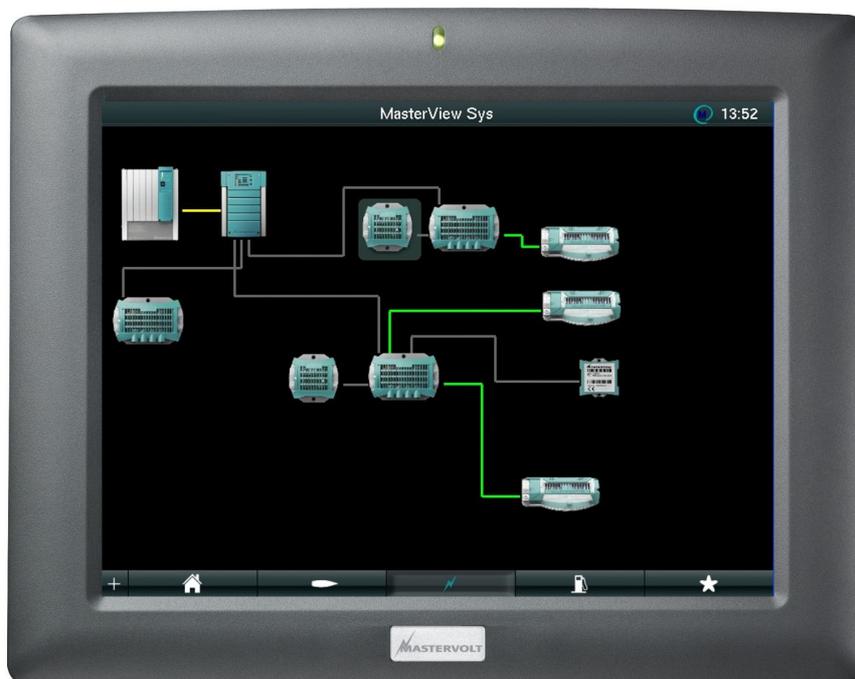




USERS MANUAL / GEBRUIKERSHANDLEIDING  
BETRIEBSANLEITUNG / MANUEL D'UTILISATION  
MANUAL DE UTILIZACION / INSTRUZIONI PER L'USO

# MasterView System

**Extensive monitoring and control panel  
for the MasterBus network**



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# 1 GENERAL INFORMATION

## 1.1 PRODUCT DESCRIPTION

The Mastervolt *MasterView System* is a panel to monitor, configure and operate all connected devices in the MasterBus network. It is also capable of saving the MasterBus configuration as a whole.

## 1.2 USE OF THIS MANUAL

Copyright © 2011 Mastervolt. All rights reserved.  
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This manual serves as a guideline for the safe and effective operation, maintenance and possible correction of minor malfunctions of the *MasterView System*.

This manual is valid for the following models:

Description	Part number
MasterView System	77010400

Every person who works on or with the *MasterView System* must be completely familiar with the contents of this manual, and has to follow the instructions contained herein carefully.

Installation of, and work on the *MasterView System*, may be carried out only by qualified, authorised and trained personnel, consistent with the locally applicable standards and taking into consideration the safety guidelines and measures (chapter 2 of this manual).

Keep this manual at a secure place!

## 1.3 GUARANTEE SPECIFICATIONS

Mastervolt guarantees that this product was built according to the legally applicable standards and stipulations. If you fail to act in accordance with the regulations, instructions and stipulations in this user's manual, damage can occur and/or the product will not fulfil the specifications. This may mean that the guarantee will become null and void.



### CAREFUL!

Additional warranty agreements, like "Mastervolt system warranty" may contain restrictions which forbid resetting of historical data, refer to chapter 11.

## 1.4 QUALITY

During their production and prior to their delivery, all of our units are exhaustively tested and inspected. The standard guarantee period is two years.

## 1.5 VALIDITY OF THIS MANUAL

All of the specifications, provisions and instructions contained in this manual apply solely to standard versions of the *MasterView System* delivered by Mastervolt.

## 1.6 LIABILITY

Mastervolt can accept no liability for:

- consequential damage due to use of the MasterView System;
- possible errors in the manuals and the results thereof;
- consequential damage due to configuration errors;
- use that is inconsistent with the purpose of the product.

## 1.7 IDENTIFICATION LABEL

The identification label (see figure 1) is located at the back side of the MasterView System. Important technical information required for service, maintenance & secondary delivery of parts can be derived from the identification label.



Figure 1: Identification label



Never remove the identification label!

## 1.8 CHANGES

Changes to the *MasterView System* may be carried out only after obtaining the written permission of Mastervolt.

## 2 SAFETY GUIDELINES AND MEASURES

### 2.1 WARNINGS AND SYMBOLS

Safety instructions and warnings are marked in this manual by the following pictograms:



#### CAREFUL!

Special data, restrictions and rules with regard to preventing damage.



#### WARNING

A WARNING refers to possible injury to the user or significant material damage to the MasterView System if the user does not (carefully) follow the procedures.



A procedure, circumstance, etc which deserves extra attention.

### 2.2 USE FOR INTENDED PURPOSE

- 1 The *MasterView System* is constructed as per the applicable safety-technical guidelines.
- 2 Use the *MasterView System* only:
  - in a technical correct condition;
  - in a closed, well-ventilated room, protected against rain, moist, dust and condensation;
  - observing the instructions in the users manual.
- 3 Use of the *MasterView System* other than mentioned in point 2 is not considered to be consistent with the intended purpose. Mastervolt is not liable for any damage resulting from the items mentioned above.

### 2.3 ORGANIZATIONAL MEASURES

The user must always:

- have access to the user's manual;
- be familiar with the contents of this manual. This applies in particular to chapter 2, Safety Guidelines and Measures.

### 2.4 MAINTENANCE AND REPAIR

- 1 If the electrical installation is switched off during maintenance and/or repair activities, it should be secured against unexpected and unintentional switching on:
  - switch off all charging systems;
  - switch off the connection with the batteries;
  - be sure that third parties cannot reverse the measures taken.
- 2 If maintenance and repairs are required, only use original spare parts.

### 2.5 GENERAL SAFETY AND INSTALLATION PRECAUTIONS

- Connection and protection must be done in accordance with local standards.
- Do not work on the *MasterView System* or system if it is still connected to a current source. Only allow changes in your electrical system to be carried out by qualified electricians.
- Check the wiring at least once a year. Defects such as loose connections, burned cables etc. must be corrected immediately.

### 2.6 WARNING REGARDING THE USE OF BATTERIES

Excessive battery discharge and/or high charging voltages can cause serious damage to batteries. Do not exceed the recommended limits of battery discharge level. Avoid short circuiting batteries, as this may result in explosion and fire hazard. Installation of the batteries and adjustments of the *MasterView System* should only be undertaken by authorised personnel!

### 2.7 SAFETY REGULATIONS AND MEASURES

Do not work on an electrical system if it is still connected to a current source. Only allow changes in your electrical system to be carried out by qualified electricians.

### 3 MASTERBUS

#### 3.1 WHAT IS MASTERBUS?



All devices that are suitable for MasterBus are marked by the MasterBus symbol.

MasterBus is a fully decentralized data network for communication between the different Mastervolt system devices. The communication network is based on CAN-bus which has proven a reliable bus-system in automotive applications. MasterBus is used as power management system for all connected devices, such as the inverter, battery charger, generator and many more. This gives the possibility for communication between the connected devices, for instance to start the generator when the batteries are low.

MasterBus reduces complexity of electrical systems by using MasterBus cables. All system components are simply chained together. Therefore each device is equipped with two MasterBus data ports. When two or more devices are connected to each other through these data ports, they form a local data network, called the MasterBus. The results are a reduction of material costs as only a few electrical cables are needed and less installation time.

For central monitoring and control of the connected devices Mastervolt offers a wide range of panels which show full status information of your electrical system at a glance and a push of a button. Four different panels are available, from the small Mastervision compatible 120 x 65mm LCD screen up to the MasterView System. All monitoring panels can be used for monitoring, control and configuration of all connected MasterBus equipment.

New devices can be added to the existing network in a very easy way by just extending the network. This gives the MasterBus network a high degree of flexibility for extended system configuration, not only today, but in the future as well!

Mastervolt also offers several interfaces, making even non-MasterBus devices suitable to operate in the MasterBus network.

For direct communication between the MasterBus network and a Device which is not from Mastervolt, the Modbus interface is recommended.



**CAUTION:** Never connect a non-MasterBus device to the MasterBus network directly! This will void warranty of all MasterBus devices connected.

#### 3.2 HOW TO SET UP A MASTERBUS NETWORK

Every device that is suitable for the MasterBus network is equipped with two data ports. When two or more devices are connected using these ports, together they form a local data network, called the MasterBus.

Keep the following rules in mind:

Connections between the devices are made by standard straight MasterBus cables. Mastervolt can supply these cables. These cables are also commonly available at computer supply stores.

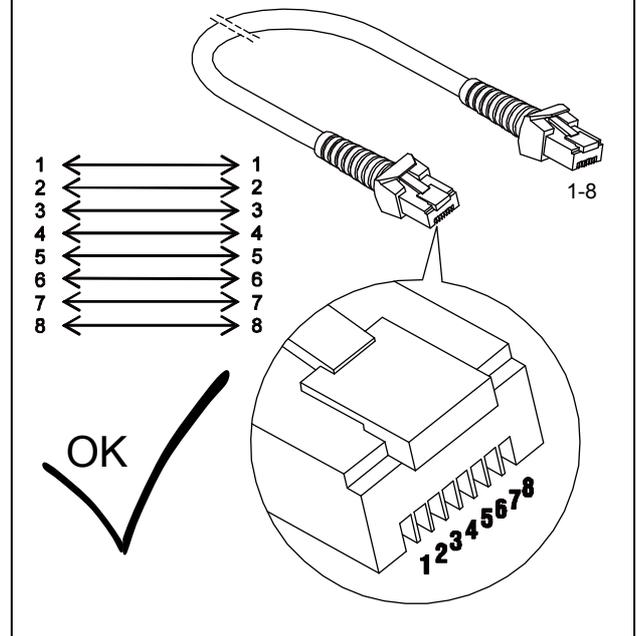


Figure 2

As with all high speed data networks, MasterBus needs a terminating device on both ends of the network .

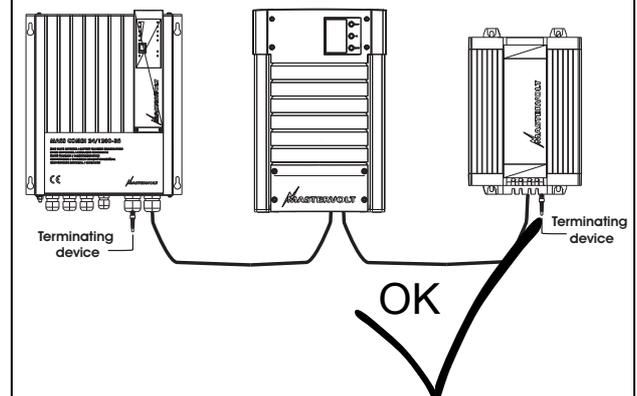


Figure 3

The electric power for the network comes from the connected devices.  
 At least one device in the network should have powering capabilities (see specifications).  
 One powering device can power up to three non-powering devices.  
 As all powering devices are galvanically isolated, multiple powering devices are allowed.

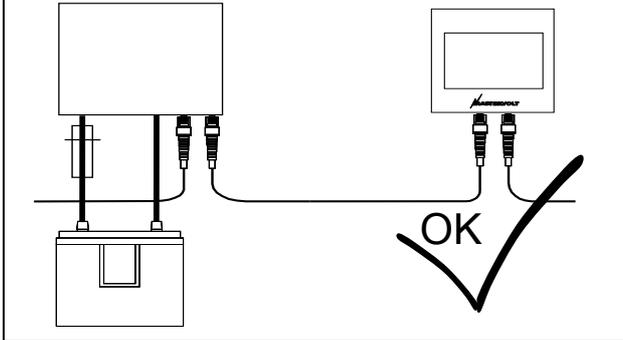


Figure 4

Do not make ring networks.

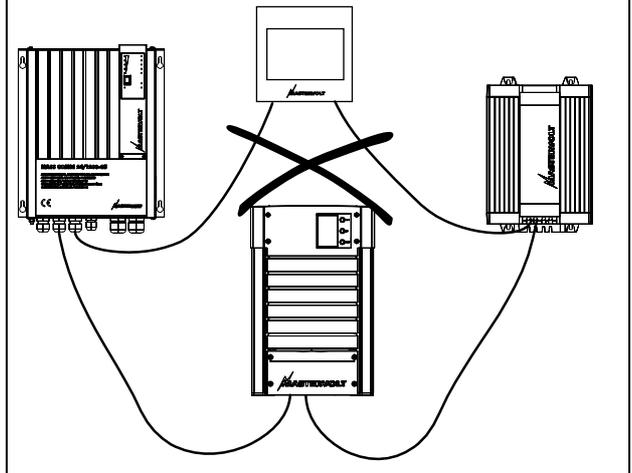


Figure 5

Do not make T-connections in the network.

