# Nevion Configurator's Help Contents

Welcome to Nevion Configurator's help file.

**How to's**
Each "how to" section contains step by step instructions of how to build, configure and maintain your system.

**Concepts**
The "Concepts" part describes different concepts of the Nevion Configurator and Nevion Products.

**Nevion Configurator's Reference**
This section is a screen by screen reference of every part of the Nevion Configurator.

**Application examples**
Here are some examples of configuration and systems that can be useful.

# System Requirements

These are the minimum system requirements for running Nevion Configurator:

Operating systems:
- Windows XP with SP2 or higher (English only)
- Windows Vista (English only)
- Windows 7 with SP1 or higher (English only)

When running Nevion Configurator in Windows 7, user must set "Compatibility mode" to Windows XP with SP2/3.
It's also a requirement that any user running Nevion Configurator must have administrator rights on the local computer.

System speed
- Intel Pentium III 800 or more

Memory
- 512 MB RAM
- 100 MB of available hard disk space

CD/DVD
- CD-ROM or DVD-ROM

Display
- XVGA (1024x768) or higher resolution

Ports
- 10/100/1000 MBit Network Interface Card
- Serial port (COM), only applicable when upgrading Sublime devices

Other software/frameworks
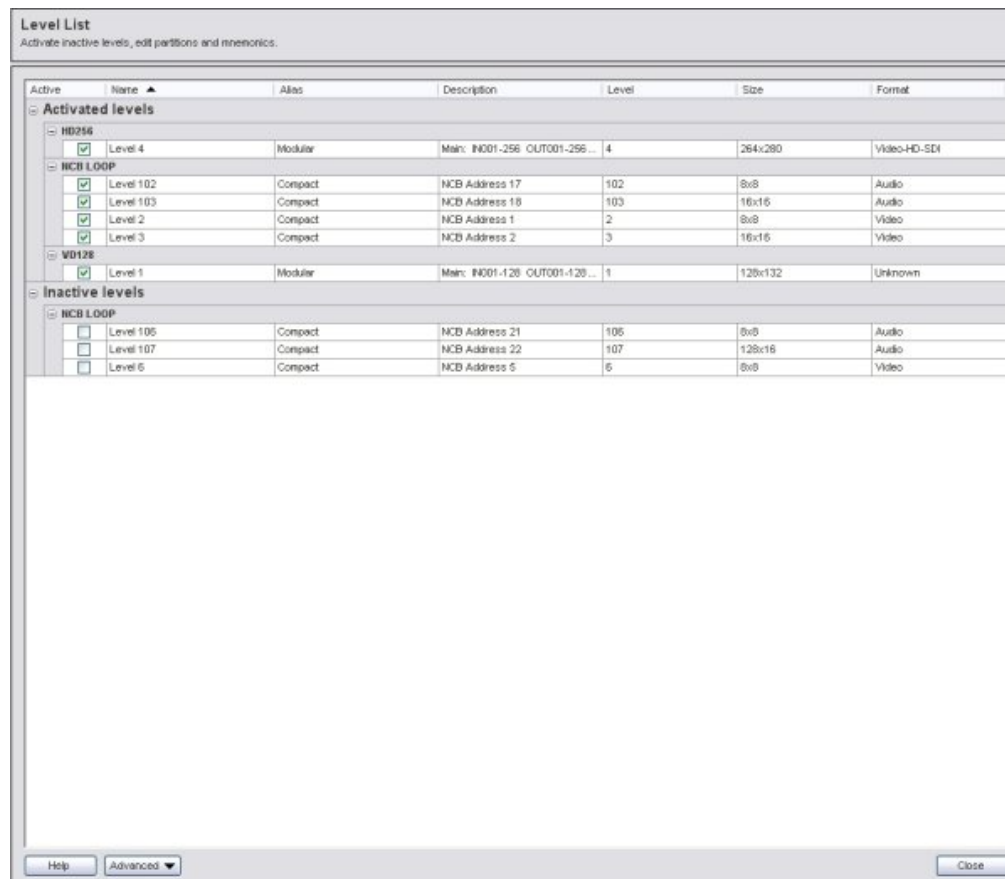- Microsoft .NET Framework 2.0

# How to Activate Levels

Levels in the system must be actived before it can be used by control panels or 3rd party devices.

**Follow these steps to create a support package**
- On the toolbar press the "Levels" button
- All active levels are shown in the "Activated levels" section
- All inactive levels are shown in the "Inactive levels" section
- Check the checkbox on the inactive levels to active
- Verify that the level number is correct
- To change the level number, right-click on a level and select "Edit partitions"

**Level List**
Activate inactive levels, edit partitions and mnemonics.

| Active | Name ▲ | Alias | Description | Level | Size | Format |
|---|---|---|---|---|---|---|
| ⊟ Activated levels | | | | | | |
| ⊟ HD256 | | | | | | |
| ☑ | Level 4 | Modular | Main: IN001-256 OUT001-256 ... | 4 | 264x280 | Video-HD-SDI |
| ⊟ NCB LOOP | | | | | | |
| ☑ | Level 102 | Compact | NCB Address 17 | 102 | 8x8 | Audio |
| ☑ | Level 103 | Compact | NCB Address 18 | 103 | 16x16 | Audio |
| ☑ | Level 2 | Compact | NCB Address 1 | 2 | 8x8 | Video |
| ☑ | Level 3 | Compact | NCB Address 2 | 3 | 16x16 | Video |
| ⊟ VD128 | | | | | | |
| ☑ | Level 1 | Modular | Main: IN001-128 OUT001-128 ... | 1 | 128x132 | Unknown |
| ⊟ Inactive levels | | | | | | |
| ⊟ NCB LOOP | | | | | | |
| ☐ | Level 105 | Compact | NCB Address 21 | 105 | 8x8 | Audio |
| ☐ | Level 107 | Compact | NCB Address 22 | 107 | 128x16 | Audio |
| ☐ | Level 6 | Compact | NCB Address 5 | 6 | 8x8 | Video |

Help    Advanced ▼                                                      Close
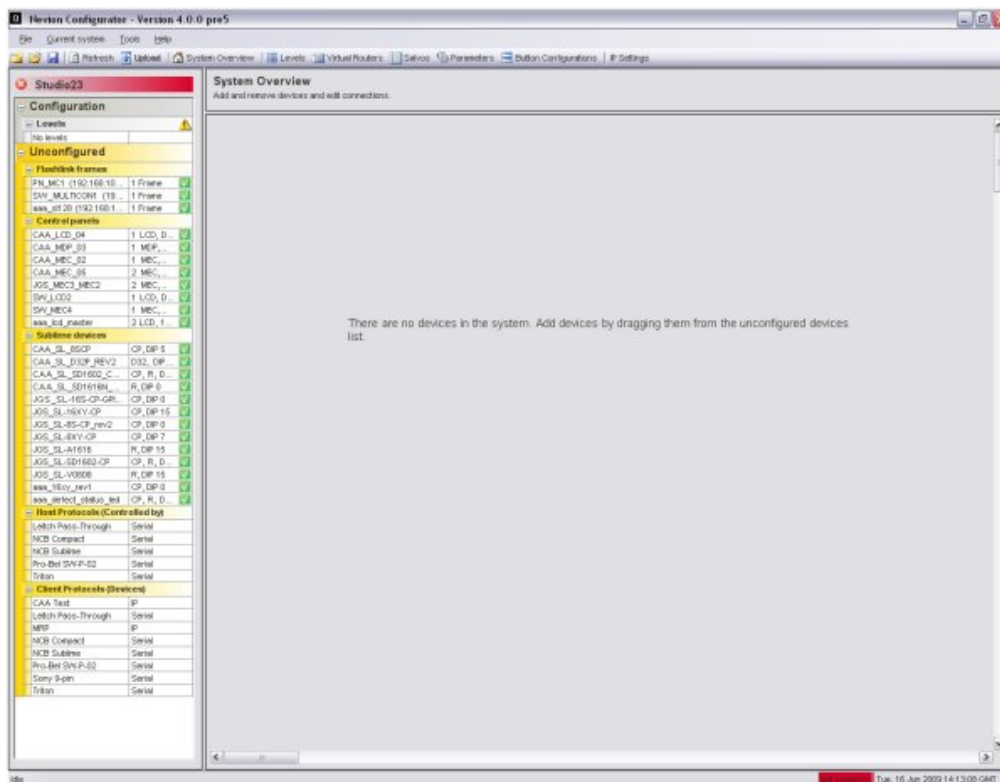
# How to Create a New System

Creating a system means connecting and configuring all your devices. Devices can be control panels, Modular routers, Flashlink cards, Sublime routers or 3rd party devices.

**Follow these steps to create a new system:**
- Start the Nevion Configurator
- Select the "Create system" tab
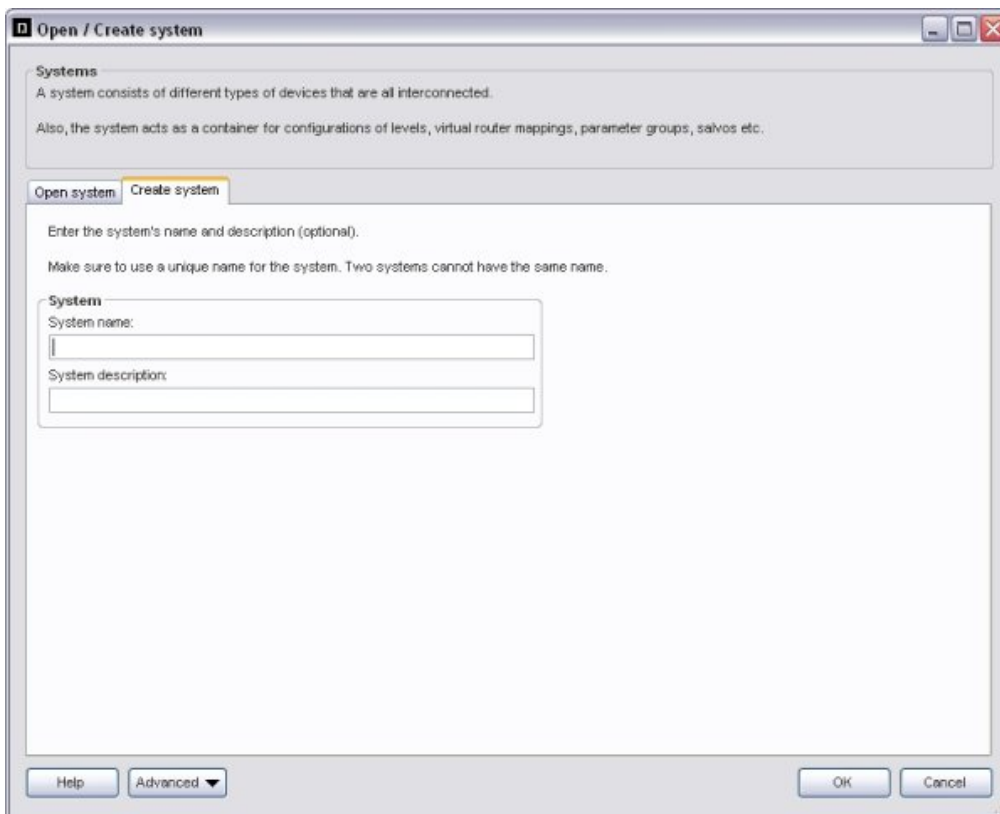
- Type in system name and description
- Press OK



- An empty work area is shown and all available devices are shown in the "Unconfigured" section of the explorer
- Add devices by dragging them onto the work area
- Press the "Upload" button when finished adding devices to the system

- When uploading is finished, the system devices are started and detects hardware (routers, cards, 3rd party)
- Press "Refresh" after some minutes to retreive what the system actually discovered
- Open the level list to active levels

- Create salvos and parameters
- Create button configurations

# How to Restore a Backup

When working on large systems, it's smart to take backups of the configuration. A backup is created by simply pressing the save button or use the save function on the main menu.

**Follow these steps to restore a backup**
- Open your existing system from the "Open Systems" dialog
- Wait until all devices are scanned and configuration is downloaded
- Open the "Open Systems" dialog again and select one of the backup files
- Press OK and the Configurator will update the system with the backup file configuration
- Press Upload to apply all changes to the existing system
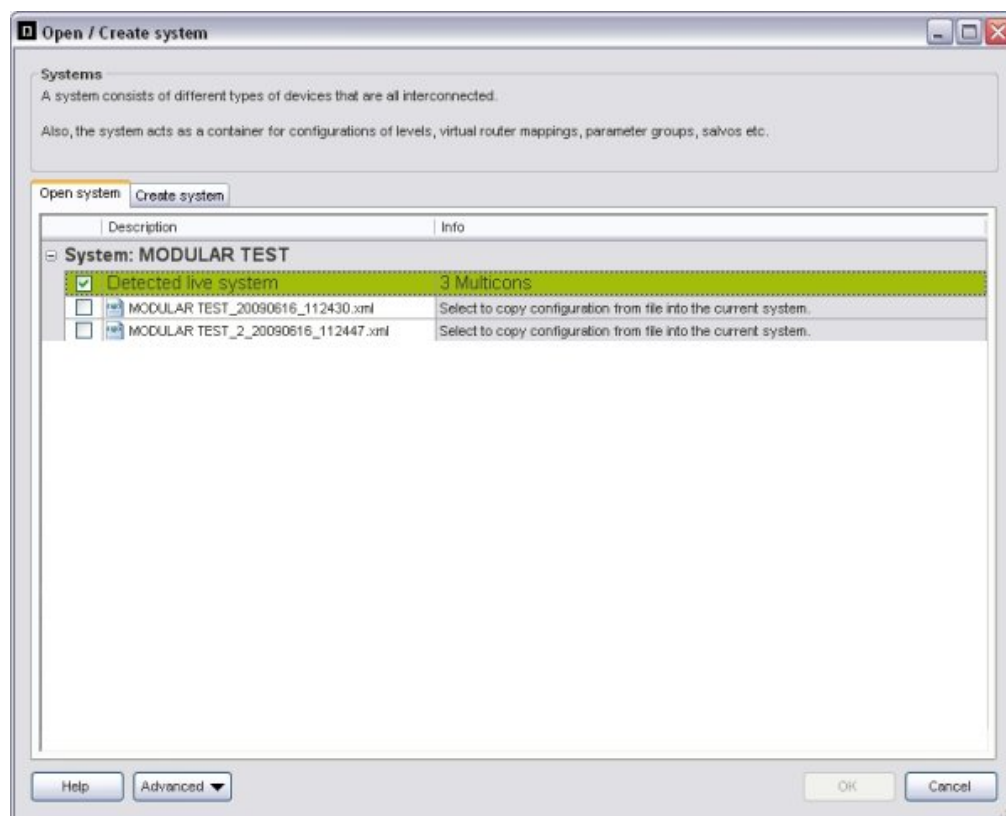


# How to Add a device to the system

All devices in the unconfigured devices section can be added to the system. Devices that supports UDP detection are shown in the unconfigured list. Devices not supporting the UDP detection or that are not available can be added manually.

**Follow these steps to add a detected device to a system:**
- Start the Nevion Configurator
- Open a system or create a new system
- Drag the device into the system overview and drop it
- System will be automatically reconfigured with the new device.
- Press Upload to send the changes to all affected devices

**Follow these stpes to add a device manually:**
- Start the Nevion Configurator
- Open a system or create a new system
- Right-click in the system overview and choose "Add device manually"
- Configure the device (details)
- Press OK
- Press Upload to send the changed to all affected devices

# How to Remove a device from the system

Devices can be removed from a system when the system is opened in the Nevion Configurator.

**Follow these steps to remove a device from a system:**
- Start the Nevion Configurator

- Open a system
- Right-click on the device in the system overview
- Choose "Remove from system"
- Press Upload to send changes to all affected devices

Note: If a router is removed, for example a Sublime or Modular router, level mnemonics is also removed. Virtual Routers and salvos using this level will NOT be updated. These must be manually updated after the removal.

# How to Configure Joystick override on control panels

Joystick override or salvo restore is used on camera control joysticks. Joystick button shows current camera on local monitor. When the button is release the local monitor shall restore the previous video source.

In order to make this work, there are some settings that must be enabled in the system.

**Salvo group configuration**
On each salvo group used for this application, the flag "Salvo revert supported" must be checked.
See also salvo group config.

**Control panel setup - GPI**
Each modular control panel have a separate configuration for GPI inputs. In this application, salvos must be dragged onto the GPI inputs. When dragging salvos onto the GPI inputs, the "Restore Enabled" flag must be checked before you start dragging.
See also GPI setup on control panel.

**Control panel setup - Restore options**
Two different restore options are supported:
Fixed: When the joystick button is released, a fixed salvo is fired. This will always result in the same video source on the local monitor after release.
Dynamic: When the joystick button is released, the previous video source is restored. Whatever the source was before the button push, this source will be displayed after the button release.
See also Restore options on control panel.

If more than one joystick button is pushed at the same time, only after all buttons are relased, the restore action will be triggered.

# How to Create a Support Package

When there is a need for contacting our support department, please create a support package and attach this to the email.

**Follow these steps to create a support package**
- Start the Nevion Configurator and open your existing system
- Wait for the devices to be scanned and configuration to be downloaded
- Make sure that all changes are uploaded
- Go to Help menu and select "Create support package"
- In the "Save As" dialog choose a destination for the support package zip file.
- Press the "Save" button
- The creation of the support package may take some minutes
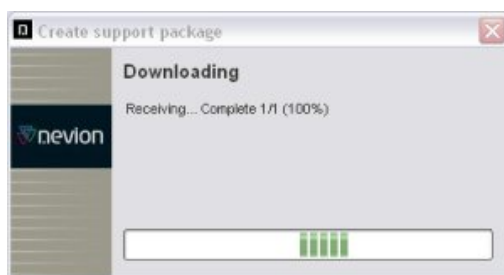


Progress during support package creation

# How to Upgrade Firmware

When there is a new firmware available for a device, the device should be upgraded with new firmware. Latest firmware and release logs can be found at nevion.com/support.

**Follow these steps to upgrade firmware on a IP device:**
- Open the existing system from Nevion Configurator
- Go to Tools->Firmware Upgrade
- Select the device(s) that need(s) an upgrade, and press "Upgrade"
- In the "Select firmware file(s)" dialog, browse to the correct firmware file (*.bin)
- Press OK. Firmware file is uploaded to the controller and the upgrade is started
- Each row will show current status of the upgrade
- Remember to reboot the devices after a successful upgrade

# How to Upgrade Firmware on serial devices

When there is a new firmware available for a device, the device should be upgraded with new firmware. Latest firmware and release logs can be found at nevion.com/support.

Note: Make sure that the computer have a serial port and the port is connected to the device. Upgrade on serial port must be done separately for each device.

**Follow these steps to upgrade firmware on a IP device:**
- Open the existing system from Nevion Configurator
- Go to Tools->Firmware Upgrade on serial port
- Select firmware file (*.bin) by pressing the browse button
- Select device type to upgrade
- Select which serial port the device is connected to
- Press the Upgrade button to start upgrading
- Status shows when the upgrade is done (2-4 minutes)
- Remember to power down after the upgrade
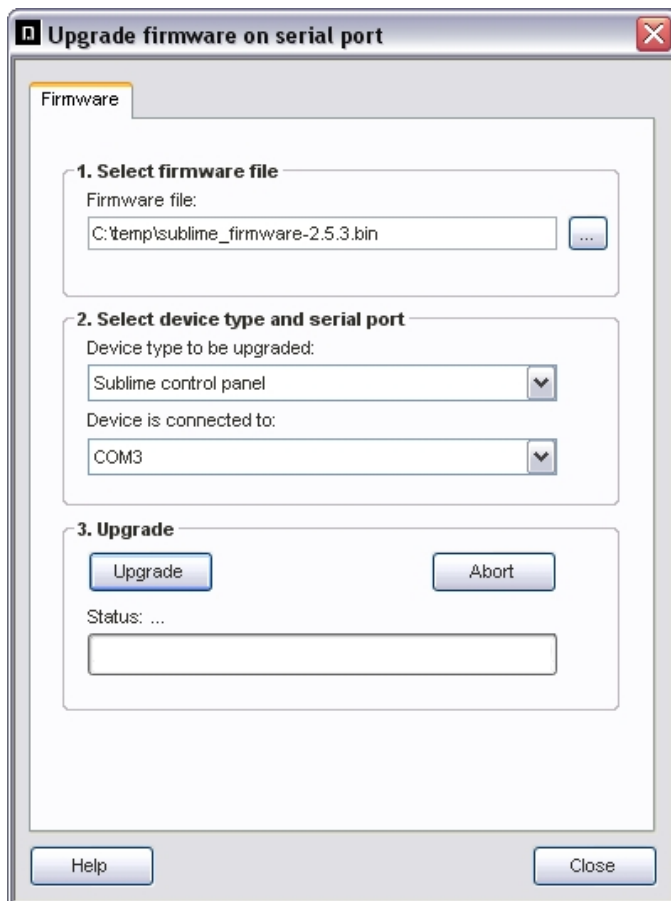
## How to Create a Button Configuration

Each panel must be assigned to a button configuration before it can be used.

**Follow these steps to create a button configuration:**

- In the System Overview or Explorer, double-click on a panel
- Click the "New" button to create a new button configuration
- In the "Control Panel Configuration Editor" each button can be configured. Click on the "Settings and Button Functions" button to select function.
- Drag the selected items onto the buttons
- Click OK when finished
- Make sure that new button configuration is selected in the list before pressing "Upload" to update the panel

**Device information**

| | | | |
|---|---|---|---|
| Hostname: | R3_MEC_1 | Firmware version: | 2.0.0-RC4 |
| IP address: | 192.168.10.35 | Hardware revision: | 255 |
| Subnet mask: | 255.255.255.0 | DIP setting: | 35 |
| Default gateway: | 192.168.10.254 | MAC address: | 00:0D:39:02:01:06 |

Control panel

Control panel

| Use | Name |
|---|---|
| ☑ | R3_MEC_1_1 |

New

Edit

Delete

Help    Advanced ▼                                                                                          Close
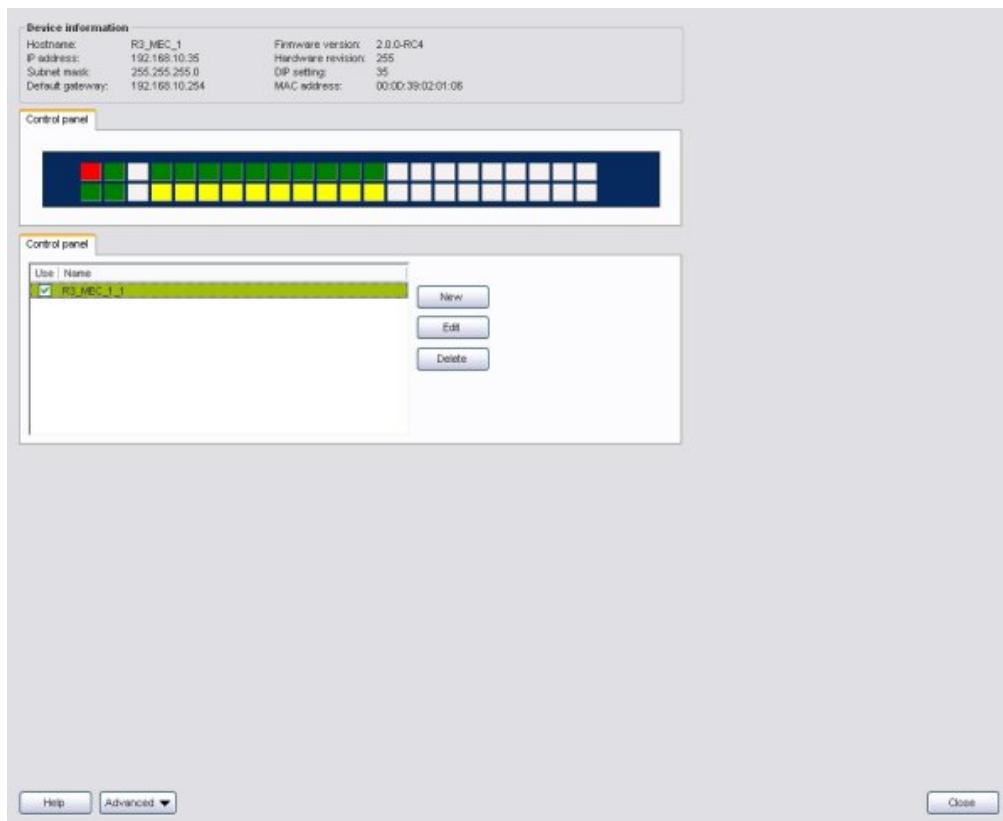
# How to Change IP Address

Each device must have an unique IP address on the network.

