

***CONFIGURATION MANUAL FOR MI
RANGE***

EDITED: 22/09/00

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1 Viewing Options for Configuration Tool

1.1 Status Bar

For help, press F1. For context menu, right click tree item.

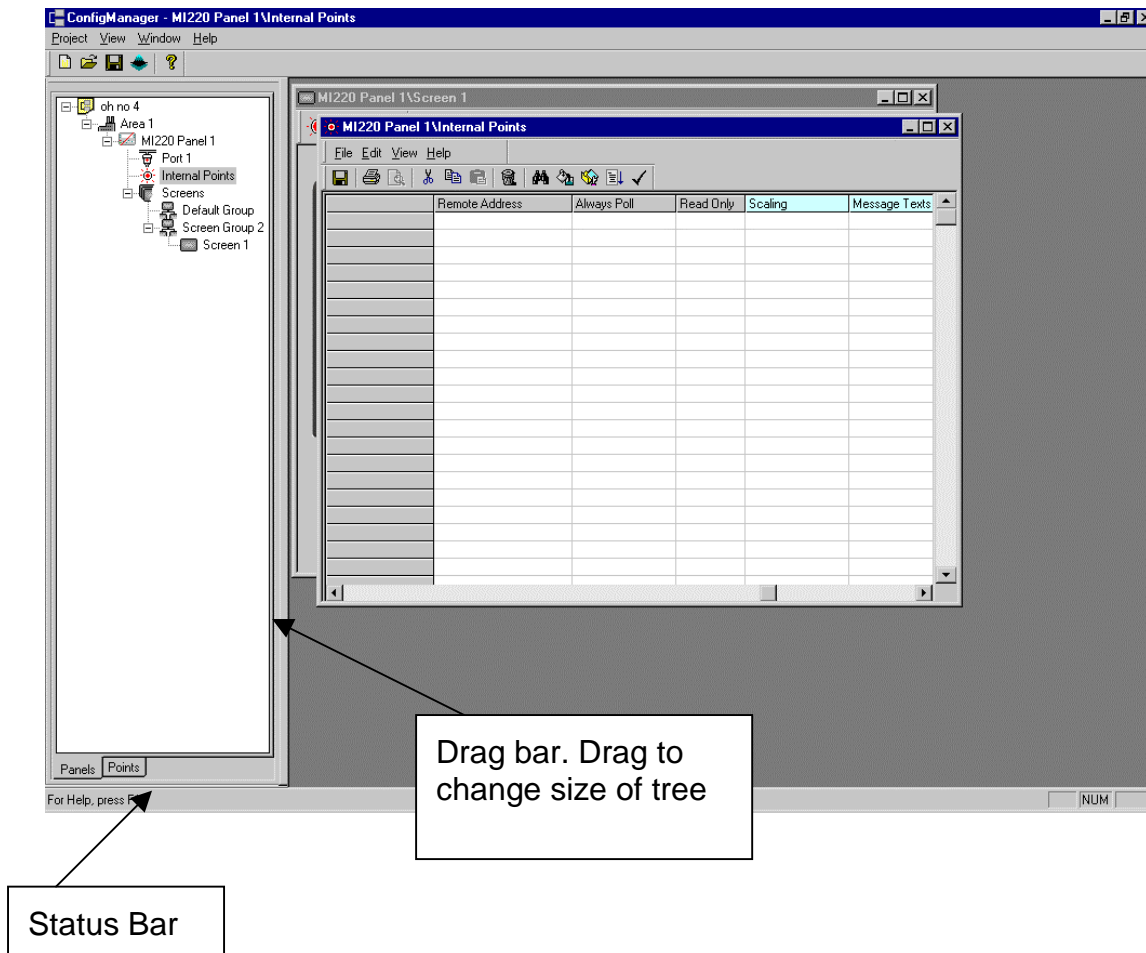
The status bar gives the user hints related to what they are currently doing.

1.2 Help System

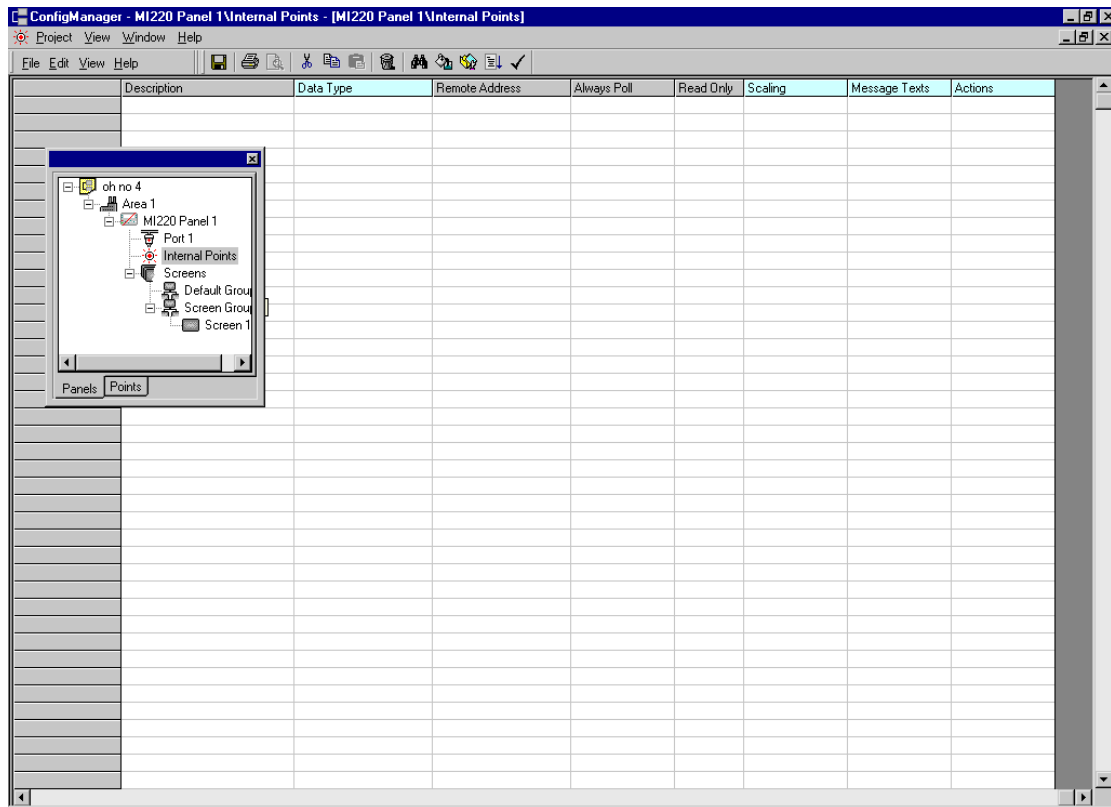
Help is context based, so pressing F1 will bring up help related to where the user is in the software. e.g. Press F1 whilst a tree item is selected and you will get help related to that item. For help on address formats press F1 with the cursor active in the box where you type the address.

