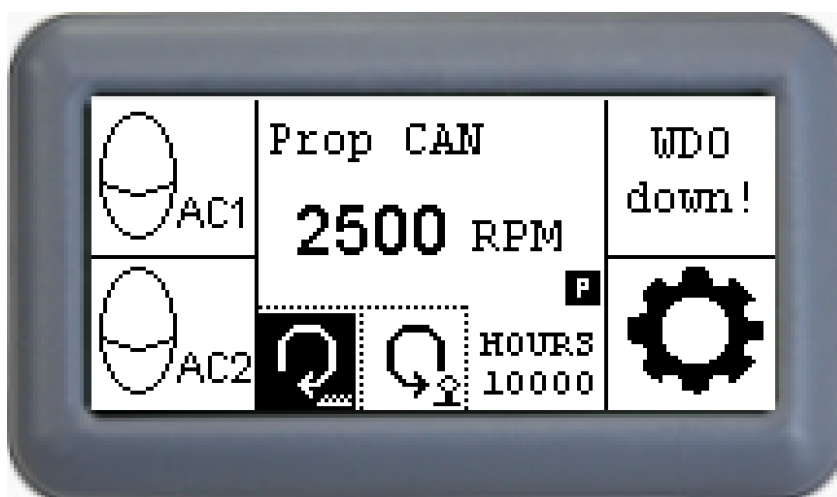
# USE AND CALIBRATION MANUAL

## 1. LOGO BRAND SCREEN





When the display is turned on, a screen showing the manufacturer's logo is briefly displayed. This screen is not displayed if the display logo option is deactivated from the menu.


## 2. WORK SCREEN








The main work screen appears during normal system operation. It contains the visual indications required to operate the machine:


-  represents the status of accumulator 1. Accumulator boom 1 normally excluded. Press the icon on the touch screen to control the solenoid valve for accumulator 1.

When activated, the accumulator icon will show . Press the icon again to deactivate the accumulator and return to the original condition.

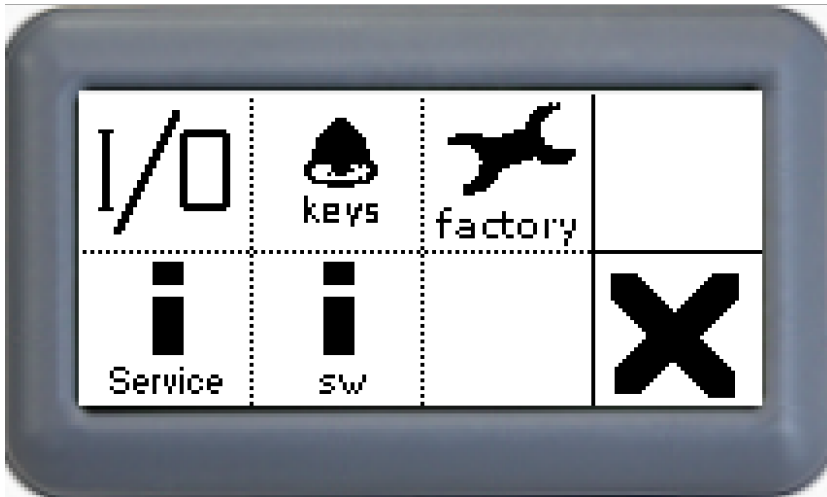
-  represents the status of accumulator 2. Tilting accumulator normally excluded. Press the icon on the touch screen to control the solenoid valve for accumulator 2.

When activated, the accumulator icon will show . Press the icon again to deactivate the accumulator and return to the original condition.







- "Prop CAN" represents the type of machine selected ("Prop CAN" if the machine is proportional in CAN-BUS, or "Hybrid" if the machine is a hybrid).
- The "RPM" value represents the number of revolutions per minute of the rotor. This information can be deactivated from the system menu (**Chapter 5**).
-  represents the status of the clockwise rotator command (grass cutter function). If the solenoid valve relative to the command for the rotor to turn clockwise is commanded, the icon will show . To command the rotor to turn clockwise, press the key for at least 2 seconds and release within a further 5 seconds. To stop, press the stop button in accordance with the set ramp.
-  represents the status of the anticlockwise rotator command (hedge cutter function). If the solenoid valve relative to the command for the rotor to turn anticlockwise is commanded, the icon will show . To command the rotor to rotate anticlockwise, press the key for at least 2 seconds and release within a further 5 seconds. To stop, press the stop button in accordance with the set ramp.
- The "HOURS" values represents the number of hours the rotor has operated.
- "WDO down" is a flashing message that appears if the master ECU's WDO relay is open, cutting off power to the controls.


Press the  icon to access the main menu.

### 3. MAIN MENU

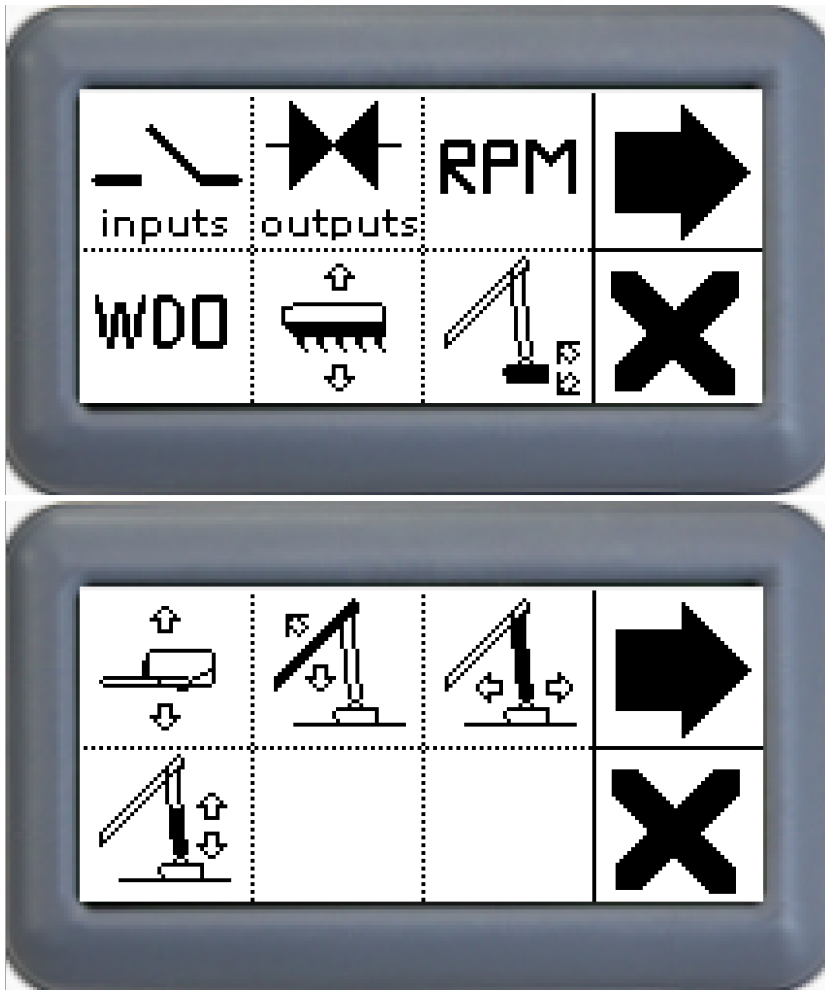



The main menu screen, accessible from the work screen, allows you to access the main system controls. Press the icons to access the following sub-menus:



-  allows you to access the diagnostics menu for the in-out of the master ECU (**Chapter 4**).
-  allows you to enable/disable the tones of the CAN-VIEW3 display when the various touch screen icons are pressed. When the key tones are active, the icon will show .
-  accesses the system sub-menus for movement activations and calibrations. The sub-menus may only be enabled if a password is entered in the window that appears once this icon is pressed. If the password is not entered (or is incorrect) the system returns to the main menu page. (**Chapter 5**). There are currently 3 different password levels provided, which allow access to the different configurations.
-  allows you to display the information relating to the manufacturer brand, if activated in the relative menu. If the brand is deactivated, the icon does not allow access to any screen. (**Chapter 6**).
-  allows you to show the information relating to the software code of the ECU of the system (**Chapter 7**).









-  returns to the main work screen (**Chapter 2**).