**Follow these steps to change an IP address:**

- Open the existing system
- Click on the "IP Settings" on the toolbar or go to Tools->IP Settings
- To start editing, doubleclick on a cell or select a cell and press F2
- Write in a proper Hostname, IP address, subnet mask or default gateway
- Press OK to apply the changes

- Devices will loose control for 2-3 minutes after an IP address change

| Hostname ▲ | IP address | Subnet mask | Default gateway | Type | Firmware | Mac | Info |
|---|---|---|---|---|---|---|---|
| ⊟ CONTROL PANELS | | | | | | | |
| J0S_LCD3 | 192.168.10.103 | 255.255.255.0 | 192.168.10.254 | Control panels | 2.0.0-RC4 | 00:0D:39:03:01:A9 | 1 LCD, DIP 103, Mas... |
| R3_MEC_1 | 192.168.10.35 | 255.255.255.0 | 192.168.10.254 | Control panels | 2.0.0-RC4 | 00:0D:39:02:01:06 | 1 MEC, DIP 35, Master |
| ⊟ MULTICON | | | | | | | |
| R256_MC_A | 192.168.10.181 | 255.255.255.0 | 192.168.10.254 | Multicon | 3.0.0RC4a | 00:0D:39:01:08:E2 | |
| R256_MC_B | 192.168.10.180 | 255.255.255.0 | 192.168.10.254 | Multicon | 3.0.0RC4a | 00:0D:39:01:08:1F | |
| R3_VD128_A | 192.168.10.31 | 255.255.240.0 | 192.168.10.254 | Multicon | 3.0.0RC4a | 00:0D:39:01:01:37 | |

# How to Manage Multicons in Modular routers

In a Modular router, there can be a single Multicon or two Multicons for redundancy. This section describes how to add the second Multicon into a running router and how to remove a failing Multicon from a running router.

Before you start contact Nevion support for assistance and guidance!

It's always recommended to make a backup before any major changes in the system. Create a support package before starting this system modification process.

**How to add a Multicon in a running Modular router**
Assumes that the Modular router is running with one Multicon with the latest firmware. System is configured and there are no problems reported in Nevion Configurator.

The new Multicon must be pre-configured in another (not connected) LAN with a valid IP address and the latest firmware. This Multicon must appear as unconfigured in this LAN.

This procedure will make your system uncontrollable during the operation.
System status (router connections, salvo status etc.) will not change.

1. Start Nevion Configurator and open the system with the Modular router
2. While Nevion Configurator is running, insert the new Multicon into the Modular frame
3. Wait until all the LED's are green and Nevion Configurator enable the upload button (3-4 minutes)
4. Press upload to apply changes into the system. This will take about 4-5 minutes.

Press refresh after upload is finished to verify that the new Multicon is accepted in the Modular router. System should show no errors or warnings after the refresh process is finished.

**How to remove a failing Multicon from a running Modular router**
Assumes that the Modular router is running with one running and one failing Multicon. This also supports removing a fully functional Multicon from a Modular router.

In any of the above cases (running or failing Multicon), this procedure will remove any trace of the selected Multicon from the system.

1. Make sure that Nevion Configurator is shutdown.
2. Remove the Multicon that is failing or shall be removed for other reasons
3. Start Nevion Configurator and open the system with the Modular router
4. Opening this system will failing due to a missing Multicon. This is expected.
5. Go to Tools->Advanced->Cleanup system
6. Configurator will ask you if Nevion Support instructed you to perform this task. Select Yes if this is true.
7. Check the IP address of the controller that shall be removed and press OK
8. System is changed. Press upload to apply the changes. This will take 3-4 minutes.

Press refresh after upload is finished to verify that the Multicon is removed from the Modular router. System should show no errors or warnings after the refresh process is finished.

# How to Operate a touch panel

Nevion touch panel has four MEC-buttons, two rotary wheels and a large touchscreen. It has different layouts on the touchscreen, which is user configurable.

### System menu
Press all four MEC-buttons at the same time to activate the system menu. General settings like IP address, firmware version and configuration name will be shown. Contrast and buzzer can also be configured here.
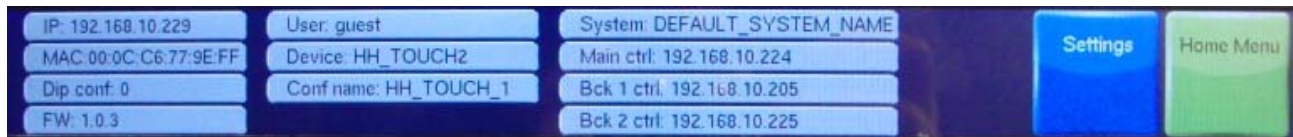


### MEC-buttons
Standard functions assigned to MEC-buttons are panel enable, home and up. Panel enable enables or disables all of the panel functionality, except for GPI. Home and up are layout links, which will open either the home layout or to the parent layout in the layout tree.

### Rotary wheels
The rotary wheels are used for scrolling in menus and lists. Touch panel has different list views to control levels, virtual routers, salvos and parameters. In advanced mode, the rotary wheels are used for button scrolling.

### Touch-screen
The touch-screen shows user configurable buttons, with 10 buttons or 40 buttons layout.

# How to Add new units in Sublime 16x2 router stack

Some versions of 16x2 Sublime units may be interconnected to create a larger router. The NCB-interface is used to exchange control messages between units. External control systems should be connected to the Ethernet or RS-232 interface of the last unit in the stack (i.e. the unit with the highest input numbers).

When expanding a stack that is part of a Multicon system some reconfiguration is required:
- The new unit must first be configured with correct Protocol and IP-settings.
- When upgrading from a single 16x2 unit the Protocol of the org. unit must be checked/changed.
- The Multicon must be configured to connect to the IP-address of the new unit.
- The new router/Level size must be updated in Multicon.

**Preparing the new unit:**
NOTE: This should be done outside the live system to avoid potential IP conflicts.
1. Connect the new unit to Ethernet and start the Nevion Configurator.
2. Create a new empty System. Drag & Drop the unit from "Unconfigured Devices" to the System Overview. Click Upload.
3. Click IP-settings and configure the unit with a unique IP-address. Click OK.
4. Open "System Overview", right click the unit and select "Configure".
5. Click the "Sublime"-tab and select the protocol "Sublime 16x2 routers with/without extensions". Click Upload.
6. Open "System Overview", right click the unit and select "Remove from system". Click OK + Upload.
7. Click "Current system" in the top menu and select "Delete system" + OK.

**Adding new unit to the stack:**
1. Start the Nevion Configurator and open your live system.
2. Right click the org. unit/stack in the System Overview window and select "Configure".
3. Click the "Sublime"-tab and verify that the protocol "Sublime 16x2 routers with/without extensions". Click Upload.
4. Install the new unit in the stack.
5. Move the Ethernet cable from the org. unit to the new unit.
6. Set the extension mode DIP switches on all units according to user manual.
7. Connect NCB cables between units according to user manual.
8. Connect extension coax cables between units according to user manual.
9. Powercycle all units in the stack (OFF/ON).
10. Open "System Overview", right click the Multicon controller and select "Reboot" + OK. Repeat for all Multicon controllers in the system.
11. Close the Configurator and wait 2-3 minutes for the system to fully restart.

**Multicon update:**
1. Start the Nevion Configurator and open your system.
2. Right click the org. unit in the System Overview window and select "Properties".
3. Select the IP-address of the org. unit in the Clients list. Click Remove.
4. Enter the IP-address of the new unit and click Add + OK. Click OK on the info box.
5. Upload the changes. When the upload is finished click Refresh.
6. Click the "Levels"-button. Right click the org. Level and select "Edit partitions".
7. In the Partition editor select the Level and then click Modify.
8. Change the "Input range" end number to match the new size. Click Set and then Upload.

**Units w/Integrated Control Panel:**

From FW ver.2.1.5 the embedded control panel will automatically follow the input extension setting. Example: If the unit is set to extension mode 1 (Inputs 17-32), the input buttons will automatically change from Inputs 1-16 to 17-32 without any reconfiguration required.

Units with earlier FW versions must have the panel reconfigured to match the input offset.

# How to Make a control panel available on other subnets

It's possible to have Multicons and routers in one subnet and control panels in another subnet. Follow this procedure to add a control panel on other subnets.

**Make sure that the control panel is part of the local system**
1. Connect the panel on local subnet and set local IP address
2. Make sure firmware is updated to the latest version
3. Add the panel into the existing system, by drag and drop
4. Create a new button configuration and assign it to the panel
5. Press upload to apply changes

**Prepare the panel for remote subnet**
1. Open IP settings and set the new IP address on the panel
2. Press OK
3. Right-click on the panel and select "Make available on other subnets".
4. Press upload to apply changes
5. Click save to save a XML-backup of the current configuration
6. Close Nevion Configurator and disconnect panel from local subnet
7. Re-connect panel on remote subnet

**Modify configurations with remote panels**
1. Open Nevion Configurator and open the live system
2. Select open system again and select XML-backup from previous steps
3. Press upload to activate the remote panel in local configuration
4. Modify button configuration or other configuration settings
5. Press upload to apply changes

Note! XML file must ALWAYS be opened after opening live systems with remote panels

**Remove a remote control panel**
1. Make sure your computer is connected to subnet where the remote panel is connected
2. Open Nevion Configurator and open the live system. System will show errors, since XML isn't loaded yet.
3. Right-click on panel and selected "Remove from system".
4. Press upload

# Concepts: Categories

Categories are only used in the <u>virtual router concept</u>. There are two types of categories, source categories and destination categories.

A category contains a collection of similar devices such as VTRs, Cameras, Monitors, Satellite feeds etc.

Typical use of a category is on a control panel. It gives the user quick access to similar equipment by getting a list of the devices or scrolling through devices on the panels.

# Concepts: Systems

A system is a collection of devices and a user configuration. It is the user that defines the system and how it's configured. This is done in the Nevion Configurator application.

Multicon is the system controller handling the system and all communication between devices in the system. Multicons can be present in N-Boxes, Modular routers or Flashlink frames.

In a system there can be control panels (Modular or Sublime). A control panel can control everything in the system It's user configurable.

In a system there can be routers (Modular, Sublime or 3rd party) and all of them are controllable from a panel, Nevion's THOR router control application or 3rd party system.

In a system there can be Flashlink cards and all available settings on those cards are controllable from a panel or 3rd party system.

# Concepts: Levels

Levels represent controllable routers or matrices for video, audio or data. Each level has a number which is used to identify it in the system.

In a system levels come from different devices. VikinX routers are represented as video, audio and data levels in the system. Audio matrices on Flashlink cards are represented as audio levels in the system. 3rd party routers are also represented as levels in the system.

### Activation
All levels appear inactive by default. This means that the user must activate all levels that will be used in the system. Levels not used will remain inactive.

### Partitions
A level may be partitioned (or divided) into two or more smaller levels. This is done in the Partition editor.

# Concepts: Virtual Router

The virtual router is a map of physical levels into one big virtual router.

Typical use of a virtual router is when devices in the application are multiformat (HD/SD) and multitype (video/audio/data). Add all your levels (hd, sd, aes, data) and configure sources and destination. A vtr will have a hd and sd signal, several aes signals and a data signal. A camera will have an hd or sd signal. Configure all devices with the according signals.

When the operator uses the virtual router he doesn't have to care about signal types and if they are correct. The virtual router will handle this and make sure all connections are made when the operator executes camera 1 to mixer 3 or camera 4 to edit suite 5.

A virtual router also allows you to define sources and destinations from different physical inputs on each level.  For example, a virtual source named VTR 2 could be defined as input 2 on the SD level and input 14 on the HD level, and have its audio come from input 27 on the AES level.

A physical input may be used with more than one virtual source or destination.  For example, you could define a virtual source called TONE/BARS which uses AES input 1 for the tone and SD video input 6 for the bars. Then you could define another virtual source called SLATE, which uses the same AES input 1 for audio and SD input 12 for a character generator, to produce the slate at the beginning of a production.  The operator would select TONE/BARS or SLATE, and not be concerned about which physical inputs the sources were

coming from.

# Concepts: Salvos

A salvo (sometimes called a macro of a preset) executes a list of crosspoints, virtual crosspoints and parameter settings from a single button press or TCP/IP command. Each salvo must be present in a salvo group. The group can contain many salvos.

A salvo can be executed from a panel or 3rd party interface.

Typical use of a salvo can be setting up a monitor wall to a certain state, setting input source and aspect ratio on a downscaler or smaller actions that the operator uses often. Another use for a salvo could be to save the configuration of an edit suite in a way that is suitable for a particular client or user and recall it with one button.

# Concepts: Parameters

A parameter represents controllable settings on equipment controlled by Multicon. It can be aspect ratio, laser on/off, video gain (Y/Pb/Pr), video generators, vtr's (play,record..) and much more.

A parameter group contains one or several parameters, and is used to group parameters together to make it easier for the operator to use. One parameter group can contain all your aspect ratio parameters, while another group can contain all the video generators.

The Configurator scans the system and displays all available parameters. The operator can make parameter groups and add only the required parameters in the group.

# Concepts: User Management

The User Management in the Configurator handles both user groups and users.

**User Groups**
A user group has settings for control panel access level, configuration level, web page access and snmp control.

**Users**
A user must be member of a user group and gets the rights configured in this group.

# Concepts: Lock and Protect

Lock or protect may be used when controlling levels, virtual routers, parameters or salvos. If an operator wants to prevent accidental switching or prevent others from using the same outputs as he does, lock and protect may be used.

**Lock**
Lock means that this output, destination, salvo or parameter is locked for everyone. Nobody (including the user who locked it) is able to change the status until someone unlocks it.
Only the same user that locked it or someone with higher access level can unlock it.

**Protect**
Protect means that this output, destination, salvo or parameter is protected against everybody except the user that issued the protect command. It means that this user can continue using this item, but for everybody else it will appears as it was locked.
Only the same user that protected it or someone with higher access level can unprotect (unlock) it.

# Nevion Configurator's Main window

The main window consists of a file menu, toolbar, system explorer and working area.
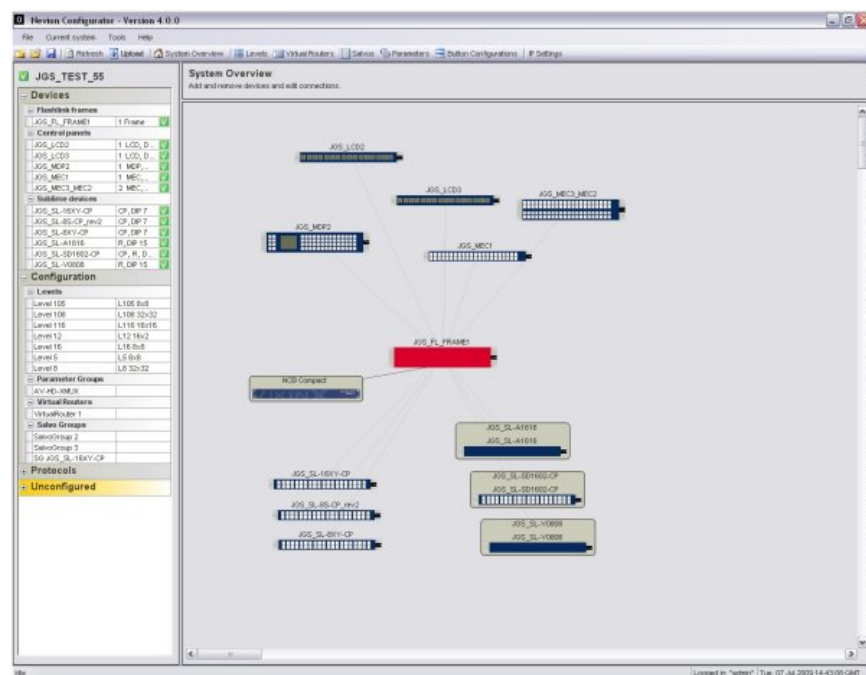


**File menu**
The file menu gives direct access to different part of the Nevion Configurator.

**Toolbar**
The toolbar gives fast access to the most frequently used parts of the Nevion Configurator.

**System Explorer**
The system explorer part shows all devices in the system (Devices), the configuration in the system (Configuration) and everything that's not configured yet (Unconfigured)

**Working Area**
The working are will show the system overview while adding/removing devices in the system and editors/lists depending on user actions.

## File Menu

File menu contains functions such as open, save and exit.

**New System**
Creates a new system. Shortcut Ctrl+N

**Open System**
Opens existing systems. Shortcut Ctrl+O

**Close System**
Closes the current system. Shortcut Ctrl+F4

**Save System**
Saves the current system to a backup XML file. Can be restored by using "Open System" at a later stage. File is saved with current name and location.
Shortcut Ctrl+S

**Save System As**
Same as save system, except user is prompted for filename and storage location.

**Exit**
Closes the application. Shortcut Alt+F4

## Current System Menu

The Current System Menu contains functions related to the current system such as upload, level lists, salvos, parameters etc.

**System overview**
Shows the system overview page with all devices and connections. [Ctrl+Shift+H]

**Upload changes**
Uploads all changes in the current system and applies them. [Ctrl+Shift+U]

**Levels**
Shows the level list. [Ctrl+Shift+F1]

**Virtual Routers**
Shows the virtual router list. [Ctrl+Shift+F2]

**Salvos**
Shows the salvo group list. [Ctrl+Shift+F3]

**Parameters**
Shows the parameter group list. [Ctrl+Shift+F4]

**Button configurations**
Shows the button configurations list. [Ctrl+Shift+F5]

**Available parameters**
Shows all available parameters in the system. [Ctrl+Shift+F6]

**Inter-communication protocol**
Shows all controllers with the inter-communication protocol setting. [Ctrl+Shift+P]

**Banned crosspoints**
Shows the list of banned crosspoints in the system. [Ctrl+Shift+C]

**Rename system**
Gives a new name to the system. [Ctrl+Shift+R]

**Delete system**
Deletes a system. The system must be empty before it can be deleted. [Ctrl+Shift+D]

**User management**
Opens a dialog for configuring user groups and users. [Ctrl+Shift+M]

**Switch user**
Login with different user name and password. [Ctrl+Shift+W]

## Tools Menu

The Tools menu contains IP settings, firmware upgrade and options.

**IP Settings**
Opens the IP Settings dialog for setting IP info.

**Firmware upgrade**
Opens the Firmware upgrade dialog.

**Product Key Manager**
Opens the Product Key Manager for adding and removing keys. Shortcut Ctrl+Shift+K

**Advanced**
Contains advanced options: Communication viewer, Clean up system and Import converted configuration

**Options**
Open the options dialog for setting network interface card, configuration path etc. for the application.

## Help Menu

Help menu contains help search, help index and about dialog.

**Contents**
Shows the contents of the help file. Shortcut F1

**Search**
Shows the search page of the help file.

**Index**
Shows the index page of the help file.

**Create support package**
Creates a ZIP file, containing system and configuration settings. This file can be sent to the Nevion Support department for assistance in troubleshooting configurations.

**About**
Shows the about box with version number of the application.

## Level Mnemonics

In the Level Mnemonics editor you can set name, alias and description for both inputs and outputs on a level.
To open the Level Mnemonics editor double click on a level in the system explorer or open the level list and double click on a level there.

**Configuration:**

| | |
|---|---|
| Name: | Name of the level |
| Alias: | Alias of the level |
| Description: | Description of the level |
| Info: | Shows detailed info |

**Input/Output mnemonics:**

| | |
|---|---|
| Ch: | Channel number |
| Icon: | Icon used to show this input/output |
| Name: | Name of input/output |
| Alias: | Alias of input/output |
| Description: | Description of input/output |

**Advanced functions:**

| | |
|---|---|
| Import level - From XML: | Import level mnemonics from a XML file |
| Export level - To XML: | Export level mnemonics to a XML file |
| Print: | Prints out the input or output table |
| Print preview: | Shows a preview of the input or output table to be printed |
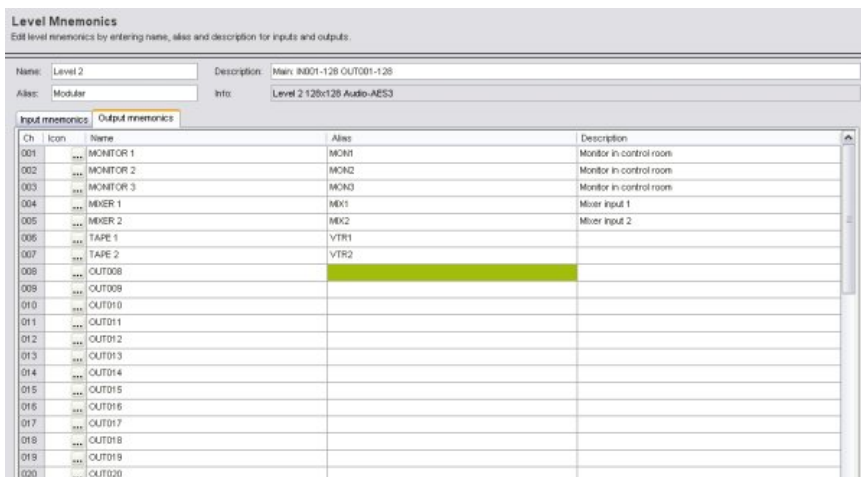
# Partitions Editor

In the partitions editor you can change the level number and level size.

To open the partitions editor, right-click on a level in the level list and select "Edit partitions".

**Actions:**

| | |
|---|---|
| New: | Creates a new partition. Enter detailed settings below |
| Modify: | Modifies the selected partition by enabling detailed settings below |
| Delete: | Delete the selected partition |

**Partition settings:**

| | |
|---|---|
| Name: | Name of partition - equal to level name |
| Alias: | Alias of partition - equal to level alias |
| Description: | Description of partition - equal to level description |
| Level: | Level number which is unique in the system |
| Input range: | A range from lower input to upper input, range must be 1 or greater size |
| Output range: | A range from lower output to upper output, range must be 1 or greater size |
| | |
| Set: | Applies the current settings |
| Reset: | Resets the current settings back to original values |
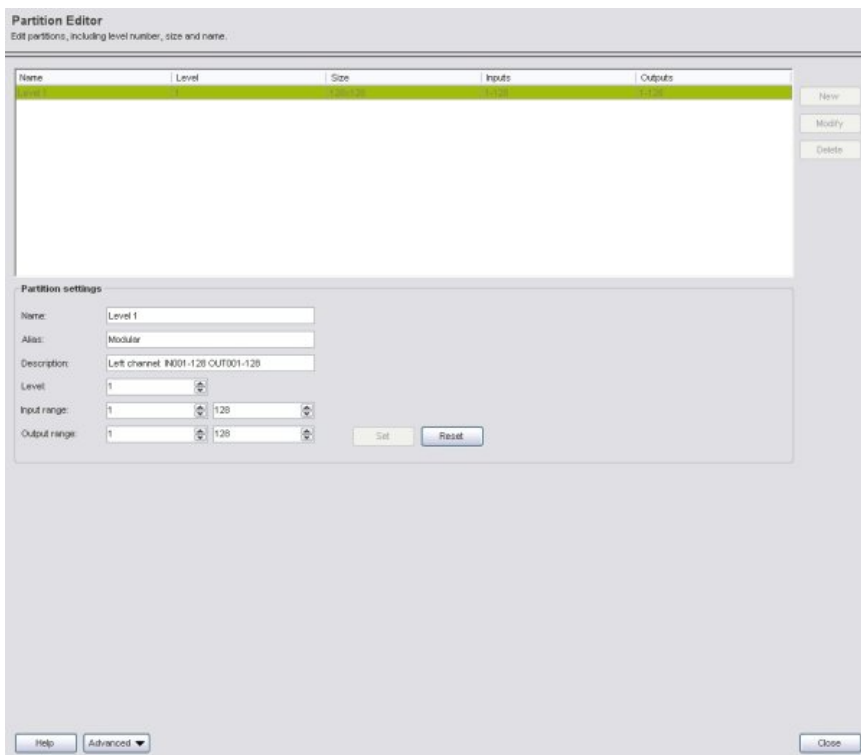


# Virtual Router Editor

The virtual router editor enables the user to map physical devices into virtual sources and destinations.

