

MA-1000, MA-2000, MA-8000

Configuration Tool

M-167.5-Serie-MA-EN / 03.2022

## Intended purpose

This product may be used only for the applications outlined in the catalogue and in the technical description, and only in conjunction with the recommended and approved external devices and components.

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## Safety-related user information

This manual includes information required for the proper use of the products described.

In order to ensure correct and safe operation of the product, all guidelines concerning its transport, storage, installation, and mounting must be observed. This includes taking the necessary care when operating the product.

The term 'qualified personnel' in the context of the safety information included in this manual or on the product itself designates:

- project engineers who are familiar with the safety guidelines concerning fire alarm and extinguishing systems.
- trained service engineers who are familiar with the components of fire alarm and extinguishing systems and the information on their operation as included in this manual.
- trained installation or service personnel with the necessary qualifications for carrying out repairs on fire alarm and extinguishing systems, or who are authorised to operate, earth and label electrical circuits and/or safety equipment/systems.

## Symbols

The following information is provided in the interests of personal safety and to prevent damage to the product described in this manual and all equipment connected to it.

Safety information and warnings to prevent hazards endangering the life and health of users and maintenance personnel, as well as causing damage to the equipment itself, are indicated by the following pictograms. Within the context of this manual, these pictograms have the following meanings:



**Warning** - designates risks for man and/or machine. Non-compliance will result in risks to man and/or machine. The level of risk is indicated by the word of warning.



**Note** - important information on a topic or a procedure and other important information.



**Standards and guidelines** - observe configuration and commissioning information in accordance with the national and local requirements.

## Dismantling



In accordance with Directive 2012/19/EU (WEEE), after being dismantled, electrical and electronic equipment is taken back by the manufacturer for proper disposal.

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# 1 Introduction

The MA-Tool is a programming application for the M<sub>A</sub>x panel range. The software enables to:

- See panel configuration on the PC.
- Edit panel configuration.
- Create and manage a configuration file archive which can be edited at any time and can be transferred into the panel.

The configuration functionalities that are available with this tool are the same you can run when configure the system directly from the panel interface.

## 1.1 Minimum system requirements

CPU: I5  
 RAM: 8 GB  
 Free space on fixed disc: 70 MB  
 Operating system: Windows 7 (64 Bit), Windows 10



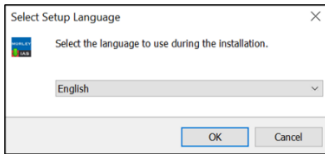
Install the application using system administrator credentials. For details on the configuration parameters, see the M<sub>A</sub>x Commissioning documentation (M-167.2-SERIE-MA-xx)

## 1.2 Associated Documents

Part No.	Description
M-167.1-MA1000-EN	Installation Manual MA-1000
M-167.1-MA2000-EN	Installation Manual MA-2000
M-167.1-MA8000-EN	Installation Manual MA-8000
M-167.2-SERIE-MA-EN	Commissioning Manual M <sub>A</sub> x panel Fire Detection System
M-167.3-SERIE-MA-EN	Operation Manual MA-1000, MA-2000, MA-8000
M-167.4-SERIE-MA-EN	Quick Start Guide MA-1000, MA-2000, MA-8000
M-167.5-SERIE-MA-EN	Configuration tool MA-1000, MA-2000, MA-8000
M-167.6-MA-LCD7-EN	Operating and Installation Manual MA-LCD7 Repeater

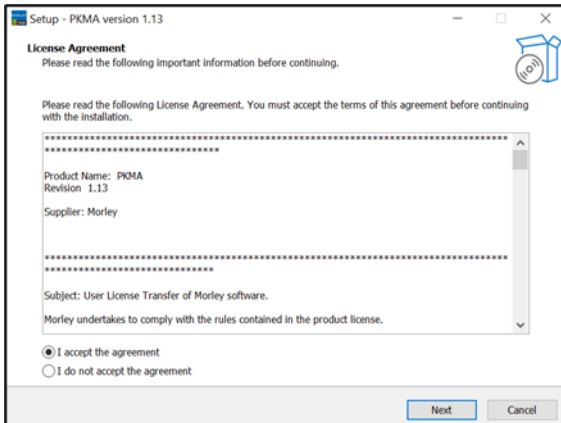
## 2 Software Installation

Run the file PKMA\_Setup.EXE and follow the instructions of the installation wizard:



Select the preferred language from the dropdown menu.

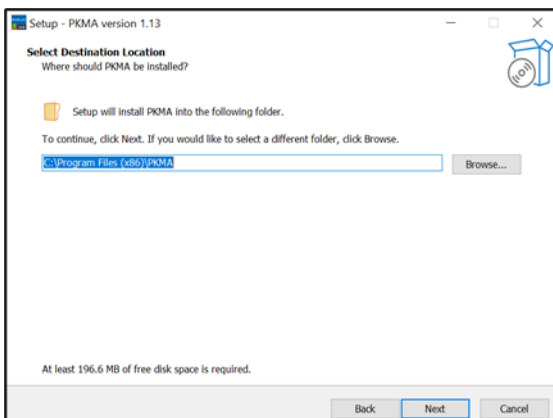
Press **OK** to continue.



Read the license agreement.