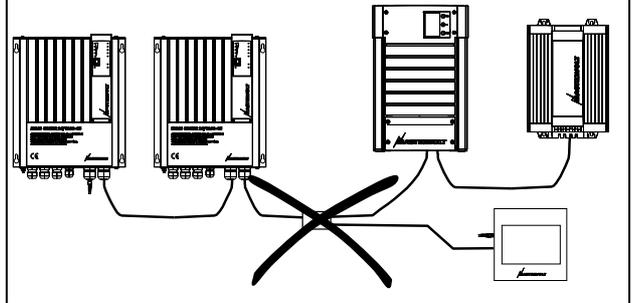


Figure 6

## 4 INSTALLATION



### WARNING

During installation and commissioning of the *MasterView System*, the Safety Guidelines and Measures are applicable at all times. See chapter 2 of this manual.

### 4.1 THINGS YOU NEED

Tools:

- A drill for the mounting holes
- A saw to make a cut-out for flush mounting the panel
- A cross-head screw driver

Materials:

- The *MasterView System* (included)
- The *System Panel Controller* (included)
- USB cable assembly
- DC supply cable assembly
- 4 clamps for flush mounting (included)
- MasterBus connection cable (MasterBus cable) (1 meter / 3ft included)
- MasterBus terminating devices (1 pc included)

### 4.2 WALL MOUNTING

The MasterView System is flush mounted. The recommended cut out size is 256 x 202 mm. If you want to flush mount the panel, use the four special mounting parts to clamp it to the board. See Specifications for more information on the dimensions and the drilling/ cutting holes.

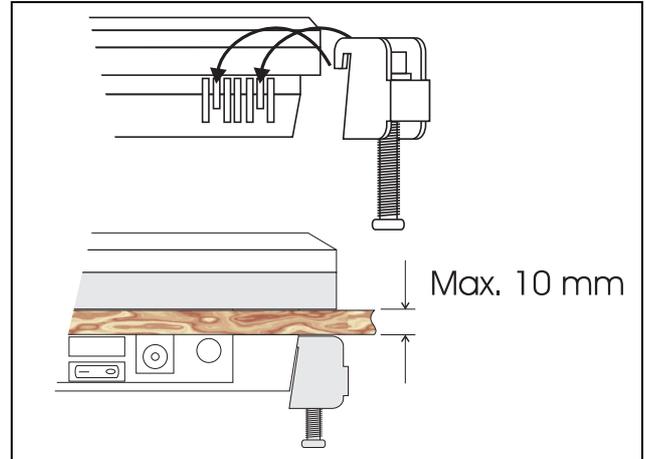


Figure 7: Flush mounting the panel

### 4.3 SYSTEM PANEL CONTROLLER

See figure 8. Connection of the MasterView System to MasterBus occurs via the System Panel Controller (SPC). This controller (included) contains a MasterBus USB Interface and a MasterBus controlled power supply of the MasterView System. A pulse switch (not included) attached to connector (4) switches On the MasterView System, see also section 5.3.

### 4.4 MAINTENANCE

Clean the touch screen with a soft cloth. Do NOT use acids or scourers!

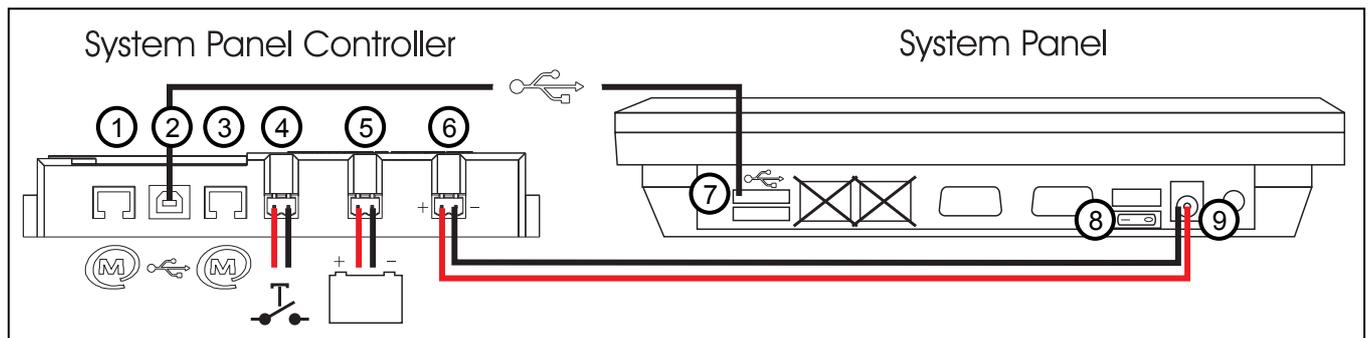


Figure 8: Connections

1. MasterBus connector
2. USB connector SPC
3. MasterBus connector
4. Connector for external pulse switch
5. Connector for battery (SPC DC in)
6. SPC DC out
7. MasterView System USB connector
8. MasterView System On/Off switch
9. MasterView System DC in



Insert a fuse in the positive battery line.



Be sure to connect the battery to the System Panel Controller correctly! It is not protected against reverse polarity!

## 5 OPERATION

### 5.1 GENERAL

The Mastervolt *MasterView System* is a central monitoring and control panel for devices that are connected to the MasterBus network. It shows status information of your electrical system by means of a touch screen.



**NOTE:** This manual can not instruct for any particular device connected, except for the *MasterView System* itself. Refer to the user's manuals of the devices connected.

### 5.2 SOFTWARE

The *MasterView System Panel* is Linux based. Its software for the PC is Windows based.

The advantage is, MasterBus event configuration and basic settings can be done at home in Windows. The configuration (.mvc) file can be saved on a USB stick and opened on the Linux based MasterView System, see chapter 8. This also applies for Consumer screen background images (section 7.2).

The same way, Mastervolt update (.mvu) files can be downloaded from internet on the PC and opened on the MasterView System. An .mvu file can contain a system update, but also a program update.

Further in this manual the additions (*PC only*) and (*Panel only*) indicate if a function is suitable for only one application.

### 5.3 SWITCHING ON

The MasterView System is MasterBus operated via the System Panel Controller. There are four ways of switching On the MasterView System.

- Switching On by means of a MasterBus event. This event is usually triggered by a MasterBus switch like the Switch Input 4. Configure the switch to switch On the System Panel Controller. The MasterView System will switch On after this.
- Switching On by means of the On/Off switch in the System Panel Controller or monitoring device MasterBus monitoring tab
- Switching On by means of a pulse switch attached to the System Panel Controller (figure 8, point 4).
- In case the MasterView System has been switched Off as result of an alarm, it can still be switched On by pressing the pulse switch for 15 seconds. This is called *Forced On*.

### 5.4 SWITCHING OFF

There are four ways of switching Off the Panel.

- Via the MasterView System main menu. You are asked to confirm. If you select Yes in configuration level, the configuration is saved automatically. *This may take several minutes.*

Only in end user level, switching Off is possible. This is faster, but the configuration is not saved.

- Switching Off by means of a MasterBus event, usually controlled by a MasterBus switch (like the Switch Input 4). Configure it to switch Off the System Panel Controller. This also switches Off the MasterView System.
- Switching Off by means of a pulse switch attached to the System Panel Controller (figure 8, point 4).
- Switching Off by means of a MasterBus monitoring tab in the System Panel Controller or a monitoring device like the MasterView Easy.

The MasterBus settings are not only stored in the *MasterView System* but also in the internal memories of the selected devices. As a result of this, switching off the *MasterView System* will not influence the settings.

### 5.5 CONNECTED TO SYSTEM

If the MasterView System is connected to the system, the MasterBus icon appears in the top bar, see figure 9 point 1.

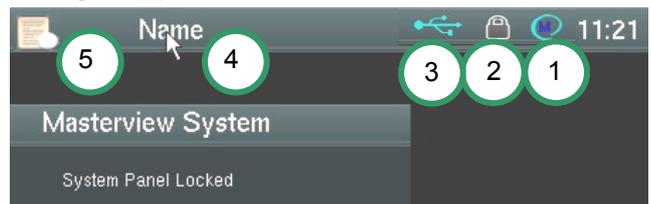


Figure 9: Top bar icons

### 5.6 LOCKING THE SCREEN

To prevent unwanted operation of your touch screen, it features a screen lock. If you press the name (4) for more than three seconds, the screen is locked and a lock symbol appears at the right corner of the top bar. See point 2 in figure 9.

After pressing the name (4) again for more than three seconds, you see the lock symbol disappear and the touch screen is operable again. If you press the log symbol (5), actual system information and data logging is shown in a pop up window. See chapters 6 to 10 for the monitoring, control and configuration menus of the *MasterView System*.

### 5.7 USB STICK

A USB stick can be used for saving and retrieving the MasterBus settings. With the stick connected, a USB icon appears in the top bar next to the MasterBus logo (figure 9, point 3).

### 5.8 USB MOUSE

A USB mouse can be connected to the panel.

## 6 TOP BAR SCREENS

The top bar is shown in figure 11, in the dotted rectangle. It contains menus for most initial settings.

### 6.1 SYSTEM CHECK

At first start up, the MasterView System performs a system check to verify if all devices are MasterBus connected and to verify the navigation light function. Figure 10 shows the System Check screen. If all devices listed are connected, it says SYSTEM CHECK OK. If not, it shows all not connected devices or it tells “MasterBus not found”. See chapter 10 Trouble Shooting for instructions on how to solve this. The system check can be performed anytime by selecting it in the Main Menu (see chapter 8).



Figure 10: System Check

### 6.2 SYSTEM LANGUAGE

Figure 11 shows the MasterView System Language screen. It shows the language selected with a darker looking flag. The flags refer to the languages: English, Nederlands, Deutsch, Français, Castellano, Italiano, Norsk, Svenska, Suomi, Dansk.

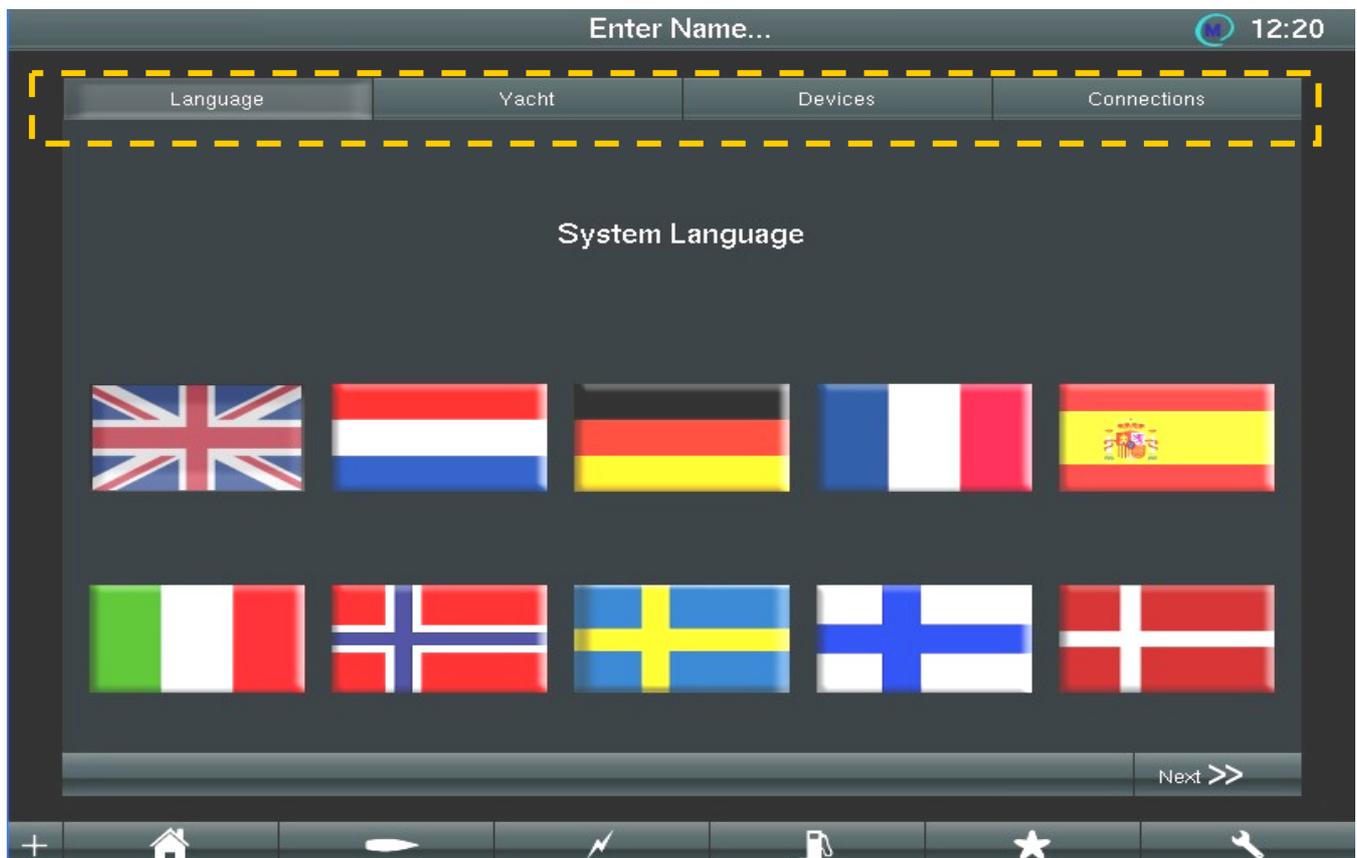


Figure 11: Language screen, the English language is selected

**6.3 YACHT / VEHICLE**

This screen offers the option to set a name for your MasterView System and to select a yacht or vehicle application. If you touch the Set Name box, a keyboard at the right appears. It enables entering letters, figures and signs. Touch the arrow up to switch from undercast to capital letters. Touch the cross to delete the complete name. If you want to switch from letters to figures, touch the blue **.-123** button. The keyboard brightness can be adjusted by pressing the arrows on the left. Touch "enter" to confirm the new name. In the lower fields you can set the date and time (MasterView System only).