1.3 Main Window Layout issues

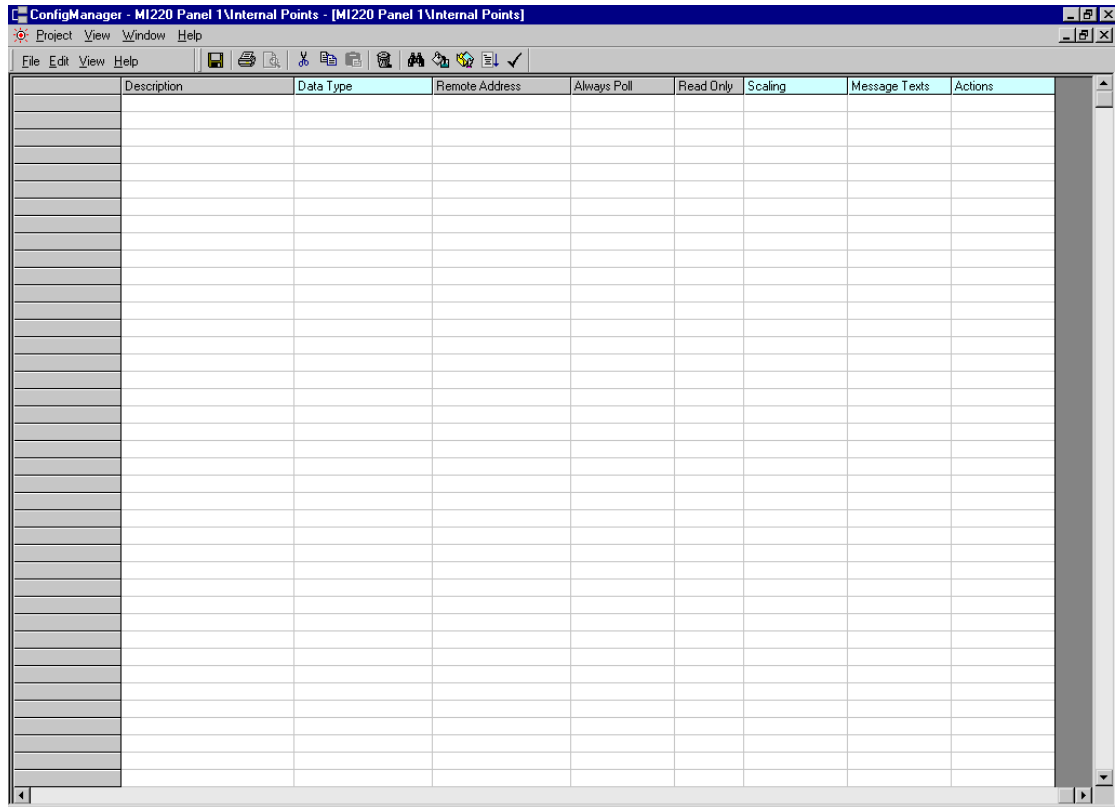
1.3.1 The default layout



1.3.2 Maximum window view with a floating tree, to enable full view of work



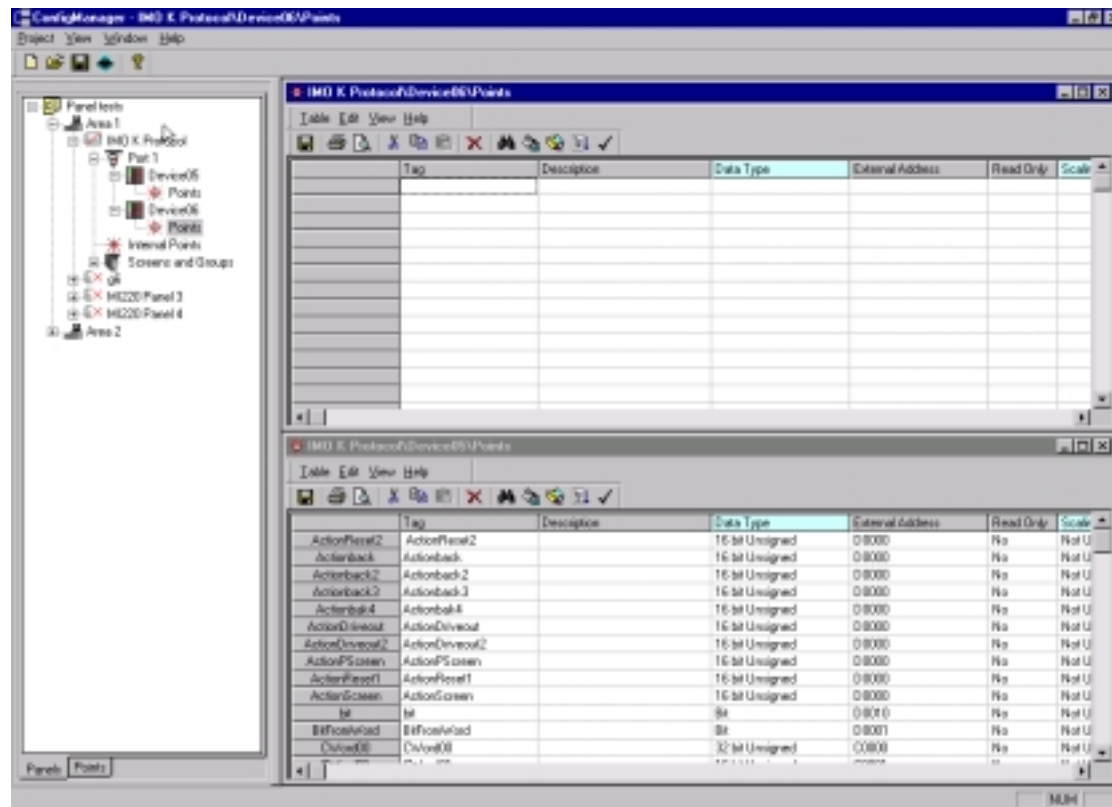
1.3.3 Maximum work area no other tools



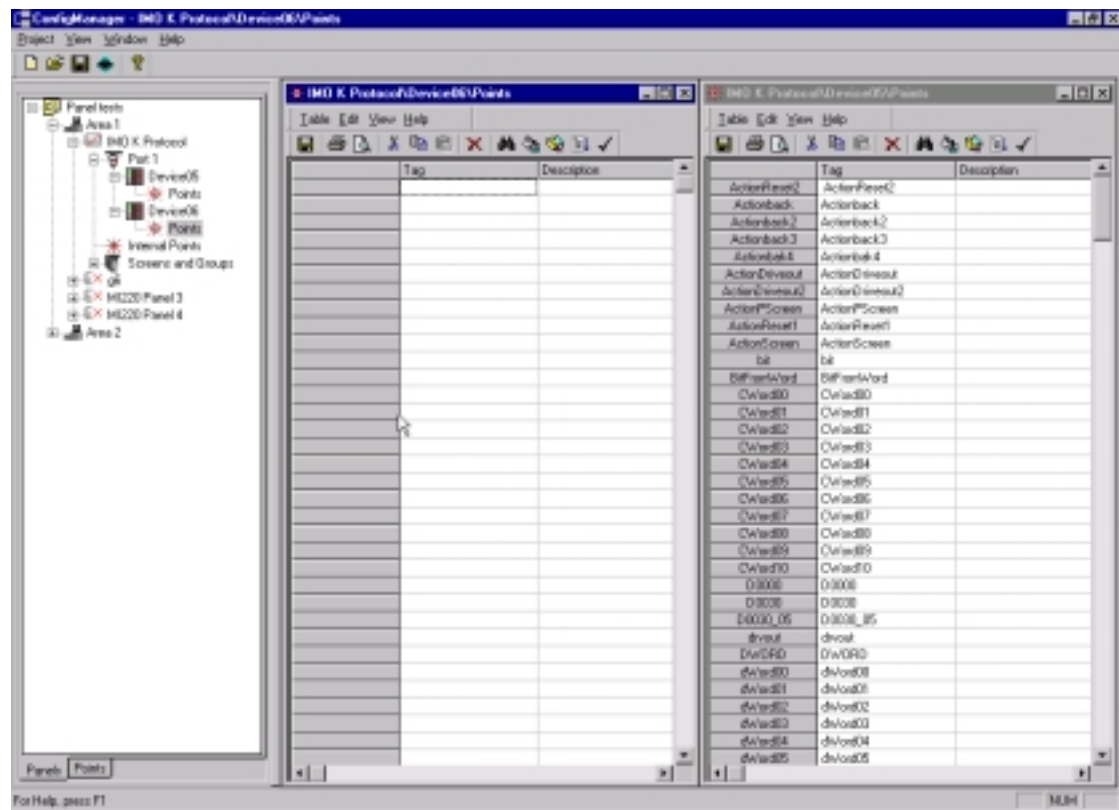
The screenshot shows a software window titled "ConfigManager - MI220 Panel 1\Internal Points - [MI220 Panel 1\Internal Points]". The window has a menu bar with "Project", "View", "Window", and "Help". Below the menu bar is a toolbar with various icons for file operations and configuration. The main area of the window is a table with the following columns: Description, Data Type, Remote Address, Always Poll, Read Only, Scaling, Message Texts, and Actions. The table is currently