**Virtual router properties:**

| | |
|---|---|
| Name: | Name of virtual router |
| Alias: | Alias of virtual router |
| Description: | Description of virtual router |

**Virtual Level - Actions:**

| | |
|---|---|
| New: | Add a new virtual level, opens the virtual level editor |
| Modify: | Modify the current virtual level (corresponding to selected column) |
| Delete / Restore: | Deletes the current virtual level. If deleted, user can restore the virtual level |

**Src/Dest - Actions:**

| | |
|---|---|
| New: | Add a new source or destination, depending on where you current selection is |
| Delete / Restore: | Deletes the current row (source/destination). If deleted, user can restore the row |

**Categories - Actions:**

| | |
|---|---|
| New: | Add a new source or destination category, opens the category editor |
| Modify: | Modify the current category |
| Delete / Restore: | Deletes the current category. If deleted, user can restore the category. |

| | |
|---|---|
| Mnemonics: | |
| Show / Hide: | Shows or hides Alias, Description and Icon columns for all sources and destinations. |

**Advanced functions:**

| | |
|---|---|
| Fill with default values: | Fills the virtual router with default values, Note! Overwrites all existing data |
| Import Virtual Router | |
| - From XML: | Import virtual router from a XML file |
| - From CSV: | Import virtual router from a CSV file |
| - From Excel: | Import virtual router from a Excel file |
| Export Virtual Router | |
| - To XML: | Export virtual router to a XML file |
| - To CSV: | Export virtual router to a CSV file |
| - To Excel: | Export virtual router to a Excel file |
| Print: | Prints out the table |
| Print preview: | Shows a preview of the table |

CSV files (*.csv) are ASCII files with values separated by commas.
Excel files (*.xlsx) are Microsoft Excel files. It's required to install MS Excel 2007 or newer on the computer to support import/export of Excel files.

**See also:**
Concepts: Virtual Router
Concepts: Categories
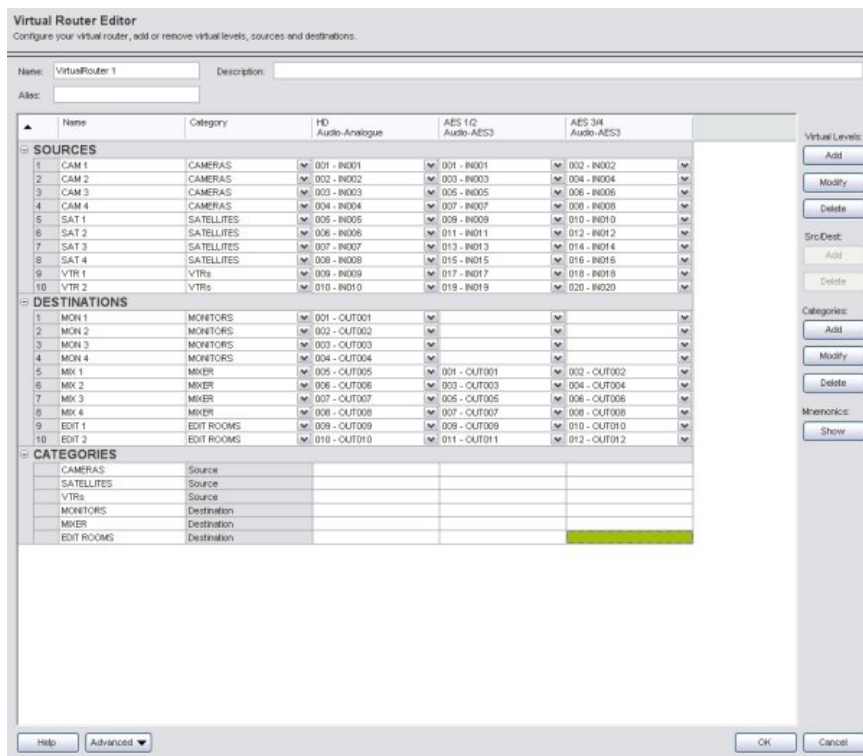


Use the buttons on the right side to add/delete virtual levels, sources, destinations and categories.

# Virtual Level Editor

Add or modify a virtual level. This editor opens when you select Add or Modify virtual levels from the Virtual Router Editor.

**Settings:**

| | |
|---|---|
| Name: | Set the name of the virtual level |
| Alias: | Optional alias of the virtual level |
| Description: | Optional description of the virtual level |
| Level: | Selects physical level to be associated with this virtual level |
| Format: | Shows the router format for the physical level (read-only) |

## Category Editor

Add or modify a category. This edior opens when you select Add or Modify cateogry from the Virtual Router editor.

**Settings:**

| | |
|---|---|
| Name: | Set the name of the category. |
| Alias: | Optional alias of the category. |
| Description: | Optional description of the category. |
| Display index: | Show all items in the category and their display index. |
| | It's possible to add/remove empty rows in this editor, |
| | for special control panel behavior. |



## Salvo Editor

The salvo editor creates presets/macros with predefined crosspoint, virtual router and parameter settings.

**Salvo properties:**

| | |
|---|---|
| Name: | Name of salvo |
| Alias: | Alias of salvo |
| Description: | Description of salvo |

**Configured salvo items:**
Shows a list of configured salvo items.

**Available salvo items:**
Shows a list of available salvo items to be added.

**How to add salvo items:**

- Click on the "Select items" button
- Choose type of items to add (Levels, Virtual Routers, Parameter Groups)
- Choose type of subitem (Level, Virtual Router, Parameter Group)
- Select items (input/source, output/destination, parameter option)
- Hint: Use the CTRL key to do multiselect

**How to remove salvo items:**
- Click on a row in the Configured salvo items list
- Click the Delete button to delete the salvo item.

**Salvo items:**

| | |
|---|---|
| Physical crosspoints: | Crosspoints related to levels controllable in the system, contains of a level reference, an input and an output. |
| Virtual crosspoints: | Crosspoints related to virtual routers controllable in the system, contains of a virtual router reference, a source and a destination. |
| Parameters: | Setting related to a parameter group controllable in the system, contains of a parameter group reference, parameter reference and a value. |

**Advanced functions:**

| | |
|---|---|
| Snapshot: | Opens the <u>Snapshot from system</u> dialog, can retreive live system status directly into a salvo. |
| Export - To XML: | Export salvo configuration to a XML file |
| Import - From XML: | Import salvo configuration from a XML file |
| Print: | Prints out the table |
| Print preview: | Shows a preview of the table |



Select items in the "Available salvo items" section and add them to the salvo.

# Salvo Group Editor

The salvo group editor handles the salvos in the group.

**Salvo group properties:**

| | |
|---|---|
| Name: | Name of salvo group |
| Alias: | Alias of salvo group |
| Description: | Description of salvo group |
| Salvo revert supported: | Check this option if salvos in this group are used by panels with salvo restore functionality. |

**Actions:**

| | |
|---|---|
| New: | Add a new salvo to the group |
| Modify: | Modify an existing salvo group, opens salvo editor |
| Clone: | Clones the current salvo |
| Delete / Restore: | Deletes the current salvo. If deleted, the salvo can be restored |
| Copy to: | Copy the current salvo to selected salvo group |

**Advanced functions:**

| | |
|---|---|
| Print: | Prints out the table |
| Print preview: | Shows a preview of the table |
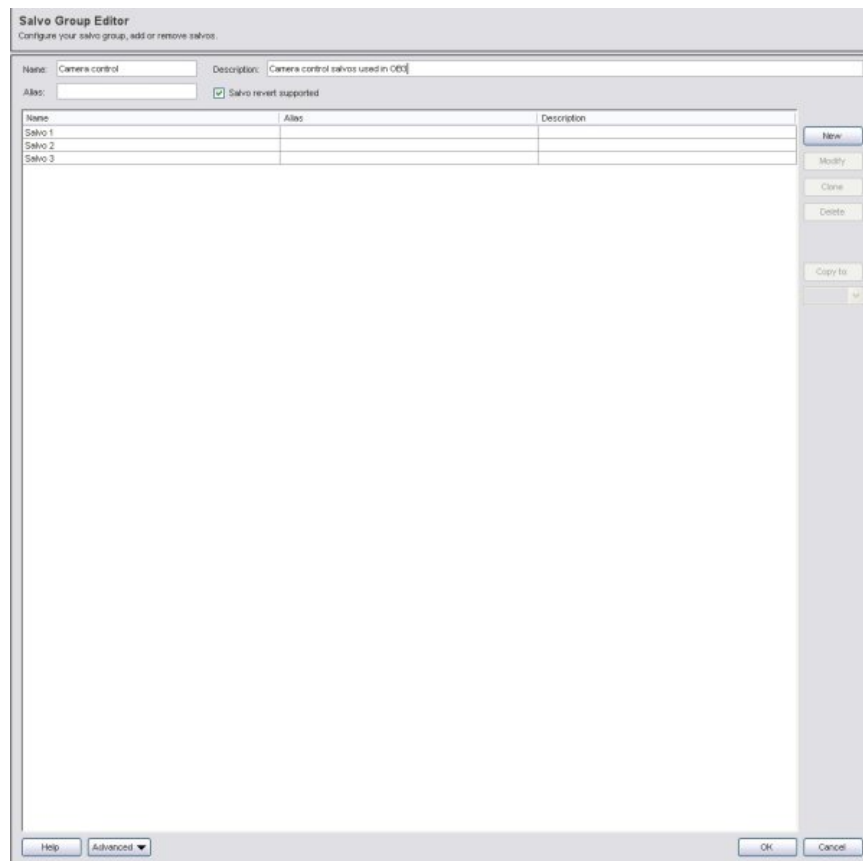
## Parameter Group Editor

The parameter group editor handles parameters in a group to make them controllable in the system.

**Parameter group properties:**

Name:                 Name of parameter group
Alias:                Alias of parameter group
Description:          Description of parameter group

**Configured Parameters:**
Shows all parameters configured in this parameter group. All configured parameters can be controlled from control panels or 3rd party systems.

**Available Parameters:**
Shows all available parameters in system for all Multicons. These parameters can be added to this group.

**Actions:**

New:                  Add selected parameters in the Available Parameters list to this group
                      Hint: Use CTRL key to multiselect parameters
Restore:              Restores an already deleted parameter
Delete:               Deletes the selected parameter in the Configured Parameters list

Drag and drop can also be used to add parameters. Drag a single parameter to the Configured Parameter list to add one parameter. Drag the "Card" row and all parameters from this card will be added.

**Advanced functions:**

Export - To XML:      Export parameter group configuration to a XML file
Import - From XML:    Import parameter group configuration from a XML file
Print:                Prints out the table
Print preview:         Shows a preview of the table

**Parameter Group Editor**
Add or remove parameters in this group to make them controllable in the system.

Name: DWC-HD-DMUX          Description: Rack 0, Position 07

Alias: DWC-HD-DMUX

| Configured Parameters: | | | | | Available Parameters: |
|---|---|---|---|---|---|
| Name | Alias | Description | Info | | ⊟ CAA FL |
| Video processing: YGain | Video processing: YGain | DWC-HD-DMUX: Y chan... | CAA FL\DWC-HD-DMUX | **Add** | ⊟ DWC-HD-DMUX (Rack 0, Position 07) |
| Video processing: CrGain | Video processing: CrGain | DWC-HD-DMUX: Cb cha... | CAA FL\DWC-HD-DMUX | | Video delay: Frames |
| Video processing: CbGain | Video processing: CbGain | DWC-HD-DMUX: Cr cha... | CAA FL\DWC-HD-DMUX | **Restore** | Video delay: Lines |
| Video in | Video in | DWC-HD-DMUX: Chang... | CAA FL\DWC-HD-DMUX | | Video delay: Sample |
| Video generator: Pattern | Video generator: Pattern | DWC-HD-DMUX: Video... | CAA FL\DWC-HD-DMUX | **Delete** | Relative audio delay: Sample |
| Video generator: Colour | Video generator: Colour | DWC-HD-DMUX: Video... | CAA FL\DWC-HD-DMUX | | Phase delay: Lines |
| Video delay: Sample | Video delay: Samples | DWC-HD-DMUX: Delay I... | CAA FL\DWC-HD-DMUX | | Phase delay: Sample |
| Video delay: Lines | Video delay: Lines | DWC-HD-DMUX: Delay I... | CAA FL\DWC-HD-DMUX | | Audio processing ch 1-2 |
| Video delay: Frames | Video delay: Frames | DWC-HD-DMUX: Delay I... | CAA FL\DWC-HD-DMUX | | Audio processing ch 3-4 |
| Video DAC: Output | Video DAC: Output | DWC-HD-DMUX: Analog... | CAA FL\DWC-HD-DMUX | | Audio processing ch 5-6 |
| Scaling | Scaling | DWC-HD-DMUX: Output... | CAA FL\DWC-HD-DMUX | | Audio processing ch 7-8 |
| Relative audio delay: Sample | Relative audio delay: Sa... | DWC-HD-DMUX: Delay I... | CAA FL\DWC-HD-DMUX | | Audio processing ch 9-10 |
| Processed video out | Processed video out | DWC-HD-DMUX: Chang... | CAA FL\DWC-HD-DMUX | | Audio processing ch 11-12 |
| Phase delay: Sample | Phase delay: Samples | DWC-HD-DMUX: Delay I... | CAA FL\DWC-HD-DMUX | | Audio processing ch 13-14 |
| Phase delay: Lines | Phase delay: Lines | DWC-HD-DMUX: Delay I... | CAA FL\DWC-HD-DMUX | | Audio processing ch 15-16 |
| Audio processing ch 9-10 | Audio processing ch 9-10 | DWC-HD-DMUX: Audio... | CAA FL\DWC-HD-DMUX | | An. audio out processing |
| Audio processing ch 7-8 | Audio processing ch 7-8 | DWC-HD-DMUX: Audio... | CAA FL\DWC-HD-DMUX | | AES out processing |
| Audio processing ch 5-6 | Audio processing ch 5-6 | DWC-HD-DMUX: Audio... | CAA FL\DWC-HD-DMUX | | Video in |
| Audio processing ch 3-4 | Audio processing ch 3-4 | DWC-HD-DMUX: Audio... | CAA FL\DWC-HD-DMUX | | Processed video out |
| Audio processing ch 15-16 | Audio processing ch 15-16 | DWC-HD-DMUX: Audio... | CAA FL\DWC-HD-DMUX | | Video DAC: Output |
| Audio processing ch 13-14 | Audio processing ch 13-14 | DWC-HD-DMUX: Audio... | CAA FL\DWC-HD-DMUX | | Video generator: Pattern |
| Audio processing ch 11-12 | Audio processing ch 11-12 | DWC-HD-DMUX: Audio... | CAA FL\DWC-HD-DMUX | | Video generator: Colour |
| Audio processing ch 1-2 | Audio processing ch 1-2 | DWC-HD-DMUX: Audio... | CAA FL\DWC-HD-DMUX | | Scaling |
| An. audio out processing | An. audio out processing | DWC-HD-DMUX: Audio... | CAA FL\DWC-HD-DMUX | | Video processing: YGain |
| AES out processing | AES out processing | DWC-HD-DMUX: Audio... | CAA FL\DWC-HD-DMUX | | Video processing: CrGain |
| | | | | | Video processing: CbGain |

Help    Advanced ▼                                                                          OK    Cancel

# Touch Panel Configuration Editor

The Touch Panel Configuration Editor creates new or modifies button configurations for Nevion touch panels. The feature set of touch panels is similar to Modular IP Panels from Nevion, and in addition it supports multiple layouts.



**Configuration**
The main configuration window has two tabs, Front and GPI.
Front tab shows layouts for the touch screen on the panel and enables the user to configure each layout separately.
GPI tab shows 16 GPI inputs which can be configured as buttons.

**Layout configuration**
Touch panel supports multiple layouts, which the user freely can configure with button functions.

Predefined layout styles available are:

- 10 buttons - 10 buttons with large size
- 40 buttons - 40 buttons with small size
- List layouts - Predefined list layouts for levels, virtual routers, salvo groups and parameter groups
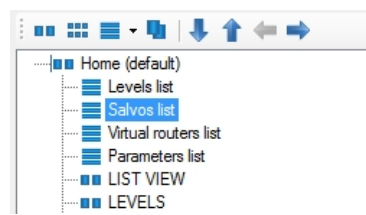


**Button functions**

Button functions available:

- Standard function buttons - Panel Enable, Lock, Protect, Take, Take on/off, A/V Toggle, Home, Up
- Level control - Inputs, Outputs
- Virtual control - Sources, Destinations, Level Breakaway, Categories
- Salvo control - Salvos



### Advanced button functions

In addition to standard button functions, the touchpanel has some advanced control features.

- Advanced Level Control
- Advanced Salvo Control
- Advanced Virtual Control

### Button color settings

User can set active and inactive color on selected button(s).

### Configuration settings

- Name - Configuration name
- Desc - Configuration description
- User - User assocciated with this configuration
- Display - Shows display mode (name or alias)
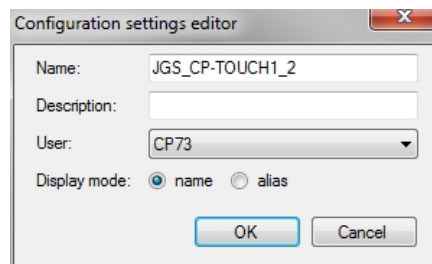


# Touch Panel Configuration Editor - Layouts

Each layout can be configured separately and have it's own set of button functions. The user can navigate between layouts with the menu function buttons (home or up), or create buttons with link to a specific layout.

### Home layout

Each configuration has one home layout, this is mandatory. This has 10 buttons and will be shown when the user pushes the home button function. All other layouts will be added under the home layout.

### Default layout

When the panel reboots/restarts the default layout will be shown. Normally, the home layout is also the default layout, but the user can right-click on any layout and make it default.

### Layout handling

The layout toolbar enables the user to add different layouts.



- Add 10 buttons layout
- Add 40 buttons layout
- Add list layout
- Clone current layout

The layout tree can be modified with the toolbar functions.



- Move down
- Move up
- Decrease indent level
- Increase indent level

### Layout linking

To enable the user to jump to a layout, the button must be configured with a layout link.

- Open the layout you want to jump from, by clicking the layout in the layout tree.
- Drag the layout you want to jump to, onto a button on the active layout
- The button is now a layout link

You can double-click on the layout link button in the editor, it will show the layout which the button links to.

**Context menu**
Right-click on a layout to show the context menu.

| | |
|---|---|
| ▪▪ | New 10 buttons |
| ⬚⬚⬚ | New 40 buttons |
| ⬚ | Clone current |
| | Rename |
| ✕ | Delete |
| ✔ | Set as default |
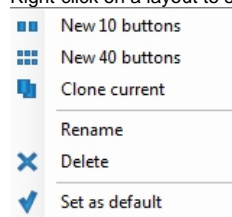
# Touch Panel Configuration Editor - List layouts

List layouts are predefined layouts. There are four different list layouts:
- Levels list
- Salvos list
- Virtual router list
- Parameter list

**Levels list**
The levels list shows all levels available in the system (of Multicons). It gives the user access to all inputs and outputs using the rotary wheels.
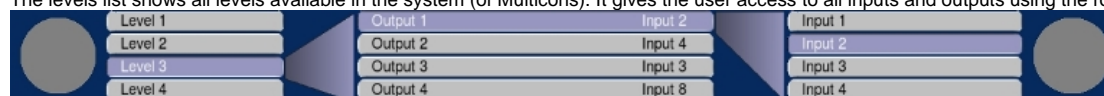


The left rotary wheel selects which level to control. Press it to open outputs list and it can be used to select output. Press it again and it can select levels.
The right rotary wheel selects inputs and press it to send the command.

**Salvos list**
The salvos list show all salvo groups in the system (of Multicons). It gives the user access to all salvos using the rotary wheels.
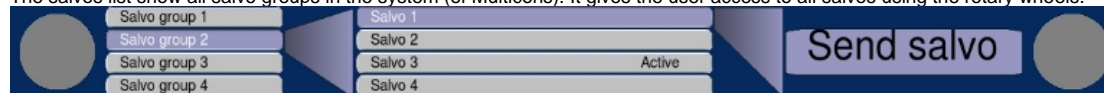


The left rotary wheel selects which salvo group to control. Press it to open salvos list and it can be used to select salvo. Press it again and it can select salvo group.
The right rotary can be pressed to activate a salvo.

**Virtual router list**
The virtual router list shows all virtual routers in the system (of Multicons). It gives the user access to all sources and destinations using the rotary wheels.



The left rotary wheel selects which virtual router to control. Press it to open the destinations list and it can be used to select destination. Press it again and it can select virtual rotuer.
The right rotary wheel selects source and press it to send the command.

**Parameter list**
The parameter list shows all parameter groups in the system (of Multicons). It gives the user access to all parameters using the rotary wheels.
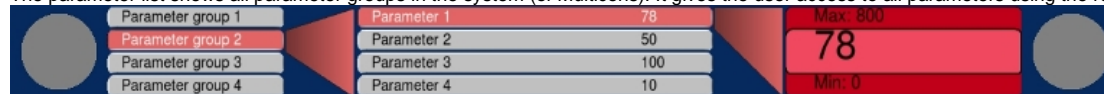


The left rotary wheel selects which parameter group to control. Press it to open all parameters and in can be used to select a parameter. Press it again and it can select parameter group.
The right rotary wheel selects the value for the parameter and press it to send the value.

# Touch Panel Configuration Editor - Advanced Level Control

The user can configure a region of buttons to show inputs or outputs from a level. If there are more inputs than buttons in the region, the rotary wheel can be used for scrolling. This is an effective way to get access to more inputs or outputs on a limited number of buttons.

Select Advanced Level Control.
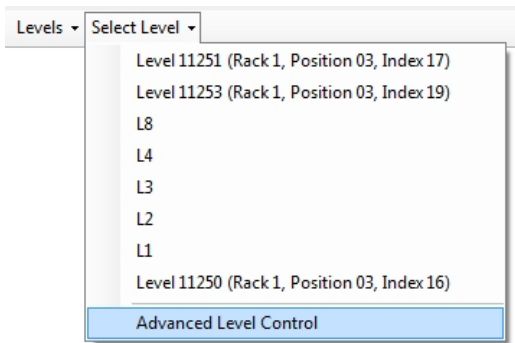
All available levels are shown, group in inputs and outputs.