 If changed, date and time will be copied to MasterBus connected devices with time setting capability like the MasterShunt. The name you save will be copied to the connected monitoring devices like the MasterView Easy (Name Yacht).

 To prevent the risk of losing data at power loss, save your settings regularly (see sections 8.4.2 and 6.4).



Figure 12: Keyboard options

**6.4 DEVICES PAGE**

The Devices page shows two boxes.

**6.4.1 All Devices**

The *All Devices* box (left) shows all devices available. They can be added to all connected devices in the *Devices in System* box (right). Adding or removing occurs with the *Add* or *Remove* button.

**6.4.2 Devices in System**

The *Devices in System* box shows the device selected. It also shows the serial number, only if the device is (Connected) or if it has been connected to the MasterView System before. The figure between brackets (12) stands for the number of connected MasterBus devices in the system. After installer

login, the number of nodes is shown. This number indicates the amount of ID's on the bus. Up to 63 devices can be connected to the MasterView System panel.

**6.4.3 Virtual devices**

See figure 14. A device in the *Devices in System* box that is not connected to the MasterBus network, is called a *virtual device*. This can be a non-MasterBus device or just not connected like the MasterBus NMEA Interface in this example.

To connect, a virtual device can be assigned a real serial number in the lower box or it can be replaced by a real device in the replacement wizard (refer to section 6.6).

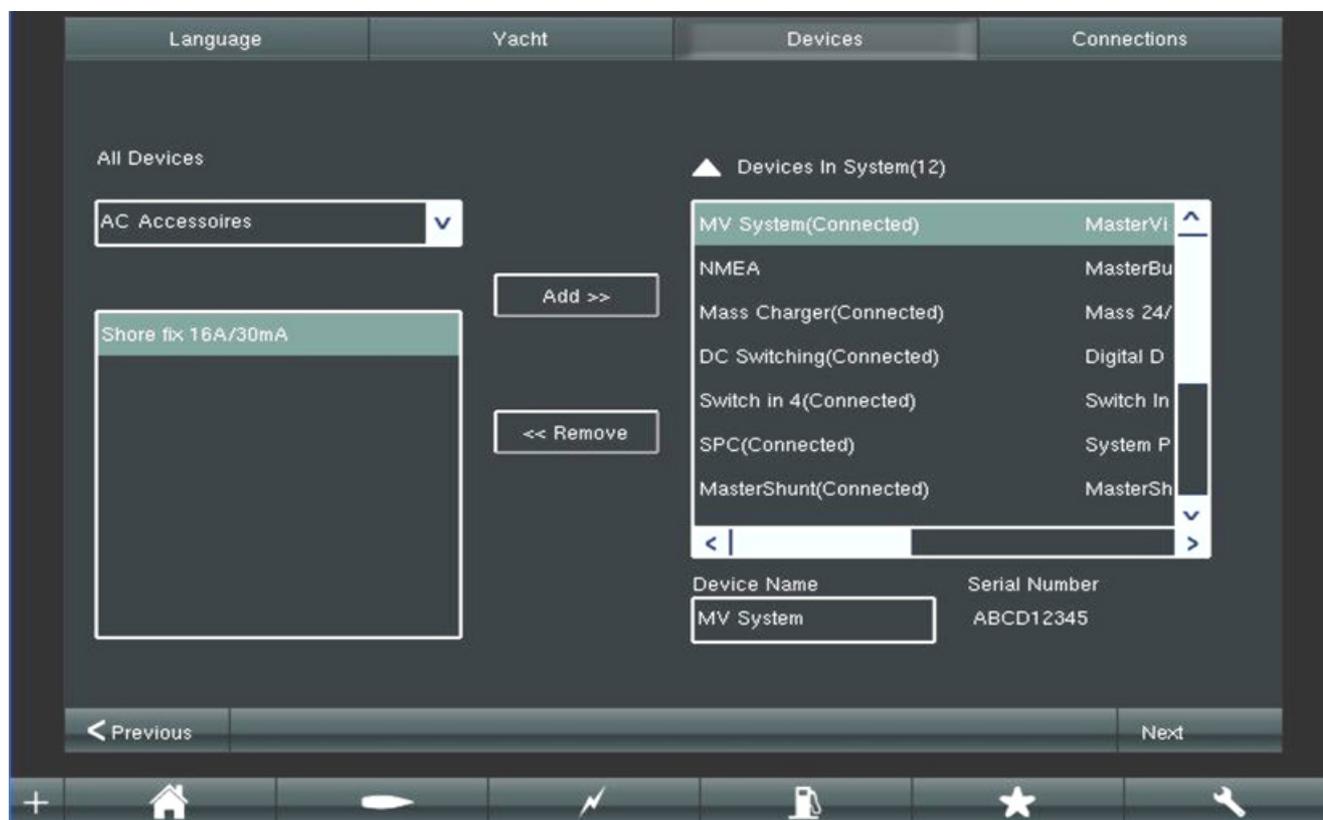


Figure 14: Devices



Figure 15: Devices page, serial numbers

## 6.5 CONNECTIONS PAGE

The Connections page shows all AC and DC connections of the Devices in System box (see previous section). See figure 16. In the upper box (1) a connected MasterBus device can be selected to display their connections. Box (2) then shows the DC input of the selected device, box (3) shows its DC output connections. In case there are more device connections, the arrow (4) on the right enables selecting the other connections in a pull down screen. In the example shown the MasterShunt load side is connected to the DC input of the System Panel Controller.

If you want to add more connections for the DC output, touch the “+” (5) to open a new DC Output box. Touch the selection arrow (6) to select the connected device next in the power line. This is the device with its input connected to the output of the selected device. The Power Flow page in chapter 7 makes all clear. Select *Automatic Connections* (7) if you wish the System Panel to configure the system.

 After you configured connections yourself, your settings will be lost when checking *Automatic Connections!*

 Connections can be configured by *drag and drop* on the Power Flow page too, refer to section 7.3.

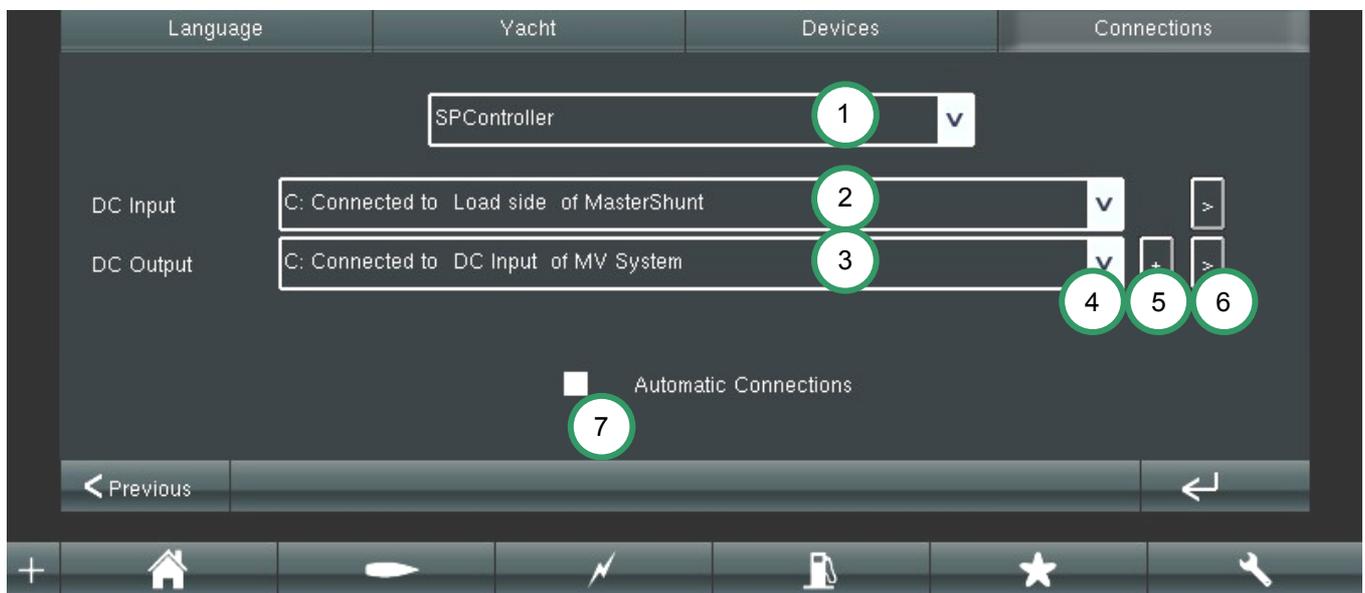


Figure 16: Connections

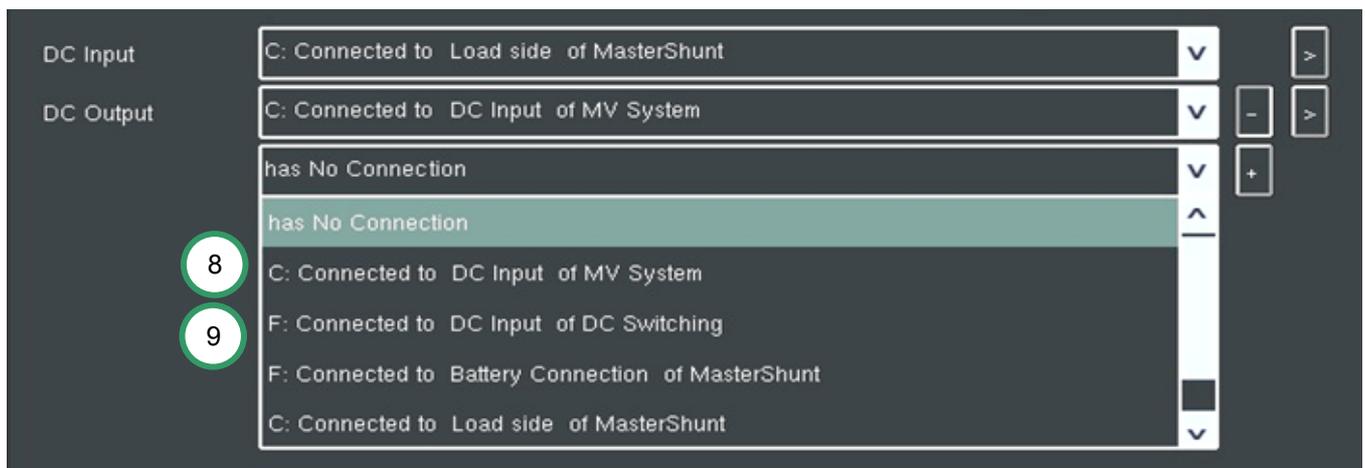


Figure 17: Adding a connection

See figure 16 and 17. If you touch the “+” (figure 16, point 5) and the “v” (figure 16, point 4), a connections pull down menu like figure 17 appears. Default the description “has no Connection” is

shown. To add a connection, select an option in the menu. Figure 17, point 8: the “C” means Connected, point 9: the “F” means Free to connect.

**6.6 REPLACEMENT WIZARD**

The replacement wizard is called Found Device, see figure 18. This wizard appears in two occasions:

1. A virtual device has been added before and the real system is connected to the MasterView System. The MasterView System recognizes a corresponding device and the wizard asks if the virtual device is to be replaced by the real device.

If you select *New Device*, the real device will be added to the system and the virtual device will not be replaced.

If you select *Replacement*, all configuration and events in the virtual device will be written to the real device!

2. A real device has to be replaced in the system. The new device is recognized by the panel as a corresponding device and the wizard asks if the device is to be replaced. This only happens if the new device is similar to the device replaced.

If you select *New Device*, the new device will be added to the system and the old offline device stays present in the list. If you select *Replacement*, all configuration and events in the old device will be written to the new device. The events with the device as target and with the device as source will be replaced. Besides, a pop up asks whether to update the Yard settings file as well. This way the replacement wizard does not need to be repeated after you return to Yard settings.