empty, with only the header row visible. The table has a vertical scrollbar on the right side, indicating that there are many rows in the table.

Description	Data Type	Remote Address	Always Poll	Read Only	Scaling	Message Texts	Actions
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1.3.4 Windows tiled horizontally, to allow multiple editing

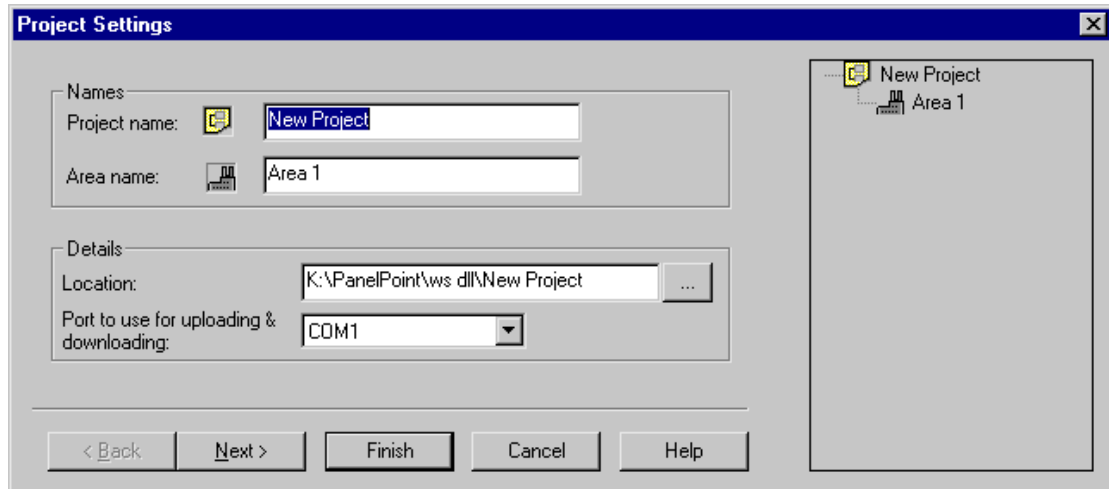


1.3.5 Windows vertically tiled



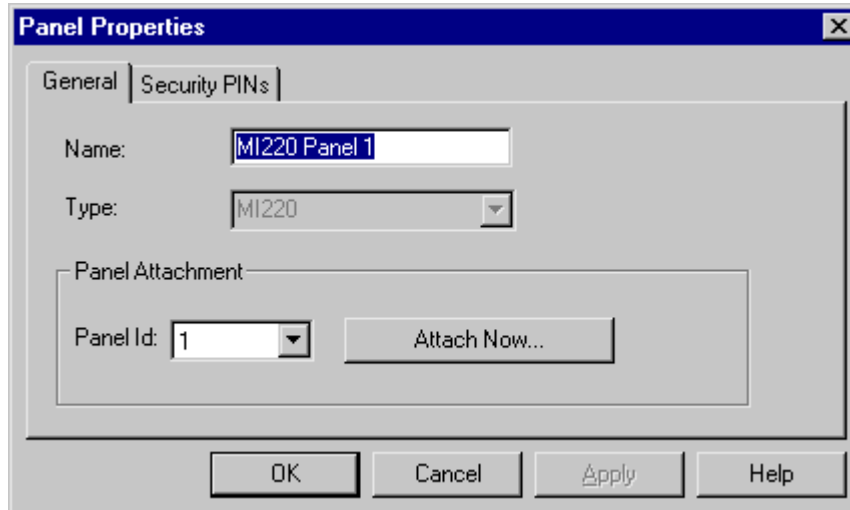
2 Types of property sheet

2.1 WizardSheets



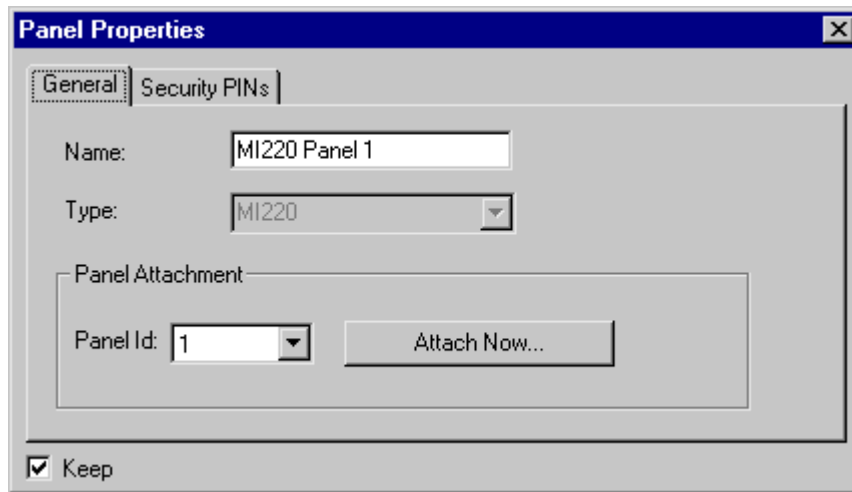
Used for creating items for the first time in a step by step way. 'Next' moves to the next step, 'Back' moves back to the previous step, 'Cancel' aborts, 'Help' calls context help and 'Finish' applies the steps taken to produce something.