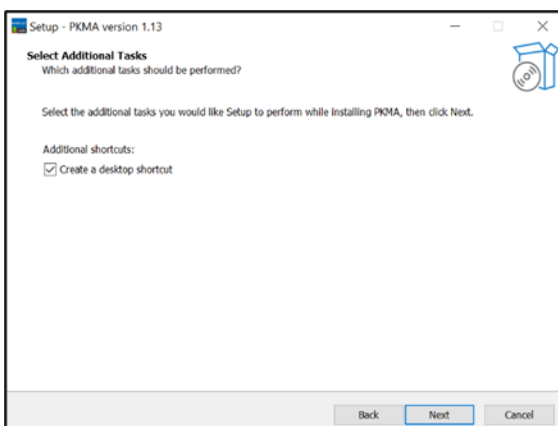
To confirm the software installation, select the radio button **"I Accept the agreement"**.

Press **Next** to continue.



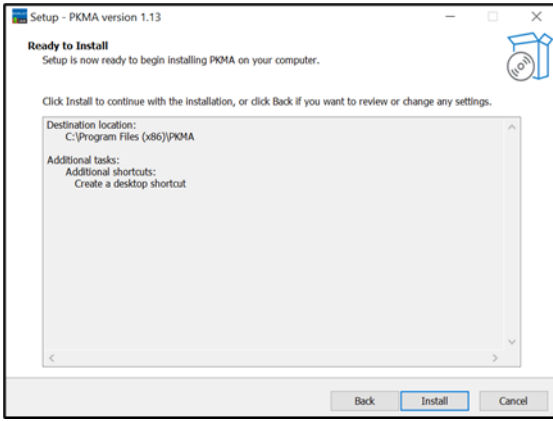
Confirm or change the default path for software installation.

Press **Next** to continue.



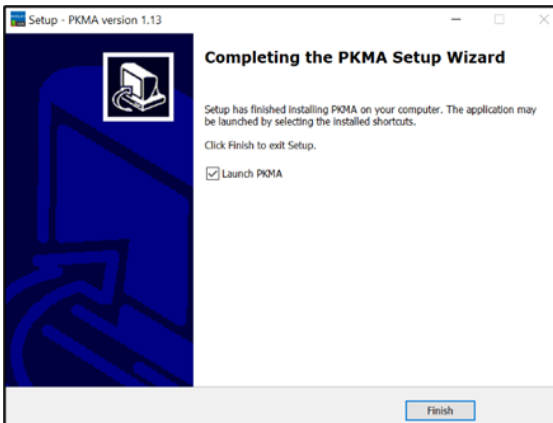
Here you can choose to create a software shortcut on the desktop applying a tick in the checkbox.

Press **Next** to continue.



Check the information in the summary window.

Press **Install** to proceed with software installation.

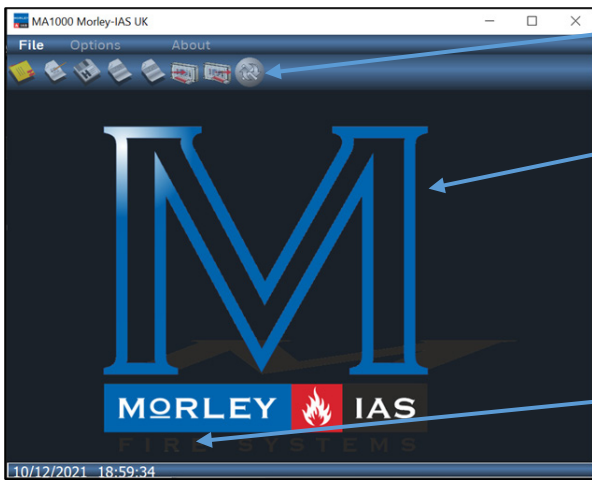


Now the software is installed on the computer.

Press **Finish** to execute the configuration tool.

### 3 Software Functions Overview

After running the application, the following window appears, where the configuration of the system can be managed. This window is divided in three parts:



#### Command Bar

This is the area where the main file and application management commands are grouped together.

#### Work area

This is the real work area where the user defines the various characteristics of the system. In turn, this is split into a summary area, to the left, and an area to the right, which will take on different characteristics depending on the actions taken by the user.

#### Date / Time bar

A small bar is inserted at the bottom showing the current date and time.

## 3.1 Main Command Icons



### Open File (Ctrl+o)

Allows you to open a file containing the previously saved system data. The function is also activated by selecting a file from "browse resources" in Windows and dragging it into the application itself.



### New File (Ctrl+n)

Allows to create a new system config file.



### Save Current File (Ctrl+s)

Allows to save the system config file in the desired path on the PC.



### PDF export

Allows to save the system config in PDF format to the desired path on the PC. This command generates a single file containing all the data relative to the system.



### CSV export

Allows to save the system config in CSV file format to the desired path on the PC. This command generates different files in "Comma Separated Value" format containing the system data to allow easy viewing inside a text editor or electronic spreadsheet.



### Compile

This command creates a binary file containing the system's configuration. The file is instantly usable to configure a system with the MAX panels.



### Import

This command reads the configuration binary file generated by the MAX panels to be viewed/modified with the application.



### Check programming errors

This functionality allows to check if any error occurs into the programming file.

All the above-mentioned options are available in the drop-down menu File on the command bar. Here is also an option for quick access to recent file as well as save an existing file with a different name to reuse previous system configurations.

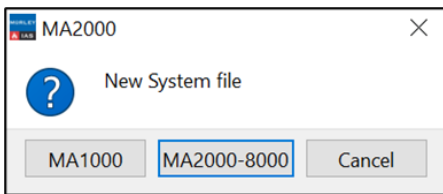
### The Options menu allows to:

- Select a different language between the ones available in the list
- Change the colour theme from dark to light
- Search (Ctrl+c) between Zones, Groups, Detectors and Modules
- The "About" menu shows the PK-Tool version used.