Figure 18: Found Device

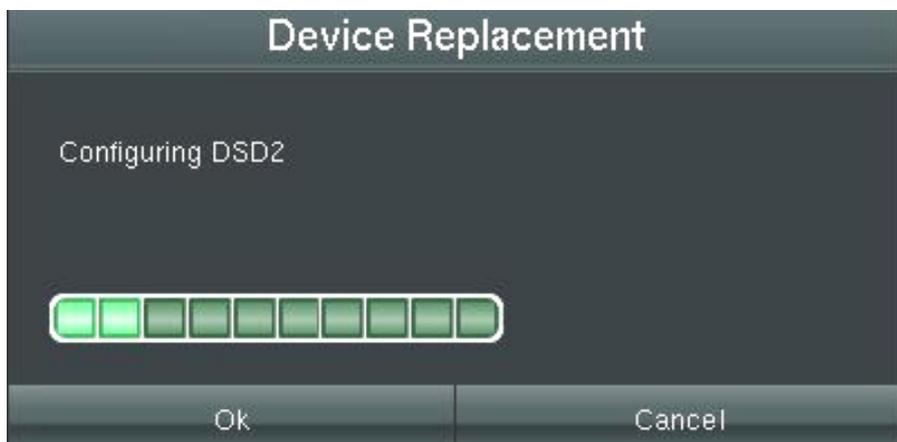


Figure 19: Device Replacement

## 7 NAVIGATION BAR

Figure 20 shows the Navigation bar in the dotted rectangle. The navigation bar features six menus for daily use. The first one is the Status page.

### 7.1 STATUS PAGE



The MasterView System Status page shows the energy status, see figure 20. It tells you what AC and

DC sources are available in your electrical system. It can be used for monitoring, and level for operation as well. A generator can be started or the shore power can be adjusted (figure 20). The battery bar (1) will show only if you added a (virtual) battery on the Device page (see section 6.4).

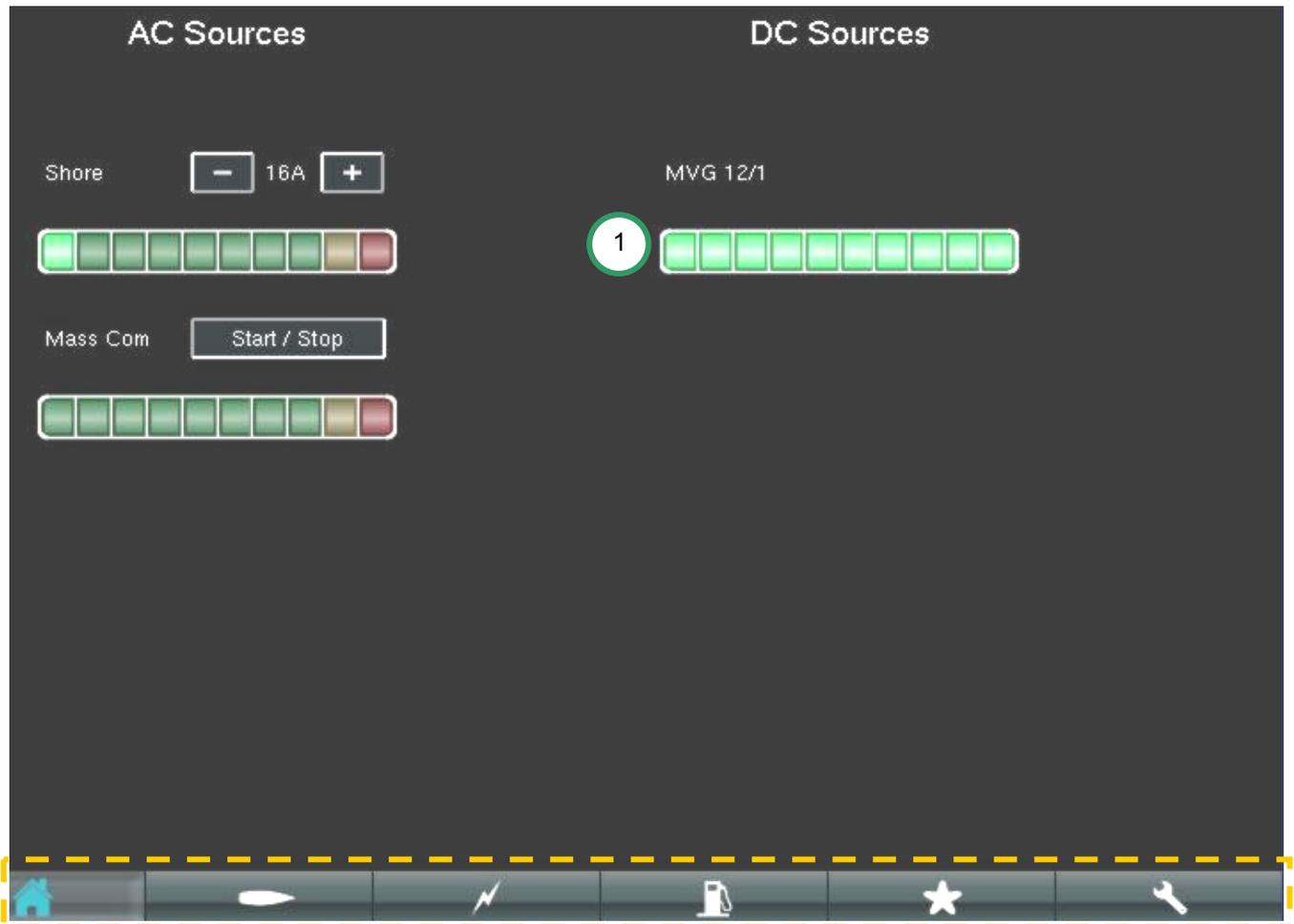


Figure 20: Status page

## 7.2 CONSUMER PAGE

The Consumer page shows all system devices that have been entered in the MasterView System device menu. This page is used for:

- Switching lights;
- Switching other loads;
- Alarm pop ups (see figure 43).

MasterBus switchable devices (lights, other loads) on this page can be switched by clicking their miniatures. Power devices (like chargers, generators), can be hidden (see section 7.2.8) to pop up in alarm only! The Consumer page can only be changed in configuration level.



It is important to add *all* power devices (like chargers, generators) in the consumer page. You can hide them for display, but they will pop up in alarm!

### 7.2.1 Light points

See figure 21. In this example Consumer page the interior and exterior lights are shown. They can be switched by clicking the miniatures. Before you can switch on the Consumer page, four conditions must be met:

- 1 A light (or other consumer) has to be added to the system. It can be selected in the Devices page, DC Loads list, see section 6.4;
- 2 A light must have been connected to a digital switching device. This can be done in the Connections page, see section 6.5. Clicking the miniature now lets the switching device switch;
- 3 The light miniatures (examples in the circles) must be positioned in the Consumer page. See figure 22. Select the corresponding load under “Show Devices” and position the miniature.
- 4 To switch a real consumer, it must be connected to the corresponding digital switching device in the electrical system as well.

### 7.2.2 Navigation lights check

There is a special option to check the correct functioning of the navigation lights. It checks if the lights are really working during the System check (chapter 6) by switching them on for a short moment. If not, a pop up screen shows which navigation light is not working correctly.



Checking another light during System check, can be accomplished by configuring this light as a navigation light.



Figure 21: Overview example with connected MasterBus devices

If you select the “+” in the Consumer page (figure 21, dotted circle), a pop up menu like figure 22 is shown (configuration level only).

### 7.2.3 Open Image

Option to insert an image of your yacht or vehicle. The image is free to choose. Image formats supported are: .bmp, .png and .jpg. The image can be uploaded by inserting a USB stick with the background image on its root. The image can also be transferred to the MasterView System by saving an .mvc file onto USB stick and reading this with the panel. See also section 8.4.2.

### 7.2.4 Max. Pages

More than one Consumer page can be created, for instance to present different floors in your vessel/ vehicle and to present various parts of the exterior, like exterior lighting. In this example, 2 Pages is selected.

### 7.2.5 New Page 1

In case more than one page is selected, the Consumer pages can be named. New Page 1 is the first page. Naming the pages after their application is convenient. Example: First Floor, Second Floor, Exterior Lights.

### 7.2.6 Show Devices

Selection box to show the Devices in your system that are not yet shown in the Consumer page.

### 7.2.7 Select Devices

Device items can be shown in the Consumer page. By touching or clicking the “v” next to *Select Devices*, a pull down screen with the system list appears. In this list the device can be selected from which an item has to be shown in the Consumer page.

### 7.2.8 Show item

Option to show an item of the selected device, see section 7.2.5. An item example is the *Device State* of the MasterShunt.

### 7.2.9 Hide device

Option to hide a device in the Consumer page. This device has to be selected first by touching/ clicking its miniature in the Consumer page. Hiding is convenient for energy system devices you cannot switch but you only want to be shown in case of an alarm. See the corresponding device manual for alarm configuration.

### 7.2.10 Show name

Check box to show the device name that corresponds with the item shown.

### 7.2.11 Show all

Check box to show all connected MasterBus system devices in the overview.

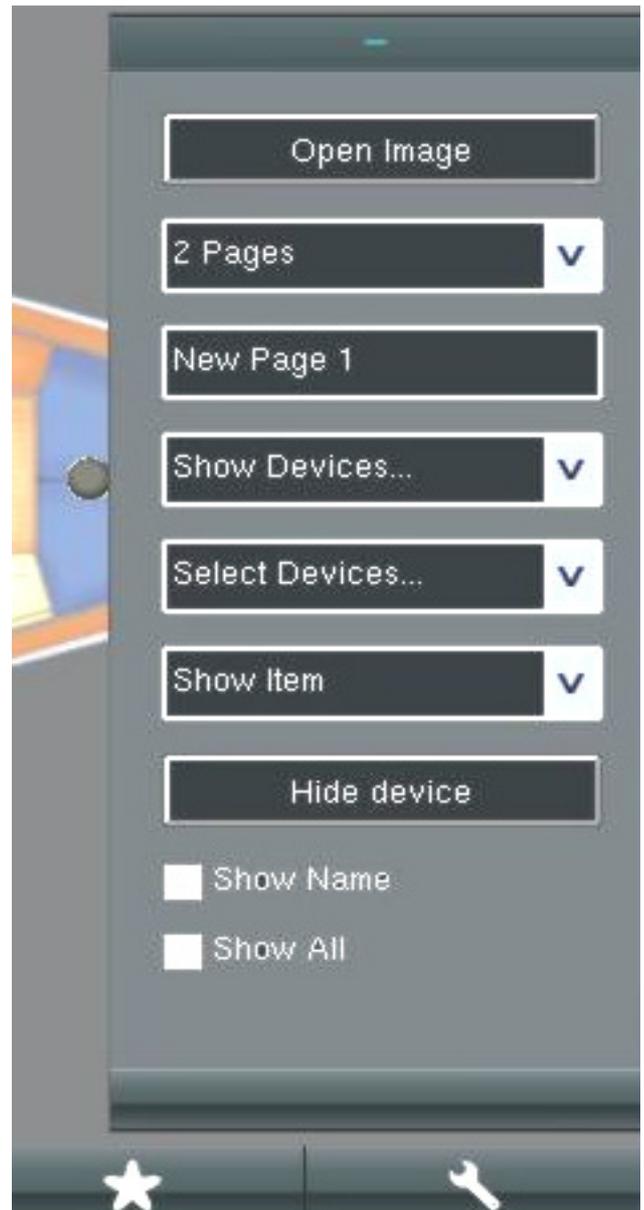


Figure 22: Consumer page pop up screen

## 7.3 POWER FLOW PAGE

Graphic display of the system power flow you set in the Connections page. See the table for line colours and their meaning. If there is an AC or DC energy flow, flowing arrows show the current direction. The table below shows the meaning of the different lines.

Colour	Voltage	Dotted	Red
Green	DC 12V	<1V	1-8V or ≥ 16V
Dark blue	DC 24V	<1V	1-16V or ≥ 32V
Light blue	DC 48V	<1V	1-32V or ≥ 64V
Orange	AC120V	<5V	5-80V or ≥ 160V
Yellow	AC230V	<5V	5-180V or ≥ 260V
Grey (no arrow)	No information available		

In configuration level only, you can move the components while the relations stay in place (the coloured lines go along). The display also shows the current direction when charging or loading occurs.

### 7.3.1 Max. Pages

Option to select more than one page in the Connections overview. See figure 24. By touching the Consumer page button, you can select one page. This page can be deleted

### 7.3.2 Show Devices

Selection box to show the Devices that are not yet shown in the overview page.

### 7.3.3 Hide

Option to hide the selected device.

### 7.3.4 Pop up check

Check box to see more information about a device when touching it in the connection overview. See figure 23 and 24.



Figure 23: Pop up check

### 7.3.5 Default State

Option to rearrange the devices to default display. This may not be the physical configuration, yet all devices are visible in the screen.