Drag one group of inputs or outputs onto the panel. An example will look like this:



If you double-click on the inputs or outputs, an editor will be shown. Here you can modify the region of the group.
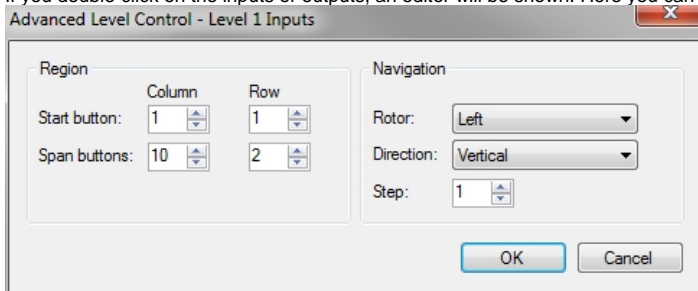


Then you can build a advanced level control with additional salvos, for example.
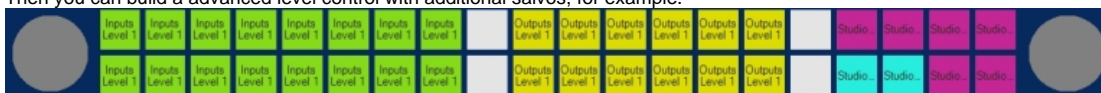


Note: It's not possible to drag inputs from one level and outputs from another level onto the same layout. Inputs and outputs must come from the same level.

# Touch Panel Configuration Editor - Advanced Salvo Control

The user can configure a region of buttons to show salvos in a salvo group. If there are more salvos than buttons in the region, the rotary wheel can be used for scrolling. This is an effective way to get access to many salvos a limited number of buttons.

Select Advanced Salvo Control.



All available salvo groups are shown.

| Salvos ▾ Advanced Salvo Group Control ▾ |
|---|
| Salvos |
| SIM SALVOS |
| EMB 15-16 |
| EMB 13-14 |
| EMB 11-12 |
| EMB 09-10 |
| EMB 07-08 |
| EMB 05-06 |
| EMB 03-04 |
| EMB 01-02 |
| AES OUT4 |
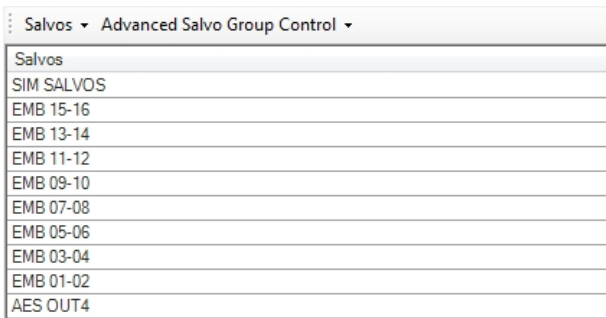
Drag one group of salvos onto the panel. An example will look like this:
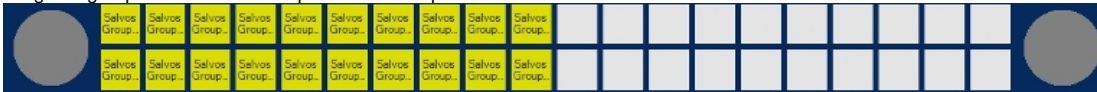


If you double-click on the salvos region, an editor will be shown. Here you can modify the region settings.
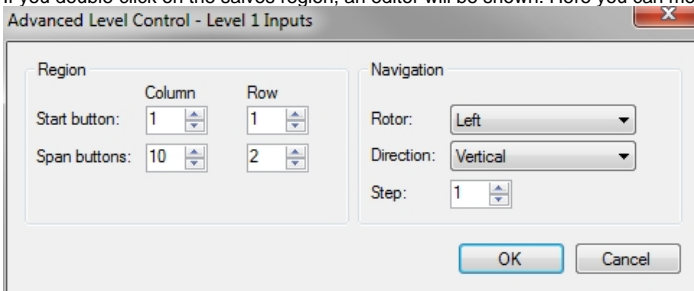


Note: Maximum two regions with salvos are allowed on the same layout.

# Touch Panel Configuration Editor - Advanced Virtual Control

The user can configure a region of buttons to show sources or destinations from a virtual router. If there are more sources/destinations than buttons in the region, the rotary wheel can be used for scrolling. This is an effective way to get access to more sources or destinations on a limited number of buttons.

Select Advanced Virtual Control.

| Virtual Routers ▾ | Select Virtual Router ▾ |
|---|---|
| | VirtualRouter 4 |
| | VirtualRouter 3 |
| | VirtualRouter 2 |
| | VirtualRouter 1 |
| | Advanced Virtual Router Control |
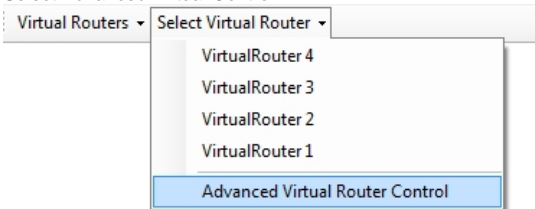
All available virtual routers are shown, group in sources and destinations.

| Virtual Routers ▾ Advanced Virtual Router Control ▾ | |
|---|---|
| Sources | Destinations |
| VirtualRouter 4 (Sources) | VirtualRouter 4 (Destinations) |
| VirtualRouter 3 (Sources) | VirtualRouter 3 (Destinations) |
| VirtualRouter 2 (Sources) | VirtualRouter 2 (Destinations) |
| VirtualRouter 1 (Sources) | VirtualRouter 1 (Destinations) |
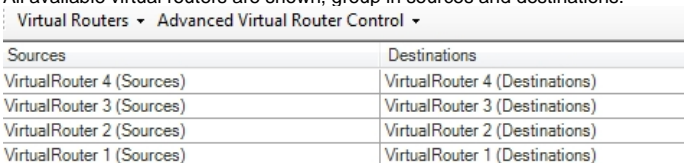
Drag one group of sources or destinations onto the panel. An example will look like this:



If you double-click on the sources or destionations, an editor will be shown. Here you can modify the region of the group.
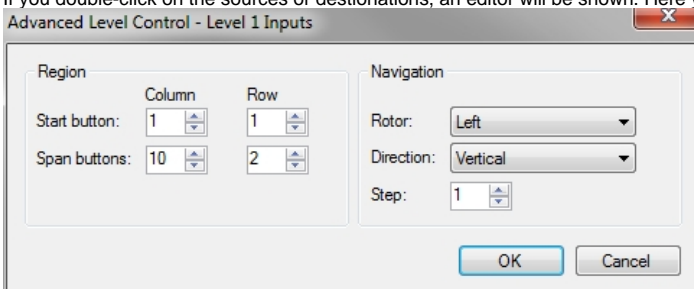


Note: It's not possible to drag sources from one virtual router and destinations from another virtual router onto the same layout. The sources and destinations must come from the same virtual router.

# Control Panel Configuration Editor

The Control Panel Configuration Editor creates button configurations for Modular IP panels and Sublime panels.

**Configuration**
Shows the current button configurations. Each panel have different set of button layouts and each button can be freely configured.

**GPI**
Shows the configuration on the GPI inputs. Each panel have 16 GPI inputs that can be configured like any other button.

**Button Colors**
Shows the active and inactive color on the active button. Buttons with input, output and in2out configuration have default colors.

**Settings and Button Functions**
| | |
|---|---|
| Function buttons: | Standard buttons like panel enable, take, lock etc. |
| Levels: | Add input, output and in2out buttons |
| Virtual routers: | Add source, destination, category and level breakaway buttons |
| Parameters: | Add parameter set, display and toggle buttons |
| Salvos: | Add salvo set buttons |
| GPI Output configuration: | Configure GPI outputs and to trig them |
| General panel settings: | Configure general panel settings like user, LED intensity etc. |

**Advanced functions:**
| | |
|---|---|
| Print: | Prints out the table |
| Print preview: | Shows a preview of the table |
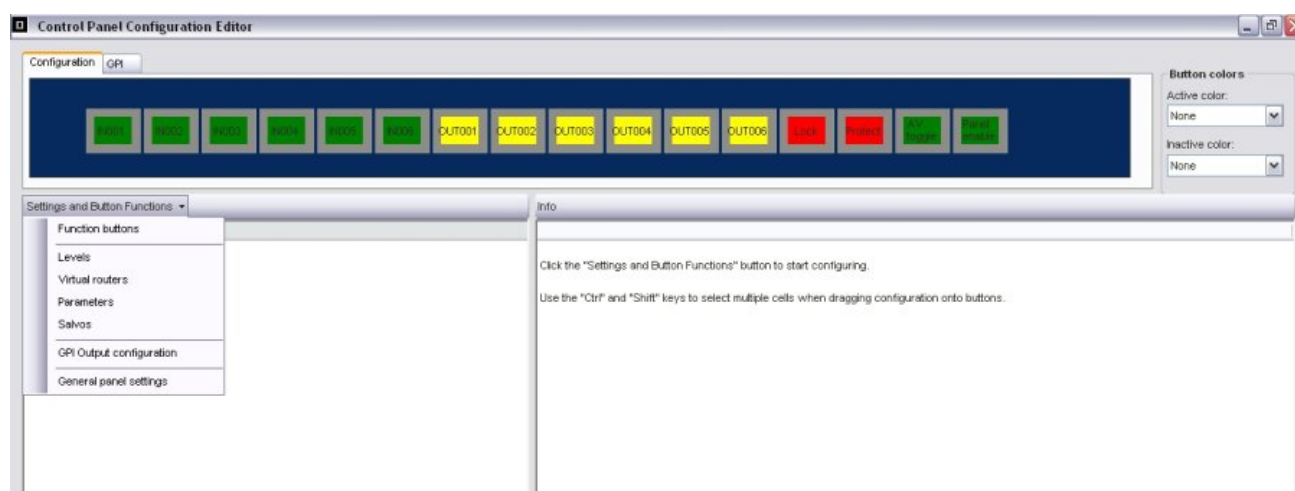


Select button configuration from the toolbar and drag it onto a button. Each button is fully configurable.

# Control Panel Configuration - Function Buttons

The following function buttons are available in the Settings and Button Functions:

**Standard**
| | |
|---|---|
| AV Toggle: | Toggles between audio, video and married control. |
| | Only used on level inputs and outputs. |
| Lock: | Locks the selected output, destination, parameter |
| | or salvo with the configured panel user. |
| Panel Enable: | Enables or disables all buttons on a panel, except itself. |
| Protect: | Protects the selected output, virtual destination, parameter |
| | or salvo from being changed by anyone other than the current user |
| | or a user with higher access level. |
| Signal Presence: | Indicates if a signal is present on the selcted output, |
| | destination or salvo. |
| Take: | If take is turned on (see Take on/off below), this button is used to confirm the |
| | user action. |
| Take on/off: | Turns the take functionality on or off. |

**MDP**
Allows the selection of additional functions that only apply to MDP panels, such as the numeric keypad buttons, source mode, destination mode etc.

**GPI**
| | |
|---|---|
| GPI indicator 1-16: | Indicates the status of the GPI, active color is shown when |
| | GPI input is active, otherwise inactive color is used. |
| GPO Trigger 1-16: | Manually trig a GPO output. |

| Function buttons ▾ | |
|---|---|
| Name ▲ | Description |
| ⊟ Standard | |
| AV Toggle | Toggle between audio, video and both levels |
| Lock | Locks/unlocks a crosspoint. |
| Panel enable | Enables / disables one or more buttons on the control... |
| Protect | Protects/unprotects a crosspoint. |
| Signal Presence | Indicates if signal is presence on input or output. |
| Take | Confirms setting a crosspoint. |
| Take on/off | Toggles the take state for one or more buttons on the c... |
| ⊟ GPI | |
| GPI indicator 01 | Monitors a GPI. |
| GPI indicator 02 | Monitors a GPI. |
| GPI indicator 03 | Monitors a GPI. |
| GPI indicator 04 | Monitors a GPI. |
| GPI indicator 05 | Monitors a GPI. |
| GPI indicator 06 | Monitors a GPI. |
| GPI indicator 07 | Monitors a GPI. |
| GPI indicator 08 | Monitors a GPI. |
| GPI indicator 09 | Monitors a GPI. |
| GPI indicator 10 | Monitors a GPI. |
| GPI indicator 11 | Monitors a GPI. |
| GPI indicator 12 | Monitors a GPI. |
| GPI indicator 13 | Monitors a GPI. |
| GPI indicator 14 | Monitors a GPI. |
| GPI indicator 15 | Monitors a GPI. |
| GPI indicator 16 | Monitors a GPI. |
| GPO trigger 01 | Manually trigger a GPO. |
| GPO trigger 02 | Manually trigger a GPO. |
| GPO trigger 03 | Manually trigger a GPO. |
| GPO trigger 04 | Manually trigger a GPO. |
| GPO trigger 05 | Manually trigger a GPO. |
| GPO trigger 06 | Manually trigger a GPO. |
| GPO trigger 07 | Manually trigger a GPO. |
| GPO trigger 08 | Manually trigger a GPO. |
| GPO trigger 09 | Manually trigger a GPO. |
| GPO trigger 10 | Manually trigger a GPO. |
| GPO trigger 11 | Manually trigger a GPO. |
| GPO trigger 12 | Manually trigger a GPO. |
| GPO trigger 13 | Manually trigger a GPO. |
| GPO trigger 14 | Manually trigger a GPO. |
| GPO trigger 15 | Manually trigger a GPO. |
| GPO trigger 16 | Manually trigger a GPO. |

## Control Panel Configuration - Levels

The following level functions are available in the Settings and Button Functions:

**Level select**
To choose which level to use, click the "Select Level" item and select a level:

| Levels ▾ | Select Level ▾ |
|---|---|
| | Level 115 |
| | Level 15 |
| | Level 16 |
| | Level 10751 (Rack 0, Position 08, Index 3) |
| | Level 110 (Rack 6, Position 07, Index 19) |
| | Level 8 (NCB Address 7) |
| | Level 108 (NCB Address 23) |
| | Level 65 (DEMO) |
| | Level 10750 (Rack 0, Position 08, Index 2) |
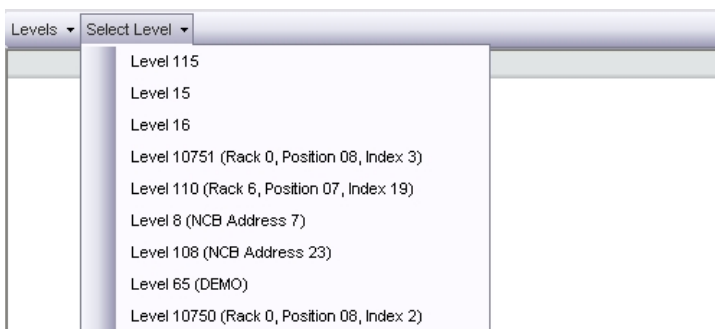
**Input button**
Represent a input on a level (router), button color is set by the system.
Select an input and drag it onto the panel to add an input button.

**Output button**
Represent a output on a level (router), button color is set by the system.
Select an output and drag in onto the panel to add an output button.

**Input-to-Output button**
Represent an input to output relation, switches directly the input to the output when pressed. Button color is set by the system.
Select an input, press and hold the CTRL key, select an output and drag the selection onto the panel to add an input-to-output button.

| Levels ▾  Level 8 (NCB Address 7)  ▾ | | | |
|---|---|---|---|
| No ▲1 | Inputs | ▲2 | Outputs |
| 1 | IN001 | 1 | OUT001 |
| 2 | IN002 | 2 | OUT002 |
| 3 | IN003 | 3 | OUT003 |
| 4 | IN004 | 4 | OUT004 |
| 5 | IN005 | 5 | OUT005 |
| 6 | IN006 | 6 | OUT006 |
| 7 | IN007 | 7 | OUT007 |
| 8 | IN008 | 8 | OUT008 |
| 9 | IN009 | 9 | OUT009 |
| 10 | IN010 | 10 | OUT010 |
| 11 | IN011 | 11 | OUT011 |
| 12 | IN012 | 12 | OUT012 |
| 13 | IN013 | 13 | OUT013 |
| 14 | IN014 | 14 | OUT014 |
| 15 | IN015 | 15 | OUT015 |
| 16 | IN016 | 16 | OUT016 |
| 17 | IN017 | 17 | OUT017 |
| 18 | IN018 | 18 | OUT018 |
| 19 | IN019 | 19 | OUT019 |
| 20 | IN020 | 20 | OUT020 |
| 21 | IN021 | 21 | OUT021 |
| 22 | IN022 | 22 | OUT022 |
| 23 | IN023 | 23 | OUT023 |
| 24 | IN024 | 24 | OUT024 |
| 25 | IN025 | 25 | OUT025 |
| 26 | IN026 | 26 | OUT026 |
| 27 | IN027 | 27 | OUT027 |
| 28 | IN028 | 28 | OUT028 |
| 29 | IN029 | 29 | OUT029 |
| 30 | IN030 | 30 | OUT030 |
| 31 | IN031 | 31 | OUT031 |
| 32 | IN032 | 32 | OUT032 |

## Control Panel Configuration - Virtual Routers

The following virtual router functions are available in the Settings and Button Functions:

**Virtual router select**
To choose which virtual router to use, click the "Select Virtual Router" item and select a virtual router:

| Virtual routers ▾ | Select Virtual Router ▾ | |
|---|---|---|
| | VirtualRouter 2 | |
| | VirtualRouter 1 | |
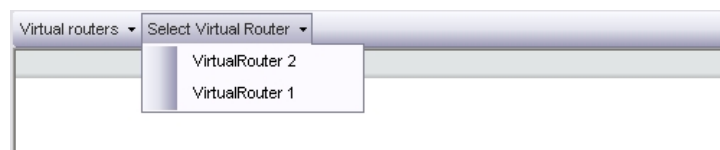
**Function select**
To choose which virtual router function to use, click the "Select Function" item and select a function:

| Sources and destinations: | Add source, destinations and source-to-destination buttons |
|---|---|
| Source categories: | Add source category select and category index buttons |
| Destination categories: | Add destination category select and category index buttons |
| Levels: | Add level breakaway and custom breakaway buttons |

| Virtual routers ▾  VirtualRouter 1 ▾  Select Function ▾ | |
|---|---|
| | Sources and Destinations |
| | Source Categories |
| | Destination Categories |
| | Levels |
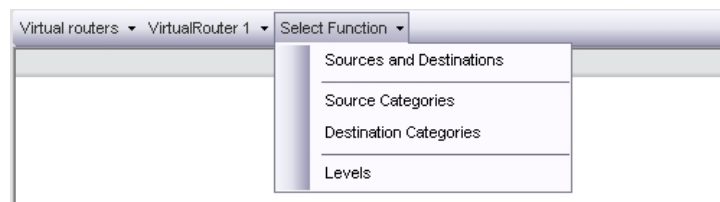
**Source button**
Represents a virtual source defined in the selected virtual router.
Select a source and drag it onto the panel to add a source button.

**Destination button**
Represents a virtual destination defined in the selected virtual router.
Select a destination and drag it onto the panel to add a destination button.

**Src2Dest button**
Represents a source to destination relationship, switches directly the source to the destination when pressed.
Select a source, press and hold the CTRL key, select an output and drag the selection onto the panel to add a src2dest button.

| Virtual routers ▾  VirtualRouter 1 ▾  Sources and Destinations ▾ | | | |
|---|---|---|---|
| ▲ | Name | | Name |
| 1 | VSRC001 | 1 | VDST001 |
| 2 | VSRC002 | 2 | VDST002 |
| 3 | VSRC003 | 3 | VDST003 |
| 4 | VSRC004 | 4 | VDST004 |
| 5 | VSRC005 | 5 | VDST005 |

**Source Category select button**
Represent a source category and when pressed it will display the category contents on the panel.
Select a source and drag in onto the panel to add a source category select button.
Press and hold the CTRL key, select multiple categories and drag the selection onto the panel to add a source category toggle button (only valid on CP-16LCD panels).

**Source Category content display button**
Represent a index in the source category and will display the source at this index.
Select a category index and drag in onto the panel to add a source category content display button.

| Virtual routers ▾ VirtualRouter 1 ▾ Source Categories ▾ | |
|---|---|
| Name | Description |
| ⊟ CATEGORIES | |
| CAM | |
| SAT | |
| ⊟ CATEGORY DISPLAY INDEX | |
| Category index 1 | Category display index button |
| Category index 2 | Category display index button |
| Category index 3 | Category display index button |
| Category index 4 | Category display index button |

**Destination Category select button**
Represent a destination category and when pressed it will display the category contents on the panel.
Select a destination and drag in onto the panel to add a destination category select button.
Press and hold the CTRL key, select multiple categories and drag the selection onto the panel to add a destination category toggle button (only valid on CP-16LCD panels).

**Destination Category content display button**
Represent a index in the destination category and will display the destination at this index.
Select a category index and drag in onto the panel to add a destination category content display button.

| Virtual routers ▾ VirtualRouter 1 ▾ Destination Categories ▾ | |
|---|---|
| Name | Description |
| ⊟ CATEGORIES | |
| MON | |
| MIX | |
| ⊟ CATEGORY DISPLAY INDEX | |
| Category index 1 | Category display index button |
| Category index 2 | Category display index button |
| Category index 3 | Category display index button |
| Category index 4 | Category display index button |
| Category index 5 | Category display index button |

**Virtual level toggle button**
Represent a virtual level defined in the selected virtual router, turns on or off the control and status monitoring on this level.
Select a virtual level and drag it onto the panel to add a virtual level toggle button.

**Custom level breakaway**
Represent a virtual level toggle button with custom defined breakaway steps. Click the "..." (browse) button to open the Custom level breakaway editor.
Drag the Custom level breakaway row onto the panel to add a custom level breakaway button.

**Levels to be included in the button status**
General panel configuration. Set which levels to be included on button status calculation for virtual router on all buttons. Click the "..." (browse) button to open the Virtual levels included in status editor.

| Virtual routers ▾ VirtualRouter 1 ▾ Levels ▾ | | |
|---|---|---|
| ▲ | Name | Description |
| 0 | SD | |
| 1 | AA | |
| | Custom level breakaway | Click here to configure --> ... |
| | Levels to be included in butt... | Click here to configure --> ... |

# Control Panel Configuration - Parameters

The following parameter functions are available in the Settings and Button Functions:
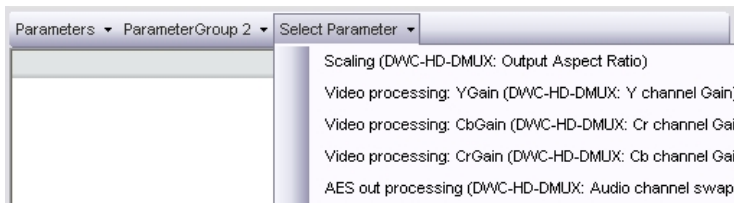
**Parameter group select**
To choose which parameter group to use, click the "Select Parameter Group" item and select a parameter group:

| Parameters ▾ | Select Parameter Group ▾ | |
|---|---|---|
| | ParameterGroup 2 | |
| | ParameterGroup 1 | |

**Parameter select**
To choose which parameter to use, click the "Select Parameter" item and select a parameter:

| Parameters ▾ | ParameterGroup 2 ▾ | Select Parameter ▾ | |
|---|---|---|---|
| | | Scaling (DWC-HD-DMUX: Output Aspect Ratio) | |
| | | Video processing: YGain (DWC-HD-DMUX: Y channel Gain) | |
| | | Video processing: CbGain (DWC-HD-DMUX: Cr channel Gai | |
| | | Video processing: CrGain (DWC-HD-DMUX: Cb channel Gai | |
| | | AES out processing (DWC-HD-DMUX: Audio channel swap| | |

**Predefined value button**
Represent a predefined value from a enumerated list defined by the parameter.
Drag a predefined value onto the panel to add a predefined value button.
Drag the "Toggle all" row onto the panel to add a button that toggles through all values and sets the current.

| Parameters ▾ | ParameterGroup 2 ▾ | Scaling (DWC-HD-DMUX: Output Aspect Ratio) ▾ |
|---|---|---|
| **Name ▲** | | |
| 16:9 | | |
| 16:9 LB | | |
| 4:3 | | |
| Toggle all | Toggles between all enumerated values | |
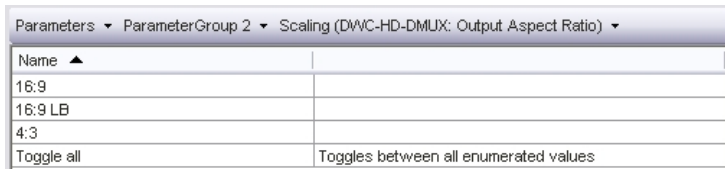
**Numeric value button**
Represent a numeric value defined by the parameter.
Drag the "Display value" row onto the panel to add a button that display the parameter value.