2.2 Standard Sheet



Used when the user needs to change properties before doing anything else. 'OK' applies changes and closes sheet, 'Cancel' and 'x' close without changes, 'Apply' applies changes without closing and 'Help' calls context help.

2.3 Pinable Sheet



Used to enable rapid editing of many items with similar properties.

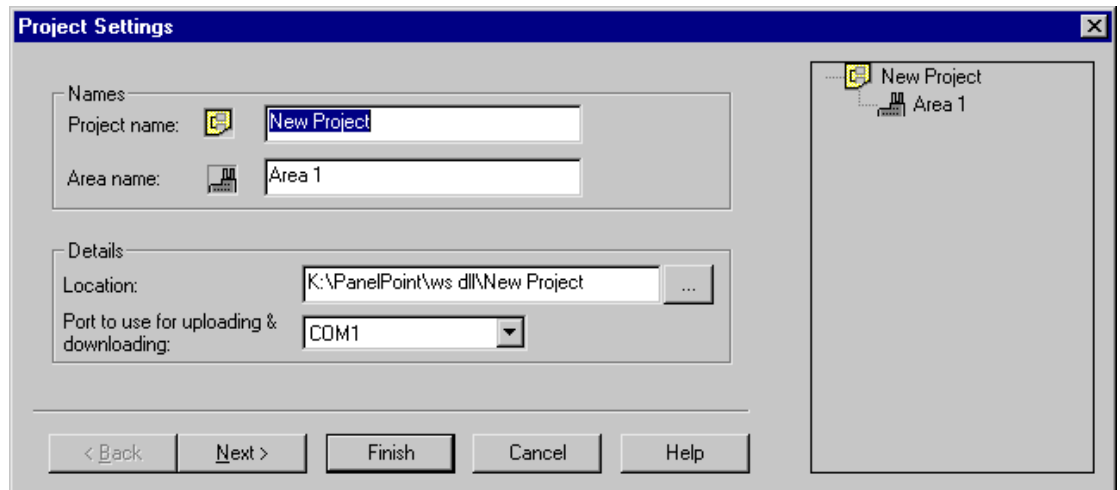
Pressing 'F1' key calls context help.

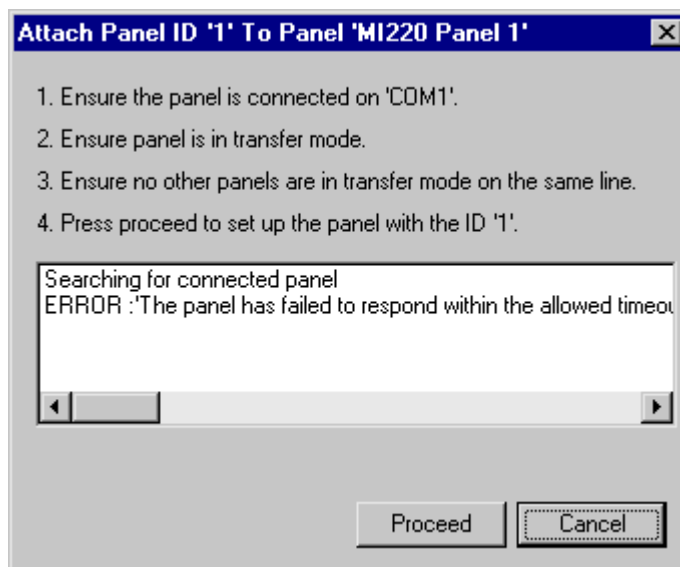
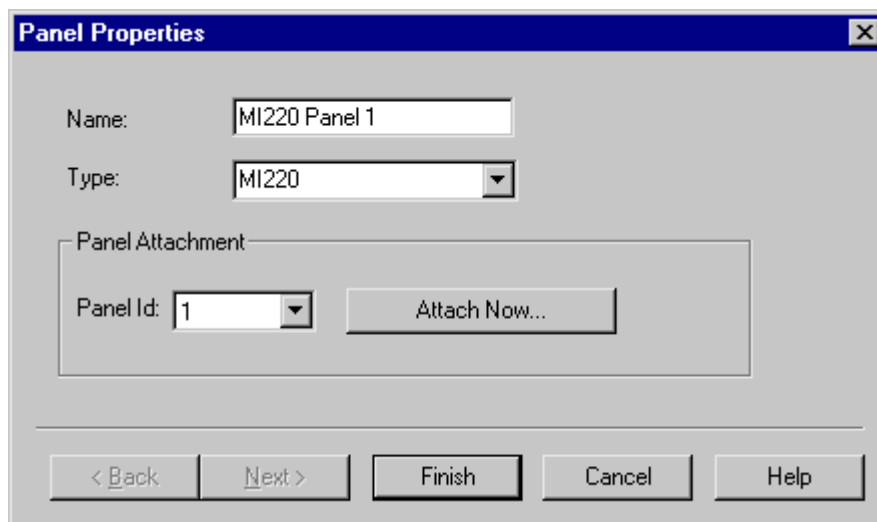
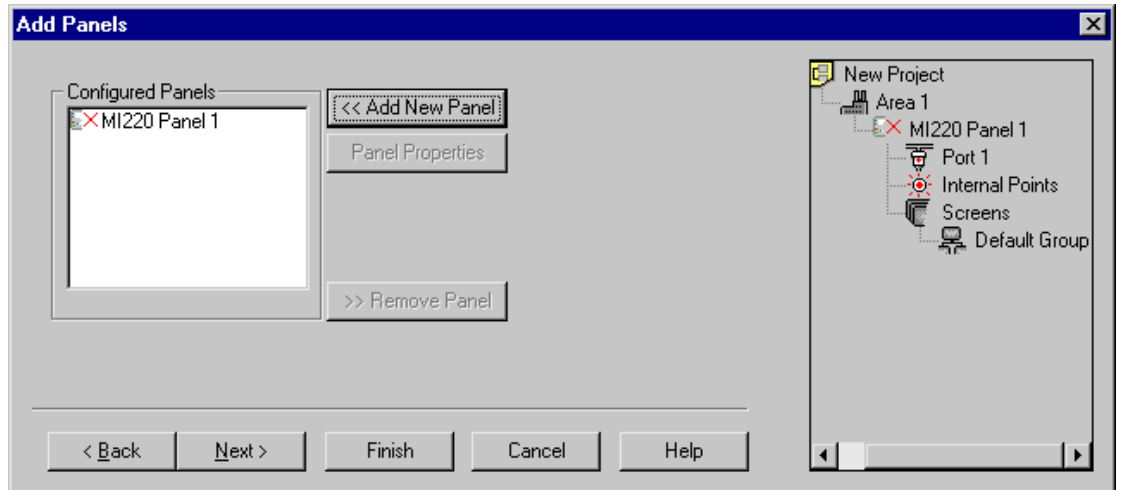
Without Keep ticked 'x', pressing the 'Enter' key, or clicking on anything outside the sheet, closes and applies changes. Pressing the 'Esc' key closes without applying changes.