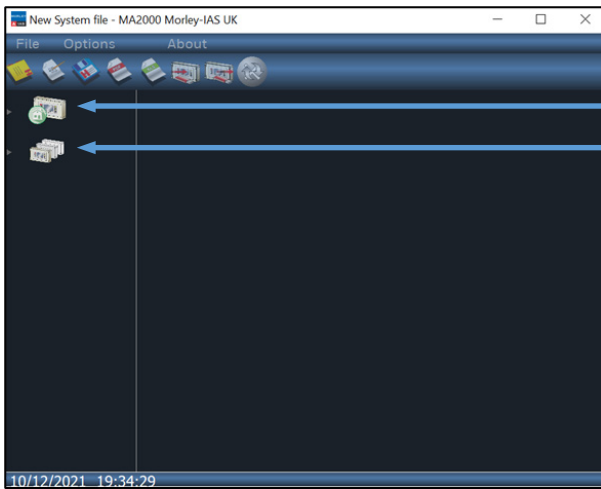
## 4 Create a New File

To create a completely new system configuration file, select the option and the New System File window appears to allow the Morley M<sub>A</sub>x Panel model selection.

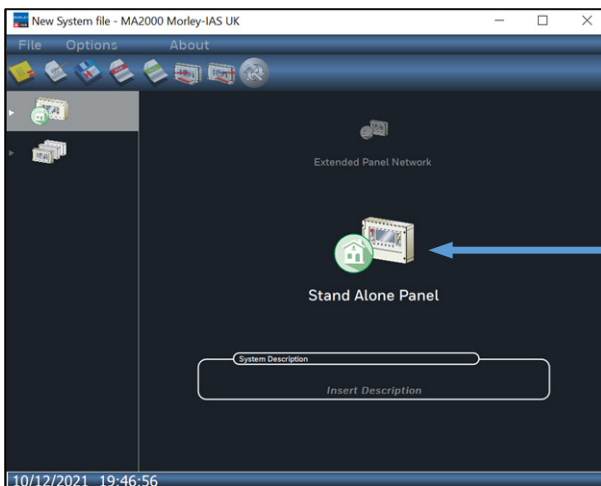


### 4.1 System Topology

Here type the system description and establish its configuration:

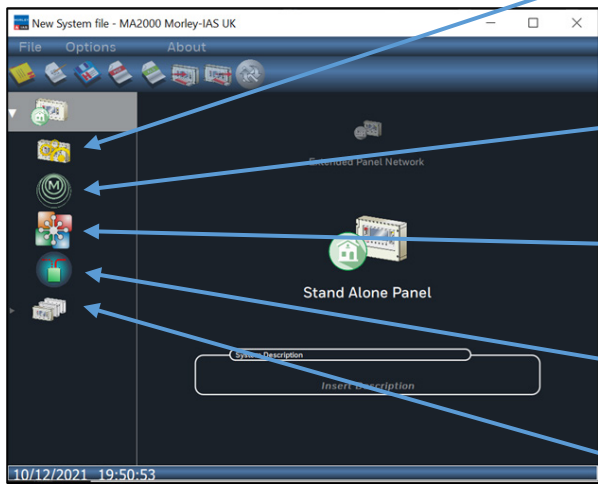


- Single Panel (max. 8 loops).
- Network Panels up to 128 loops.



- Single Panel (max. 8 loops).

Clicking on the arrow provides access to the other system options:



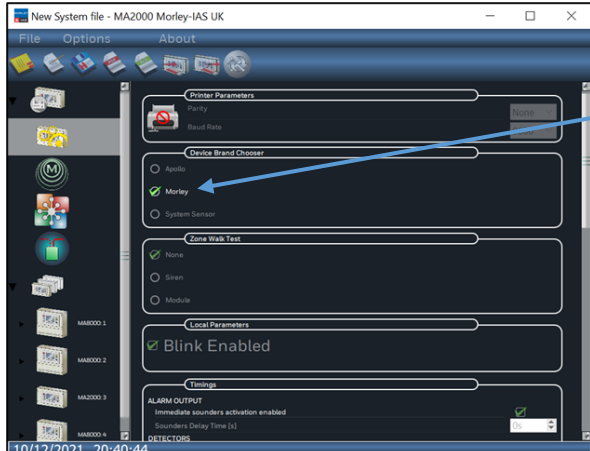
**System General Parameters**  
The setup field device protocol, enable the printer port, change timing and special parameters options, change the relay output setup.

**System Zone**  
The setup soft zone names and parameters as well as check how many devices are associated in each zone.

**Group Parameters**  
The setup logical group limits and configure the control-by-event equation.

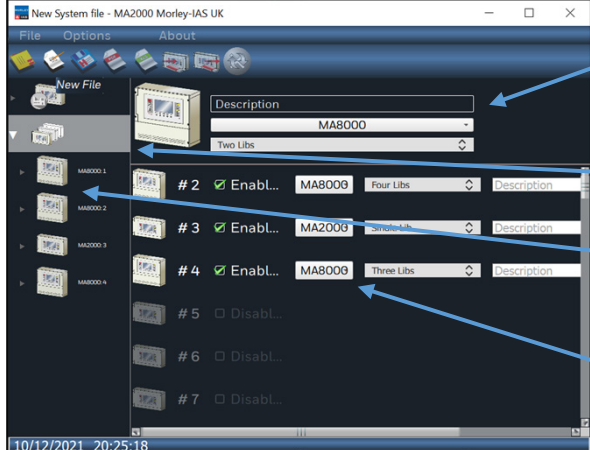
**Network Booster**  
Enable the CAN-BUS Booster and add a label description.