## 4. DIAGNOSTICS MENU

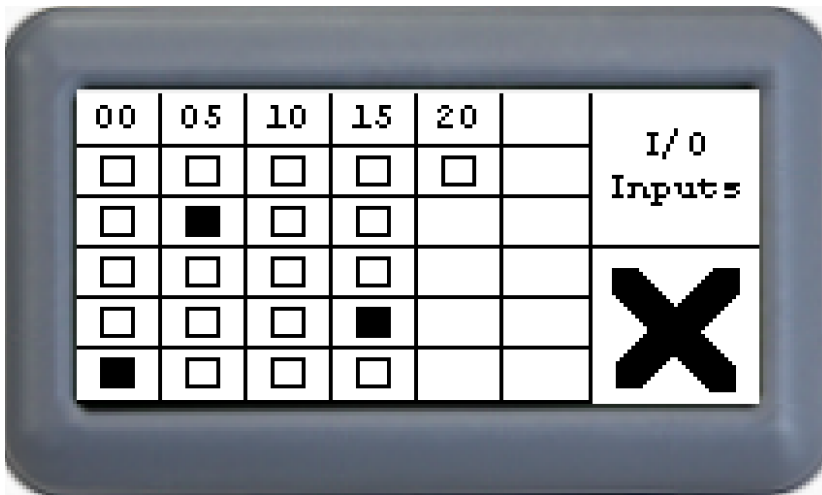


The main diagnostics menu screen is divided into 2 windows. To navigate between the two windows, press the  icon. Press the dedicated icons to access the various diagnostics screens:

-  accesses the general diagnostics screen for master ECU inputs (**Chapter 4.1**).
-  accesses the general diagnostics screen for master ECU outputs (**Chapter 4.2**).
- **RPM** accesses the diagnostics screen for master ECU inputs in frequency (**Chapter 4.3**).

-  accesses the diagnostics screen for the power relay of the "Watch Dog" outlets of the master ECU (**Chapter 4.4**).
-  accesses the diagnostics screen for the in-out dedicated to rotor movement (**Chapter 4.5**).
-  accesses the diagnostics screen for the in-out dedicated to head tilting (**Chapter 4.6**).
-  accesses the diagnostics screen for the in-out dedicated to machine tilting (**Chapter 4.7**).
-  accesses the diagnostics screen for the in-out dedicated to boom 1 movement, only active if the proportional machine CAN-BUS is selected. (**Chapter 4.8**).
-  accesses the diagnostics screen for the in-out dedicated to boom 2 movement, only active if the proportional machine CAN-BUS is selected (**Chapter 4.9**).
-  accesses the diagnostics screen for the in-out dedicated to boom 2 insertion/extraction (**Chapter 4.10**).
-  allows you to return to the main menu screen (**Chapter 3**).

## 4.1 GENERAL INPUTS DIAGNOSTICS MENU



The general inputs diagnostics screen of the master ECU shows graphs of the logic status of all inputs of the ECU. The first value in each column represents the number of the input (according to the pinout of the ECU), in groups of 5. There are 21 inputs. The squares represent:

- white: 0 volt input.
- black: 12 volt input if digital, or > 0 volt if analogue.

The inputs not used by the system are always white. In detail:

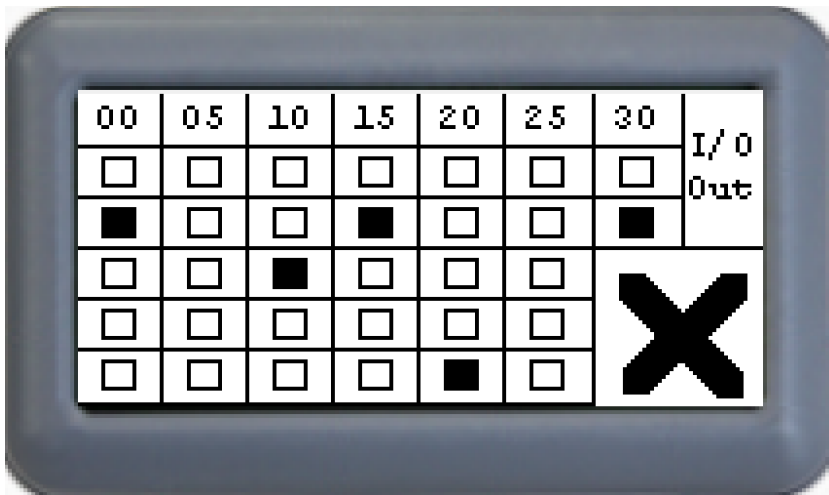
<b>Inp</b>	<b>00:</b>	PIN J2.15 – Anticlockwise rotor activation button.
<b>Inp</b>	<b>01:</b>	PIN J2.27 – Clockwise rotor activation button.
<b>Inp</b>	<b>02:</b>	PIN J2.16 – Stop rotor button.
<b>Inp</b>	<b>03:</b>	PIN J2.28 – Emergency button 1 input.
<b>Inp</b>	<b>04:</b>	PIN J2.17 – Emergency button 2 input (for redundancy).
<b>Inp</b>	<b>05:</b>	PIN J2.29 – System power enable button.
<b>Inp</b>	<b>06:</b>	PIN J2.18 – Boom extension control.
<b>Inp</b>	<b>07:</b>	PIN J2.30 – Boom return control.
<b>Inp</b>	<b>08:</b>	PIN J2.19 – Tilting direction 1 control with machine.
<b>Inp</b>	<b>09:</b>	PIN J2.31 – Tilting direction 2 drive with hybrid machine.
<b>Inp</b>	<b>10:</b>	PIN J2.20 – Head tilting control with hybrid machine.
<b>Inp</b>	<b>11:</b>	PIN J3.26 – Signal from dead man's sensor.
<b>Inp</b>	<b>12:</b>	PIN J3.15 – Floating insertion button with hybrid machine.
<b>Inp</b>	<b>13:</b>	PIN J3.27 – Not used.
<b>Inp</b>	<b>14:</b>	PIN J3.16 – Not used.
<b>Inp</b>	<b>15:</b>	PIN J3.28 – Not used.
<b>Inp</b>	<b>16:</b>	PIN J3.17 – Not used.
<b>Inp</b>	<b>17:</b>	PIN J3.29 – Not used.
<b>Inp</b>	<b>18:</b>	PIN J3.18 – Not used.
<b>Inp</b>	<b>19:</b>	PIN J3.30 – Not used.
<b>Inp</b>	<b>20:</b>	PIN J3.19 – Not used.



Press the **X** icon to return to the main diagnostics menu (**Chapter 4**).

**NOTE:** As shown in the wiring diagrams, connector J2 is identified as X6, connector J3 is identified as X7.

## 4.2 GENERAL OUTPUTS DIAGNOSTICS MENU



The general outputs diagnostics screen of the master ECU shows graphs of the logic status of all outputs of the ECU. The first value in each column represents the number of the output (according to the pinout of the ECU), in groups of 5. There are 31 outputs. The squares represent:


- white: 0 volt output.
- black: 12 volt output if digital, or > 0 mA if proportional in current.

The outputs not used by the system are always white. In detail:

**Out 00:** PIN J2.24 – Not used.

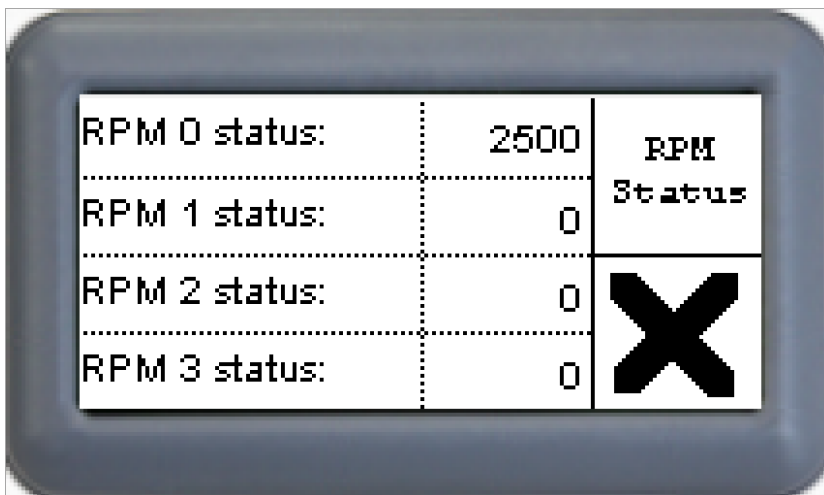
<b>Out</b>	<b>01:</b>	PIN	J2.13 – Tilting direction 1 control.
<b>Out</b>	<b>02:</b>	PIN	J2.1 – Tilting direction 2 control.
<b>Out</b>	<b>03:</b>	PIN	J2.2 – Head direction 1 control.
<b>Out</b>	<b>04:</b>	PIN	J2.3 – Head direction 2 control.
<b>Out</b>	<b>05:</b>	PIN	J2.4 – Boom 1 direction 1 control.
<b>Out</b>	<b>06:</b>	PIN	J2.5 – Boom 1 direction 2 control.
<b>Out</b>	<b>07:</b>	PIN	J2.6 – Boom 2 direction 1 control.
<b>Out</b>	<b>08:</b>	PIN	J2.7 – Boom 2 direction 2 control.
<b>Out</b>	<b>09:</b>	PIN	J2.8 – Not used.
<b>Out</b>	<b>10:</b>	PIN	J2.9 – Not used.
<b>Out</b>	<b>11:</b>	PIN	J2.10 – Not used.
<b>Out</b>	<b>12:</b>	PIN	J2.11 – Not used.
<b>Out</b>	<b>13:</b>	PIN	J2.12 – Not used.
<b>Out</b>	<b>14:</b>	PIN	J2.23 – Not used.
<b>Out</b>	<b>15:</b>	PIN	J2.35 – Not used.
<b>Out</b>	<b>16:</b>	PIN	J3.24 – Not used.

Out	17:	PIN	J3.13 – Not used.
Out	18:	PIN	J3.1 – Boom extension control.
Out	19:	PIN	J3.2 – Boom return control.
Out	20:	PIN	J3.3 – Floating 1 control.
Out	21:	PIN	J3.4 – Floating 2 control.
Out	22:	PIN	J3.5 – Accumulator boom 1 control.
Out	23:	PIN	J3.6 – Tilting accumulator control.
Out	24:	PIN	J3.7 – Clockwise rotor control.
Out	25:	PIN	J3.8 – Anticlockwise rotor control.
Out	26:	PIN	J3.9 – Safety control.
Out	27:	PIN	J3.10 – General cylinders control.
Out	28:	PIN	J3.11 – Not used.
Out	29:	PIN	J3.12 – Not used.
Out	30:	PIN	J3.23 – Not used.
Out	31:	PIN	J3.35 – Not used.

Press the  icon to return to the main diagnostics menu (**Chapter 4**).

**NOTE:** As shown in the electrical diagrams, connector J2 is identified as X6, connector J3 is identified as X7.

### 4.3 INPUTS IN FREQUENCY DIAGNOSTICS MENU



The inputs in frequency diagnostics screen of the master ECU represents the value of all inputs in frequency of the ECU. There are 4 inputs.


Inputs not used are always 0. In detail:

**RPM 0:** PIN J3.31 – Rotor revolutions signal.

**RPM 1:** PIN J3.21 – Not used.

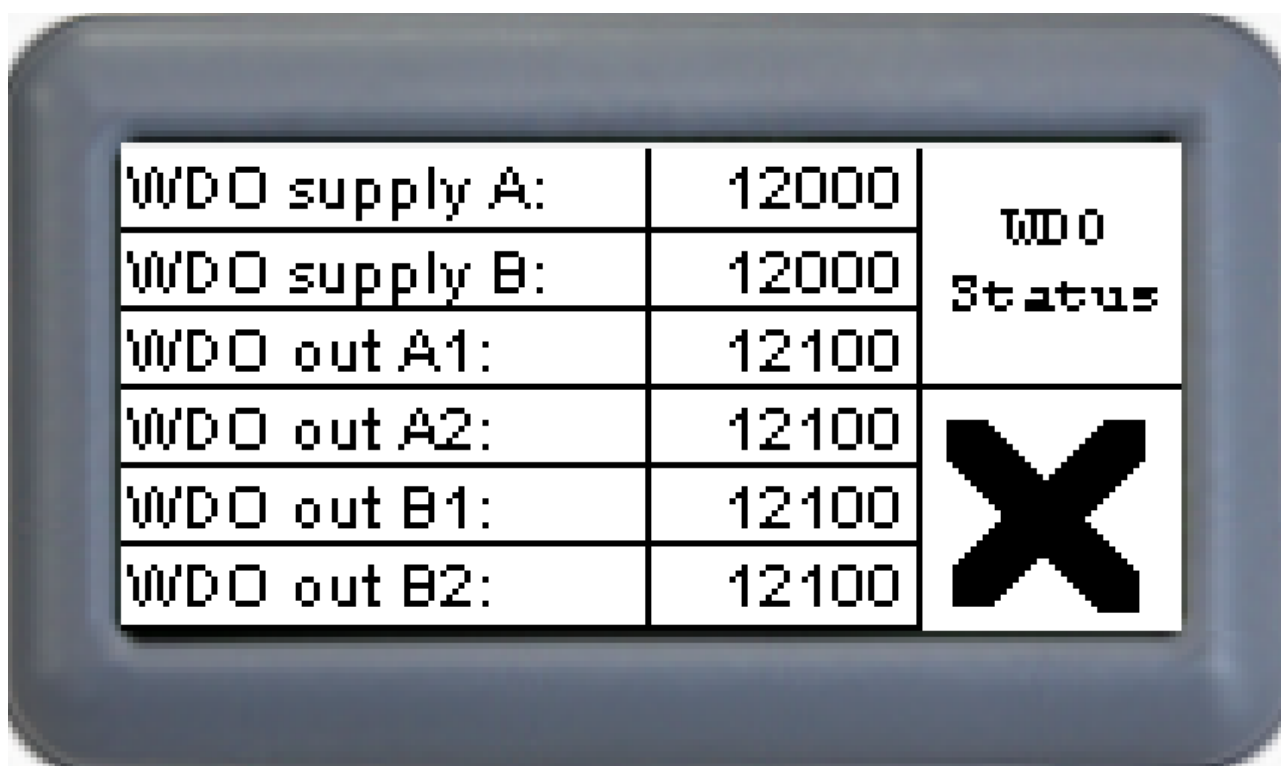
**RPM 2:** PIN J3.32 – Not used.


**RPM 3:** PIN J3.22 – Not used.

Press the  icon to return to the main diagnostics menu (**Chapter 4**).

**NOTE:** As shown in the electrical diagrams, connector J2 is identified as X6, connector J3 is identified as X7.

## 4.4 WDO RELAY DIAGNOSTICS MENU




WDO supply A:	12000	WDO Status
WDO supply B:	12000	
WDO out A1:	12100	
WDO out A2:	12100	
WDO out B1:	12100	
WDO out B2:	12100	

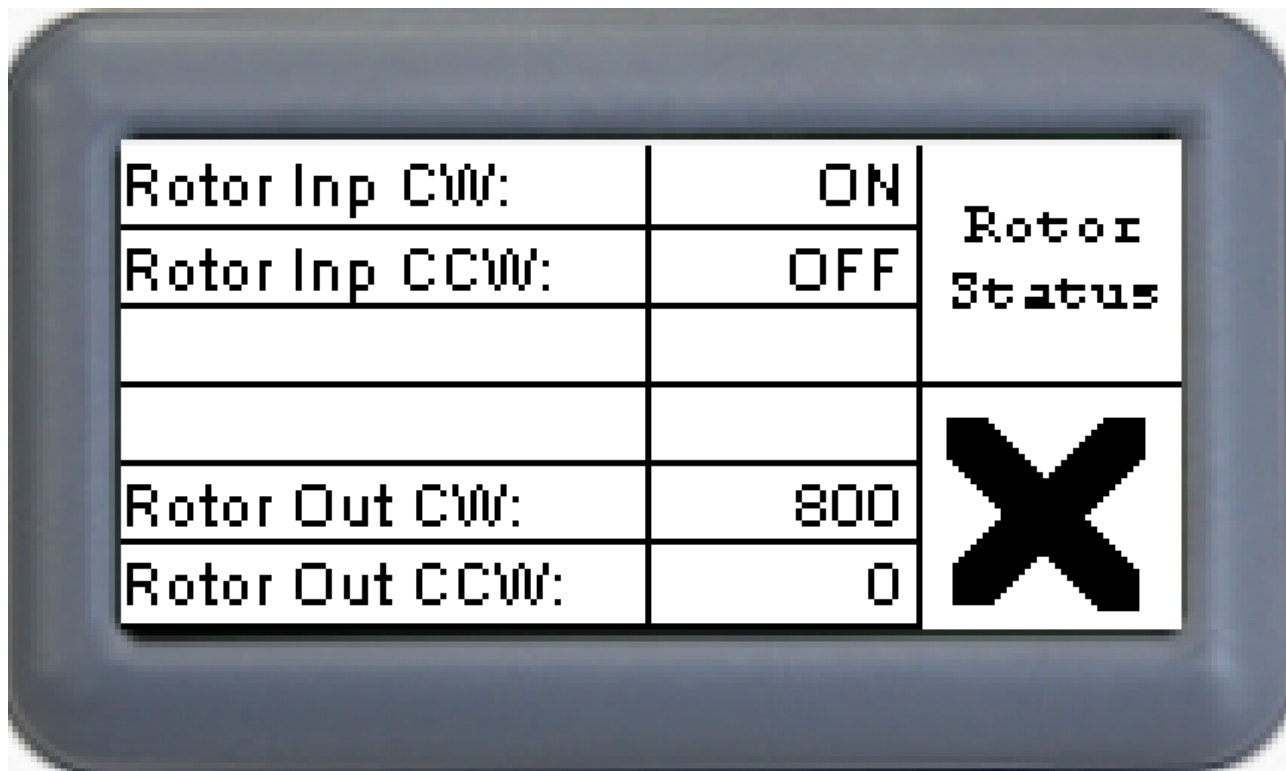
The WDO relay diagnostics screen of the master ECU represents the value of all inputs and outputs connected to the Watch Dog safety relay. The list represents:

- WDO supply A: power status of WDO CPU A (in mV).
- WDO supply B: power status of WDO CPU B (in mV).
- WDO out A1: voltage status of the relay output, bank A1 (in mV).
- WDO out A2: voltage status of relay output, bank A2 (in mV).
- WDO out B1: voltage status of relay output, bank B1 (in mV).
- WDO out B2: voltage status of relay output, bank B2 (in mV).

If the power supplies are 0 it means that the WDO relay is not correctly powered. If the outputs are 0 it means that the WDO relay does not supply power to the outputs.

Press the  icon to return to the main diagnostics menu (**Chapter 4**).


## 4.5 ROTOR DIAGNOSTICS MENU



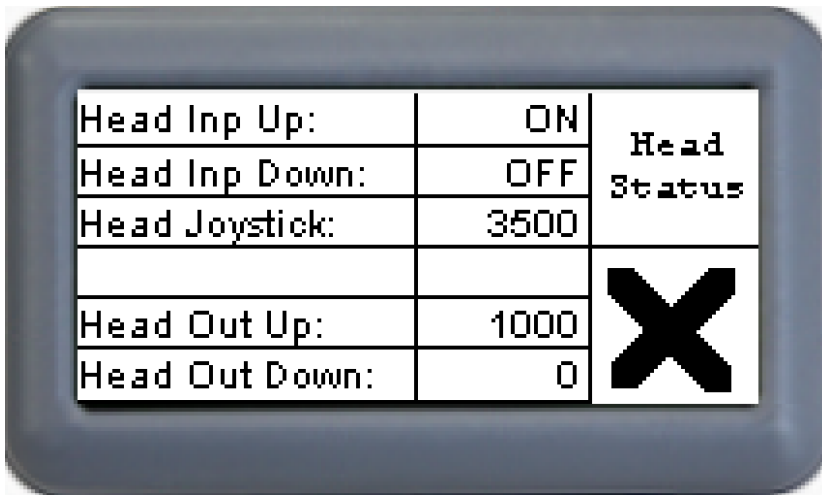
Rotor Inp CW:	ON	Rotor Status
Rotor Inp CCW:	OFF	
		X
Rotor Out CW:	800	
Rotor Out CCW:	0	


The rotor diagnostics screen represents the inputs and outputs dedicated to the movement of the rotor. There are 2 inputs and 2 outputs. The list represents:

- Rotor Inp CW: logic rotor input status clockwise direction (ON 12v – OFF 0v).
- Rotor Inp CCW: logic rotor input status anticlockwise direction (ON 12v – OFF 0v).
- Rotor Out CW: status in current rotor output clockwise direction (in mA).
- Rotor Out CCW: status in current rotor output anticlockwise direction (in mA).

Press the  icon to return to the main diagnostics menu (**Chapter 4**).


## 4.6 HEAD TILTING DIAGNOSTICS MENU



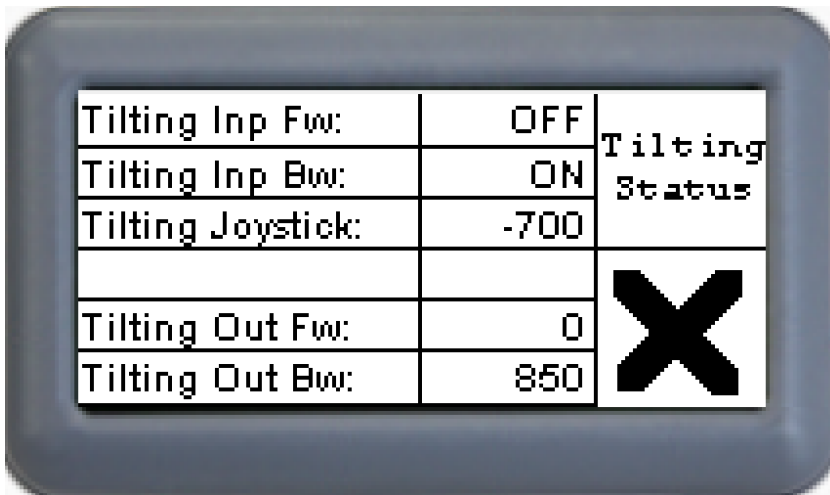
Head Inp Up:	ON	Head Status
Head Inp Down:	OFF	
Head Joystick:	3500	
		
Head Out Up:	1000	
Head Out Down:	0	

The head tilting diagnostics screen represents the inputs and outputs relative to the movement of the head tilting. There are 3 inputs and 2 outputs, the status of which varies according to the type of machine selected. The list represents:

- Head Inp Up: logic status input head tilting up.
  - Hybrid machine: always OFF.
  - Proportional machine CAN: logic status from joystick CAN-BUS (ON-OFF).
- Head Inp Down: logic status input head tilting down.
  - Hybrid machine: always OFF.
  - Proportional machine CAN: logic status from joystick CAN-BUS (ON-OFF).
- Head Joystick: head tilting control proportional joystick value.
  - Hybrid machine: roller under voltage (value from 8000 to 28000, in mV).
  - Proportional machine CAN: roller in CAN-BUS (value from -1000 to 1000).
- Head Out Up: output in current status head tilting up (in mA).
- Head Out Down: output in current status head tilting down (in mA).

Press the  icon to return to the main diagnostics menu (**Chapter 4**).

## 4.7 MACHINE TILTING DIAGNOSTICS MENU



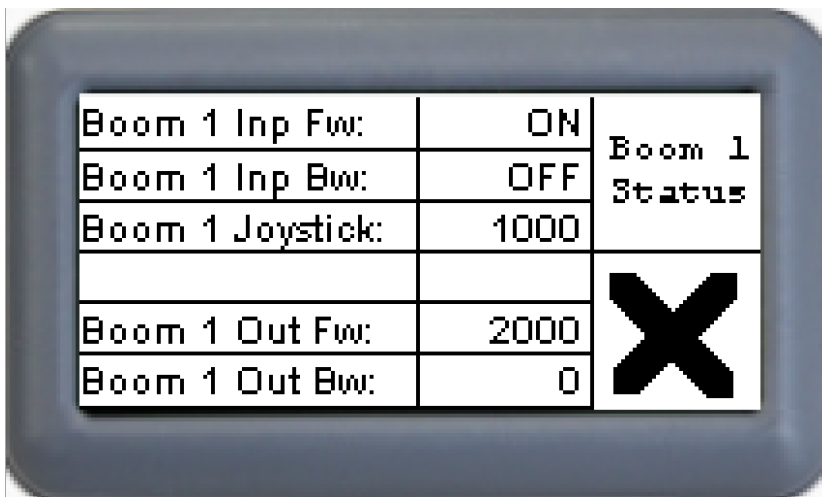
Tilting Inp Fw:	OFF	Tilting Status
Tilting Inp Bw:	ON	
Tilting Joystick:	-700	
		<b>X</b>
Tilting Out Fw:	0	
Tilting Out Bw:	850	


The machine tilting diagnostics screen represents the inputs and outputs dedicated to machine tilting movement. There are 3 inputs and 2 outputs, the status of which varies according to the type of machine selected. The list represents:

- Tilting Inp Fw: head forward tilting input logic status.
  - Hybrid machine: input logic status (ON 12v – OFF 0v).
  - Proportional machine CAN: logic status from joystick CAN-BUS (ON-OFF).
- Tilting Inp Bw: head back tilting input logic status.
  - Hybrid machine: input logic status (ON 12v – OFF 0v).
  - Proportional machine CAN: logic status from joystick CAN-BUS (ON-OFF).
- Tilting Joystick: head tilting control proportional joystick value.
  - Hybrid machine: always 0;
  - Proportional machine CAN: joystick in CAN-BUS (value from -1000 to 1000).
- Tilting Out Fw: status in head forward tilting output current (in mA).
- Tilting Out Bw: status in head back tilting output current (in mA).