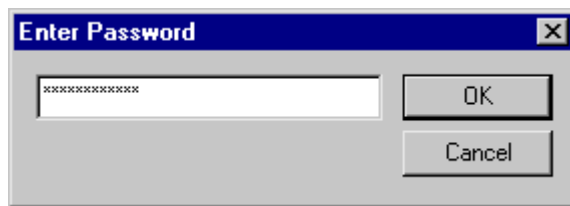
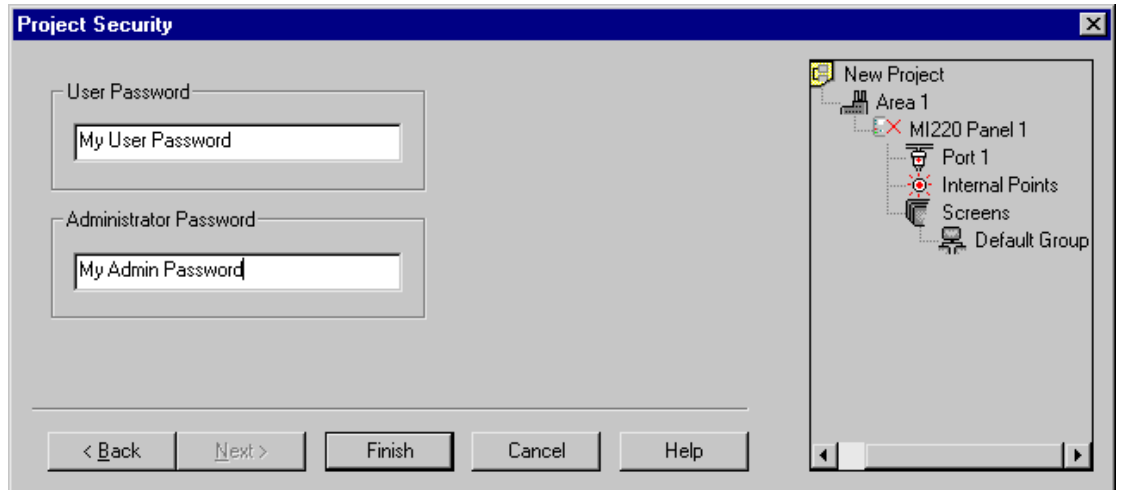
With Keep ticked 'x' closes applying changes. Pressing the 'Esc' key closes without applying changes. Pressing the 'Enter' key just applies changes. Clicking on anything else applies the changes and updates the sheet with the properties of the thing you clicked on.

3 Creating a project.

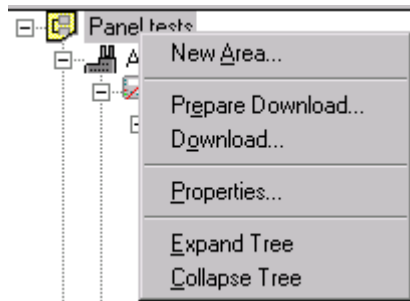
- The project is the file in which all the configuration for a number of panels is kept. This File has the extension '.WCM'. Double clicking this in explorer will open it in the configuration manager. Alternatively it can be opened from within the manager from 'open' or 'recent' menu options.
- Selecting the menu option, 'new' will cause the project wizard to appear. The purpose of this is to create a project file and the start of the tree. Finish will create the project, using the next will allow you define more detail. The first step defines the project name, where the project file is to be created, the name of the area (under which panels go), and the port to be used for downloading. The second step allows the user to add panels to the area. Creating a panel you give it a name, type and an ID. The ID is the drop number on a RS485 link. Pressing the attach button links the panel item we are creating to a real panel connected on a serial line. The 3rd step allows you to define a user and admin password. These passwords are required next time you open the project, the 'user' can do everything apart from upload and the administrator can do anything.





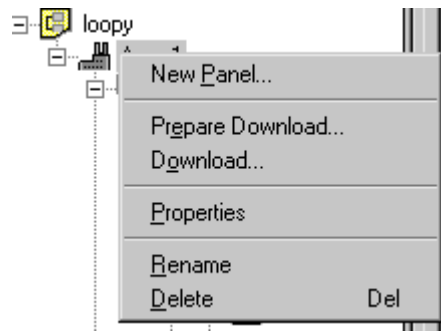


- Once a project is created. It is represented by the project icon at the root of the panel tree. Right clicking on this will allow you to change the properties, create new areas for panels, prepare download, or download to all panels in the project.



3.1 Panel Areas

- Panel areas are for grouping panels. E.g. Room 1 might be an area in which there are some panels
- Areas go under the project item in the tree
- They have the following menu



- The actions in this menu apply to all items below the area in the tree
- New panel creates a new panel item under this area
- 'Expand all' expands the whole tree
- 'Collapse' collapses the whole tree

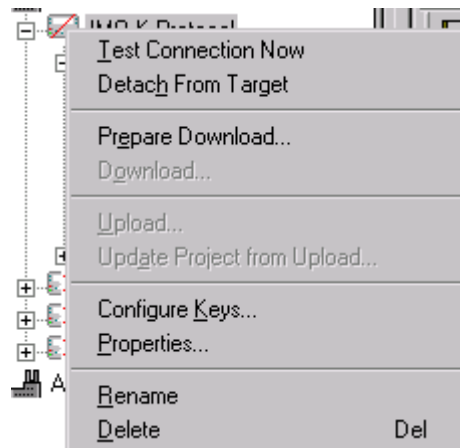
3.1.1 Panel item

- The 2 different icons above represent the 2x20 and 4x20 respectfully
- The icons can also represent the state of the panel link, see below



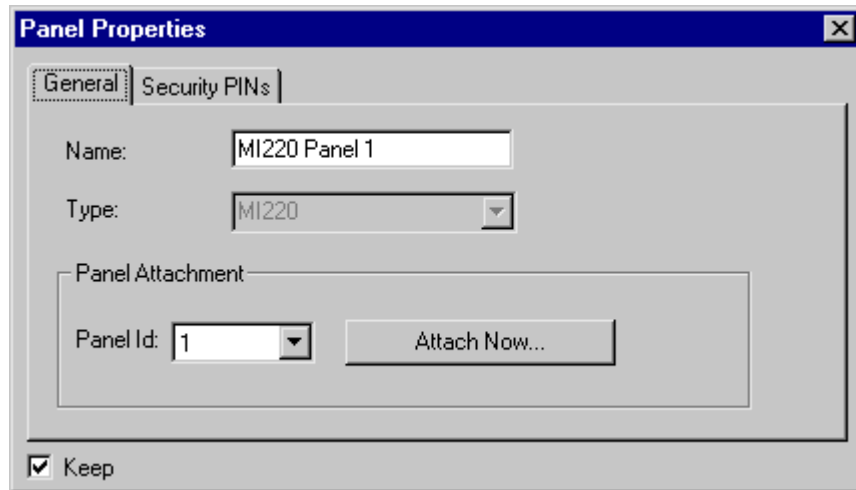
The status effects what is available on the panels menu e.g. cannot download to an offline or unattached panel.