Drag the "Set value" row onto the panel to add a button that sets a custome value. Click the "..." (browse) button to configure the custom value.

Drag the step up or down rows to add buttons that steps the value up or down according to text.

| Parameters ▾ | ParameterGroup 2 ▾ | Video processing: YGain (DWC-HD-DMUX: Y channel Gain) ▾ | |
|---|---|---|---|
| **Name ▲** | | | |
| Display value | Value display on the button | | |
| Set value | Click to change value... | | ... |
| Step down 0,1 | Decrease value with 0,1 | | |
| Step down 1 | Decrease value with 1 | | |
| Step down 10 | Decrease value with 10 | | |
| Step down 100 | Decrease value with 100 | | |
| Step up 0,1 | Increase value with 0,1 | | |
| Step up 1 | Increase value with 1 | | |
| Step up 10 | Increase value with 10 | | |
| Step up 100 | Increase value with 100 | | |

**On/Off button**
Represent a button that can turn values on or off.
Drag the "Set value OFF" row onto the panel to add a button the sets the value to off.
Drag the "Set value ON" row onto the panel to add a button the sets the value to on.
Drag the "Toggle On/Off" row onto the panel to add a button that toggles between on and off.

| Parameters ▾ | Demo (DEMO) ▾ | Bool value (Boolean value without wrap or truncate demo) ▾ |
|---|---|---|
| **Name ▲** | | |
| Set value OFF | | |
| Set value ON | | |
| Toggle On/Off | Toggles between on and off | |
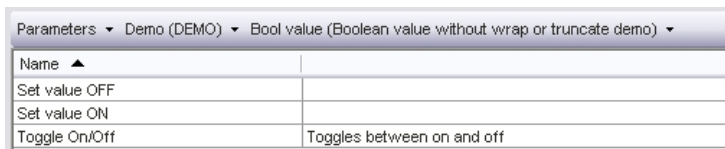
# Control Panel Configuration - Salvos

The following salvo functions are available in the Settings and Button Functions:

**Salvo group select**
To choose which salvo group to use, click the "Select Salvo Group" item and select a salvo group:

| Salvos ▾ | Select Salvo Group ▾ | |
|---|---|---|
| | Sublime salvos | |
| | LYS SG | |
| | SalvoGroup 1 | |
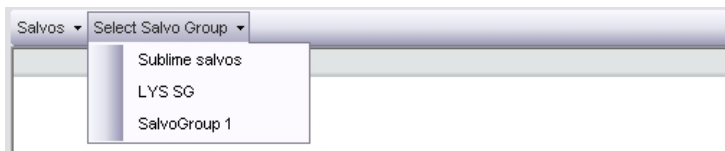
**Salvo button**
Represent a button that executes a salvo. Button colors indicate true state of salvo.
Drag the salvo row onto the panel to add a salvo button.

If the salvo button are dragged onto the GPI tab, "Restore Enabled" can be checked. If the GPI input is triggered, the salvo is executed. If the GPI input is reset, the restore salvo is executed. The restore salvo is defined in the General panel settings.

| Salvos ▾ | SalvoGroup 1 ▾ | |
|---|---|---|
| **Name ▲** | Restore Enabled | |
| Salvo 1 | ☐ | |
| Salvo 2 | ☐ | |
| Salvo 3 | ☐ | |
| Salvo 4 | ☐ | |
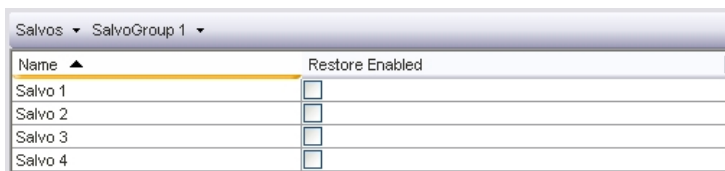
# Control Panel Configuration - GPI Output configuration

The following GPI output configurations are available in the Settings and Button Functions:

A salvo can be configured to control a GPI output. When the salvo is active, the GPI output is active, otherwise the GPI output is inactive.

If more than one salvo controls the same GPI output, the status of GPI output is calculated by the logical operator defined in the General panel settings.

**Add GPI Output Config**
- Click the "Add GPI Output Config" item on the toolbar, an empty row is displayed
- In the GPO column, select which GPI output to control
- In the Salvo Group column, select which salvo group the salvo is configured
- In the Salvo column, select which salvo to trig the GPI output

**Remove GPI Output Config**
Removes the configuration for the active row.

| GPI Output configuration ▾ Add GPI Output Config Remove GPI Output Config | | |
|---|---|---|
| GPO | Salvo Group | Salvo |
| GPO 001 ▾ | SalvoGroup 1 ▾ | Salvo 1 ▾ |
| GPO 002 ▾ | SalvoGroup 1 ▾ | Salvo 2 ▾ |
| GPO 002 ▾ | Sublime salvos ▾ | Salvo 4 ▾ |

# Control Panel Configuration - General panel setttings

The following general panel settings are available in the Settings and Button Functions:

**Button Configuration**
Configuration name:　Name of the control panel configuration displayed in the system
Description:　Description of the control panel configuration

**GPI Configuration**
GPI Output status calculation method:
　　　　Defines which calculation method to be used when 2 or more salvos control the same GPI output.
　　　　OR　　- If one of the salvos are active, the output is active
　　　　AND　- If all of the salvos are active, the output is active
　　　　XOR　- If only one of the salvos are active, the output is active
　　　　NOR　- Inverted OR
　　　　NAND- Inverted AND
　　　　XNOR- Inverted XOR

**Panel Apperance**
Backcolor intensity:　Sets the LED backcolor intensity on the control panels (only Modular IP panels)
　　　　High (outdoor) - Maximum intensity
　　　　Normal - normal intensity
　　　　Low (dark environment) - Low intensity
Display mode:　Defines what to be shown on the panel, for inputs/outputs, sources/destinations etc.
　　　　Name - Always use name as display name
　　　　Alias　- Use alias if configured as display name, otherwise use name
Font type:　Set the font type used on the panel (only valid for CP-16LCD)
Font size:　Set the font size used on the panel (only valid for CP-16LCD)

**Panel Security**
User:　Defines which user the panel will be associated with. All commands issued from
　　　　this panel will be tagged with this user.

**Salvo restore configuration**
Use fixed restore config:　Enabled means use configured salvo group and salvo, Disabled means restore to previous state.
Salvo Group:　Defines with salvo group to be used when restoring from GPI input triggered salvos.
Salvo:　Defines with salvo to be used when restoring from GPI input triggered salvos.

| General panel settings ▾ | |
|---|---|
| Setting | Value |
| ⊟ Button Configuration | |
| Configuration name | JGS_LCD3_1 |
| Description | Edit Suite 3 |
| ⊟ GPI Configuration | |
| GPI Output status calculation method | XOR ▾ |
| ⊟ Panel Appearance | |
| Backcolor intensity | Normal ▾ |
| Display mode | Name ▾ |
| Font type | Dotimatrix_5.ttf ▾ |
| Font size | 10 ▾ |
| ⊟ Panel Security | |
| User | panel2 ▾ |
| ⊟ Salvo restore configuration | |
| Salvo Group | SalvoGroup 1 ▾ |
| Salvo | Salvo 3 ▾ |

# Custom Level Breakaway Editor

The Custom Level Breakaway Editor is opened when the user adds a custom level breakaway button in control panel configuration.

**Column descriptions**
Index:　Step number index

Text:                     Name of step, shown on buttons (only CP-16LCD)
Virtual Level 1..N:       Name of virtual level, defined in virtual router

**Actions**
Add Step:                Adds a new line in the editor
Delete:                  Deletes the current step
Delete All:              Deletes all steps
Move Up:                 Moves current step up one index
Move Down:               Moves current step down one index

**Configure one step**
- Enter step name in the text column
- For each virtual level column, set the action per level:
  - On - force this level on
  - Off - force this level off
  - NotSet - leave the level state unchanged

**Advanced functions:**
Print:                   Prints out the table
Print preview:           Shows a preview of the table
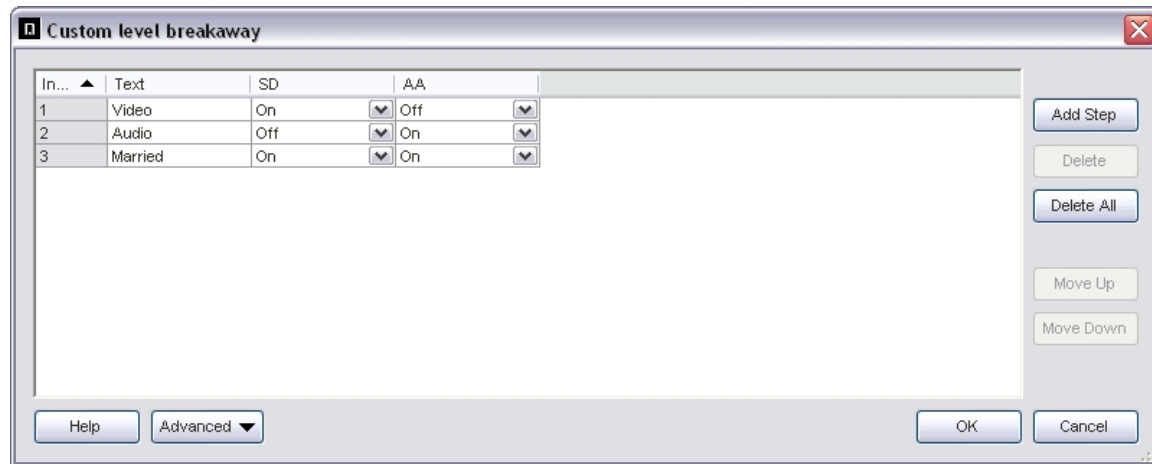


## User Management

The User Management handles user groups and users in the system.

Open the User Management from the Current System menu.
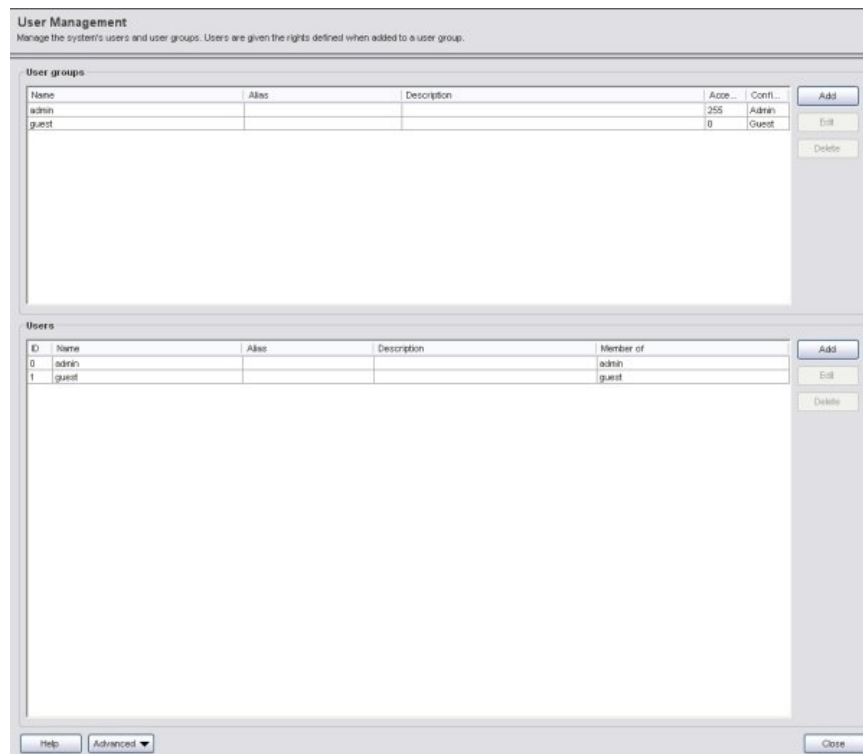


Select an user group or user and click "Edit" to modify the properties.

## Level List

The Level List shows all active and inactive levels in the system.

Only active levels can be controlled from control panels or 3rd party systems.

Open the Level List by clicking the "Levels" button on the toolbar.

**Columns description:**
| | |
|---|---|
| Active: | Click this checkbox to activate the level |
| Name: | Name of the level |
| Alias: | Alias of the level |
| Description: | Description of the level |
| Level: | Level number |
| Size: | Size of level inputs x outputs |
| Format: | Format of the level (3G, HD, SD, AES...) |

**Context menu:**
| | |
|---|---|
| Level mnemonics: | Opens the level mnemonics editor for the selected level (active levels only) |
| Activate level: | Activate the selected level (inactive levels only) |
| Edit partitions: | Opens the partitions editor for for the selected level (active levels only) |

**Advanced functions:**
| | |
|---|---|
| Print: | Prints out the table |
| Print preview: | Shows a preview of the table |
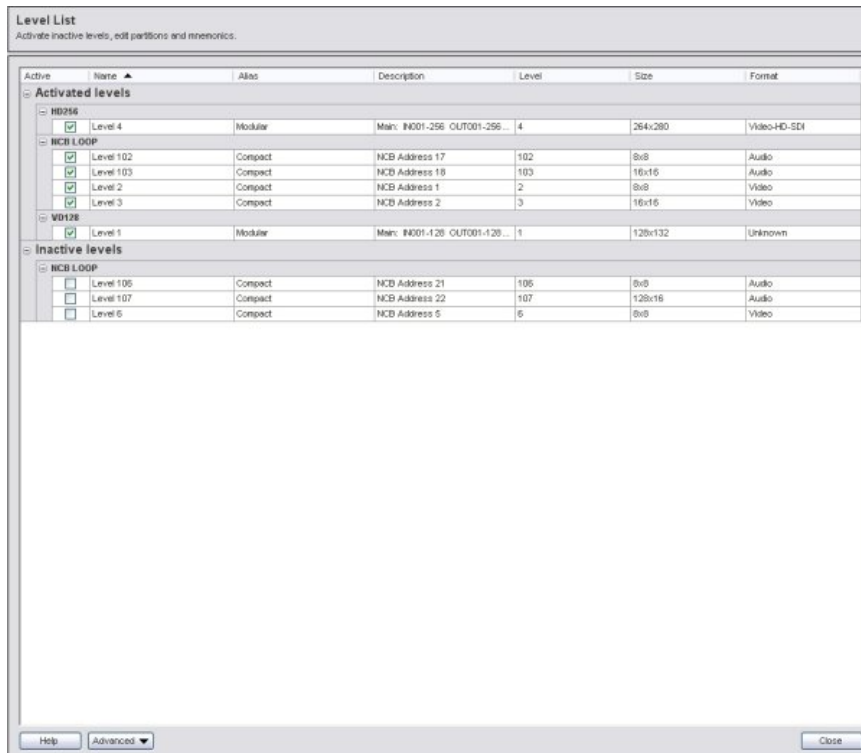


# Salvo Group List

The Salvo Group List shows all salvo groups in the system.

Open the Salvo Group List from the "Salvos" button on the toolbar.

**Columns description:**
| | |
|---|---|
| Name: | Name of the salvo group |
| Alias: | Alias of the salvo group |
| Description: | Description of the salvo group |

**Actions:**
| | |
|---|---|
| New: | Add a new salvo group and enter the salvo group editor |
| Modify: | Modify the selected salvo group |
| Clone: | Clones the selected salvo group |
| Delete: | Deletes the selected salvo group |

**Advanced functions:**
| | |
|---|---|
| Print: | Prints out the table |
| Print preview: | Shows a preview of the table |
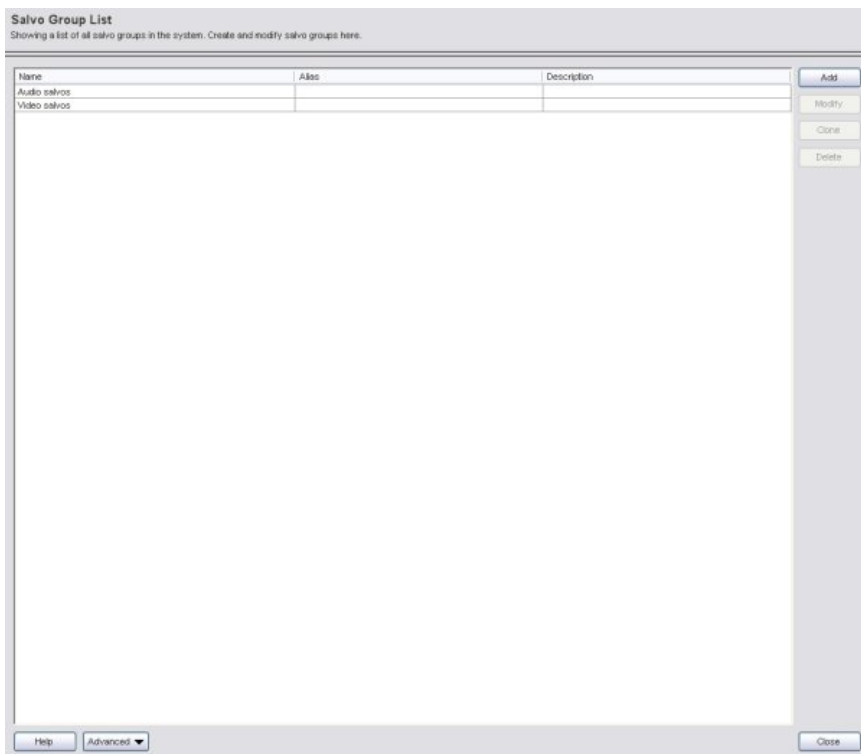
## Virtual Router List

The Virtual Router List shows all virtual routers in the system.

Open the Virtual Router List from the "Virtual Router" button on the toolbar.

**Columns description:**

| | |
|---|---|
| Name: | Name of the virtual router |
| Alias: | Alias of the virtual router |
| Description: | Description of the virtual router |
| Info: | Shows detailed info (number of levels, sources, destinations) |

**Actions:**

| | |
|---|---|
| Add: | Add a new virtual router and enter the virtual router editor |
| Modify: | Modify the selected virtual router |
| Clone: | Clones the selected virtual router |
| Delete: | Deletes the selected virtual router |

**Advanced functions:**

| | |
|---|---|
| Print: | Prints out the table |
| Print preview: | Shows a preview of the table |
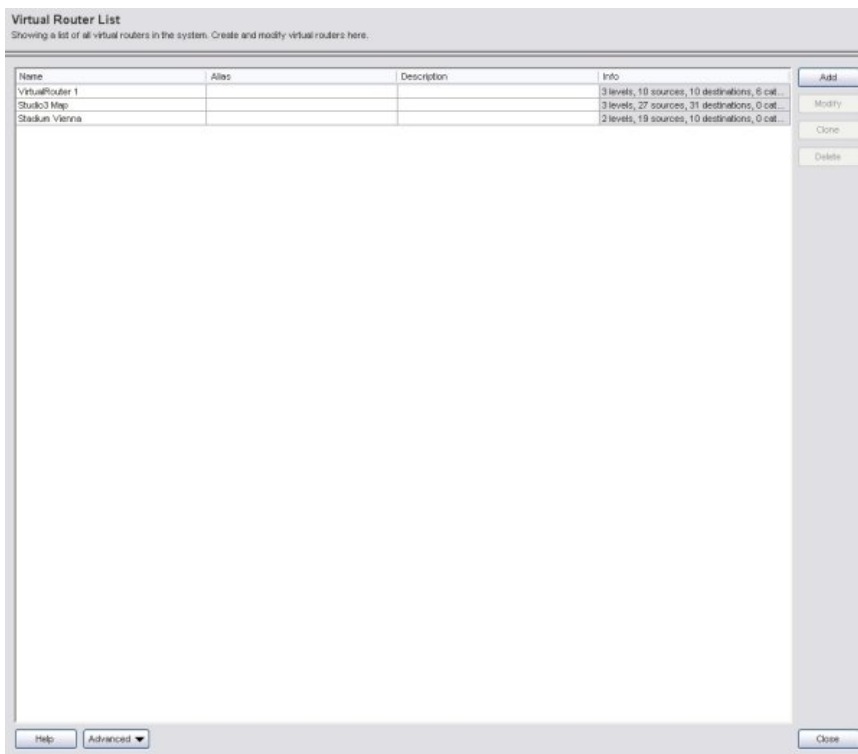
## Parameter Group List

The Parameter Group List shows all parameter groups in the system.
Open the Parameter Group List from the "Parameters" button on the toolbar.

**Columns description:**
Name:               Name of the parameter group
Alias:              Alias of the parameter group
Description:        Description of the parameter group
Info:               Shows detailed info (number of parameters)

**Actions:**
Add:                Add a new parameter group and enter the parameter group editor
Modify:             Modify the selected parameter group
Clone:              Clones the selected parameter group
Delete:             Deletes the selected parameter group

**Advanced functions:**
Print:              Prints out the table
Print preview:      Shows a preview of the table

**Parameter Group List**
Show list of all parameter groups in the system. Create and modify parameter groups here.

| Name | Alias | Description | Info |
|------|-------|-------------|------|
| DMC-HD-DMUX | DMC-HD-DMUX | Rack 0, Position 07 | 25 parameters |
| ParameterGroup 2 | | | 1 parameters |
| ParameterGroup 3 | | | 8 parameters |

Add
Modify
Clone
Delete

Help    Advanced ▼                                                                 Close
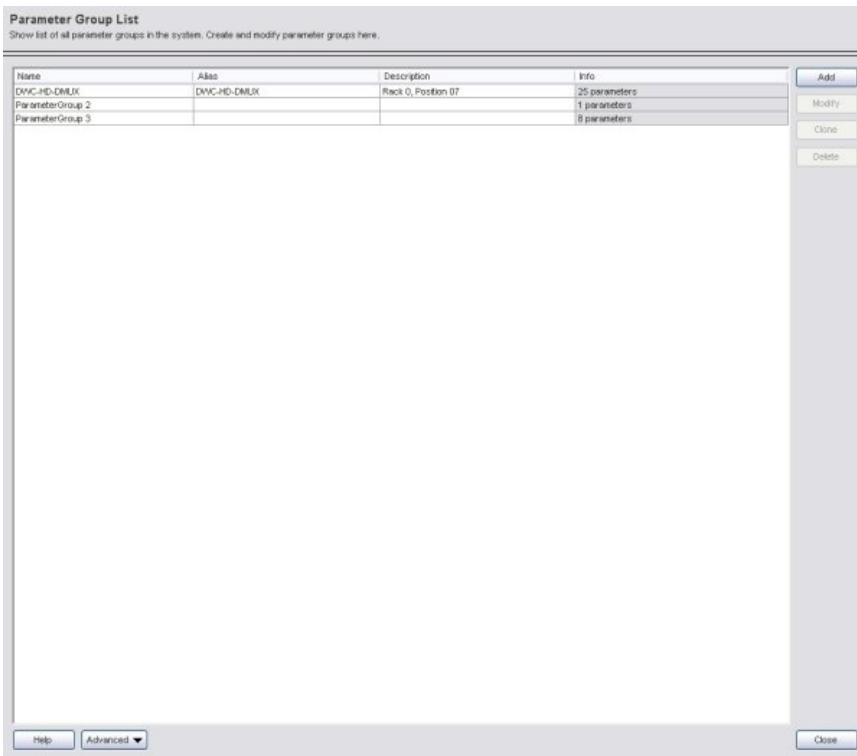
## Button Configuration List

The Button Configuration list shows all button configurations in the system.

Open the Button Configuration list from the "Button Configurations" button on the toolbar.