**Panel Configuration**  
Select the type of panel (MA-2000 and MA-8000 only) and the number of loops installed (MA-8000 only).



**Field Bus Protocol Configuration**  
Once the system topology is defined and have assigned a system description, establish the field loop protocol into the system general parameters menu, checking the relevant box into the device brand chooser area.

Now select the panel configuration menu to setup the number of panels inside the system (Network only) and the number of loops installed in each panel (MA-8000 only).



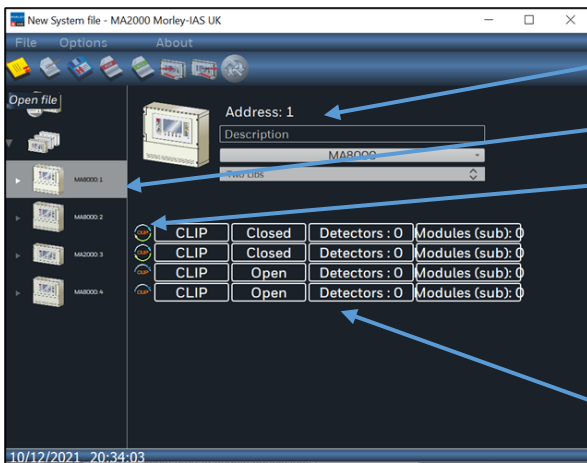
Stand-alone panel or first panel of the network.

Network system tree.

Other panels into the network.

Main area to enable panels into the network, assign the number of expansion card into the MA-8000 and the panels descriptions.

Selecting a panel from the panel tree, the direct access to the loop configuration and to the summary of the devices programmed on each loop is possible.



Panel details and description.

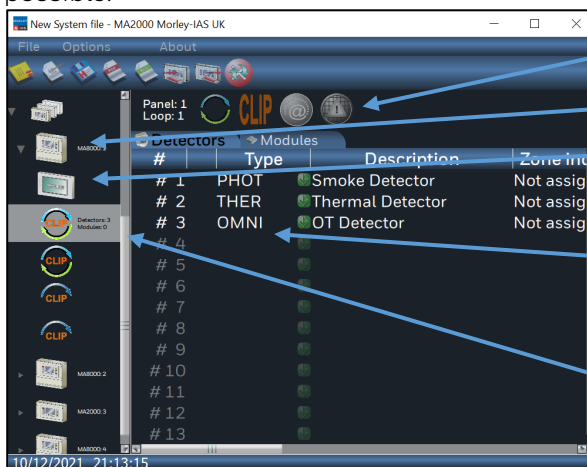
Panel selected into the tree.

Loop configuration.

Numbers of devices configured on each loop.

## 5 Loop Configuration

Selecting the arrow near the panel that will be configured. The access to the local field devices configuration is possible:



Loop config and filters to see only devices configured or with errors.

Panel selected for configuration.

LCD config menu.

Field devices parameters config area.

Loop selector.

## 6 Detector Configuration

This area works like an excel file: once configured a detector with all parameters, it is possible to copy / paste on the other rows. Also delete a detector simply using the delete key on the keyboard. Using the right click of the mouse, the access to the same functions is given. In addition, the option paste special that allow to choose which detector parameter, to the detector type and copy on the land address:

Description with the options to add the address number as prefix or suffix, the group and the zone.



Select loop type closed or open.



Field Protocol indicator.



Filter: show only used address.



Filter: show only detectors with errors.

Click on the green arrow to view the drop-down menu and select the detector type

Add description

Assign a soft zone

Assign a Control-by-Event

Configure the additional parameters

#	Type	Description	Zone index	CBE	Verificati...	Tracking	Blink ena...
# 1	PHOT	Smoke Detector	Not assigned (G1)			<input type="checkbox"/> Disabled <input checked="" type="checkbox"/> Enabled	
# 2	THER	Thermal Detector	Not assigned (G2)			<input type="checkbox"/> Disabled <input checked="" type="checkbox"/> Enabled	
# 3	OMNI	OT Detector	Not assigned (G3)			<input type="checkbox"/> Disabled <input checked="" type="checkbox"/> Enabled	
# 4							
# 5							
# 6							
# 7							
# 8							
# 9							
# 10							
# 11							
# 12							
# 13							
# 14							
# 15							
# 16							
# 17							
# 18							
# 19							
# 20							

The following parameters can be configured for the detectors:

- **Type:** select the type of detector.
- **Description:** area to insert the detector label.
- **Zone:** number of the zone associated with the detector.
- **CBE:** Control-by-Event formula.
- **Verification:** alarm verification time.
- **Tracking:** enables the tracking function.
- **Flashing LED:** enables / disables the LED flashing on the detector.
- **Sensitivity:** setup of the standard, high and low detector sensitivity levels.