- The menu for a panel

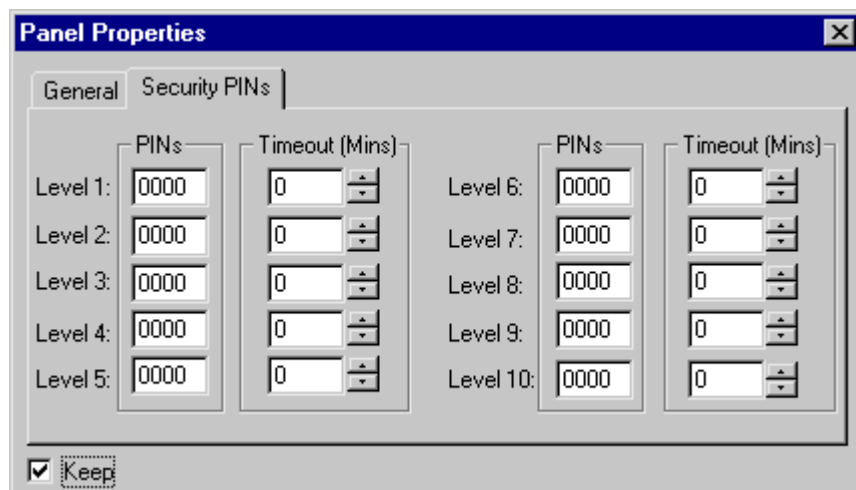


- 'Test connection Now' checks that the panel is online, this is also done automatically
- 'Detach From Target' breaks the link between the configuration and the target panel.
- 'Prepare Download' compresses the panels configuration into packed files read to download
- 'Download' sends the compressed files to the panel
- 'Upload' takes the database from the real panel and puts it on your pc
- 'Update project from upload' takes the packed files from the panel and updates the project with them

- 'Configure keys' lets you configure the default function key actions for that panel
- 'Properties'



As in the project wizard



The real panel has up to 10 security levels, set up by entering a pin on the real panel. This property page defines what they are. The timeout is the time before a pin has to be re-entered. A level is attached to a screen, therefore you can only get access to a screen if you are on an equal or higher level than the screen.

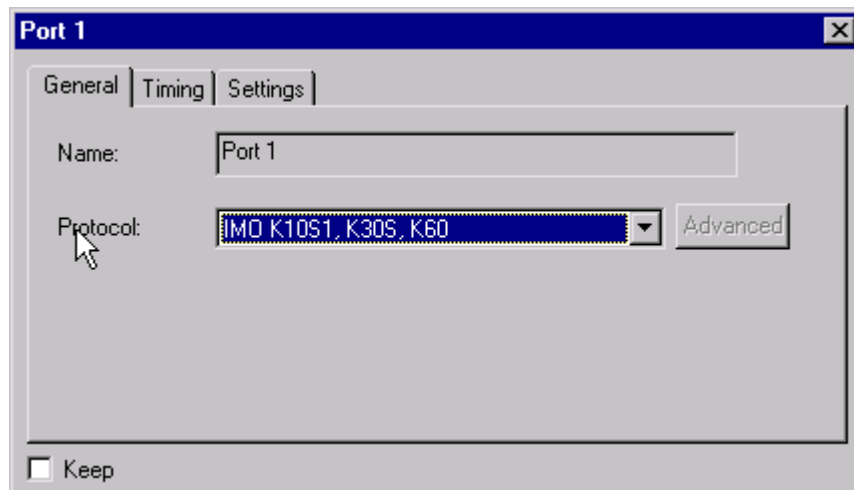
- Panels can be dragged to between areas

3.2 Port item

- There is one port item under every panel. This represents the port on the real panel.
- The port has the following options

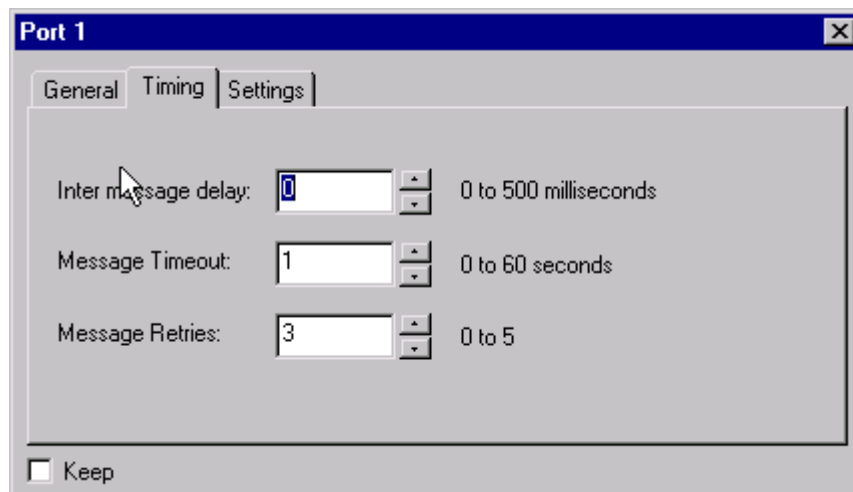


- New device adds a device or PLC item
- Properties

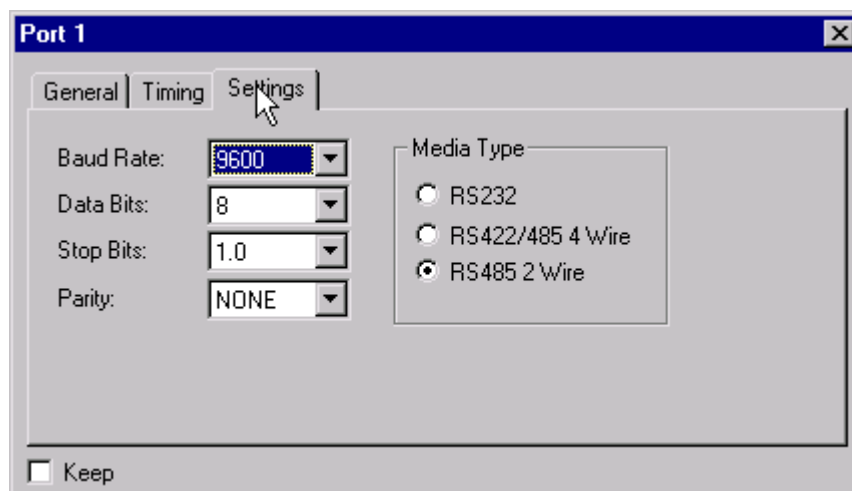


- Defines protocol to run on this port
- Advanced will call up protocol specific properties

3.2.1 Port Settings



- Inter message delay, a time to wait between message between the target panel and the PLC
- Timeout is the time to wait for a response from the PLC
- Retries is the number of times to resend a message to the PLC before giving up