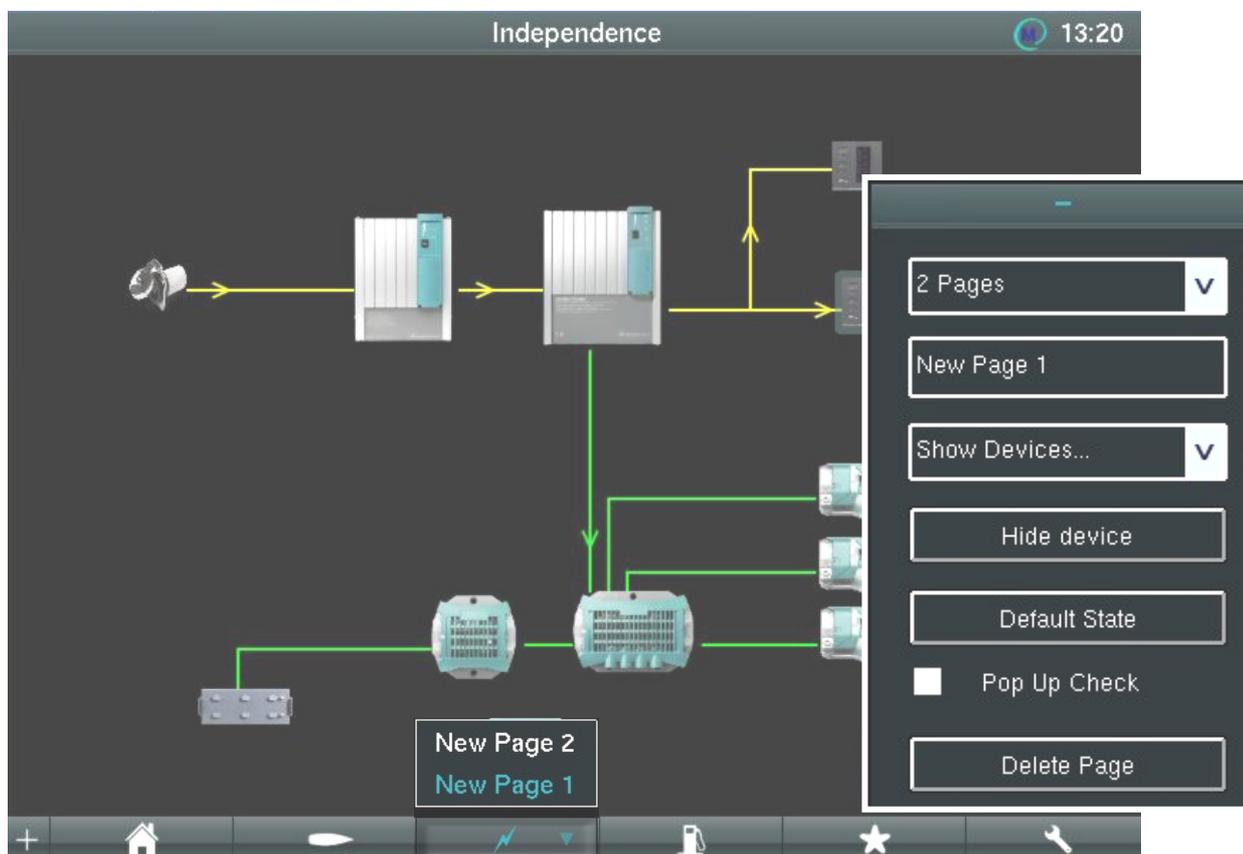


Figure 24: Connections

### 7.3.6 Drag and drop connections

The Power Flow page enables configuration of connections by means of “Drag and drop”. See figure 25.

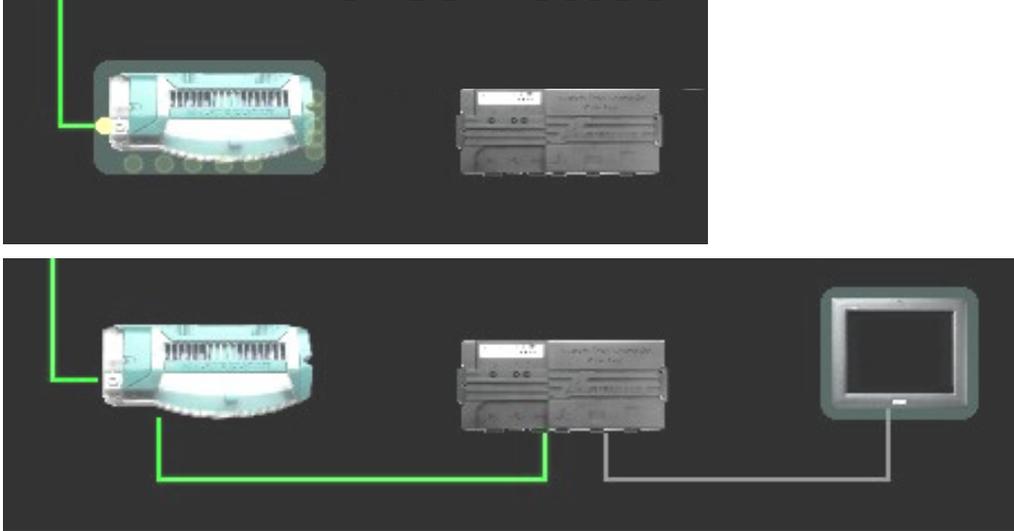


Figure 25: Connections, Drag and Drop function

If you touch the first device to connect, it shows the possible connections as open circles (1). If you drag an open circle to a second device, this device shows its possible connections as open circles too.

The connection is established by laying the first circle on the second circle. The open circles are closed then and turn yellow. To cancel this connection, drag the yellow circle all the way back to the first device.



It is easier to operate the Drag and Drop function if you disable the Pop up check. Further we recommend using an USB mouse connected to the panel when operating the Drag and Drop function.



The Drag and Drop function does not support *multiple connections* (for instance two batteries connected to one MasterShunt). For this option you need to use the Connections Page (section 6.5).

### 7.4 TANK LEVELS PAGE



If a Tank Level Interface is connected to MasterBus, a level bar appears in the Tank Levels page automatically. The tank level screen, figure 25, shows the tank readings graphically, represented like sight glasses.

Tank readings are sent to MasterBus via a Tank Level Interface each. 20 tanks can be monitored on this page. In alarm the fluid color turns red.

Alarm levels of a particular Tank Level Interface can be set in the Configuration screen, by logging into the corresponding interface, see section 7.6. For information on how to set the alarm levels, refer to the manual of the Tank Level Interface. At the levels 0% and 100%, the red alarm indication disappears.



Figure 26: Tank level screen

Point 1 in figure 26 represents the *Almost Full* alarm level setting, point 2 shows the *Almost Empty* alarm level setting.

## 7.5 FAVOURITES PAGE

Option to design your own page(s) with several gauges and switches to choose from. It could look like a dash board, see figure 28. The switches can be operated from this page.

### 7.5.1 Max. Pages (configuration level only)

Option to select more than one page for your dash board. This is convenient for representing AC and DC separately, etc.

### 7.5.2 Select Devices (configuration level only)

Box to select the device to show monitoring items of.

### 7.5.3 Analog display (configuration level only)

Checkbox to display a gauge meter. Checked: gauge meter, unchecked: digital display (not available for every item). The range of the gauges can be adjusted by clicking the gauge. This way the important range can be indicated more precisely, figure 27 shows an example for the MasterShunt.

### 7.5.4 Show item (configuration level only)

Option to show an item of the device selected by Select Devices. An item example is the device state.

### 7.5.5 Show name (configuration level only)

Selection box to show the names of the devices shown.

### 7.5.6 Delete

Option to remove an item shown on the favourite page. Touch the item and select Delete.

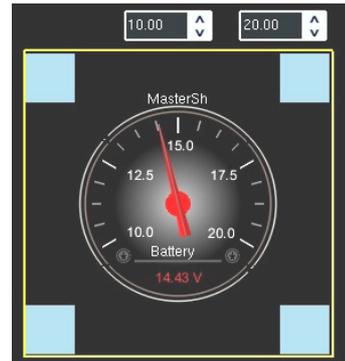


Figure 27: Adjustment of range

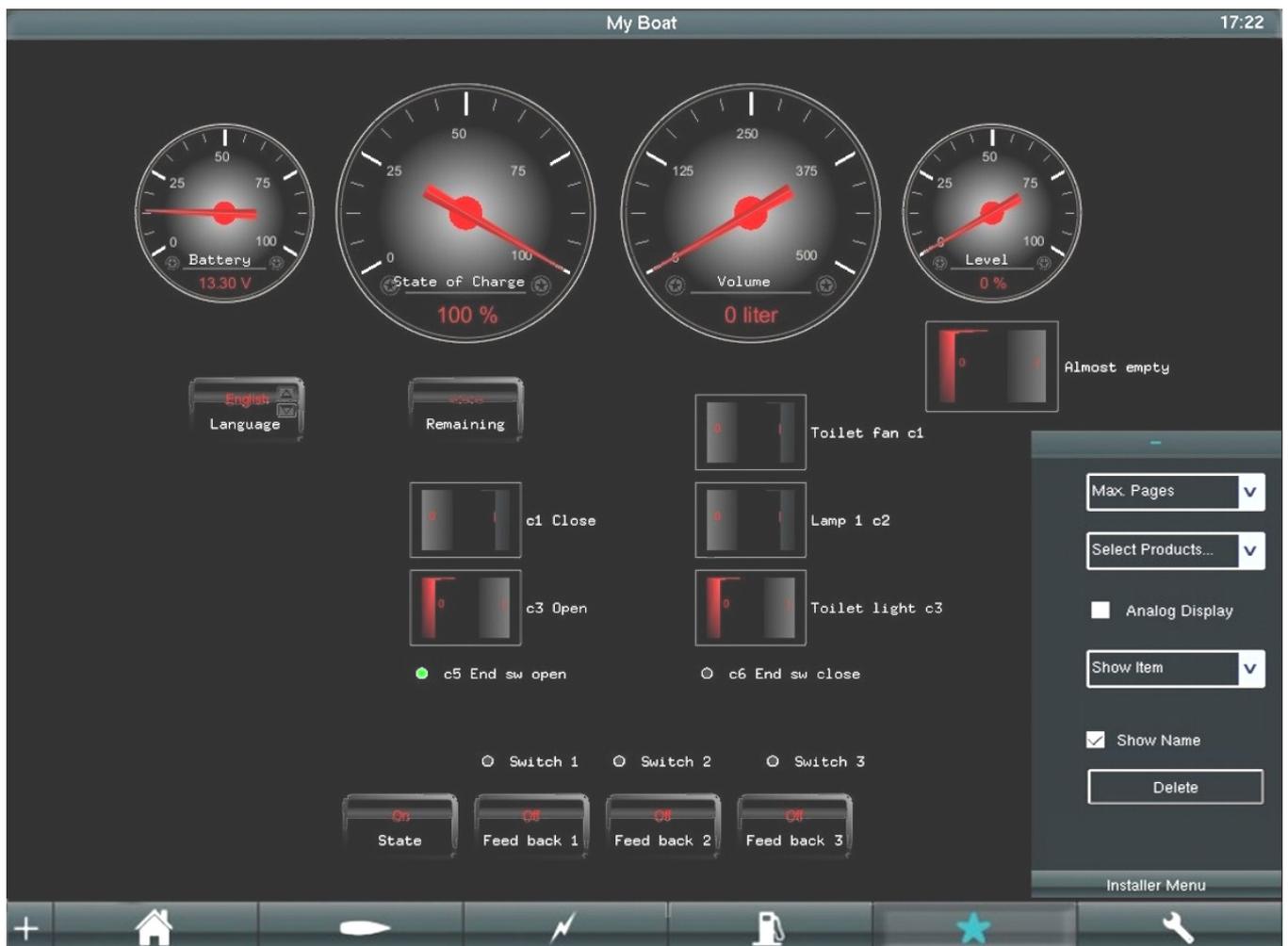


Figure 28: Favourites page example

## 7.6 CONFIGURATION

The Configuration page offers the option to monitor, configure and control all connected MasterBus devices. By touching of the buttons (1) and (2), the monitoring configuration menus appear respectively. The Configuration page is only accessible on the panel if you are logged in to configuration level (see section 8.3). In Windows you are logged in automatically.

### 7.6.1 Monitoring

See figure 29. The MasterView System shows the device status and offers the option to change it (Standby or ON). Switch 1 to 20 are optional switches to be placed onto the Favourite page. They are only functional after event configuration. Switch 1-10 are *On/Off switches*, 11-20: *Pulse switches*.

The monitoring page shows their status (enabled/disabled). The feedback signal is shown on the monitoring page as well. If the device list at the left is larger than the screen shows, arrows appear like shown (3).

If a device is connected that is not recognized by the MasterView System, a question mark “?” appears instead of the device miniature.

### 7.6.2 MasterView System Name configuration

See figure 29. This page enables configuring the MasterView System. In the screen shown, the switches can be renamed by touching the boxes and entering a new name.