**Columns description:**

| | |
|---|---|
| Name: | Name of the button configuration |
| Alias: | Alias of the button configuration |
| Description: | Description of the button configuration |

**Actions:**

| | |
|---|---|
| New: | Add a new button configuration and enter the button configuration editor |
| Modify: | Modify the selected button configuration |
| Delete: | Deletes the selected button configuration |

**Advanced functions:**

| | |
|---|---|
| Print: | Prints out the table |
| Print preview: | Shows a preview of the table |

**Button Configuration List**
Show list of all available button configurations in the system.

| Name | Alias | Description |
|------|-------|-------------|
| JGS_LCD2_1 | | |
| JGS_LCD3_1 | | |
| JGS_MDP2_1 | | |
| JGS_MEC1_1 | | |
| JGS_MEC3_MEC2_1 | | |

Preview

Help   Advanced ▼                                                                    Close
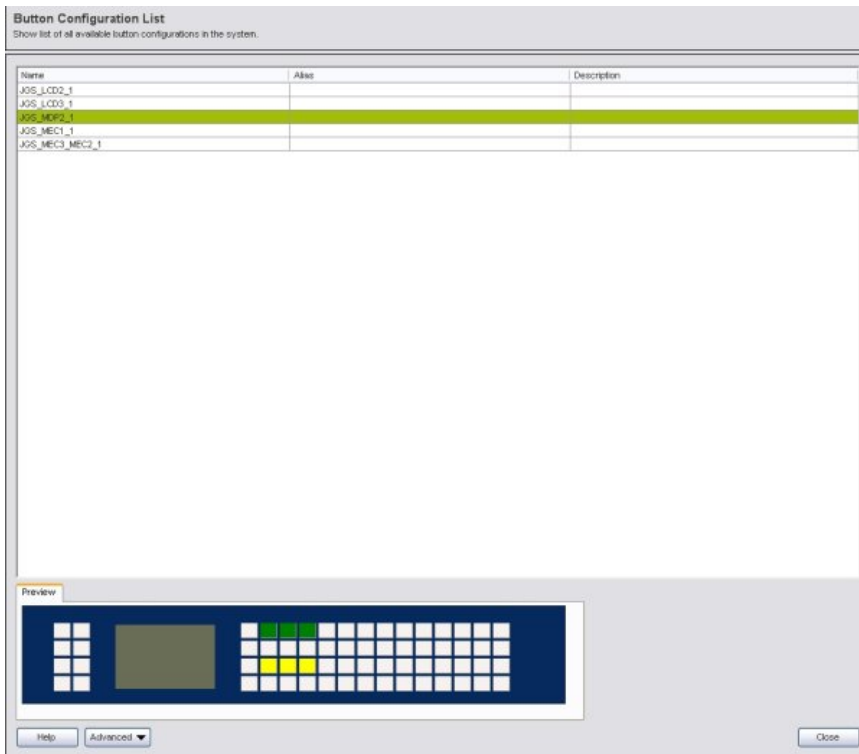
## Device List

The Device List show all devices in the system with IP settings, firmware version, MAC address and more.

The Device List can be opened by clicking the IP Settings button on the toolbar.

**Select filter:**

| | |
|---|---|
| Current system only: | Shows only devices in the current system |
| All systems: | Shows devices in all systems grouped by system name |
| Device types: | Shows devices grouped by device types, independent of systems |

**Column descriptions:**

| | |
|---|---|
| Hostname: | Hostname for the device (editable) |
| IP address: | IP address for the device (editable) |
| Subnet mask: | Subnet mask for the device (editable) |
| Default gateway: | Default gateway for the device (editable) |
| Firmware: | Firmware version for the device |
| Mac: | MAC address for the device |
| Info: | Shows detailed device info |

To change the IP settings doubleclick on a cell and enter the new value. IP settings are validated after every change and if there is something wrong a red line appears.

It will not be possible to commit IP setting changes if there are errors. Correct the errors before applying changes.
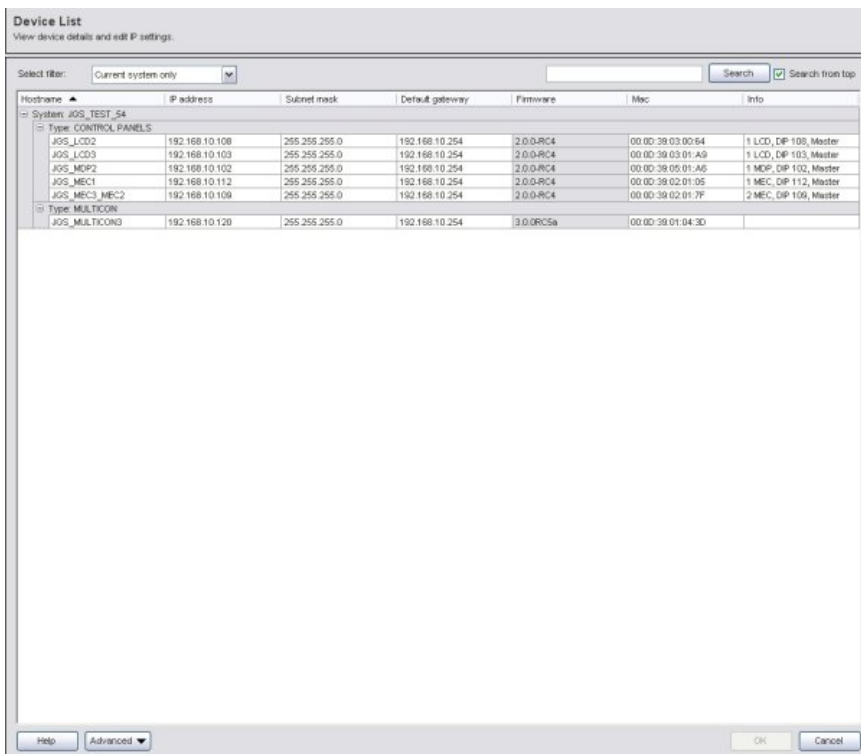
## Available Parameter List

All available parameters are shown here. Controllable parameters are shown in the parameter list on the toolbar.
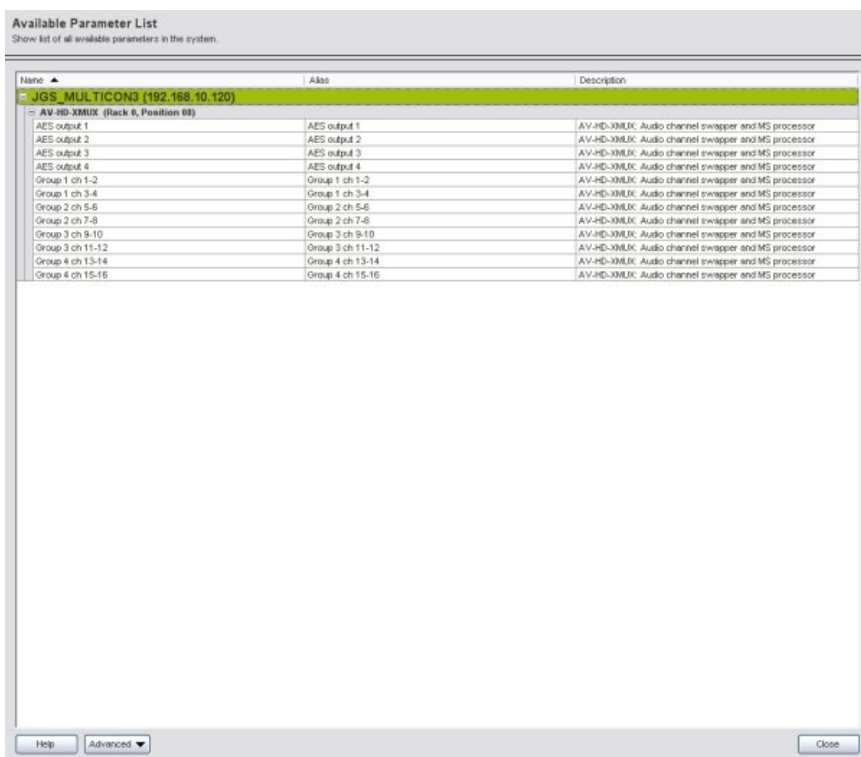


## Serial Connections

Serial connections are used when connecting devices with serial interface (RS232/422) to Multicons.

**Connection 1 & 2**
There are no main and backup connections, both connections are equal. Multicons connected to this subsystem will find out which controller that shall have control and which will be the backup.

Use the dropdown menus to select connections 1 & 2. Serial ports already configured will be hidden from the dropdown lists.

**Serial connections**

Which serial port(s) is the subsystem "NCB Compact" connected to?

Connection 1:  JGS_FL_FRAME1 - Serial port 1

Connection 2:  No connection

Help          OK          Cancel
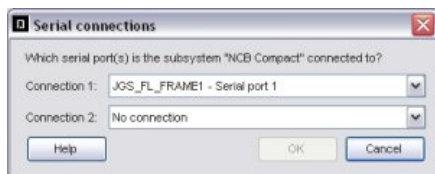
# Tcp/Ip Connections

Tcp/Ip connections is used when connecting IP devices to Multicon, such as Control Panels, Sublime routers, Syscons/EthCons or 3rd party automation systems.

The system is autoconfiguring. When a device is added, the Tcp/Ip connections will be created automatically. The user can edit the connections in this dialog, but in most cases that wouldn't be necessary.

**Configured connections**
Shows the configured connections for this device.
Modular IP panels support 3 redundant connections. If the first controller on the list becomes unavailable, the panel will try to connect to the next on the list.
Sublime panels support only 1 connection.

**Available connections**
Shows all available Multicons that this device can be connected to.
If the system contains more Multicons than the device can be connected to, the user can modify which Multicons to connect to by using the add/remove buttons.

**Actions**
Add:                        Adds the selected controller to the configured list
Remove:                  Removes the selected controller from the configured list

**Tcp/Ip Connections**

Configured connections are shown here. Use drag and drop to modify the connections and their priority.

Configured connections:

| | Connected to: |
|---|---|
| 1 | JGS_MULTICON3 (192.168.10.120) |
| 2 | |
| 3 | |

Add        Remove

Available connections:

| Name | Info |
|---|---|
| | |

Help          OK          Cancel

# Firmware Upgrade

Devices can be upgraded via IP or serial connection.

**IP devices**
To upgrade IP devices (Modular IP panels and controllers), see How to upgrade firmware.

**Serial devices**
To upgrade serial devices (Sublime), see How to upgrade firmware on serial devices.

**Actions**
Get status:              Refreshes upgrade status for all devices
Reboot:                  Reboots selected devices
Upgrade:                 Opens firmware file selection dialog and starts upgrading selected devices
Close:                   Closes this dialog

**Column descriptions**
Upgrade:                 Check this to mark a device for upgrade
Fimrware version:        Current firmware version on the device
Hostname:                Hostname of the device
IP address:              IP address of the device
Subnet mask:             Subnet mask of the device
Default gateway:         Default gateway of the device
MAC address:             MAC address of the device
Status:                  Status field showing the progress of the upgrade

**Advanced functions:**
Upgrade on serial:       Opens the dialog for upgrading serial devices
Print:                   Prints out the table
Print preview:           Shows a preview of the table

**Force upgrade:**
Inactive (unchecked):  Upgrades only components that have been changed
Active (checked):  Upgrades all components, even unchanged components (uses longer time)

**Firmware Upgrade**
Select IP devices for firmware upgrade. Upgrade of Sublime devices must be performed using the serial port.

| Upgrade | Firmware version | Hostname ▲ | IP address | Subnet mask | Default gateway | MAC address | Status |
|---|---|---|---|---|---|---|---|
| Supported devices | | | | | | | |
| Control panels | | | | | | | |
| ☐ | 2.0.0-RC4 | CAA_LCD_01 | 192.168.10.65 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:03:02:33 | Idle |
| ☐ | 2.0.0-RC4 | CAA_LCD_04 | 192.168.10.68 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:03:01:AA | Idle |
| ☐ | 2.0.0-RC4 | CAA_MDP_03 | 192.168.10.67 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:05:00:9B | Idle |
| ☐ | 2.0.0-RC4 | CAA_MEC_02 | 192.168.10.66 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:02:02:D1 | Idle |
| ☐ | 2.0.0-RC4 | CAA_MEC_05 | 192.168.10.69 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:02:05:20 | Idle |
| ☐ | 2.0.0-RC4 | CAA_MEC_06 | 192.168.10.70 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:02:05:2E | Idle |
| ☐ | 2.0.0-RC4 | JGS_LCD2 | 192.168.10.108 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:03:00:64 | Idle |
| ☐ | 2.0.0-RC4 | JGS_LCD3 | 192.168.10.103 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:03:01:A9 | Idle |
| ☐ | 2.0.0-RC4 | JGS_MDP2 | 192.168.10.102 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:05:01:A6 | Idle |
| ☐ | 2.0.0-RC4 | JGS_MEC1 | 192.168.10.112 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:02:01:05 | Idle |
| ☐ | 2.0.0-RC4 | JGS_MEC2 | 192.168.10.110 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:02:01:85 | Idle |
| ☐ | 2.0.0-RC4 | JGS_MEC3_MEC2 | 192.168.10.109 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:02:01:7F | Idle |
| ☐ | 2.0.0-RC4 | R3_MEC_1 | 192.168.10.35 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:02:01:06 | Idle |
| ☐ | 2.0.0-RC4 | SW_LCD2 | 192.168.10.62 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:03:01:A8 | Idle |
| ☐ | 2.0.0-RC4 | SW_MEC1 | 192.168.10.51 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:02:01:87 | Idle |
| ☐ | 2.0.0-RC4 | SW_MEC4 | 192.168.10.61 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:02:01:9B | Idle |
| ☐ | 2.0.0-RC3 | aaa_lcd_master | 192.168.10.154 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:03:00:12 | Idle |
| ☐ | 2.0.0-RC3 | aaa_mec_slave | 192.168.10.155 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:02:00:92 | Idle |
| Multicon | | | | | | | |
| ☐ | 3.0.0RC4a-svn1678... | | 192.168.0.10 | 255.255.255.0 | 192.168.0.254 | 00:0D:39:06:00:68 | Idle |
| ☐ | 3.0.0RC5 | CAA_ETHCON | 192.168.10.64 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:06:00:83 | Idle |
| ☐ | 3.0.0RC5 | CAA_MULTICON_1 | 192.168.10.80 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:01:08:DB | Idle |
| ☐ | 3.0.0RC5a | CAA_MULTICON_2 | 192.168.10.78 | 255.255.240.0 | 192.168.10.254 | 00:0D:39:FF:00:61 | Idle |
| ☐ | 3.0.0RC5a | JGS_MULTICON3 | 192.168.10.120 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:01:04:3D | Idle |
| ☐ | 3.0.0RC5a | JGS_MULTICON4 | 192.168.10.33 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:01:00:A8 | Idle |
| ☐ | 3.0.0RC5 | PN_MC1 | 192.168.10.183 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:FF:00:31 | Upgrade done - reboot to complete... |
| ☐ | 3.0.0RC4a | R2_AD128_B | 192.168.10.24 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:01:00:7E | Upgrade done - reboot to complete... |
| ☐ | 3.0.0RC4a | R2_AA128_B | 192.168.10.26 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:01:00:65 | Upgrade done - reboot to complete... |
| ☐ | 3.0.0RC5 | R256_MC_A | 192.168.10.181 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:01:08:E2 | Upgrade done - reboot to complete... |
| ☐ | 3.0.0RC5 | R256_MC_B | 192.168.10.180 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:01:08:1F | Upgrade done - reboot to complete... |
| ☐ | 3.0.0RC5a | R3_VD128_A | 192.168.10.31 | 255.255.240.0 | 192.168.10.254 | 00:0D:39:01:01:37 | Upgrade in progress (87%) |
| ☐ | 3.0.0RC5-svn16851-... | R3_VD128_B | 192.168.10.32 | 255.255.240.0 | 192.168.10.254 | 00:0D:39:FF:00:2C | Idle |
| ☐ | 3.0.0RC5 | SW_MULTICON1 | 192.168.10.63 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:01:03:2A | Upgrade done - reboot to complete... |
| ☐ | 3.0.0RC5ftpd | aaa_upgrade | 192.168.10.153 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:02:07:40 | Idle |
| Sublime devices | | | | | | | |
| | 2.1.4 | CAA_SL_8SCP | 192.168.10.74 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:0A:0A:60 | Upgrade on serial port (RS232) |
| | 2.1.4 | CAA_SL_AES3232_CP | 192.168.10.73 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:00:00:00 | Upgrade on serial port (RS232) |
| | 2.1.5pre2 | CAA_SL_D32P_REV2 | 192.168.10.76 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:FE:01:14 | Upgrade on serial port (RS232) |
| | 1.0.5 | CAA_SL_SD1602_CP_... | 192.168.10.72 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:FE:01:14 | Upgrade on serial port (RS232) |
| | 2.1.4 | CAA_SL_SD1616N_REV2 | 192.168.10.77 | 255.255.240.0 | 192.168.10.254 | 00:0D:39:0A:0B:C4 | Upgrade on serial port (RS232) |
| | 2.1.4 | JGS_SL-16S-CP-GPI_re... | 192.168.10.114 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:0A:10:7D | Upgrade on serial port (RS232) |
| | 1.0.6 | JGS_SL-16XY-CP | 192.168.10.105 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:FF:00:1F | Upgrade on serial port (RS232) |
| | 2.1.4 | JGS_SL-8S-CP_rev2 | 192.168.10.113 | 255.255.255.0 | 192.168.10.254 | 00:0D:39:0A:0A:5B | Upgrade on serial port (RS232) |

Help   Advanced ▼   ☐ Force upgrade   Get status   Reboot   Upgrade   Close

# Firmware Upgrade - Select files

When upgrading firmware, the user has to select the correct firmware files.

**Supported devices**
When upgrading supported devices (Multicons or Control panels), use the browse buttons to locate the files (*.bin).
Press OK to start upgrading with selected files.

**Unsupported devices**
When upgrading SYSCONs/ETHCONs/GYDAs, please refer to the Upgrade guide before proceeding. Please contact Nevion support if you don't posess the manual.

**Select firmware file(s)**

Supported devices | Unsupported devices

**Multicons**
Select the firmware file to upgrade to:
C:\temp\multicon_pxa255-3.3.1.bin   [...]

**Control panels**
Select the firmware file to upgrade to:
C:\temp\cp_firmware-3.1.2.bin   [...]
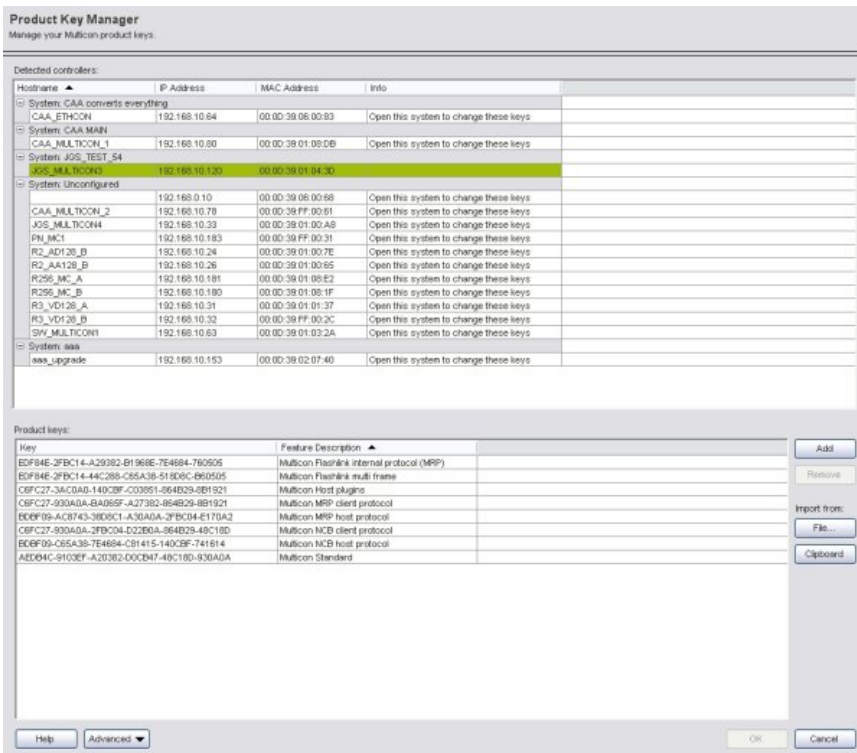
Help   OK   Cancel

# Product Key Manager

The Product Key Manager handles product keys for the Multicon. Each Multicon must have keys to enable certain features.

Product Keys will be provided when Multicon or features are purchased.

Select a Multicon, add or remove keys in the list below.



## Salvo snapshot

Salvo snapshot retreives the status from selected levels, virtual routers or parameter groups, and automatically adds the current settings into the salvo.

**Actions:**
- Select which levels, virtual routers and parameter groups to get status from
- Click OK to insert it into the salvo

**Advanced functions:**
Print:                          Prints out the table
Print preview:                  Shows a preview of the table
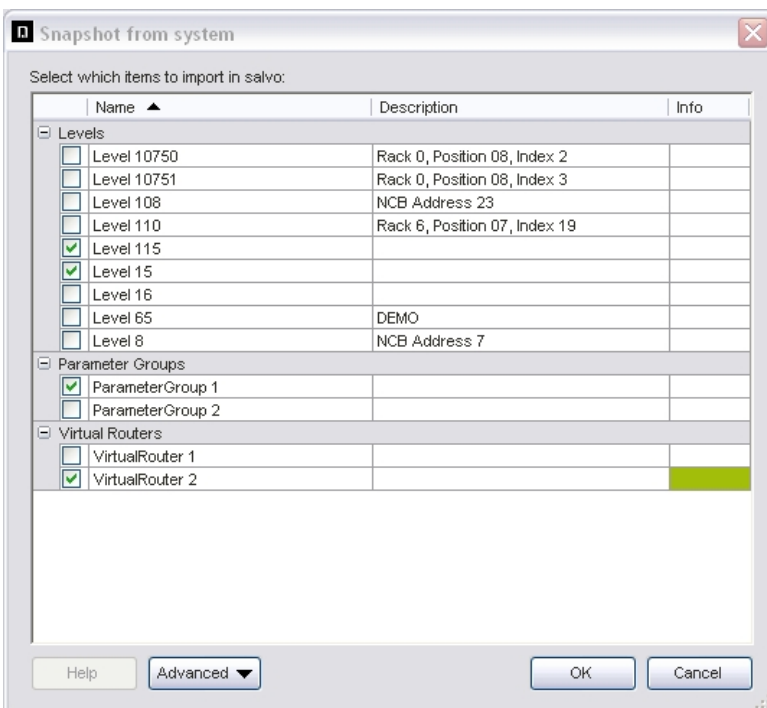


## Configuration Converter

Converts the result of the "Upgrader" tool used when migrating from System Configurator 3.x.x projects to Nevion Configurator 4.x.x projects.

**1. File selection**
Select the file that the "Upgrader" tool created.

**2. Object selection**
Select which objects (levels, salvos, virtual routers, button configurations etc.) that shall be imported into the current system.

**3. Import**
Click the import button to import the selected objects.

**Configuration Converter**
Converts old projects into Multicon compatible system configurations.

**1. File selection**
Select a converted configuration file created by Nevion Upgrader to be used for the current system.

[                                                                          ] [ Browse... ]

**2. Object selection**
Specify which objects to import from file.

| Import | Name | Description |
|--------|------|-------------|
|        |      |             |

[ Select all ] [ Deselect all ]

**3. Import**
Click the button to import the selected objects.
[ Import ]

[ Help ] [ Advanced ▼ ]                                                       [ Close ]

## Create System

Creates a new system.

Enter a system name (required) and a description (optional).

**Open / Create system**

**Systems**
A system consists of different types of devices that are all interconnected.

Also, the system acts as a container for configurations of levels, virtual router mappings, parameter groups, salvos etc.

[ Open system ] [ Create system ]

Enter the system's name and description (optional).

Make sure to use a unique name for the system. Two systems cannot have the same name.

**System**
System name:
[                                        ]

System description:
[                                        ]

[ Help ] [ Advanced ▼ ]                                                [ OK ] [ Cancel ]

## Open System

Opens an existing system detected live or from a backup file.