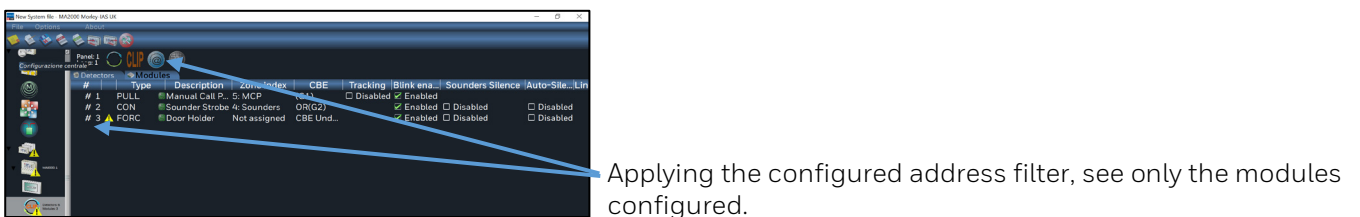
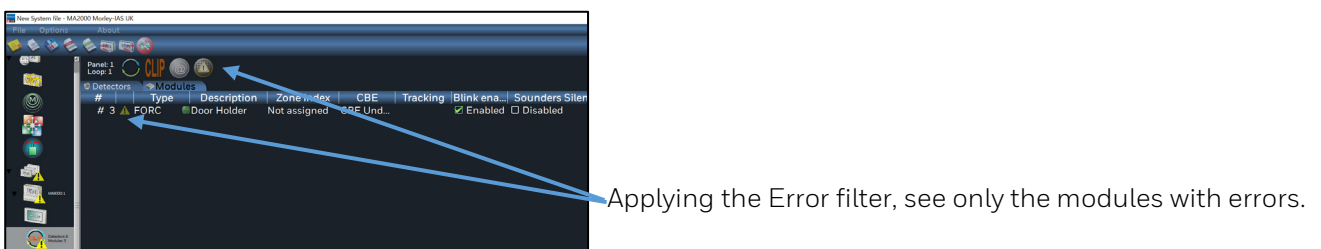
## 7 Modules Configuration

This area works like the detector's configuration. The following parameters can be configured for the modules:

- **Type:** select the type of module.
- **Description:** area to insert the label.
- **Zone:** number of the zone associated with the module.
- **CBE:** Control-by-Event formula.
- **Tracking:** enables the tracking function.
- **Flashing LED:** enables / disables the LED flashing on the module.
- **Sounder Silence:** enables / disables the manual silencing.
- **Auto-Silence:** enables / disables the automatic output silencing after the programmed time.

### 7.1 Error Messages and Filters

If you do not assign a module to a zone, an error icon appears starting from the System, then to the panel affected, then the loop up to the modules:



You can apply also both error and modules configured filters at the same time.

## 7.2 Zone Programming



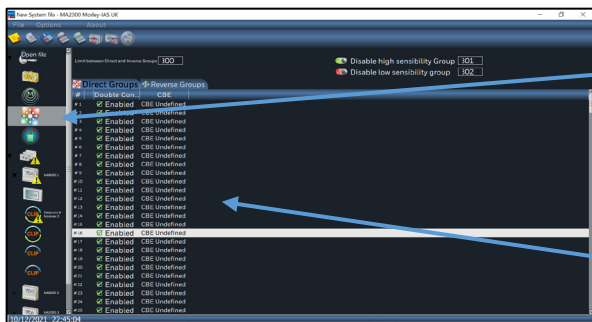
Select the zone programming icon.

Access to the zone configuration page.

The following parameters can be configured on this page:

- **Description:** name associated to the zone.
- **Day & Night Control:** enables high / low detector sensitivity management.
- **Pre-alarm:** enables the pre-alarm management for detectors assigned to the zone.
- **Number of Alarms for CBE activations:** indicates the number of devices in alarm condition assigned to the zone that will activate the siren outputs.
- **Number of Detectors:** displays the number of detectors assigned to the zone.
- **Number of Modules:** displays the number of modules assigned to the zone.

## 7.3 Group Programming

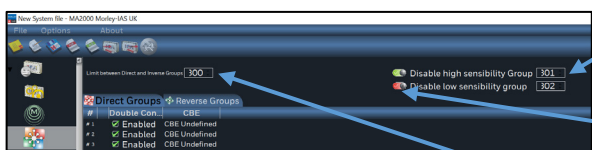


Select the Group programming icon.

Access to Group programming.

### 7.3.1 High / Low Sensibility Group

To use the day/night function, 2 groups need to be defined into the Reverse Group to write the CBE equation where the activation times can be set. The times define the high and low sensibility time slots.



**High / Low Sensibility Group Enable/Disable**  
Switch to enable/disable the groups.

High and Low sensibility group number setup box.

**Limit between Direct and Reverse Group:**  
Max. limit programmable for the direct groups.

## 8 Control-by-Event Programming

The Control-by-Event equation allows to program a series of conditions that the control unit will assess when the point, zone or group is **ACTIVE**, and it will then perform the programmed operations. ACTIVE means:

- **Input** modules or detectors **in alarm**.
- **Output** module **activated**.
- **Group** where one of the **points** in the group **is active**.

Typical programming of the control unit is defined as CONTROL-BY-EVENT EQUATION (**CBE**). During the programming phase, a CBE equation must be associated with each point, zone or group.

To define these conditions, implement the CBE equation using logical operators:

CBE “zero” equation it is also possible to not program any equation for a device. In this case:

- If the device is an input detector or module, the control unit will only activate all general visual and sound signals (alarm LED on the front panel, general alarm RELAY, BUZZER and possible output modules programmed via TYPE ID software for general signaling).
- If the device is an output module it will never be activated unless it is programmed for general signaling via TYPE ID software.