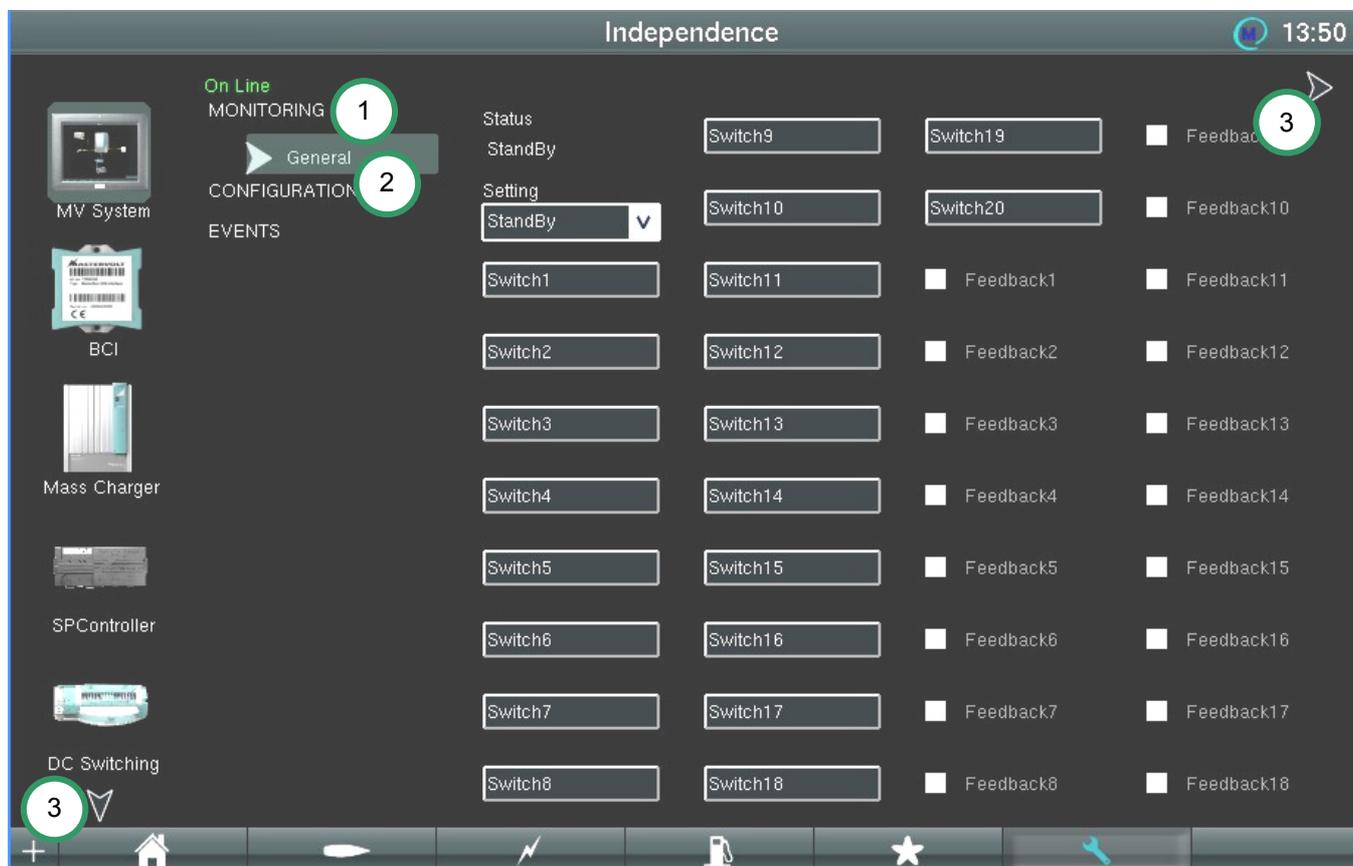


Figure 29: Monitoring



Figure 30: Naming the switches

**7.6.3 Group view**

Shown in figure 30 is the Group view. Another presentation is the Tab view which you may recognise from the MasterAdjust software. Tab View can be selected in the navigation bar (see figure 31).



Figure 31: Tab view selection

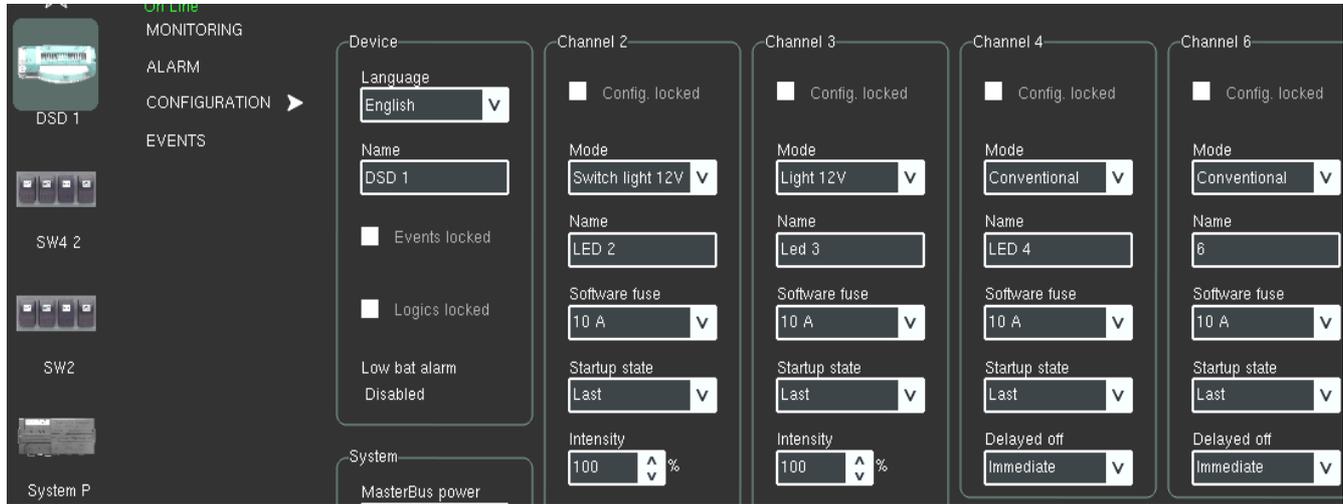


Figure 32: Tab view

**7.6.4 Event configuration (on line)**

See the MasterView System Events table for more information. Figure 32 shows the MasterBus Event configuration screen. Selected is the MasterView System itself, source is Switch 1, target is DC Switching, command channel 5, data Toggle.

Possible Event sources:

Disabled, Switch 1 to 20, Feed back 1 to 20.

Event targets: system dependent.

Event Commands: device items.

Event data:

Off, On , Copy, Copy Invert, Toggle.

Variable	Meaning	Default	Adjustable. range
<b>Events</b>			
Event X source	Choose an event to serve as Event X X ranges 1 to 20	Disabled	Disabled, Switch 1 to 20, Feed back 1 to 20
Event 1 target	Select the MasterBus connected device that should take action due to Event X	Choose...	All connected MasterBus devices
Event 1 command	<i>Event-based command.</i> Action to be taken by the Event 1 target.	Choose...	Device items
Event 1 data	Event 1 data controls the Event 1 command, see figure 25 for explanation.	Off	Off, On, Copy, Copy Invert, Toggle
Event 2 source	Appears when Event 1 is enabled.	Disabled	Disabled, State, Backlight

Table: MasterView System Events



Figure 33: Event configuration example

1. Select a device in the list
2. Click (touch) EVENTS
3. Select Event 1 source (example: Switch 1, see figure 33)
4. Select Event 1 Target (example: DC Switching)
5. select Event 1 Command (example: DC Switching channel 5)
6. Select Event 1 Data (example: Toggle)



After offline configuration, the MasterView System events have to be saved to the offline event page. Before online configuration, make sure your off line events are up-to-date (Read from MasterBus)! Otherwise you may lose important MasterBus data!

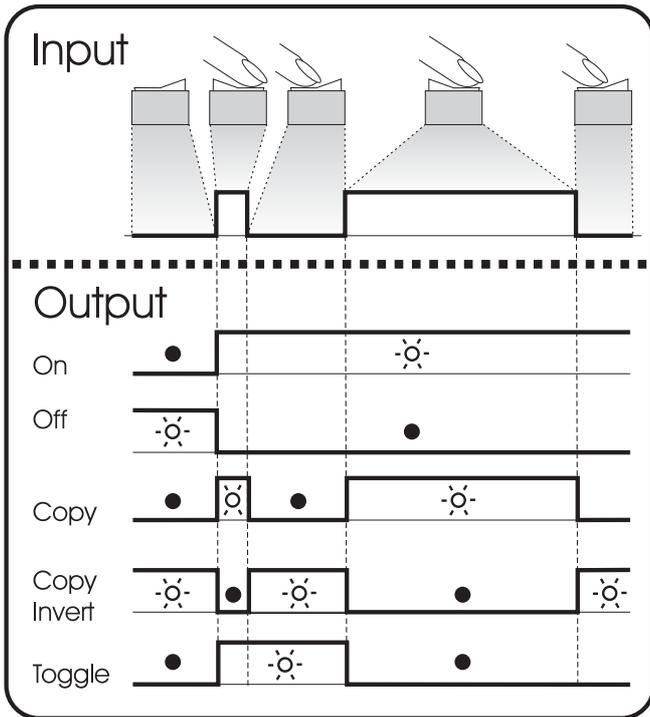


Figure 34: Event data

### 7.6.5 Device Properties

Double click Device (1) to enter the Device Properties screen (2). This screen shows all product information of the device, including software version. Click Options to enter the options screen (3);

**Input** is a pulse followed by a longer signal (1/0). This could be a short period followed by a long period of the Event source Battery low. The figure shows a pulse switch to illustrate the input.

**On** changes the status to On at the first signal.

**Off** changes the status to Off at the first signal.

**Copy** lets the status follow the input.

**Copy Invert** lets the status follow the opposite of the input.

**Toggle** changes the status at the first signal and back at the second signal. It is often used in combination with a pulse switch.

Click Login (4) for device login: option to login at the corresponding device, for instance to installer level.

Click Refresh (5) for refreshing the Device in MasterBus.

Click Download Manual (6) for downloading the manual from internet (PC only).

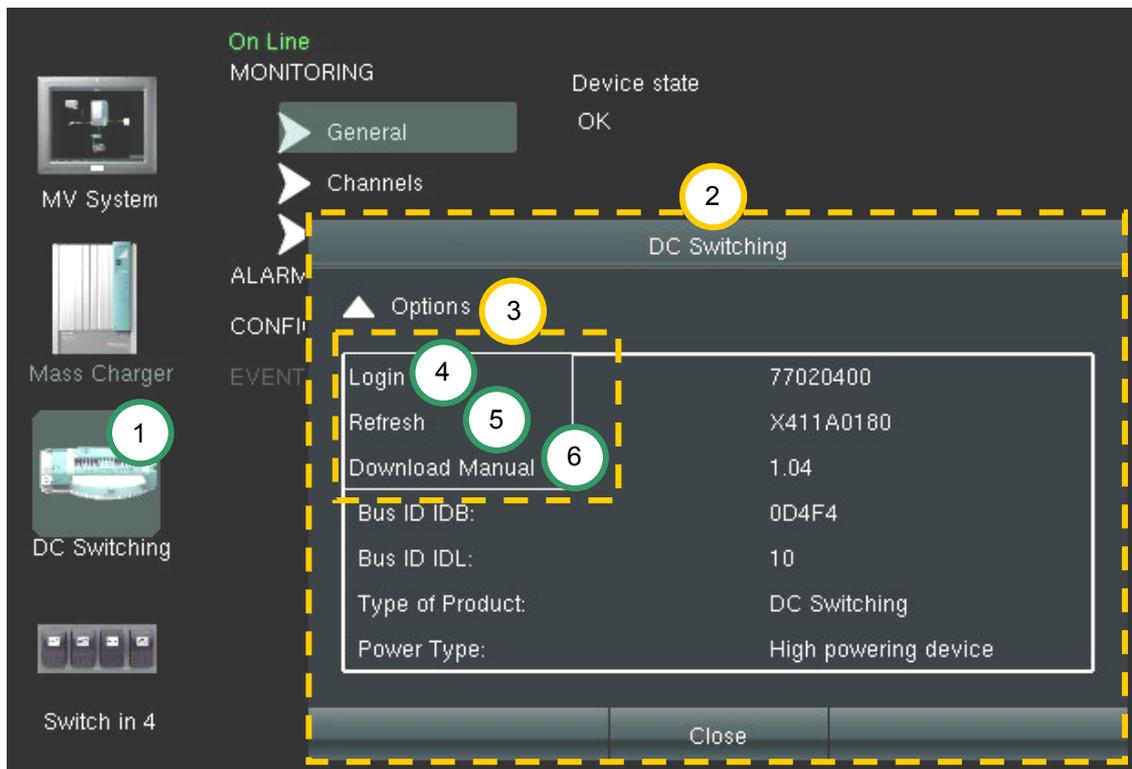


Figure 35: Device login

## 8 MAIN MENU BAR SCREENS



Click the navigation bar left corner “+” to open the main menu bar, refer to figure 11. The “+” changes to “-”. Click this sign again to close the menu.