All systems detected are shown in the list and all backup files are listed together with the correct system.

**How to restore a configuration backup**
- Start Nevion Configurator and open the online system
- Wait until the system is fully opened and the refresh process is done
- Select file->open and select the backup file (*.xml) to restore
- Press OK to load the backup
- Press Upload on toolbar to apply the changes caused by the backup
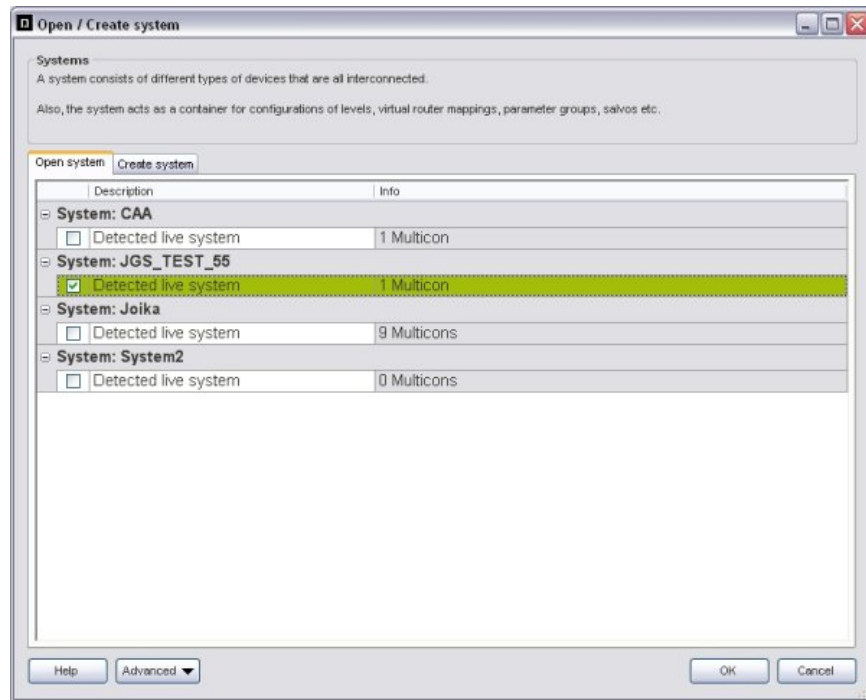


# System Overview

System overview shows all devices in a configured system.

**Control panels**
Modular IP panels or Sublime panels connected with ethernet will be shown in the system.
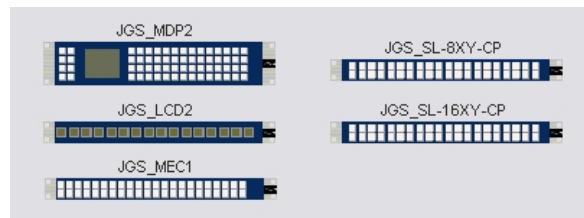


**Main controllers**
A Multicon in a N-Box, Flashlink frame or Modular frame will be shown different.
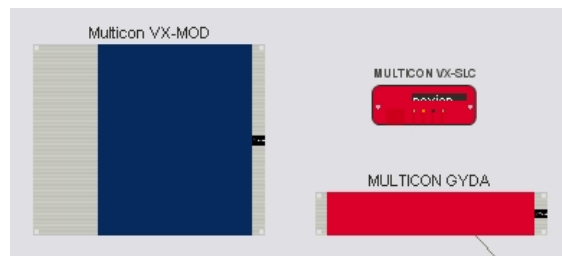


Multicon VX-MOD:      Single or redundant controllers in a Modular router frame
Multicon VX-SLC:      Single controller in a N-Box
Multicon GYDA:        Single controller in a Flashlink frame, controlling 1-8 frames

**Subsystems**
A subsystem represent small parts of the main system. For example a Sublime router, automation system or a PC. The box represent the interface on Multicon, not the external device.
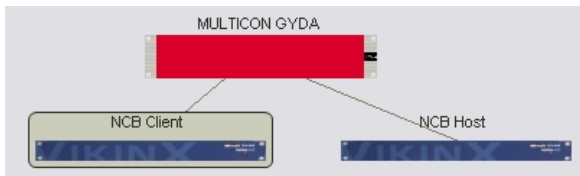
| | |
|---|---|
| Client subsystem: | Client subsystem means device that Multicon controls, like routers. |
| Host subsystem: | Host subsystem means device that controls Multicon, like 3rd party control or monitoring system. |

Client subsystems are drawn with a grey box and frame, while host systems are drawn without any frames.

**Lines**

| | |
|---|---|
| Solid lines: | Solid lines represent physical connections (serial connections RS232/422/485) |
| Dashed lines: | Dashed lines represent logical connections, which devices are connected to which |

**Configuration**
Every device in this system overview is a part of the main system.
Add a device:

- Drag the device from the Unconfigured list
- Drag a protocol from Host/Client list to add a interface
- Right click and select Add device manually

Remove device:

- Right click and select Remove from system

**Upload changes**
Every time a configuration is changed, the configurator alerts the user with the Upload button. It's smart to do several configuration changes before uploading, to save time.



# System Explorer

The system explorer is used to navigate in the system. It contains devices, configuration, protocols and unconfigured devices.
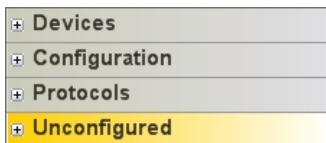


| | |
|---|---|
| Devices: | All configured IP devices in the system |
| Configuration: | Configuration in the system, levels, virtual rotuers, salvos and parameters |
| Protocols: | Available protocols for interfacing external devices |
| Unconfigured: | Unconfigured and available IP devices, ready to be added into the system |

**Devices**
All configured IP devices are located in this section.



**Configuration**
Levels, parameter groups, virtual routers and salvo groups are located in this section.

**Protocols**

Available protocols in the system are located in this section. Remember to verify that the controller have the correct product keys before trying to add a protocol.



**Unconfigured**

All IP devices not configured in any other system is shown here. These devices can be added into the current system. To add a device, drag the device into the system overview area and drop it.



## Device Viewer

Shows a device and it's properties.

**Control panel**

All devices with control panel (Modular IP panels and Sublime IP panels) will have a tab with button configuration list.

New:                    Adds a new button configuration, opens the Control Panel Configuration Editor
Modify:                 Opens the selected button configuration for modification
Delete:                 Deletes the selected button configuration

User can create multiple button configurations and easily select which one to use. Just check the configuration and press upload.
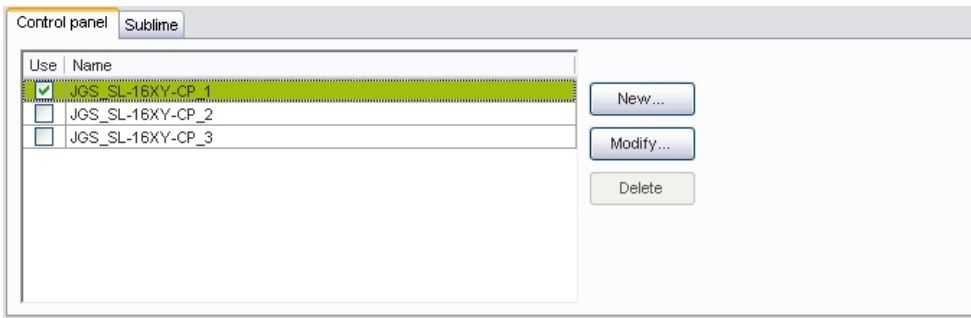
**Sublime**
All Sublime devices will have this tab with protocol settings and sync
Protocol settings:
MRP (TCP/IP):                    Enable control on IP with standard MRP protocol
NCB (RS232):                     Enable control on serial port and MIDI
NCB (RS232) without Ext:Enable control on serial port and MDI without Sublime extensions in NCB protocol.
                                 Will act like an compact device in the NCB loop
Leitch PassThru (RS232): Enable Leitch protocol on serial port
Leitch PassThru (TCP/IP):Enable Leitch protocol on TCP/IP
Thomson Native
(TCP/IP):                        Enable Thomson native protocol on TCP/IP

Note! In order to enable 3rd party protocols on Sublime, the Sublime must be configured with the corresponding product keys. Keys for 3rd party protocols can be purchased from Nevion.

Sync settings for Sublime is configured in the Sync settings dialog.
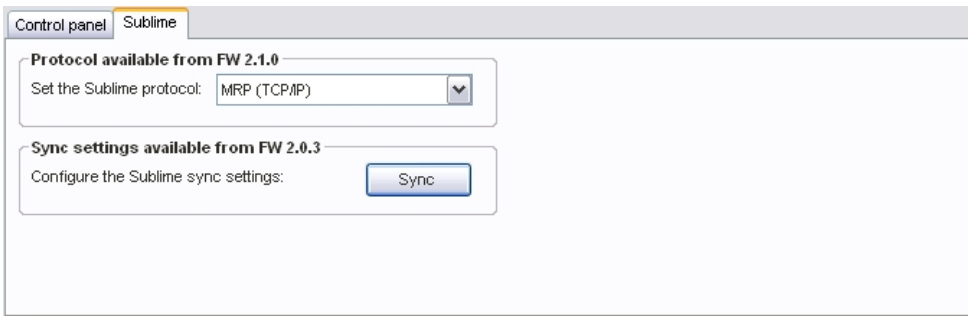


**Ported data router**
Sublime data routers (SL-D32P) have port settings here.
Port:                            Port number on the physical device
Configuration:                   Fixed - port is in fixed mode (Status set to Controller or Device)
                                 Dynamic - port is in dynamic mode, control determines port state
Status:                          Controller - Port is connected to a controlling unit
                                 Device - Port is connected to a controlled device
Please refer to the Sublime user manual for more information about ported router and port setup.
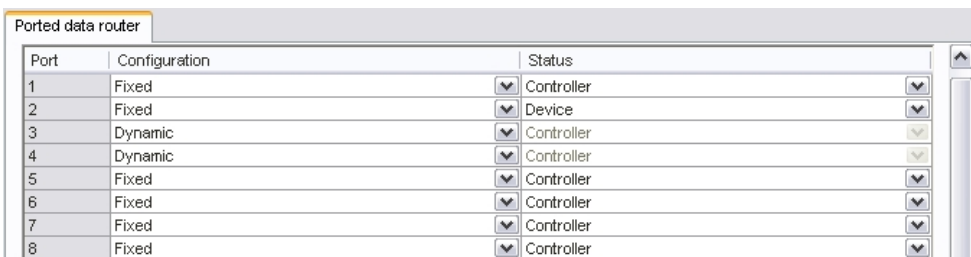


**Device information**
Shows information about the device. IP settings, firmware/hardware revisions, MAC address and more.

**Preview**
Devices with button configuration will show a preview of the configuration, showing only colors on the buttons.

**JGS_LCD3 (192.168.10.103)**
Assign button configurations to the configurable device.

Device information
| | | | |
|---|---|---|---|
| Hostname: | JGS_LCD3 | Firmware version: | 2.0.0-RC4 |
| IP address: | 192.168.10.103 | Hardware revision: | 255 |
| Subnet mask: | 255.255.255.0 | DIP setting: | 103 |
| Default gateway: | 192.168.10.254 | MAC address: | 00:0D:39:03:01:A9 |

Control panel

Control panel

| Use | Name |
|---|---|
| ☐ | JGS_LCD2_1 |
| ☑ | JGS_LCD3_1 |

New
Edit
Delete

Help    Advanced ▼                                    Close

## Web Viewer

Shows the web view for the current device.

**Web Viewer**
View the device's web page.

Select IP address: JGS_MULTICON3 (192.168.10.120)

nevion    SYSTEM    ALARMS    LOG    CONFIG    MANUALS    ABOUT

0
1
2
3
4
5
6
7

0  ADC  ADC              DA    CYBA    PSU  PSU

### SDI Changeover

MAIN
1

OUT

AUTO

2
STANDBY

| Control mode | Automatic |
|---|---|
| Switched to | Standby, latched |
| Timer | 0 |

Reset

| Signal input 1 | Present |
|---|---|
| Signal input 2 | Present |
| Reclocker | In lock |
| Bitrate | 270 |
| 5V supply | 4.93 V |
| 3.3V supply | 3.26 V |

No alarms

ⓘ 🔧 📖

Help    Advanced ▼                                    Close

## Add Device Manually

Adding devices manually can be done when working offline or pre-configuring the system.

**Multicon**
Adding a Multicon manually requires IP info, MAC address and housing information.
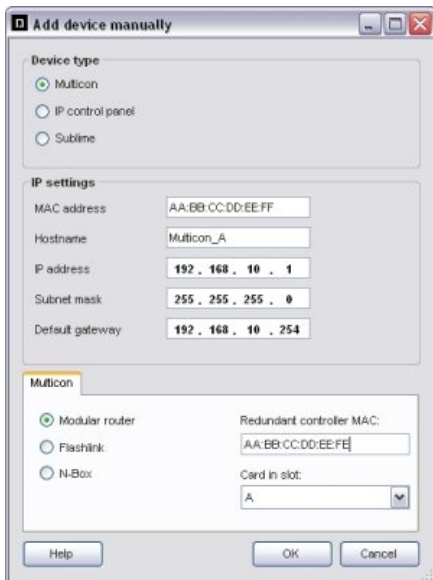
**IP Panel**
Adding a IP panel manually requires IP info, MAC address and module information.
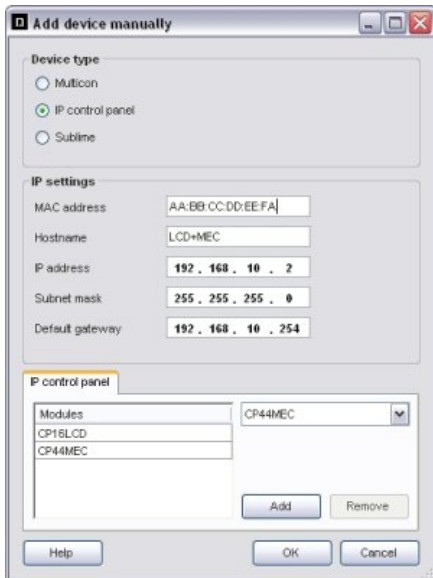


**Sublime**
Adding a Sublime device manually requires IP info, MAC address and module information.
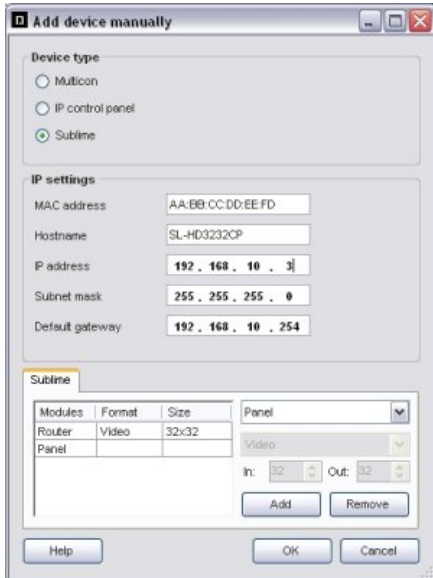


# Sublime sync settings

The Sublime sync settings dialog can be opened when viewing the Sublime device information.

**Sync settings**
Detected sync reference:    Use detected sync signal on sync input as reference
Signal format:              Switch according to pre-defined signal format
Mixed signal formats:       Switch in a way that it handles mixed signal formats
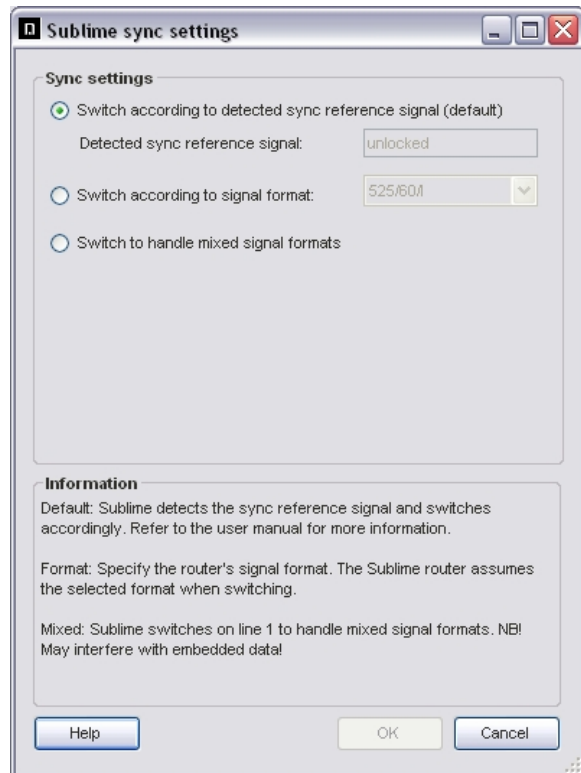


# Sublime router settings

The Sublime router settings dialog can be opened when viewing the Sublime device information.

**Input settings**
EQ bypassed:                Configure the input EQ (Enabled / Bypassed)
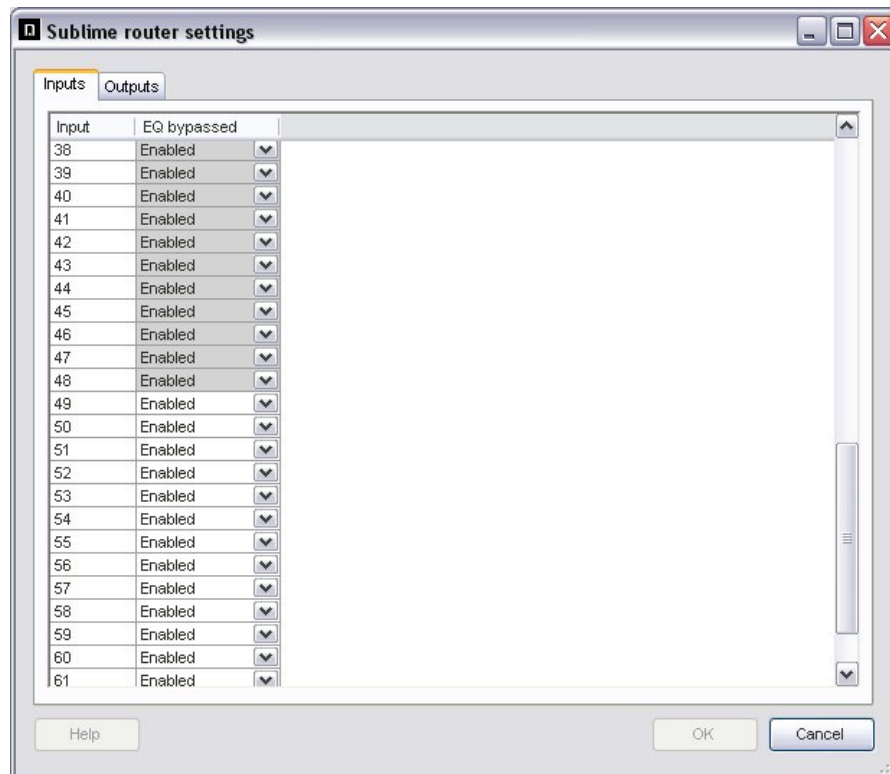


**Output settings:**
Reclocker:                  Configure the output reclocker (Enabled / Bypassed)

Auto bypass:           Set autobypass mode (On / Off)
ASI mode:              Set ASI mode on output (ASI / 177 MBit/s)
Slew rate mode:        Set slew rate mode on output (Auto / Fixed)
Slew rate:             Set slew rate when fixed (HD / SD)
Laser enabled:         Enable or disable laser when available (ON / OFF)
Laser alarm:           Indicates alarm on laser (OK / FAIL)
Laser temp alarm:      Indicates high temperature on laser (OK / FAIL)
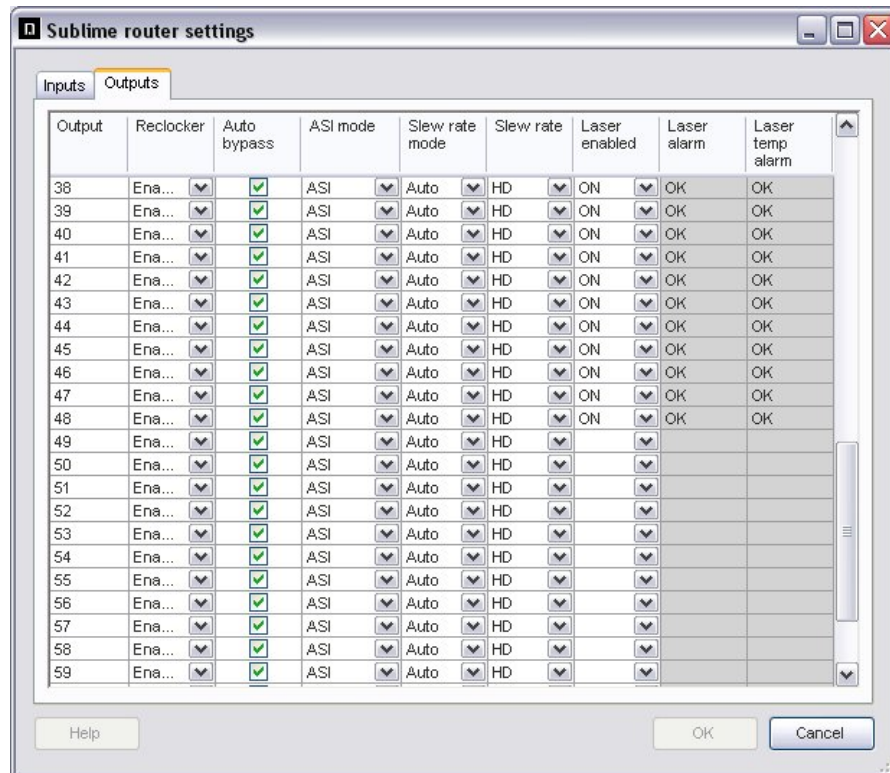


## Inter-communication Protocol

The inter-communication protocol defines how the Multicon communicate with each other. Multicon firmware earlier than 3.5.0 doesn't support this. Using this setting should be assisted by Nevion Support.
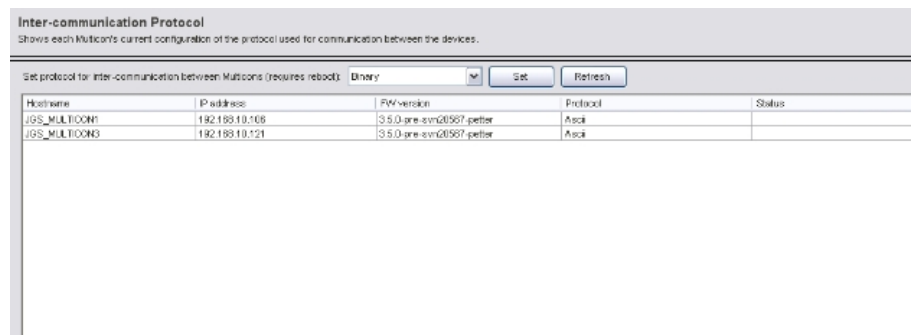


Select the protocol (Binary / ASCII) and press the "Set" button to apply new inter-communication protocol on all Multicons.

## Troubleshooter

The troubleshooter is showing all issues detected on the active device.