Press the **X** icon to return to the main diagnostics menu (**Chapter 4**).

## 4.8 BOOM 1 DIAGNOSTICS MENU



Boom 1 Inp Fw:	ON	Boom 1 Status
Boom 1 Inp Bw:	OFF	
Boom 1 Joystick:	1000	
		
Boom 1 Out Fw:	2000	
Boom 1 Out Bw:	0	

The boom 1 diagnostics screen represents the inputs and outputs dedicated to boom 1 movement, and is only active when using the proportional CAN or proportional machine. There are 3 inputs and 2 outputs. The list represents:

- Boom 1 Inp Fw: boom 1 forward input logic status.

Proportional machine CAN: logic status from joystick CAN-BUS (ON-OFF).

- Boom 1 Inp Bw: boom 1 back input logic status.


Proportional machine CAN: logic status from joystick CAN-BUS (ON-OFF).

- Boom 1 Joystick: boom 1 joystick proportional value.

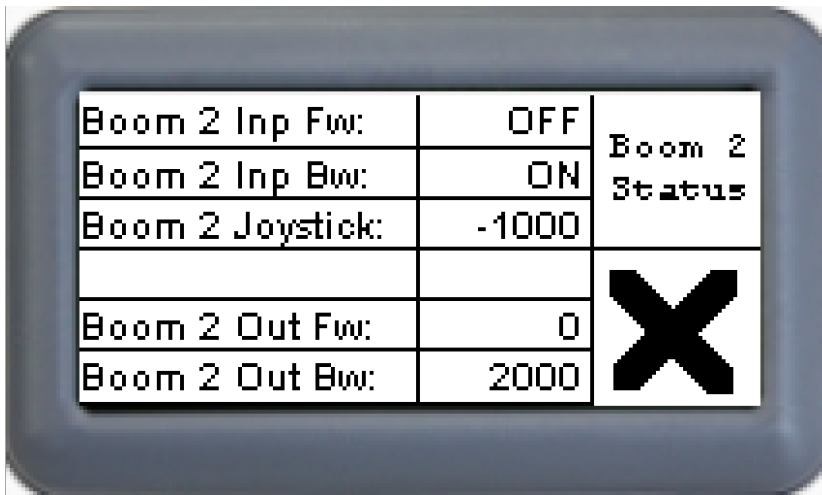
Proportional CAN machine: joystick in CAN-BUS boom 1 control (value from -1000 to 1000).


- Boom 1 Out Fw: status in boom 1 forward output current (in mA).

- Boom 1 Out Bw: status in boom 1 back output current (in mA).

Press the  icon to return to the main diagnostics menu (**Chapter 4**).

## 4.9 BOOM 2 DIAGNOSTICS MENU



Boom 2 Inp Fw:	OFF	Boom 2 Status
Boom 2 Inp Bw:	ON	
Boom 2 Joystick:	-1000	
		
Boom 2 Out Fw:	0	
Boom 2 Out Bw:	2000	

The boom 2 diagnostics screen represents the inputs and outputs dedicated to boom 2 movement, and is only active when using the proportional CAN or proportional machine. There are 3 inputs and 2 outputs. The list represents:

- Boom 2 Inp Fw: boom 2 forward input logic status.

Proportional machine CAN: logic status from joystick CAN-BUS (ON-OFF).

- Boom 2 Inp Bw: boom 2 back input logic status.


Proportional machine CAN: logic status from joystick CAN-BUS (ON-OFF).

- Boom 2 Joystick: boom 2 joystick proportional value.

Proportional CAN machine: joystick in CAN-BUS boom 2 control (value from -1000 to 1000).

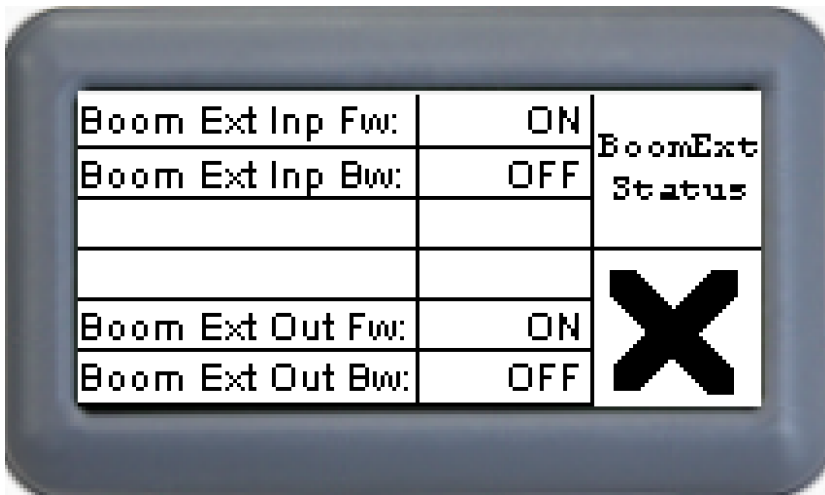
- Boom 2 Out Fw: status in boom 2 forward output current (in mA).

- Boom 2 Out Bw: status in boom 2 back output current (in mA).

Press the  icon to return to the main diagnostics menu (**Chapter 4**).



## 4.10 BOOM 2 EXTENSION DIAGNOSTICS MENU



Boom Ext Inp Fw:	ON	BoomExt Status
Boom Ext Inp Bw:	OFF	
Boom Ext Out Fw:	ON	<b>X</b>
Boom Ext Out Bw:	OFF	

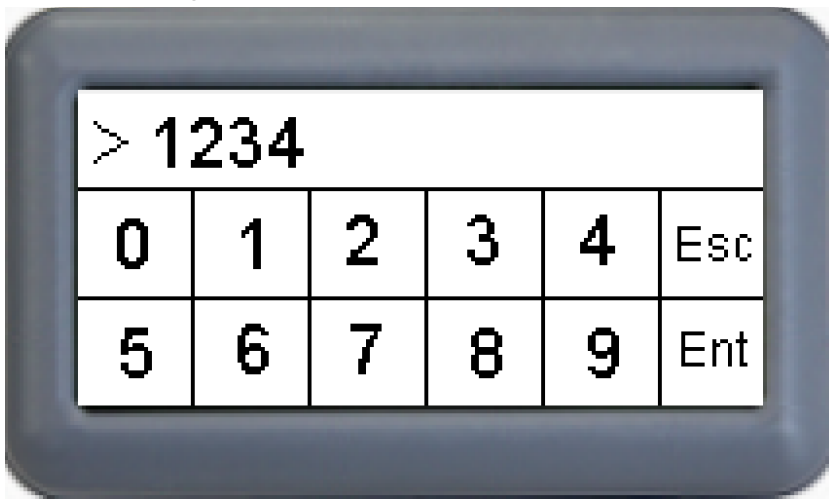
The boom 2 extension diagnostics screen represents the inputs and outputs dedicated to boom 2 extension/return movement. There are 2 inputs and 2 outputs. The list represents:

- Boom Ext Inp Fw: boom 2 extension input logic status (ON 12v – OFF 0v).
- Boom Ext Inp Bw: boom 2 return input logic status (ON 12v – OFF 0v).
- Boom Ext Out Fw: boom 2 extension output logic status (ON 12v – OFF 0v).
- Boom Ext Out Bw: boom 2 return output logic status 2 (ON 12v – OFF 0v).