If a menu is more than one generation deep, the item involved shows an arrow on the right, see figure 36, option “Advanced”.

The MasterView System has one more option in the main menu bar: Switch off. This option shuts down the MasterView System and its running software.



NOTE: The options Language, Yacht, Devices and Connections in the previous chapter are also accessible in the top bar (figure 11).

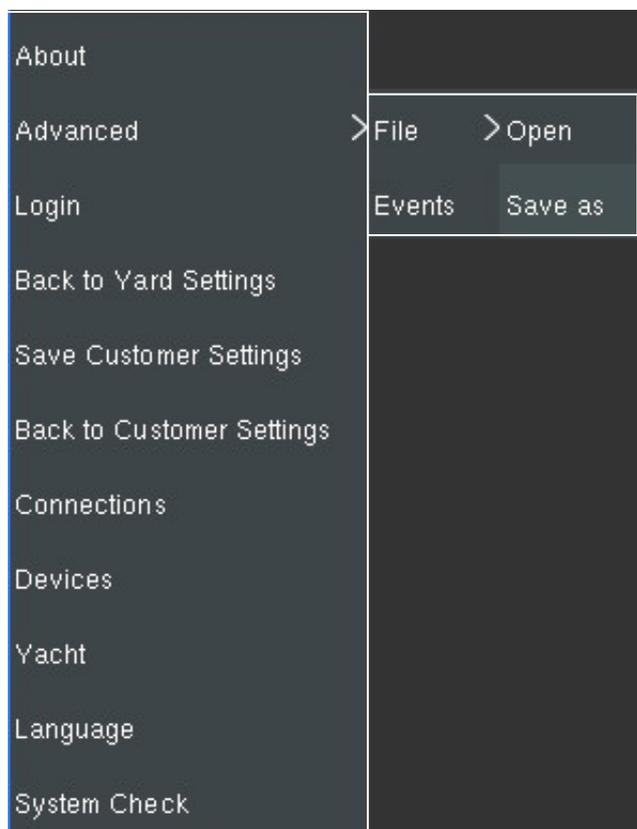


Figure 36: Main menu bar, user level

### 8.1 ABOUT

Option to see the software information like the software version.

### 8.2 ADVANCED (USER LEVEL)

The Advanced menu in the User level shows the sub menus File and Events.

#### 8.2.1 Save as

Option to create a settings file. The MasterBus settings are stored in files with extension .mvc which

stands for Mastervolt Configuration. The name is yacht or vehicle name plus date and time.



NOTE: At every shut down, the settings are saved as well.

Select Advanced > File > Save as and specify a filename for your settings. PC users also specify a location for the settings.

#### 8.2.2 Save to USB

Option to copy the .mvc file (refer to section 8.2.1) to a USB stick. Your settings cannot be saved to a USB stick only.



Save your settings to an .mvc file before copying them to a USB stick!

#### 8.2.3 Open file (PC only)

Option to open a previously saved .mvc file from a specified location on the PC.

#### 8.2.4 Events

Option to see the all MasterBus events configured in your system offline (read only). See section 8.4.3.

### 8.3 LOGIN TO CONFIGURATION LEVEL

The Configuration level is entered by means of entering the password 123 in the Login Password box. See figure 37.



Figure 37: Login

Once logged in, you see the message Configuration Level below the login box. In the Navigation bar the Configuration button appears.

The password can be changed by touching (clicking) the “Login Password” button, typing a new password and press the “Set Password” button.



NOTE: After a password change, the new password is shown under the buttons. This is done to avoid problems with mistyping.

### 8.4 ADVANCED (CONFIGURATION LEVEL)

The Advanced menu in the Configuration level shows the sub menus Update Device, Save Yard settings, File (section 8.2) and Events, see figure 38.

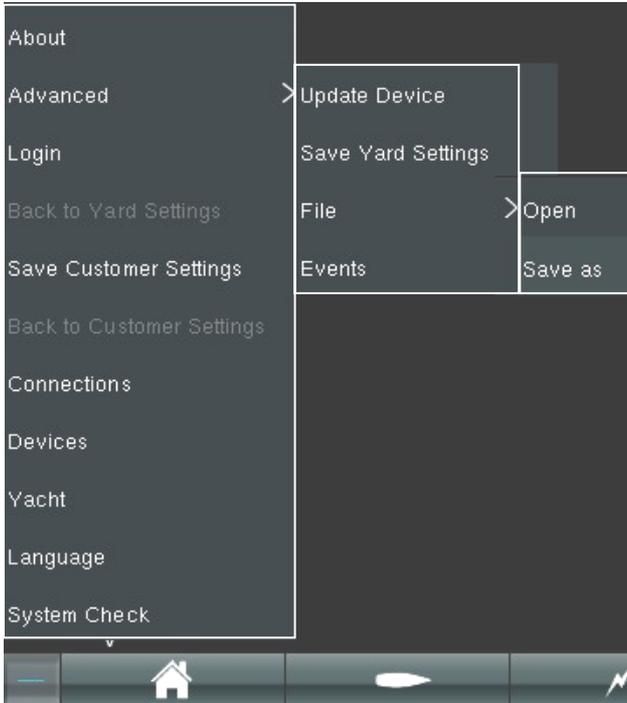


Figure 38: Main menu bar, Configuration level

#### 8.4.1 Update Device

Option to update the Device software, including the MasterView System software. The updates are stored in files with extension .mvu which stands for Mastervolt Update file. Use an internet connected device to store the update file onto a USB stick. Insert the USB stick in the MasterView System and select Update Device. The System Update screen (figure 39) opens and shows the update status. This can be *Already Up-to-date* or *Strongly Advised*.



The update file can contain more than one device update! *Full* means, all newest devices and device settings have been copied into the .mvu file.

If a device has not been updated correctly, on the configuration page a lightning symbol appears next to its miniature.

#### 8.4.2 Save Yard Settings

Option to save all MasterBus yard settings. These settings are system and device configuration related. After a device replacement, MasterView System will ask you to save this new device to the Yard settings as well.



Saving the .mvc to USB stick is convenient when configuring ships with equal systems.



Take care to save your .mvc file onto the stick root, not in a folder!

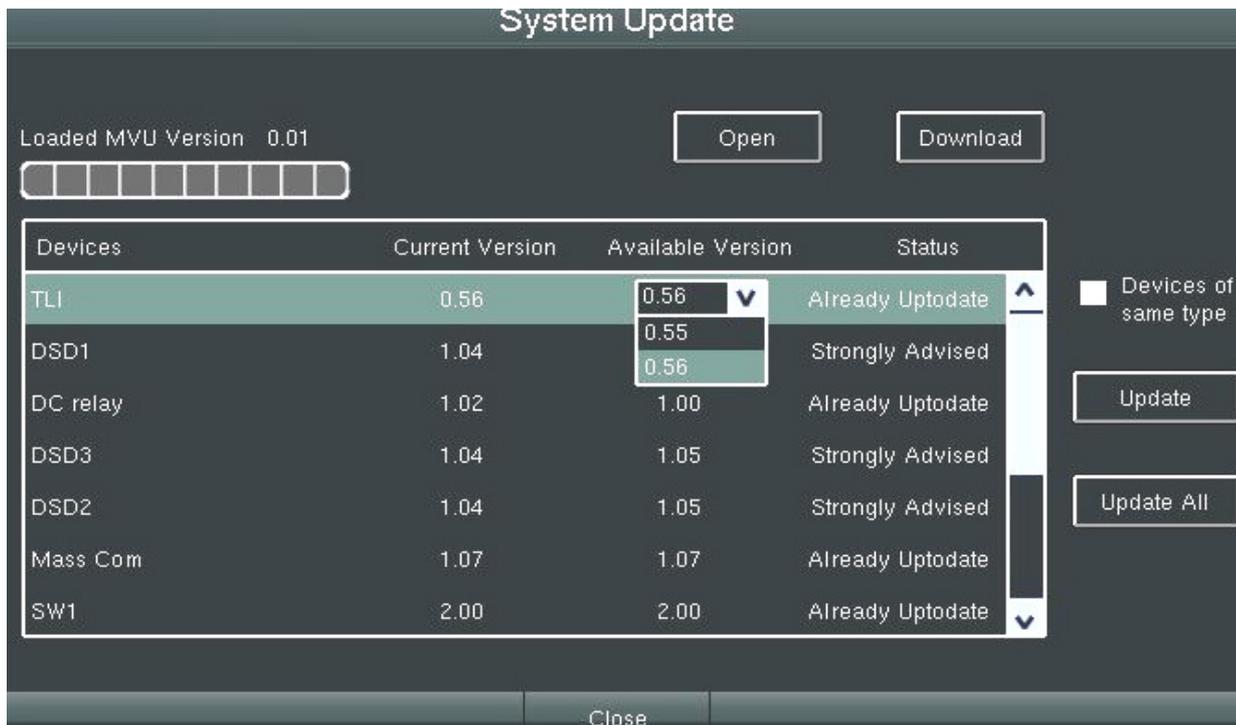


Figure 39: System update

**8.4.3 Events configuration (off line)**

Option to configure the events of all connected MasterBus devices in your system off line or on line. The great advantage of off line configuration is, it can be done at a ship yard or at your home, even when the complete system has been installed and configured. A new device can be installed, or for instance lighting settings can be changed without having to sacrifice costly time on your yacht or vehicle. See also section 8.8.

See figure 40. Refer to section 7.6.3 for more information on the MasterView System Event configuration. For Off line configuration, *Write to System* is needed to have the system behave according to your settings. You can also choose not to write the settings to MasterBus, but save them to an .mvc file instead (*Advanced/Save as*).



The Events page in the Main Menu enables *Off line* configuration. In the Configuration page, only *On line* event configuration is possible!



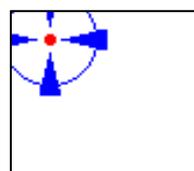
Take care to have all devices connected and switched on when you read from MasterBus and make sure all events are on the Events page before you write to MasterBus. Otherwise you may lose important MasterBus data!



Figure 40: Configuring the MasterView System Events.

**8.4.4 Touch screen calibration (panel only)**

The MasterView System touch screen is standard delivered with a calibrated touch screen. If you still experience problems, the touch screen can be calibrated again. After selecting Calibration, a circle appears in a corner of a white screen, see figure 41.



Touch the middle of this circle several times until the normal screen returns.

Figure 41: Calibration

## 8.5 BACK TO YARD SETTINGS

*Back to yard settings* allows you to restore the system to yard settings. These settings must have been saved before, see also section 8.4.2.

This option is convenient for you as customer when your customer settings do not satisfy or for instance when you changed the configuration yourself and the devices do not act like expected.

## 8.6 SAVE CUSTOMER SETTINGS

Option to save customer settings. Naming the settings files may be important for PC users, because saving more than one .mvc file is possible.

### 8.6.1 Read from System

Before saving the settings, the system asks if you want to read events from MasterBus, see figure 42.

Yes: the software will read the events from the connected MasterBus system and save them in the event page.

No: the software saves the settings from the event page without reading and saving the events in the connected MasterBus system. This is convenient if you made changes in the event page without saving these to the system yet.



By selecting Yes, you undo the unwritten events in your offline event page!  
Refer to section 8.4.3.

### 8.6.2 Write to system

Save the new settings to the connected MasterBus system. If a MasterBus device has been disabled, data cannot be written to this device. A warning pop up appears then.

## 8.7 BACK TO CUSTOMER SETTINGS

This option allows you to restore the system to your last saved Customer settings. This is only possible if you saved your Customer Settings before.

## 8.8 OFF VESSEL/ VEHICLE CONFIGURATION

When the system configuration is saved on a USB stick, the installer can do all settings at (your) home and upload these settings to your MasterView System afterwards.

This means you can take along all your MasterBus settings on a small stick, without having to take out and transport the corresponding devices.



Figure 42: Read from MasterBus?

## 9 ADDITIONAL INFORMATION

### 9.1 MASTERVIEW SYSTEM SOFTWARE FOR PC

Like mentioned before, the MasterView System Software can be updated for the panel itself (Linux) *and* for a PC (Windows). The update file .mvu is free downloadable from the internet by means of a PC. It contains updates for both the PC and MasterView System. When saved on a USB stick, it can be used to update the MasterView System.

The MasterView System software shows a DEMO banner at the MasterView System and the PC (except for the configuration page). This banner can be stopped by connecting the System Panel Controller USB cable. So the System Panel Controller is able to stop the banner for the MasterView System as well as for the PC!

The MasterView System Software update is available as free to download software on the Mastervolt website ([www.mastervolt.com](http://www.mastervolt.com)), for PC only! For the MasterView System, only software *updates* are available.



Before updating the MasterView System with a .mvd database file, be sure you saved all configuration. Not saved configuration will be lost when updating!