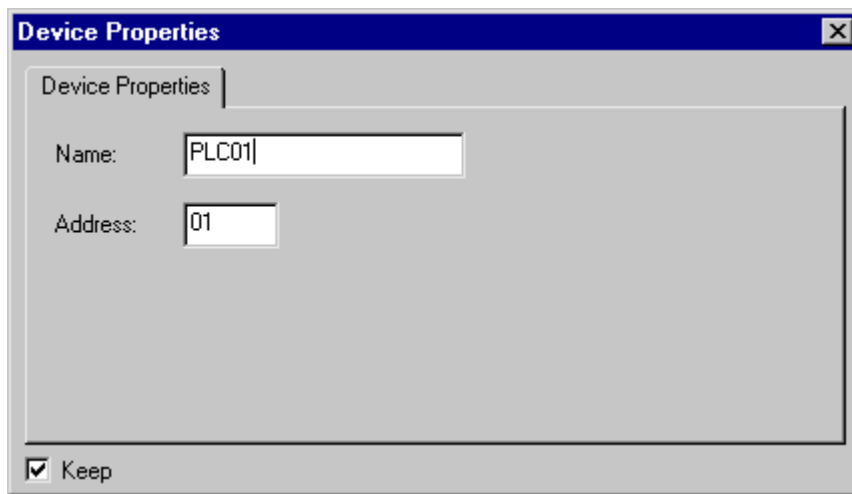


3.2.2 Device item

- The device represents the PLC
- It has a 'points' item under it. The 'points' item defines all points belonging to the device.



- It has these properties when modbus protocol is selected



Device Properties

Device Properties

Name:

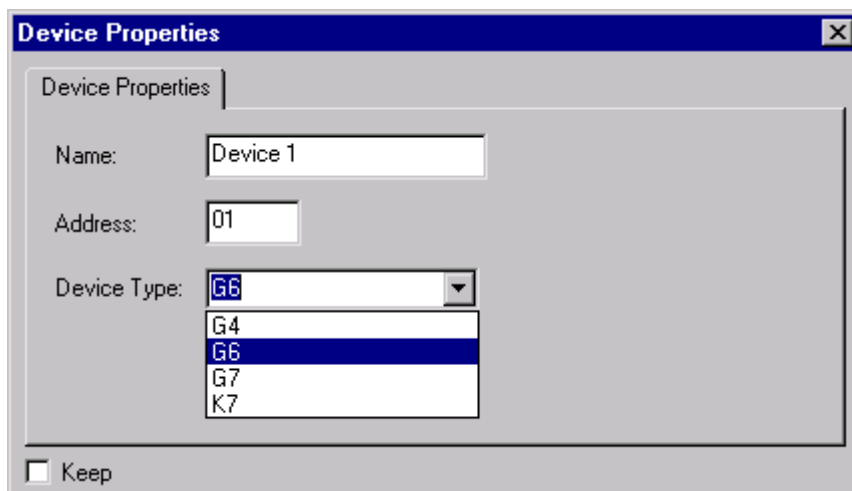
Address:

Keep

The Address is the drop number of the PLC connected to the real panel.

Protocols that support more than one device type, also have options to select the device type.

IMO G4, G6, G7, K7



Device Properties

Device Properties

Name:

Address:

Device Type: (dropdown menu open showing G4, G6, G7, K7)

Keep

IMO K10S1, K30S, K60

Device Properties

Device Properties

Name: Device05

Address: 05

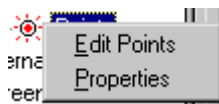
Device Type: K10S1

- K10S1
- K30S
- K60

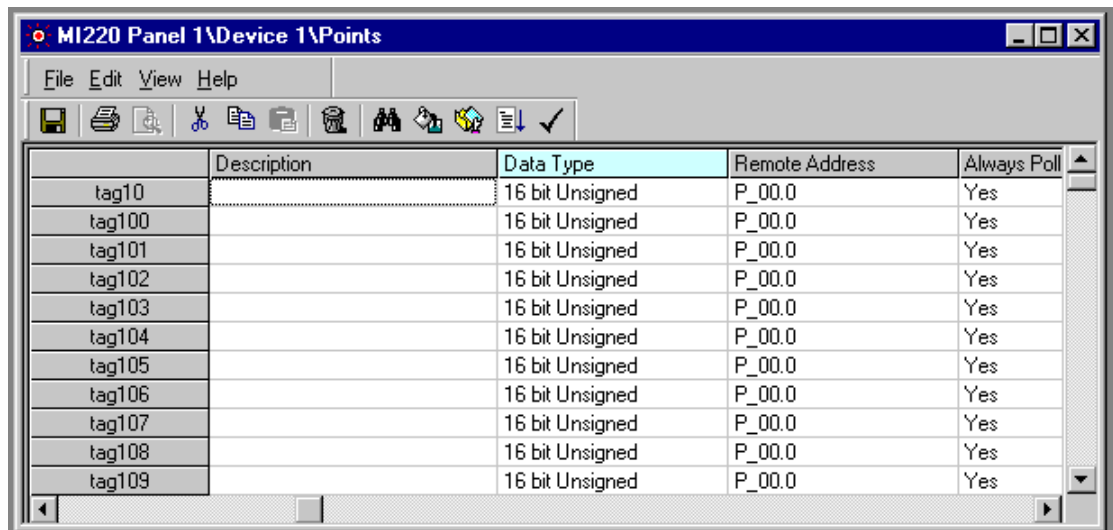
Keep

3.3 Points, Internal Points and All Points items

- This represents a group of points
- Internal points are all points on a panel with no link to a plc or device
- Points under a device, group all points on a particular panel that communicate with a particular device or plc.
- The All points item can be accessed by clicking on the point tab at the bottom of the tree.
- All points groups all the points in the project regardless of panel or device.
- 'Points' has the following menu



- 'Edit points' starts the spreadsheet with the appropriate points loaded. Double clicking the points item has the same affect.



A screenshot of a spreadsheet window titled 'MI220 Panel 1\Device 1\Points'. The window has a menu bar with 'File', 'Edit', 'View', and 'Help'. Below the menu bar is a toolbar with various icons. The spreadsheet has four columns: 'Description', 'Data Type', 'Remote Address', and 'Always Poll'. The data is as follows:

Description	Data Type	Remote Address	Always Poll
tag10	16 bit Unsigned	P_00.0	Yes
tag100	16 bit Unsigned	P_00.0	Yes
tag101	16 bit Unsigned	P_00.0	Yes
tag102	16 bit Unsigned	P_00.0	Yes
tag103	16 bit Unsigned	P_00.0	Yes
tag104	16 bit Unsigned	P_00.0	Yes
tag105	16 bit Unsigned	P_00.0	Yes
tag106	16 bit Unsigned	P_00.0	Yes
tag107	16 bit Unsigned	P_00.0	Yes
tag108	16 bit Unsigned	P_00.0	Yes
tag109	16 bit Unsigned	P_00.0	Yes

3.3.1 Point configuration spreadsheet

Editing the points from the main project tree brings up a view which looks like the one below.

The Window contains three sections. The Menu, the Toolbar and the editing grid. When points are edited for the first time, the contents of the grid will be blank. Each row in the grid represents a point, with the columns showing further configurable details relating to the point. The first column (from left to right) is the point tag. A new point is added by entering a tag into the tag field. You cannot alter other parts of a point until its tag has been specified.

Some grid column headings may appear in a different shade. This indicates further properties are associated with that point attribute. A points data type may be 16 bit Unsigned, with more options available from its properties. Right clicking the cell brings up a popup menu, containing the properties option.