To be valid and accepted by the control unit, the control equation must follow some precise syntax rules. If a syntax error occurs, the CBE equation will be rejected. Logical operators (ex. OR, AND, etc.) that are valid for several operands must be written as follows: **OPERATOR (OPERAND-1 OPERAND-2 ...)**

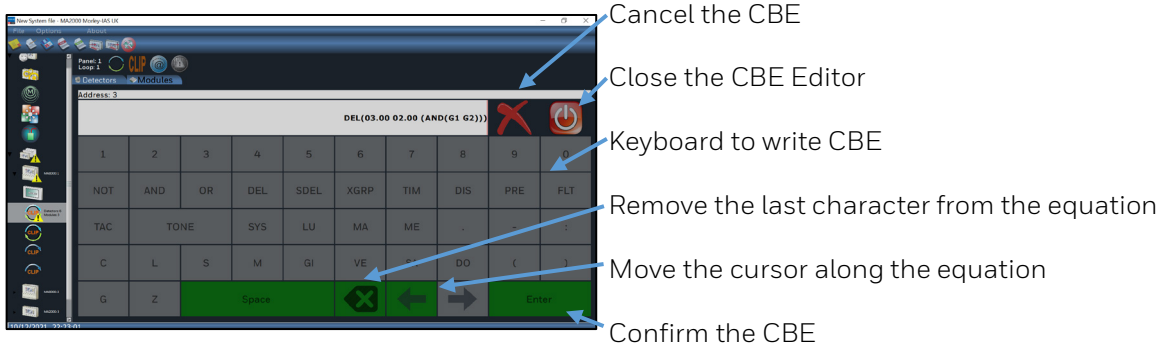
The NOT logical operator is valid only for one operand and must be written before the corresponding operand. If several operators are used, the first character of the equation must be an opening bracket, and the last character must be a closing bracket.

Example: **(OPERATOR (OPERAND-1 OPERAND-2 ...) OPERATOR (OPERAND-1 OPERAND-2 ...))**

### LOGICAL OPERATORS AVAILABLE:

- **OR**: is the operator which requires AT LEAST ONE operand to be ACTIVE.
- **AND**: is the operator which requires EACH operand to be ACTIVE.
- **NOT**: is the operator which DENIES the operand or the series of operands in brackets.
- **XGRP**: is the operator which requires AT LEAST TWO elements of the group indicated below, to be ACTIVE.
- **PRE**: is the operator that uses the pre-alarm status of a detector.
- **FLT**: is the operator that lets you use the status of a device or zone.
- **DIS**: is the operator that allows zones and points to be disabled by activating a programmed input module programmed with type-SW "NONA" (does not generate an alarm in the central unit).
- **TAC**: is the operator that allows you to report the silence command performed on the control panel.
- **DEL**: is the operator which allows you to program activation delays for specific conditions.
- **SDEL**: is equal to the "DEL" operator, with the difference that if the equation is no longer true during the delay time, the timer continues to count and then it activates the output device. An alarm or fault reset must be carried out in order to reset this timer.
- **TIM**: is the operator that allows you to program output activations at periodic time intervals.

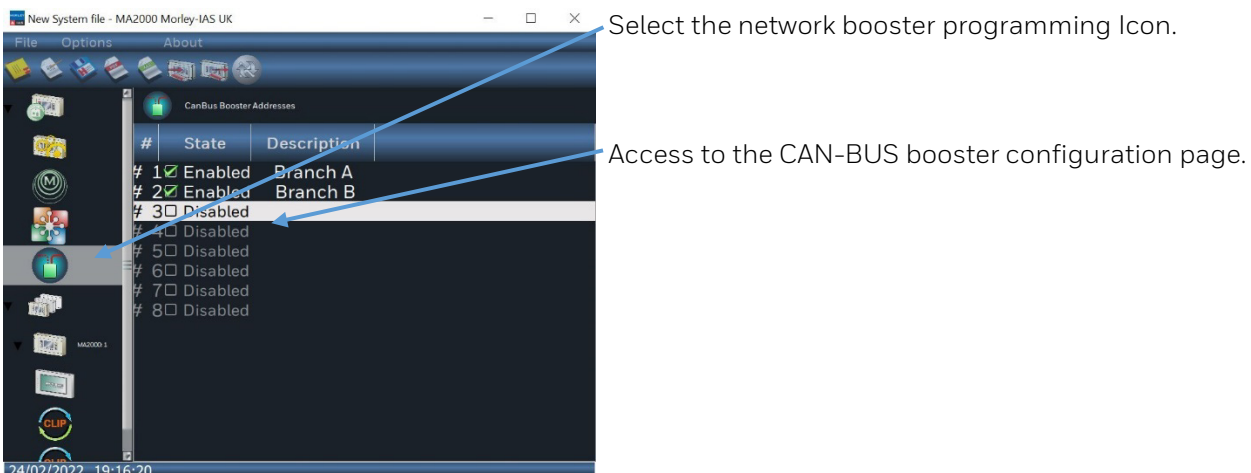
To write the Control-by-Event equations, the PK-Tool offers a wide keyboard and a supported process. Only the buttons that can be used are available for use during the insert process:



## 8.1 CAN-BUS Booster Programming

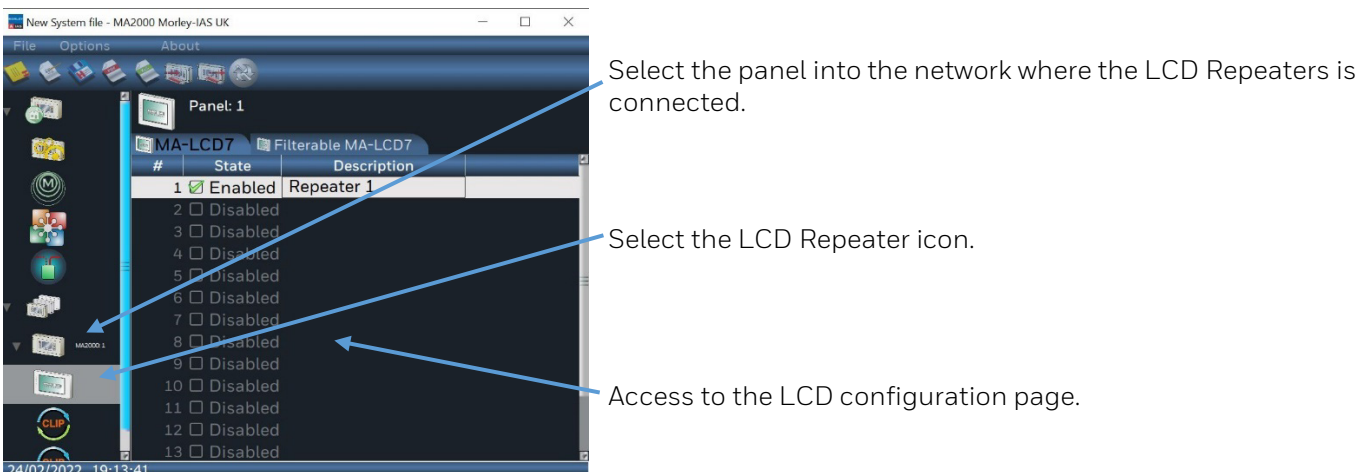
The booster can be installed along the CAN-BUS network as part of a remote power supply HLSPS25/50 increasing the node-to-node distance of additional 500 m. It is possible to install a max. of 8 MA-BST-C cards on the CAN-BUS network.

In the network booster programming page, enable the booster and assign to them a label.



## 8.2 Remote LCD Programming

MAx panels support up to 16 LCD Repeaters for each panel. Enable the once connected to the panels, assign to them a label and define if they can work as System Repeater or as Virtual Zone LED indicators.