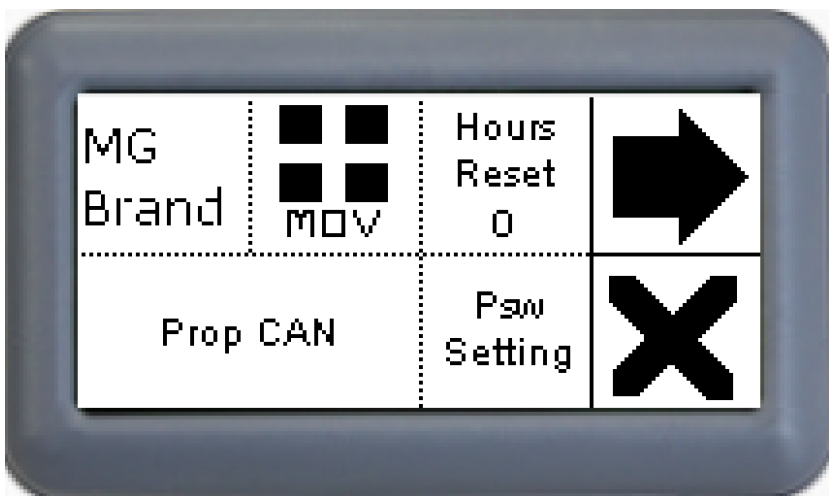
Press the **X** icon to return to the main diagnostics menu (**Chapter 4**).

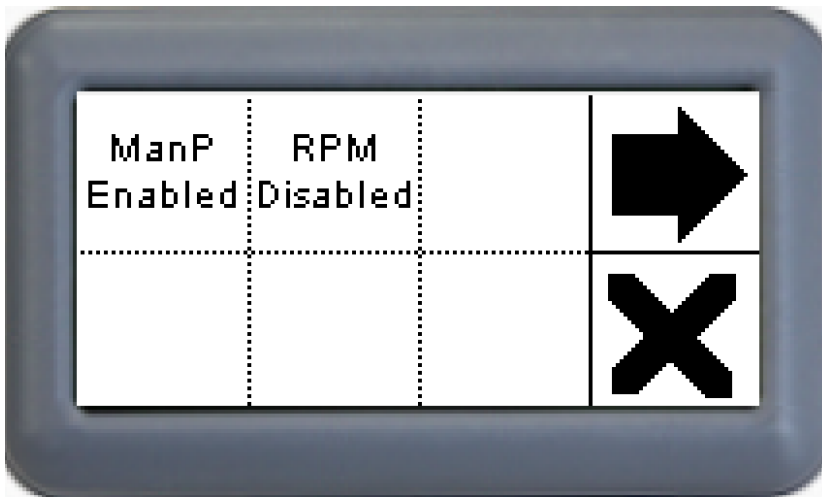
## 5. FACTORY MENU


When accessing the system menu for activations and calibration, a password is requested via the following screen:




Enter the 4-figure password by pressing the numbers on the touch screen display and press "Ent" to access the factory page. If the password is entered incorrectly, or "Esc" is pressed, the system returns to the Main Menu. The factory page appears as follows:







The system menu screen is divided into 2 windows. To navigate between the two windows, press the  icon. Press the relative icons to access the various activations and calibrations:

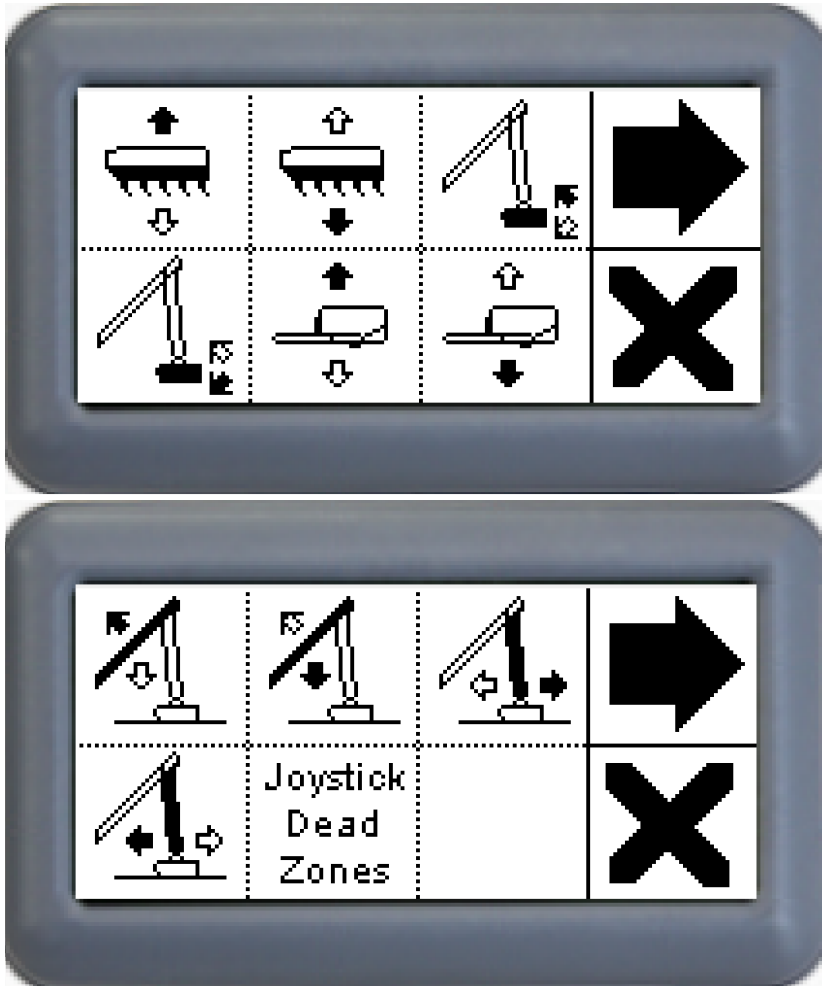
- MG Brand activates/deactivates the display information relative to the manufacturer brand.


If the brand information display is activated, the icon will show . The system automatically saves the selection. **This function requires a low access level.**


-  accesses the movement calibration screen (**Chapter 5.1**).
- The icon with the machine name allows you to select the type of machine. Press the machine icon to switch between "Hybrid", i.e. the hybrid model, or "Prop CAN", i.e. the CAN-BUS proportional model. The text that appears represents the currently selected model. The system automatically saves the selection. **This function requires a high access level.** If a low access level password is entered, the machine type may not be changed.
- "Hours Reset" resets the rotor hourmeter to zero. Pressing the text causes the reset and the number below will turn to "0", as shown in the figure below. **This function requires a high access level.** If a low access level password is entered, it is not possible to reset the hourmeter.
- "Psw Setting" allows you to change the level 1 password (**Chapter 5.2**).
- "ManP....." icon not enabled
- The "RPM....." icon enables/disables the rotor rpm display on the work screen (**Chapter 2**). Press the icon to enable/disable the rotor rpm display. If enabled, the "RPM Enabled" message will appear, if disabled it will show "RPM Disabled". **This function requires a high access level.** If a low access level password is entered, it is not possible to change the rotor rpm display.











Press  to return to the main menu page (**Chapter 3**).

## 5.1 MOVEMENT CALIBRATION MENU



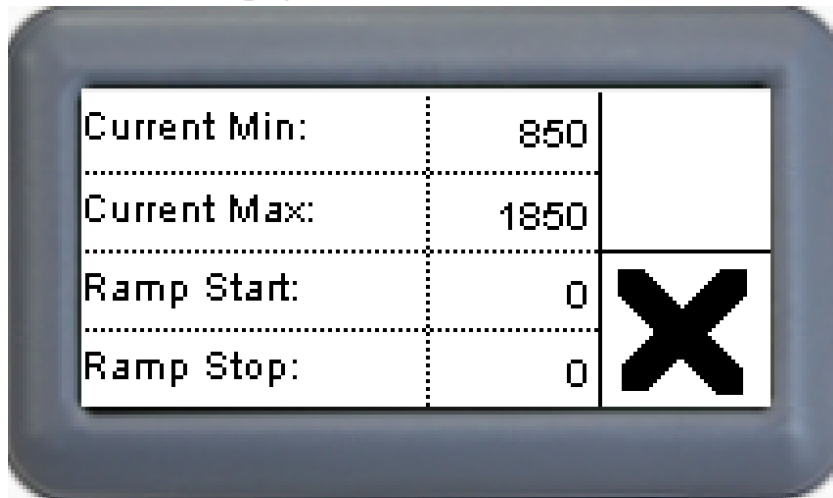
The movement calibration menu screen is divided into 2 windows. To navigate between the two windows, press the  icon. Press the relative icon to access the calibration screen (**Chapter 5.1.1**):

-  accesses the rotor clockwise movement calibration screen. **This function requires a high access level.** If a low access level password is entered, it is not possible to access the sub-menu.