Alarms:                     Issue is critical and system operation is affected
Warnings:       Issue is important, but system operation is not affected
Notes:                      Issue is trivial, information to the operators only
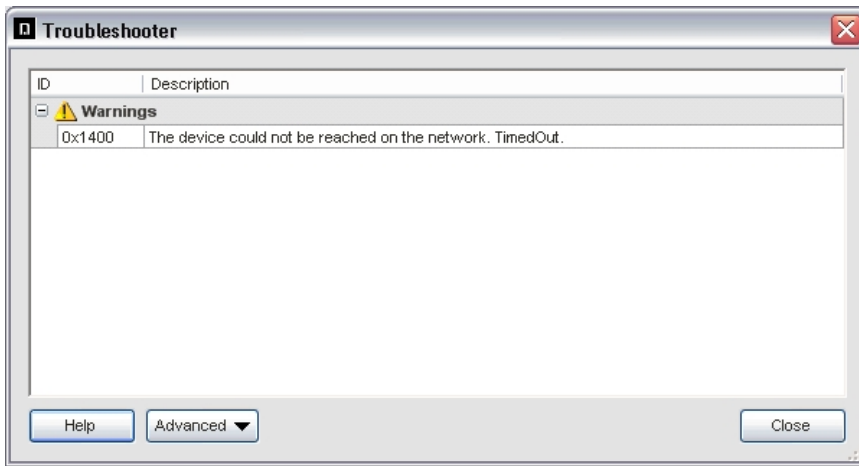
## Banned crosspoints

Shows a list of illegal crosspoints. All crosspoints in this list are not possible to connect. If a panel or 3rd party device tries to connect a combination in this list, the previous state will be returned.
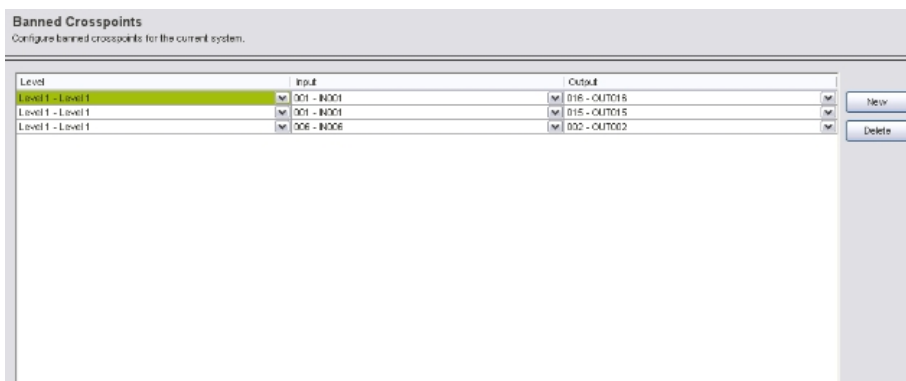


Press "New" to add an illegal crosspoint, and select Level, Input and Output.
Press "Delete" to remove an illegal crosspoint

## Folder structure

Here is a description of the folder structure of Nevion Configurator:

**Folders**

| | |
|---|---|
| Bin: | Contains binary and executable files. |
| Config: | Contains XML config files for panel configurations. |
| Firmware: | Contains firmware for all Nevion products. |
| Fonts: | Contains font files used on CP-16LCD panels. |
| IntelHex: | Folder used in communicating with Sublime devices. |
| Panels: | Folder used in communicating with Modular IP devices. |
| Plugins: | Contains protocol and plugin files used when configuring systems. |
| Support: | Default folder for support packages. |
| Systems: | Default folder for system backup files. |
| Temp: | Folder used for temporarily data. |
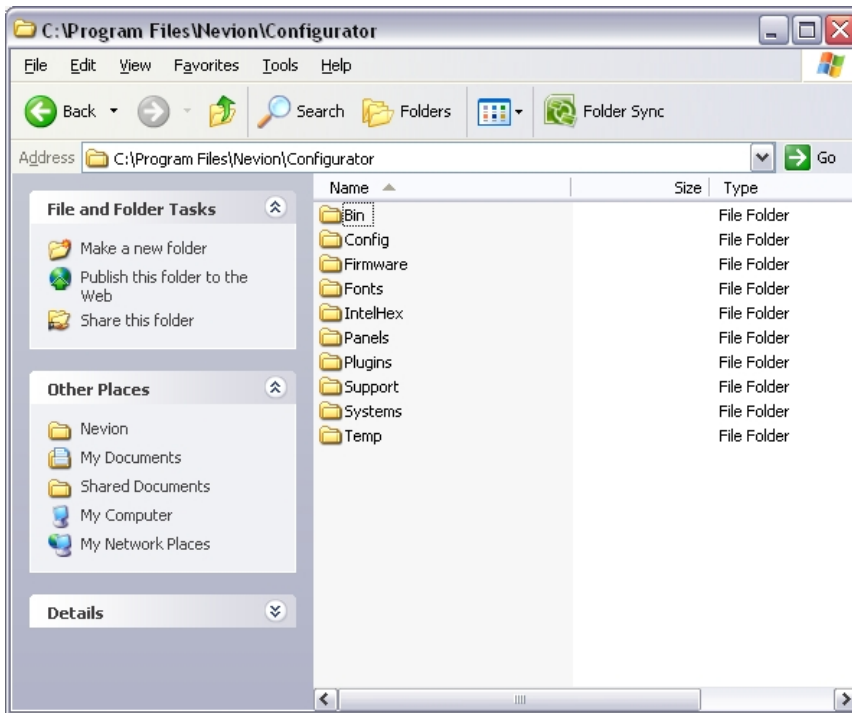
## Options

The options available in the Nevion Configurator are presented here.

**Network Settings**
Select the network interface to use for network connections. All devices to be configured must be reachable from this network interface. If you use different networks, make sure that the gateways have access across the networks.

**Configuration Path**
Enter the location of your configuration data. All configuration data is saved to this location and can be used as backup.

**System Upload**
When a user opens a new dialog or list in the Nevion Configurator, the system checks for changes. If this option is checked a dialog will appear asking the user if the changes shall be uploaded.
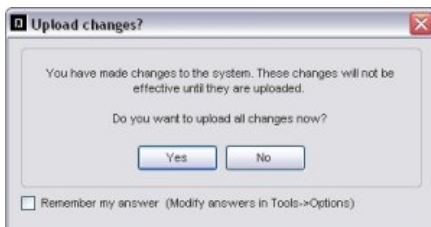


**Connections**
Options for drawing lines in the System Overview form.
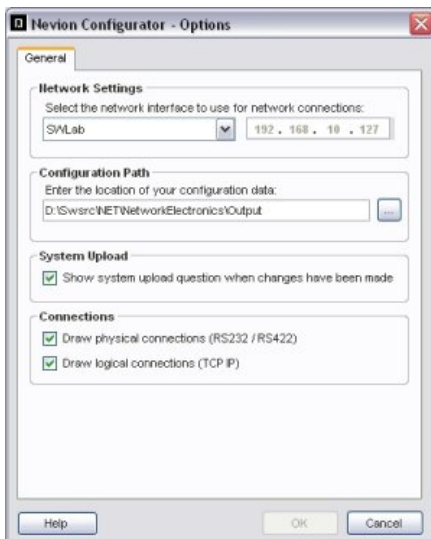


## Properties: IP Device

Shows the general IP settings and modules for an IP device (Modular IP panel, Sublime panel/router).
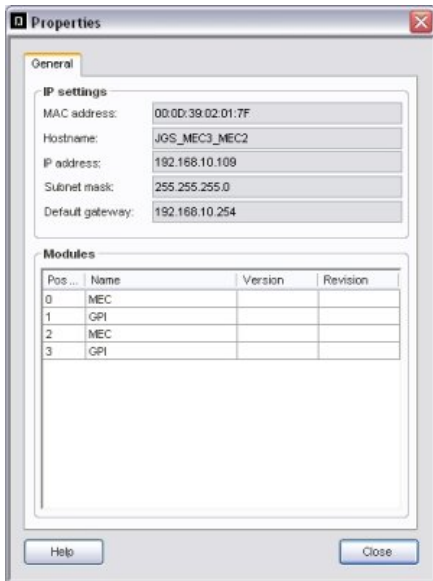


## Properties: Modules

Shows all modules detected on the device(s).
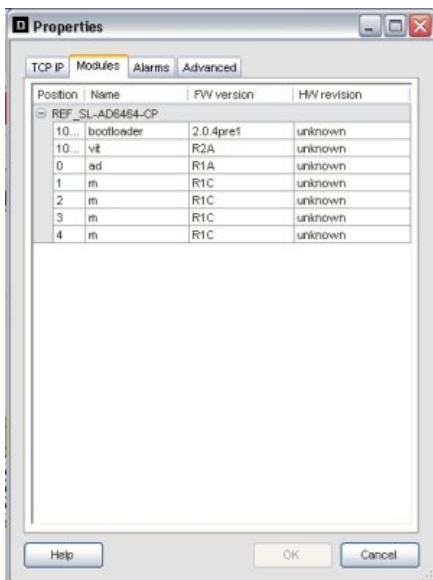


## Properties: Alarms

Shows all alarms detected on the device(s).

## Properties: Serial

Serial connection properties can be changed to fit the device.

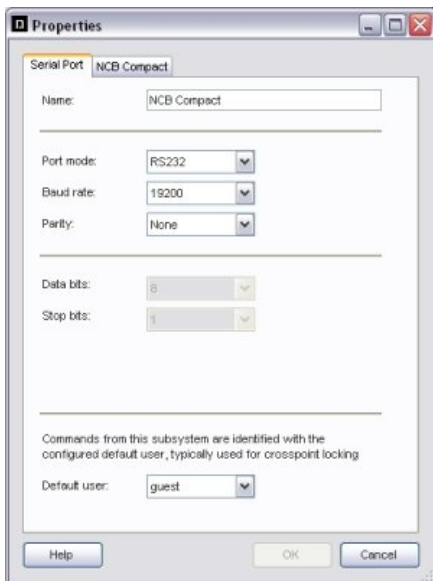**Name**
Sets the name of the device.

**Serial settings**
Port mode: RS232 / RS422
Baud rate: 9600 - 115200
Parity: None, Even, Odd

**Default user**
All activity from this device will be tagged with this user id.



## Properties: IP Connection

Shows the properties for the TCP/IP client connection.

**IP Port**
Set the port that the device communicates on.

**Clients**
All clients available for this device should be listed here.
Use the "Verify" option to test the connection.

**Default user**
All activity from this device will be tagged with this user id.

## Properties: Flashlink

Shows the properties for the Flashlink frame.

**Name**
Sets the name of the frame.

**Devices**
Shows all controllers in the frame

**Default user**
All activity from this device will be tagged with this user id.

**How to communicate with Flashlink cards:**
Sets communication port for Multicon GYDA when controlling Flashlink cards.
- Internal (Used when Multicon GYDA is in a Flashlink frame)
- External (Used when Multicon GYDA is in a N-BOX)



## Properties: Modular

Shows the properties for the Flashlink frame.

**Name**
Sets the name of the frame.

**Devices**
Shows all controllers in the Modular router.

**Default user**
All activity from this device will be tagged with this user id.

## Properties: N-Box

Shows the properties for the Flashlink frame.

**Name**
Sets the name of the frame.

**Devices**
Shows all controllers in the N-Box.

**Default user**
All activity from this device will be tagged with this user id.

## Properties: Plugin

Shows the properties for the plugin.

The properties is custom made by the developer of the plugin.
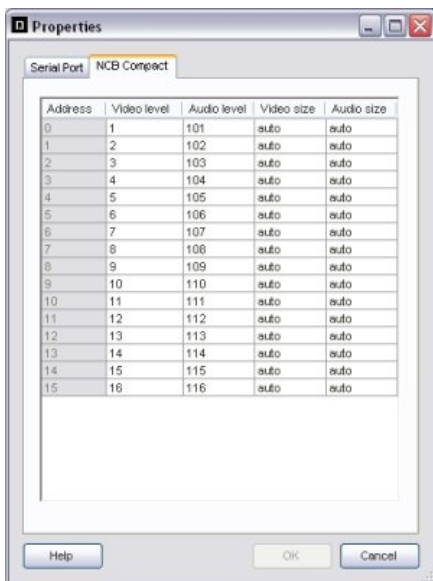
## Properties: NCB Compact/Sublime

Shows the properties of the NCB Compact/Sublime protocol.

**Level mapping**
Set the system level for addresses 0-15 for both audio and video.

**Level size**
Set the level size for adresses 0-15 for both audio and video. Fixed size is used when router connected has unexpected size.



## Properties: MRP

Shows properties for the MRP protocol.

**Lock handling**
Enabled (checked):          Lock/Protect is handled by the client Multicon connects to

Disabled (unchecked):     Lock/Protect is handled by Multicon

## Properties: Pro-Bel

Shows properties for the Pro-Bel protocol.

Set format, level and size according to Pro-Bel device.

## Properties: Sync

Shows the sync settings for the Modular router. Please refer to Modular router manuals for more details.

**General**
Modular routers support two sync domains. Each sync domain have one physical input connection, named sync input 1 or sync input 2. These connectors are located on the back of the router. It has also one loopthrough per sync input.

In each sync domain two different sync setups can be defined. The only constraint in a sync domain, is the framerate. Both sync setups must have the same framerate, but can have different number of videolines, field etc.

In total that gives the router four sync setups that can be individually configured on each input.

**Sync domain 1/2**
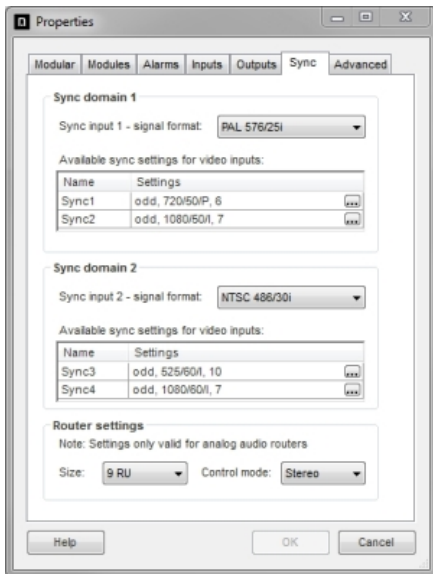Sync input 1/2 - signal format:
Specify the sync input signal format (black and burst).

Available sync settings for video inputs:
A list of two sync setups in the sync domain. Click the elipsis button to edit the settings.

**Additional setup**
Open the inputs tab and configure the sync settings per input.

# Properties: Sync settings

Configure the sync settings for video inputs.

**Name:**
Identifies the sync settings

**Sync settings mode:**
⦂  Switch according to standard video format
Choose format, field and line for a specified video format. Used when video inputs on the router have the same signal format.

⦂  Switch according to specified delay
Choose delay in microseconds (us) or nanoseconds (ns). Used when video inputs on the router have different signal format.

⦂  Switch according to sync input format (only Sublime 128 with Multicon)
The router will choose sync format according to what's detected on the sync input connector. Only valid for Sublime 128 routers with internal Multicon.

**Auto SD/HD settings**
Only used if output sync settings are set to Auto SD/HD.
Checking one of these boxes will set this as automatic sync setup if SD or HD is detected.
Only one sync setup can be set as auto for SD and one for HD.
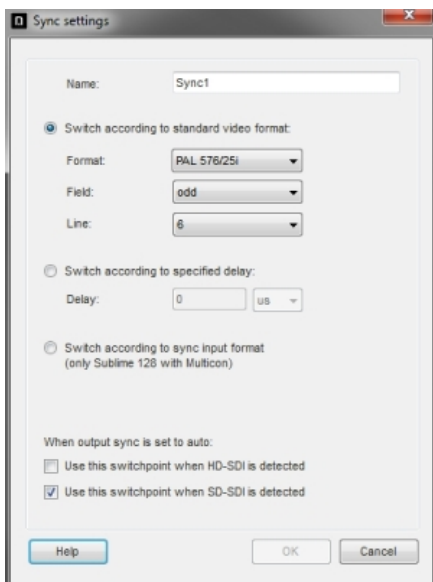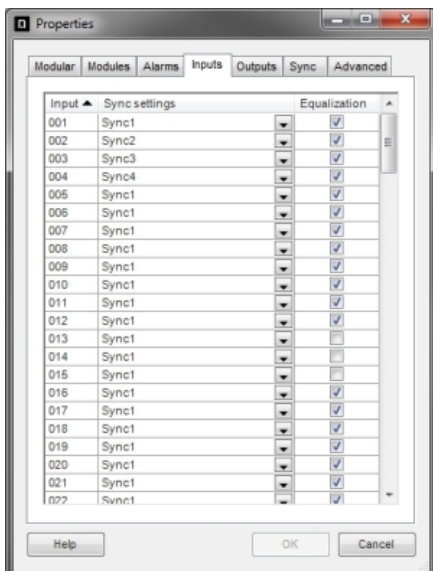


# Properties: Inputs

Configure inputs on the Modular router.

**Sync Settings**
Choose the sync settings per input. Sync settings are configured on the Sync tab.

**Equalization**
Set cable equalization on each input on or off.

## Properties: Outputs

Configure outputs on the Modular router.

**Reclocker**
Set the reclocker on each output to on or off.

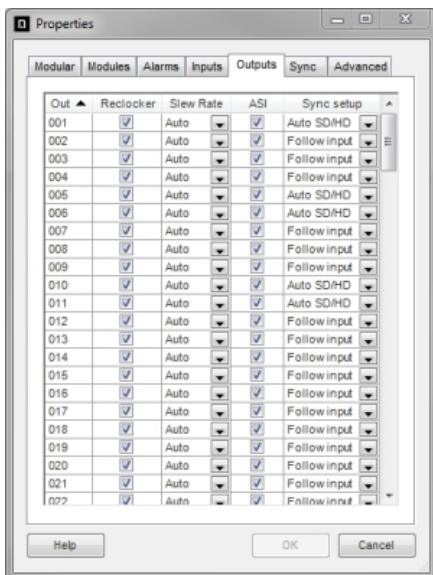**Slewrate**
Set the slewrate on each output to HD or SD.

**ASI**
Set the ASI handling on each output to on or off.

**Sync setup**
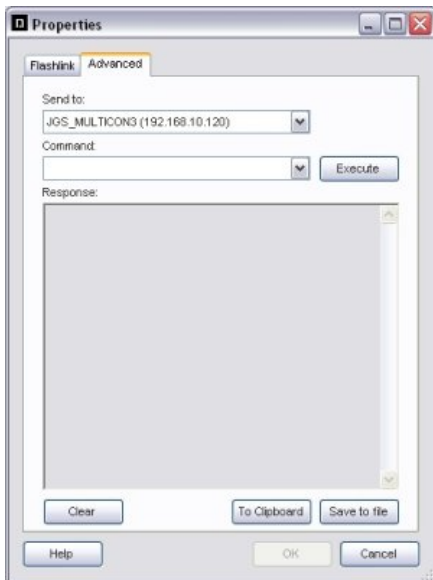Choose how the output sync shall be used.
- Follow input - sync settings follow input settings
- Auto SD/HD - automatically detect SD/HD and sync according to sync setup



## Properties: Advanced

Use advanced tools to communicate with the controller.

## Properties: User

Modify the User properties.

**Name**
Set the name of the user.

**Alias**
Optional alias of the user.

**Description**
Optional description of the user.

**User type**
Shows if the user is system generated or user configured.

**ID**
The id of the user, unique within a system.

**Password**
Set the password for this user

**User groups**
Select which user groups this user belongs to.



## Properties: User Group

Modify the User Group properties.

**Name**
Set the name of the user group.

**Alias**
Optional alias of the user group.

**Description**
Optional description of the user group.

**Group type**
Shows if the user group is system generated or user configured.

**Control Panels - Access level**
Set an access level used when locking/protecting items (outputs, salvos, parameters) in the system. Only the same user or users with higher access level can unlock/unprotect an item. For example: All panels in a system is assigned to a specific user. If all this users are in the same user group, only the panel that locked one output, can unlock. But if one panel is assigned to an admin user in the admin user group, with higher access level, this panel can unlock all outputs in the system.
Values: 0-255

**Nevion Configurator - Configuration level**
Set the appropate configuration level for users in this group.
None:           Not set by user
Guest:          Only viewing access in the Configurator
Oper:           Access to modify mnemonics and assign button configurations
Eng:            Oper access, plus add/modify/remove partitions, salvos, virtual routers, parameter groups
Admin:          Eng access, plus add/modify/remove usergroups and users

**GYDA Web page - Operational level**
Set the appropate operational level for users in this group.
None:           Not set by user
Guest:          Viewing access, info pages on all cards
Oper:           Viewing access, info pages on all cards
Eng:            Viewing and configuration access, info and config pages on all cards
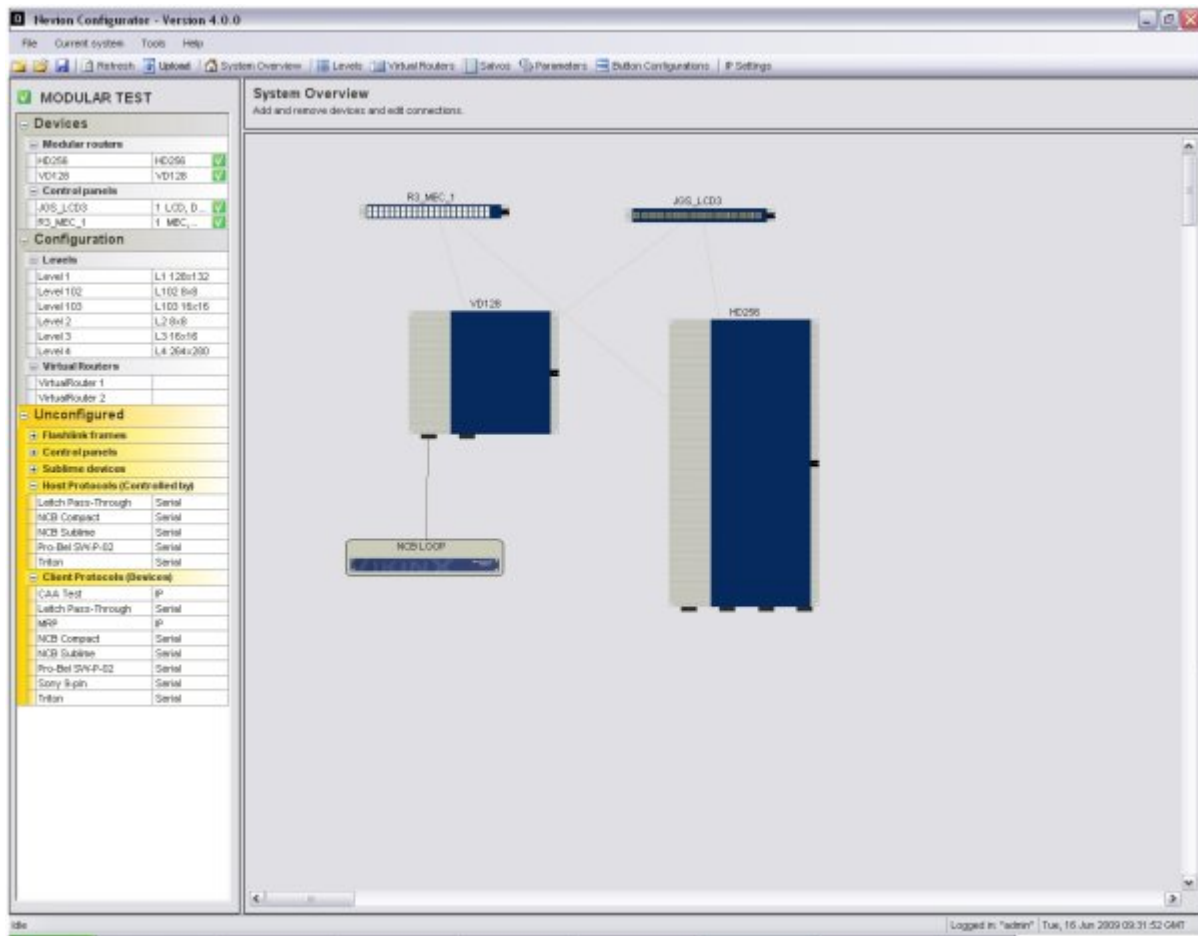Admin:          Eng access, plus access config pages

**SNMP Control - Control level**
Set the appropate control level for users in this group. Not implemented!

# Example: Modular Router and Control Panels

This example describes how to control several Modular Routers with control panels.



Adding two or more Modular Routers in a system will automatically enable the communication between them to share status and control. The control panels can be configured to each of them and will be able to control everything in the system.

# Example: Flashlink and Control Panels
# Example: Virtual Router and Multiformat devices