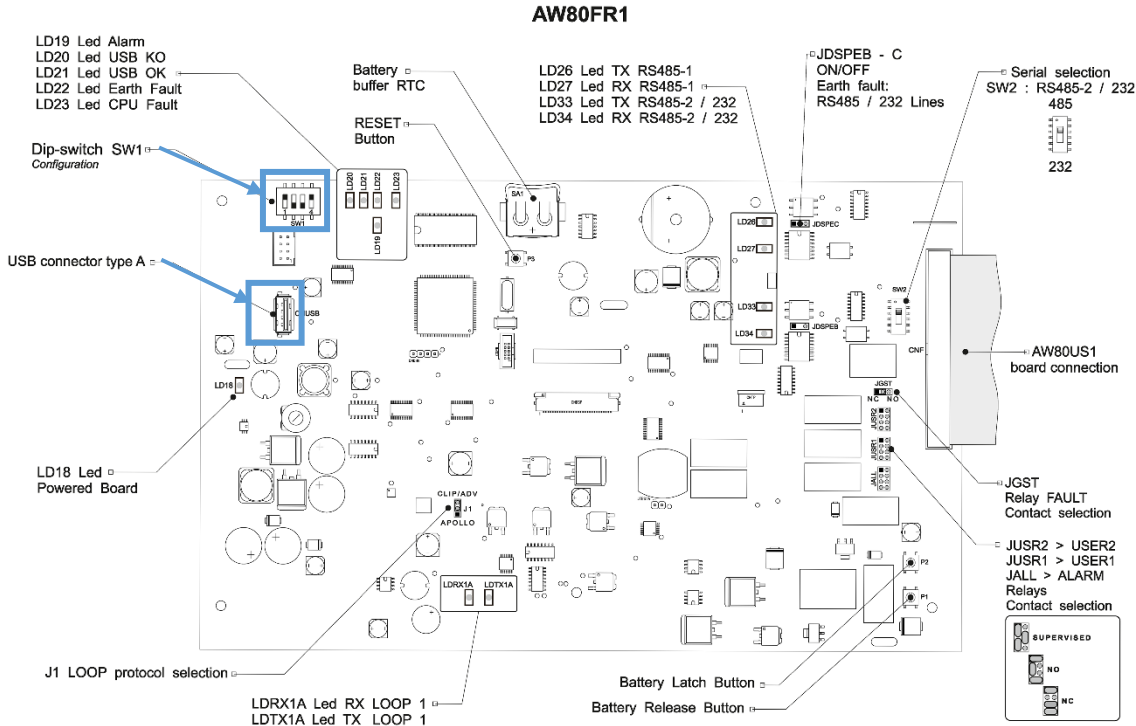
## 9 Compile Config File

### 9.1 MMax Upload / Download Config File

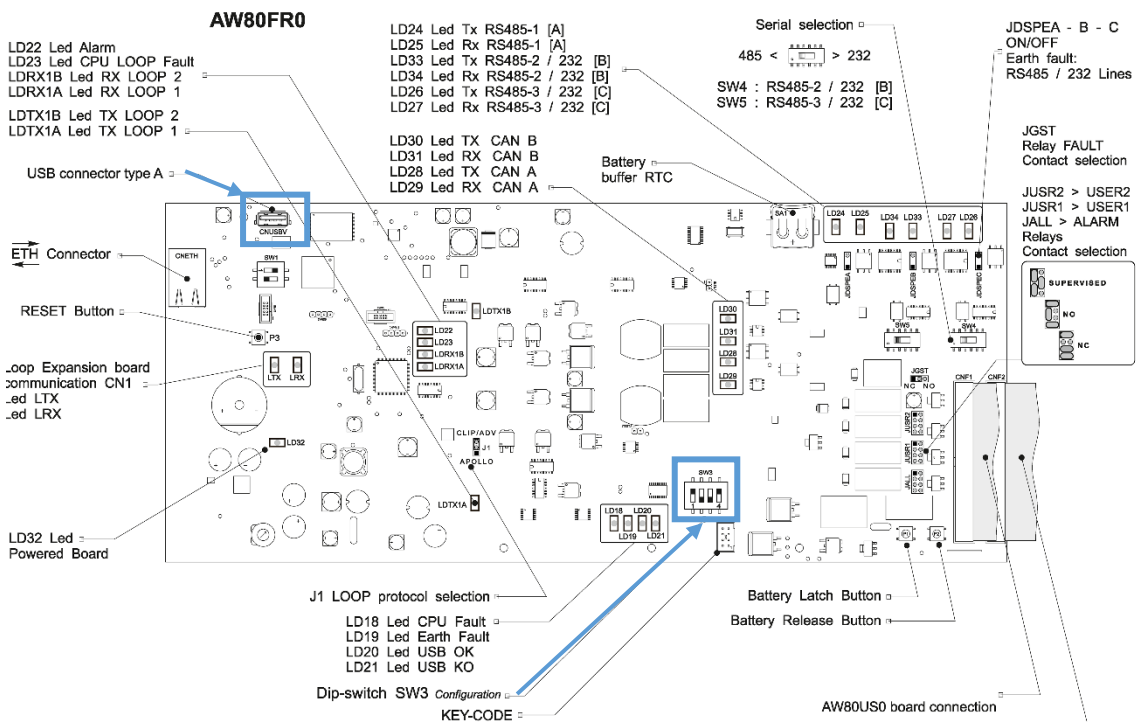
Step-by-step procedure to export the configuration file from the MMax panel to an USB key:

1. Turn **ON** :  
 SW1/1 for MA-1000  
 or  
 SW3/1 for MA-2000 / MA-8000.
2. Insert the memory stick in the USB port marked CNUSB on the mainboard as per the following illustration.

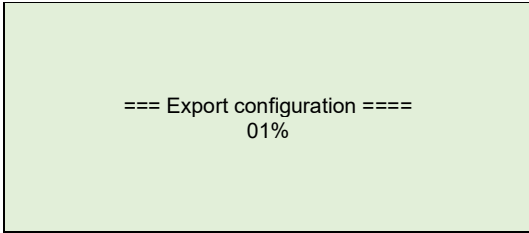
#### MA-1000



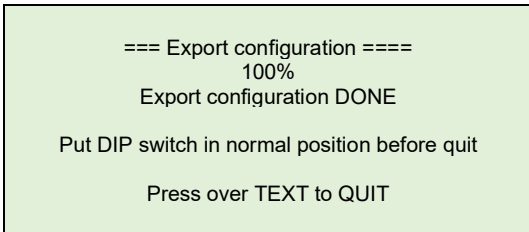
#### MA-2000 / MA-8000



3. The following appears on the panel display.



4. When the export procedure is completed, the following information appears on the display.



5. Turn **OFF**:

SW1/1 for MA-1000

or

SW3/1 for MA-2000 / MA-8000

and type on the text displayed on the touchscreen.

6. Remove the USB key where the "CFG\_OUT.BIN" panel configuration file is recorded.

**Step-by-step procedure to transfer the configuration file from the USB key to the MAx panel:**

1. Turn **ON**:

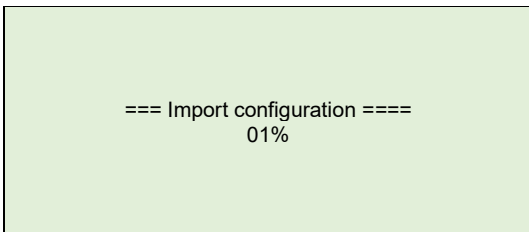
SW1/1/2/3 for MA-1000

or

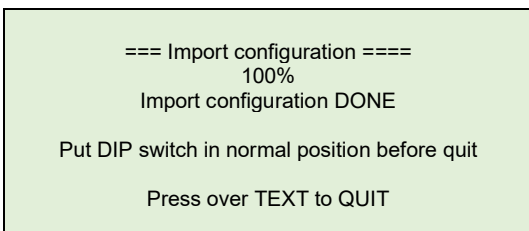
SW3/1/2/3 for MA-2000 / MA-8000

2. Insert the memory stick in the USB port marked CNUSB on the mainboard as shown in the illustration on the previous page. The "CFG\_IN.BIN" file generated by the MA-Tool software using the Compile file function / key must be in the USB memory.

3. The following appears on the panel display.



4. When the import procedure is completed, the following information appears on the display.



5. Turn **OFF**:

SW1/1/2/3 for MA-1000

or

SW3/1/2/3 for MA-2000 / MA-8000

and type on the text displayed on the touchscreen. Remove the USB key.

**Notes**

A large grid of graph paper for taking notes. The grid consists of 28 columns and 30 rows of small squares, providing a structured area for writing or drawing.

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