- 
 accesses the rotor anticlockwise movement calibration screen. **This function requires a high access level.** If a low access level password is entered, it is not possible to access the sub-menu.
- 
 accesses the head forward tilting movement calibration screen. **This function requires a low access level.**
- 
 accesses the head back tilting movement calibration screen. **This function requires a low access level.**
- 
 accesses the left machine tilting movement calibration screen. **This function requires a low access level.**
- 
 accesses the right machine tilting movement calibration screen. **This function requires a low access level.**
- 
 accesses the boom 1 forward movement calibration screen (with CAN proportional machine only). **This function requires a low access level.**
- 
 accesses the boom 1 back movement calibration screen (with CAN proportional machine only). **This function requires a low access level.**
- 
 accesses the boom 2 forward movement calibration screen (with CAN proportional machine only). **This function requires a low access level.**
- 
 accesses the boom 2 back movement calibration screen (with CAN proportional machine only). **This function requires a low access level.**
- “Joystick Dead Zones” accesses the dead zone calibration screen for the controls: head tilting, titling, boom 1 ascent/descent and boom 2 ascent/descent. **This function requires a high access level.** If a low access level password is entered, it is not possible to access the sub-menu (**Chapter 5.1.2**).
- 
 returns to the factory screen (**Chapter 5**).

## 5.1.1 MOVEMENT CALIBRATION PAGE

The calibration page is identical for each individual movement:

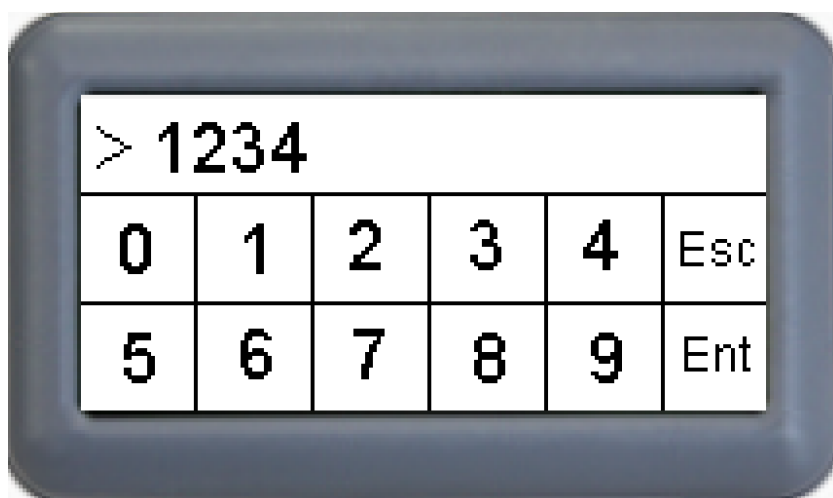


The page displays the parameters currently set for the previously selected movement. These represent:

- Current Min: minimum opening current of the proportional solenoid valve (in mA).
- Current Max: maximum opening current of the proportional solenoid valve (in mA).
- Ramp Start: time of the start ramp (in tenths of a second. E.g.: 10 = ramp lasts 1 second. 0 = no ramp).
- Ramp Stop: time of the arriving ramp (in tenths of a second. E.g.: 10 = ramp lasts 1 second. 0 = no ramp).

To set each value, press the number directly on the touch screen. A window identical to the one of the password insertion window will open where you can enter the value for the parameter.

The current values are to be entered in mA, while values for the ramps in tenths of a second:



Press "Ent" to set and save the values.

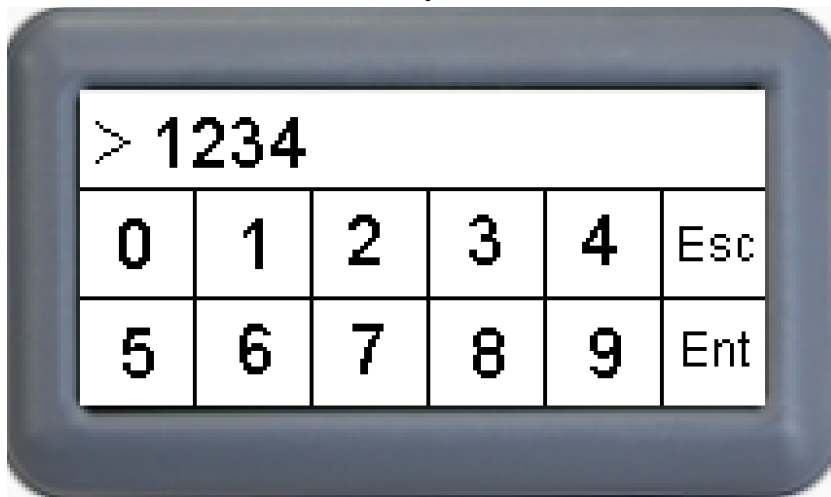
Press **X** to return to the movement calibration menu (**Chapter 5.1**).

## 5.1.2 JOYSTICK DEAD ZONE CALIBRATION PAGE

Not covered in this manual

## 5.2 LEVEL 1 PASSWORD MODIFICATION PAGE

This page allows you to modify level 1 passwords. You are asked to enter the new password twice via the numerical entry screen:



By pressing "Ent", the system acquires the set value and the screen is presented again. You need to re-enter the password you chose and entered previously.

Press "Ent" to set the second value and, if it matches the first value, it will be saved automatically and the level 1 password will have been changed correctly. To confirm the setting, the system returns to the Factory Menu page (**Chapter 5**).

If two different values are entered, the system does not set the new password and returns to the work screen (**Chapter 2**).

**IMPORTANT: only 4 numerical figures can be set, therefore the password must be a number between 1000 and 9999.**

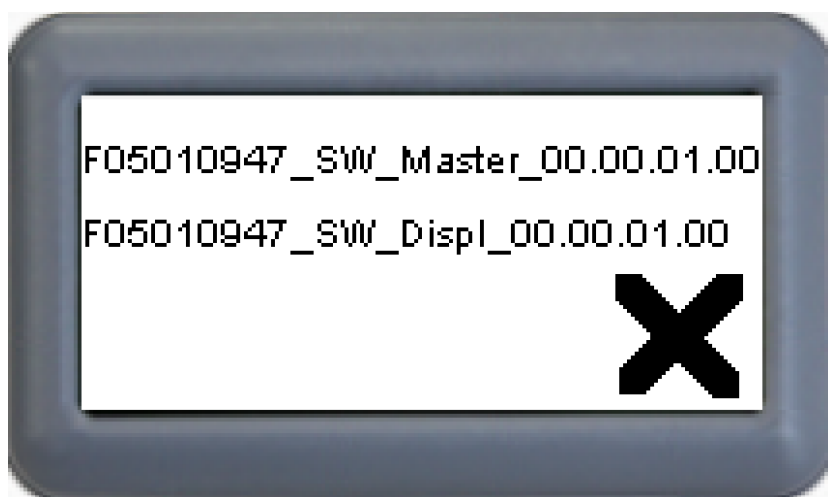
## 6. SERVICE INFO SCREEN



The service info screen represents the manufacturer brand information. The screen may only be accessed if the brand display option is active (**Chapter 5**).

Press **X** to return to the main menu page (**Chapter 3**).

## 7. SW INFO SCREEN



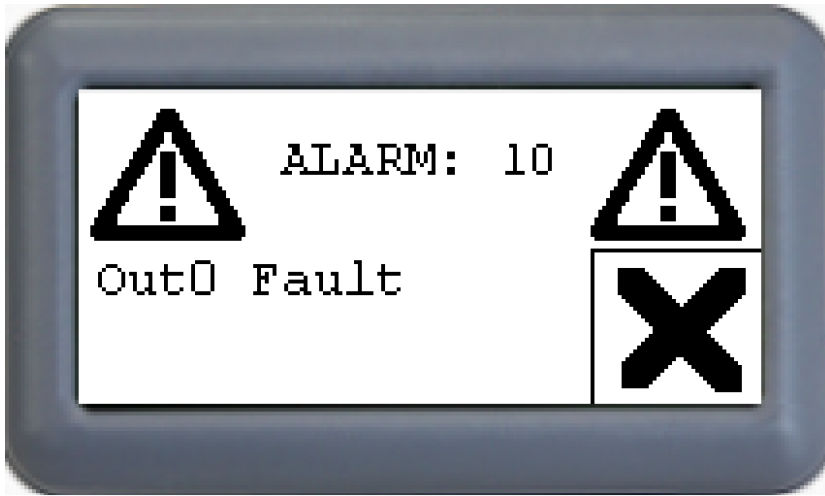
The SW info screen represents the information relative to the software codes installed in the system's ECU.