Features of the MasterView System Software:

- System configuration: to adjust the entire MasterBus network and all connected devices in accordance with your personal preferences, including programming of *Event-based commands*;
- System Monitor: complete actual overview of your entire electrical installation;

### 9.2 ORDERING INFORMATION

Part number	Description
77010400	MasterView System
77031900	System Panel Controller
77040000	MasterBus terminating device
77040020	MasterBus cable, 0,2m
77040050	MasterBus cable, 0,5m
77040100	MasterBus cable, 1,0m
77040300	MasterBus cable, 3,0m
77040600	MasterBus cable, 6,0m
77041000	MasterBus cable, 10m
77041500	MasterBus cable, 15m
77042500	MasterBus cable, 25m
77050100	100m / 330ft MasterBus cable
77050200	50 pcs. modular jacks
77050000	Complete set to assemble MasterBus cables. Delivery includes: 100 meter MasterBus cable, 50 pcs. modular jacks and crimping tool
77030100	MasterBus-USB interface

Mastervolt can offer a wide range of products for your electrical installation, including an extended program of components for your MasterBus network. Our website [www.mastervolt.com](http://www.mastervolt.com) shows an overview of all our products and free downloadable software.

## 10 TROUBLE SHOOTING

Contact your local Mastervolt Service Centre if you cannot correct a problem with the aid of the

malfunction table below. See [www.mastervolt.com](http://www.mastervolt.com) for an extended list of Mastervolt Service Centres.

Failure	Possible cause	What to do
No display function.	Panel is switched off.	Press <i>Enter</i> .
	Error in the wiring.	Check the MasterBus cables.
	No DC power.	Check the DC cables.
	SPC failure: temperature too high. SPC red LED illuminates.	Switch off the panel to let it cool down and switch it on after at least 15 minutes.
	SPC failure: voltage too low. SPC red LED illuminates.	Check System Panel Controller.
The MasterView System touch screen does not react.	The screen has been locked. The "Locked" symbol is visible (See figure 9).	Unlock the screen, see section 5.6.
MasterView System cannot be switched On.	System Panel Controller is not connected correctly. The SPC must be connected with MasterBus, DC and USB to switch On.	Check System Panel Controller cable connections. Correct if necessary.
	SPC failure (see No display function)	
Display shows an ALARM (see figure 43).	A MasterBus device connected indicates an alarm situation.	Check the alarm source shown on the display and press STOP to stop the alarm or SNOOZE to let the alarm repeat every 9 minutes.
Slow or no communication.	Error in the MasterBus wiring.	Check the MasterBus cables.
	No terminating device placed at the ends of the network.	MasterBus needs a terminating device on both ends of the network. Check if connected.
	MasterBus network is configured as a ring network.	Ring networks are not allowed. Check the connections of the network.
	T-connections in the MasterBus network.	Check if T-connections are made in the network. T-connections are not allowed.
Touch screen needs to be cleaned without controlling function.	A touch screen reacts at every touch.	Lock the MasterView System, see section 5.6. Clean touch screen with a soft cloth. Do NOT use acids or scourers! Press button long again to unlock MasterView System.
Touch screen does not react well on touching.	Touch screen is not calibrated correctly.	Calibrate the touch screen, see section 8.4.4.
One of the connected devices can not be found.	Error in the wiring.	Check the MasterBus cables.
	Device not suitable for MasterBus.	Check whether the device is suitable for MasterBus. Maybe the MasterBus cable is connected to a non-MasterBus connector.
Wrong language is displayed.	Wrong setting of the language at the MasterView System.	See section 6.1 for adjustment of the language.
	Wrong setting of the language at one of the connected devices.	Every separate connected device can have its own language setting. See user's manual of the connected devices.
Wrong name is displayed.	Wrong setting of the yacht name at the MasterView System.	See section 7.4.
System Check (section 6.1) shows devices not connected or it says "MasterBus not found".	Error in the wiring.	Check the MasterBus cables and terminating devices.
	System Panel Controller is not connected to MasterBus.	Check the MasterBus cables and terminating devices. See figure 8.
Demo banner appears in the screen (see figure 44).	System Panel Controller is not connected to MasterView System or PC.	Check the USB cable. See figure 8.

Failure	Possible cause	What to do
A device with description <i>Unknown</i> appears in the Devices page (section 6.4), see figure 45.	A device that is not yet known in the MasterView System database, has been connected to MasterBus.	Update the MasterView System software, see section 9.1.
A device with a question mark instead of a miniature appears in the Configuration page (section 7.6), see figure 46.	A device that is not yet known in the MasterView System database, has been connected to MasterBus. This device appears as <i>Unknown</i> in the Devices page.	Update the MasterView System software, see section 9.1.
After a device software update, a lightning sign appears (figure 47).	The update was not performed successfully.	Retry the software update.

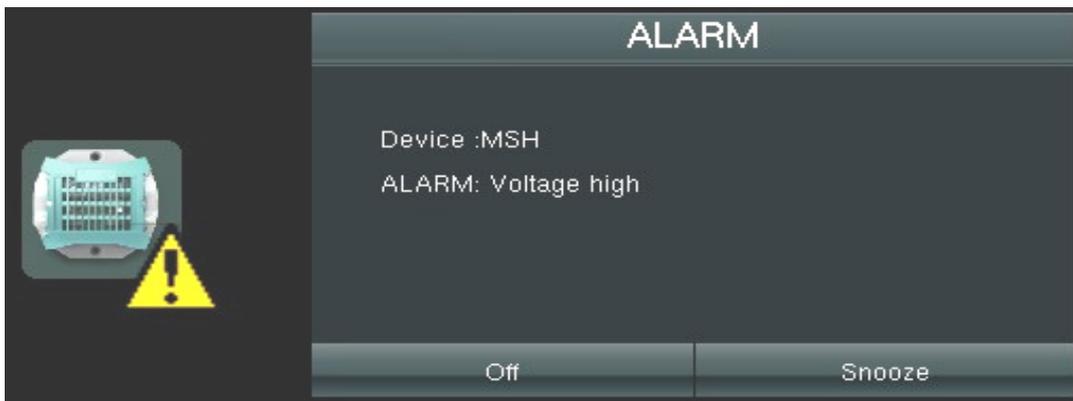


Figure 43: Alarm at the MasterShunt

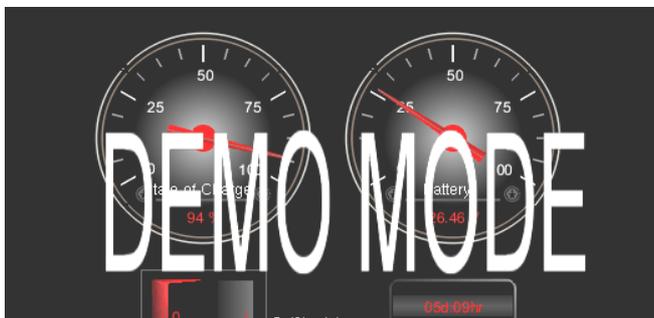


Figure 44: DEMO MODE banner

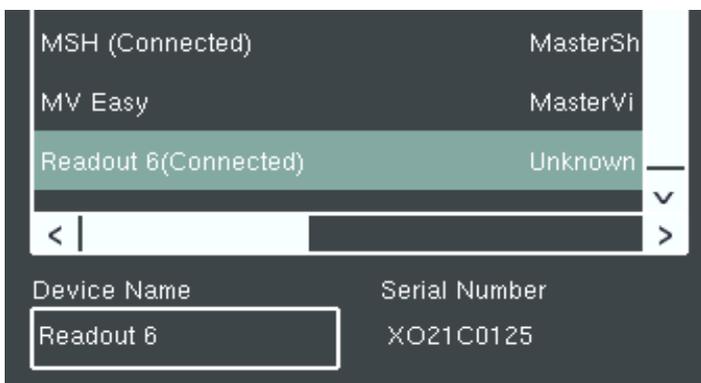


Figure 45: Device unknown



Figure 46: Question mark



Figure 47: Lightning sign

## 11 SPECIFICATIONS

### 11.1 TECHNICAL SPECIFICATIONS

Model:	MasterView System
Article number:	77010400
Delivery includes:	MasterView System, System Panel Controller including cable assembly: USB and DC cable, MasterBus connection cable (1m/3ft), MasterBus terminating device, user's manual, connector for pulse switch
Function of instrument:	Monitoring, configuration and operation of devices that are connected to the MasterBus network
Manufacturer:	Mastervolt Amsterdam, the Netherlands
Readout:	By means of a full colour LCD touch screen
Available languages:	English, Nederlands, Deutsch, Francais, Castellano, Italiano, Norsk, Svenska, Suomi, Dansk.
MasterBus powering capability:	Yes, by means of the System Panel Controller (included)
Input voltage MasterView System:	12V DC
Power consumption MasterView System:	28W
Input voltage System Panel Controller:	12V, 24V, 48V DC
Dimensions:	See section 11.2
Required depth:	38 mm minimum
Weight:	1.9 kg
Protection degree:	IP 21
Protection degree front part:	IP 65

### 11.2 DIMENSIONS

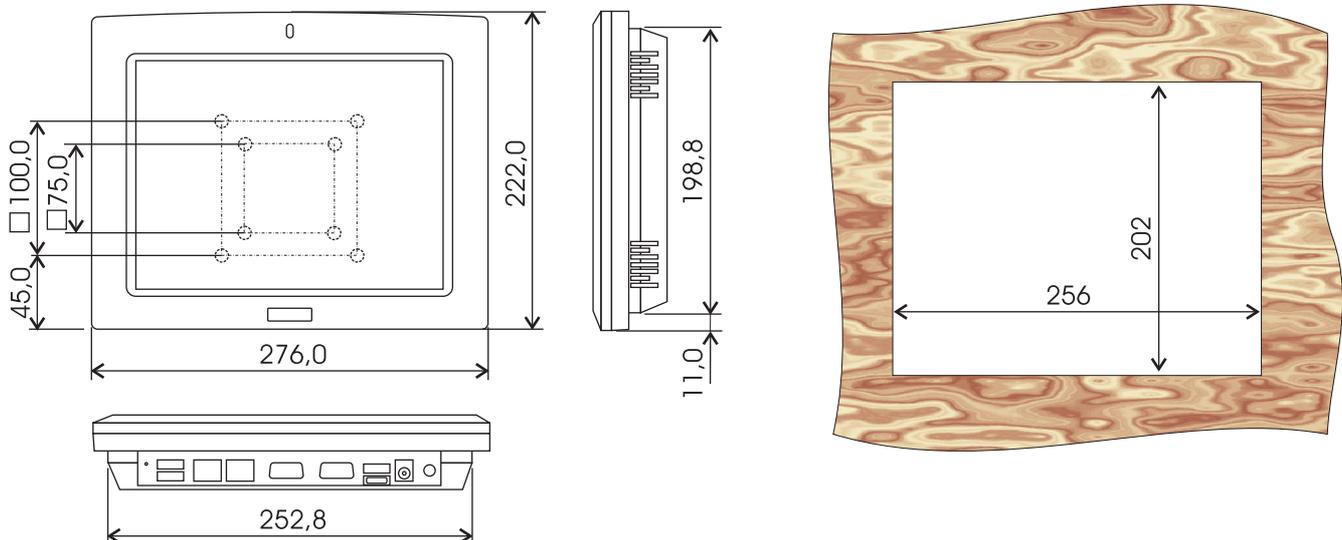


Fig. 48: Dimensions in mm of the panel

## 12 EC DECLARATION OF CONFORMITY



We,

Manufacturer            Mastervolt  
Address                 Snijdersbergweg 93  
                              1105 AN Amsterdam  
                              The Netherlands

Declare under our sole responsibility that the following product:

77010400 MasterView System Panel

Is in conformity with the provisions of the following EC directives:

2006/95/EC (Safety directive); the following harmonized standards have been applied:

- EN 60950-1:2001+ A11:2004 (LVD)

2004/108/EC (EMC directive); the following harmonized standards have been applied:

- EN 61000-6-3: 2007 EN 61000-6-1: 2007
- EN 55022: 2006, Class B EN 55024: 1998+A1: 2001+A2: 2003
- CISPR 22: 2005, Class B IEC 61000-4-2: 2001 ED.1.2
- IEC 61000-3-2: 2005 (refer to Note below) IEC 61000-4-3: 2006+A1: 2007 ED.3.0
- IEC 61000-3-3: 1994+ A1: 2001+A2: 2005 IEC 61000-4-4: 2004 ED.2.0
- IEC 61000-4-5: 2005 ED.2.0
- IEC 61000-4-6: 2006 ED.2.2
- IEC 61000-4-8: 2001 ED.1.1
- IEC 61000-4-11: 2004 ED.2.0

Note: The power consumption of EUT is less than 32W, which is less than 75W and no limits apply. Therefore it is deemed to comply with EN 61000-3-2 without any testing.

Amsterdam,



H.A. Poppelier  
Product Manager marine & mobile

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