Press **X** to return to the main menu page (**Chapter 3**).




## 8. ALARMS SCREEN

The system has a series of video alarms that signal malfunctions. In the event of an alarm, the relative screen appears on the display:



Each alarm is represented by a unique numerical value next to the word "ALARM:" and a short description of the malfunction is displayed. This text does not appear only if there is a communication failure from the master ECU.

Press  to return to the main work page. If the cause of the alarm has not been resolved, the screen reappears after a few seconds. If several alarms are active simultaneously, they will scroll across the display repeatedly.

### LIST OF ALARMS:

- "Master disconnect" without number: indicates disconnection from the master ECU CAN-BUS line
- 10 "Out0 Fault": indicates a malfunction or short circuit of the master ECU output 0 (PIN J2.24).
- 11 "Out1 Fault": indicates a malfunction or short circuit of the master ECU output 1 (PIN J2.13).
- 12 "Out2 Fault": indicates a malfunction or short circuit of the master ECU output 2 (PIN J2.1).
- 13 "Out3 Fault": indicates a malfunction or short circuit of the master ECU output 3 (PIN J2.2).
- 14 "Out4 Fault": indicates a malfunction or short circuit of the master ECU output 4 (PIN J2.3).
- 15 "Out5 Fault": indicates a malfunction or short circuit of the master ECU output 5 (PIN J2.4).
- 16 "Out6 Fault": indicates a malfunction or short circuit of the master ECU output 6 (PIN J2.5).
- 17 "Out7 Fault": indicates a malfunction or short circuit of the master ECU output 7 (PIN J2.6).
- 18 "Out8 Fault": indicates a malfunction or short circuit of the master ECU output 8 (PIN J2.7).
- 19 "Out9 Fault": indicates a malfunction or short circuit of the master ECU output 9 (PIN J2.8).
- 20 "Out10 Fault": indicates a malfunction or short circuit of the master ECU output 10 (PIN J2.9).
- 21 "Out11 Fault": indicates a malfunction or short circuit of the master ECU output 11 (PIN J2.10).
- 22 "Out12 Fault": indicates a malfunction or short circuit of the master ECU output 12 (PIN J2.11).
- 23 "Out13 Fault": indicates a malfunction or short circuit of the master ECU output 13 (PIN J2.12).
- 24 "Out14 Fault": indicates a malfunction or short circuit of the master ECU output 14 (PIN J2.23).
- 25 "Out15 Fault": indicates a malfunction or short circuit of the master ECU output 15 (PIN J2.35).
- 26 "Out16 Fault": indicates a malfunction or short circuit of output 16 of the master ECU (PIN J3.24).

- **27 “Out17 Fault”**: indicates a malfunction or short circuit of the master ECU output 17 (PIN J3.13).
- **28 “Out18 Fault”**: indicates a malfunction or short circuit of the master ECU output 18 (PIN J3.1).
- **29 “Out19 Fault”**: indicates a malfunction or short circuit of the master ECU output 19 (PIN J3.2).
- **30 “Out20 Fault”**: indicates a malfunction or short circuit of the master ECU output 20 (PIN J3.3).
- **31 “Out21 Fault”**: indicates a malfunction or short circuit of the master ECU output 21 (PIN J3.4).
- **32 “Out22 Fault”**: indicates a malfunction or short circuit of the master ECU output 22 (PIN J3.5).
- **33 “Out23 Fault”**: indicates a malfunction or short circuit of the master ECU output 23 (PIN J3.6).
- **34 “Out24 Fault”**: indicates a malfunction or short circuit of the master ECU output 24 (PIN J3.7).
- **35 “Out25 Fault”**: indicates a malfunction or short circuit of the master ECU output 25 (PIN J3.8).
- **36 “Out26 Fault”**: indicates a malfunction or short circuit of the master ECU output 26 (PIN J3.9).
- **37 “Out27 Fault”**: indicates a malfunction or short circuit of the master ECU output 27 (PIN J3.10).
- **38 “Out28 Fault”**: indicates a malfunction or short circuit of the master ECU output 28 (PIN J3.11).
- **39 “Out29 Fault”**: indicates a malfunction or short circuit of the master ECU output 29 (PIN J3.12).
- **40 “Out30 Fault”**: indicates a malfunction or short circuit of the master ECU output 30 (PIN J3.23).
- **41 “Out31 Fault”**: indicates a malfunction or short circuit of the master ECU output 31 (PIN J3.35).
- **42 “Param Error”**: indicates a system malfunction at the master ECU (parameters memory).
- **43 “Memory Error”**: indicates a system malfunction at the master ECU (flash memory).
- **44 “Active start in”**: Safety alarm: indicates that one of the inputs is active when the system starts up.
- **45 “Joy CAN OFF”**: indicates a CAN-BUS communication failure or a joystick fault (with CAN proportional machine only).
- **46 “Joy HEAD Min”**: indicates a connection failure of the analogue joystick for the hybrid machine.
- **47 “Joy HEAD Max”**: indicates a positive short circuit of the analogue joystick for the hybrid machine.
- **48 “Emerg Inp Fault”**: indicates an inconsistent status of the NC micro switches relative to the emergency stop button.
- **49 “ManP KO”**: indicates the lack of connection or failure of the dead man's sensor (only if enabled).

**USATE SEMPRE RICAMBI ORIGINALI  
ALWAYS USE ORIGINAL SPARE PARTS  
IMMER DIE ORIGINAL-ERSATZTEILE VERWENDEN  
EMPLOYEZ TOUJOURS LES PIECES DE RECHANGE ORIGINALES  
UTILIZAR SIEMPRE REPUESTOS ORIGINALES**



**the winning team**

**www.maschionet.com**

**DEALER:**



**MASCHIO GASPARDO SpA**  
Registered office & Production plant  
Via Marcello, 73 - 35011  
Campodarsego (Padova) - Italy  
Tel. +39 049 9289810  
Fax +39 049 9289900  
E-mail: info@maschio.com  
www.maschionet.com

**MASCHIO GASPARDO SpA**  
Production plant  
Via Mussons, 7 - 33075  
Morsano al Tagliamento (PN) - Italy  
Tel. +39 0434 695410  
Fax +39 0434 695425  
E-mail: info@gaspardo.it

**MASCHIO DEUTSCHLAND GMBH**  
Äußere Nürnberger Straße 5  
D - 91177 Thalmässing  
Deutschland  
Tel. +49 (0) 9173 79000  
Fax +49 (0) 9173 790079  
www.maschio.de

**MASCHIO FRANCE Sarl**  
1 rue Denis Papin ZA  
F - 45240 La Ferte St. Aubin  
France  
Tel. +33 (0) 2.38.64.12.12  
Fax +33 (0) 2.38.64.66.79

**000 МАСКИО-ГАСПАРДО РУССИЯ**  
Улица Пушкина, 117 Б  
404126 Волжский  
Волгоградская область  
Тел.: +7 8443 203100  
факс: +7 8443 203101

**MASCHIO-GASPARDO ROMANIA S.R.L.**  
Strada Înfrăţirii, F.N.  
315100 Chisineu-Cris (Arad)  
România  
Tel. +40 257 307030  
Fax +40 257 307040  
e-mail: maschio@maschio.ro

**MASCHIO-GASPARDO NORTH AMERICA**  
120 North Scott Park Road  
Eldridge, IA 52748 - USA  
Ph. +1 563 2859937  
Fax +1 563 2859938  
e-mail: info@maschio.us

**MASCHIO IBERICA**  
**MASCHIO-GASPARDO POLAND**  
**MASCHIO-GASPARDO UCRAINA**  
**GASPARDO-MASCHIO TURCHIA**  
**MASCHIO-GASPARDO CINA**