Point attributes are

- Tag
- Description
- Data type
- Remote Address
- Always Poll
- Read Only
- Scaling
- Message Texts
- Actions

3.3.1.1 Tag

The name identifying the point. This must be unique within a panel.

3.3.1.2 Description

An optional descriptive text

3.3.1.3 Data Type

Must be one of these types

Bit

16 bit signed

16 bit unsigned

32 bit signed

32 bit unsigned

Floating point

Text

Packed Text

3.3.1.4 Remote Address

The code identifying the location within the PLC – specific to the protocol used.

3.3.1.5 Always Poll

A yes/no indication which determines if the panel will be constantly monitoring the point at a regular interval. This can be affected by the Action attribute.

3.3.1.6 Read Only

Determines if the point can be modified, or if the point is used to collect data only.

3.3.1.7 Scaling

The scaling cell is not an editable value that affects the point. There are further properties associated with scaling which cannot fit into a single cell. Information shows whether the point is using scaling.

3.3.1.8 Message Texts

Points may have up to 16 message Texts. These are Messages associated with point values 0 to 15.

3.3.1.9 Actions

Points may be assigned an action. Allowed actions are

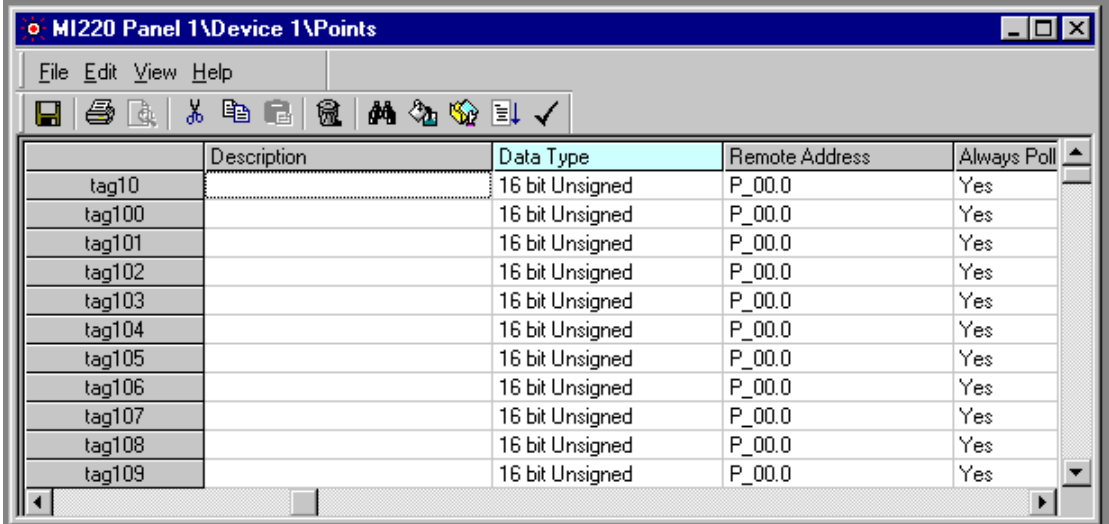
Screen

Screen & Print

Drive out

None

Actions will trigger when the point reaches a certain value and are not of use to Text/Packed Text points.



The screenshot shows a software window titled "MI220 Panel 1\Device 1\Points". It has a menu bar with "File", "Edit", "View", and "Help". Below the menu bar is a toolbar with various icons. The main area contains a table with the following data:

	Description	Data Type	Remote Address	Always Poll
tag10		16 bit Unsigned	P_00.0	Yes
tag100		16 bit Unsigned	P_00.0	Yes
tag101		16 bit Unsigned	P_00.0	Yes
tag102		16 bit Unsigned	P_00.0	Yes
tag103		16 bit Unsigned	P_00.0	Yes
tag104		16 bit Unsigned	P_00.0	Yes
tag105		16 bit Unsigned	P_00.0	Yes
tag106		16 bit Unsigned	P_00.0	Yes
tag107		16 bit Unsigned	P_00.0	Yes
tag108		16 bit Unsigned	P_00.0	Yes
tag109		16 bit Unsigned	P_00.0	Yes

3.3.2 The Toolbar



Save



Print



Print preview



Cut



Copy



Paste



Delete



Find



AutoFill



Insert Row



Sort



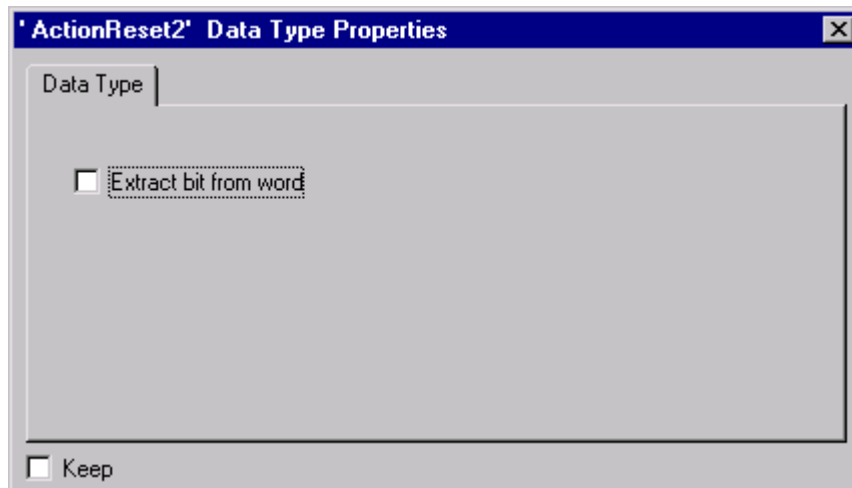
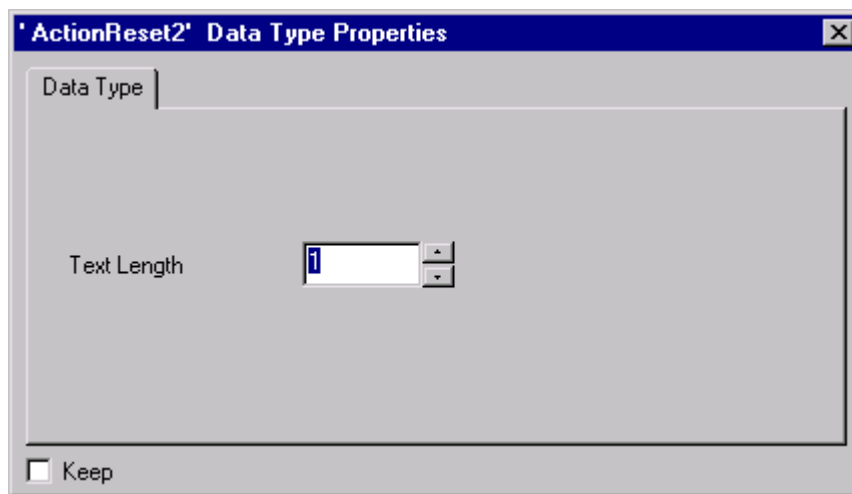
Validate Points

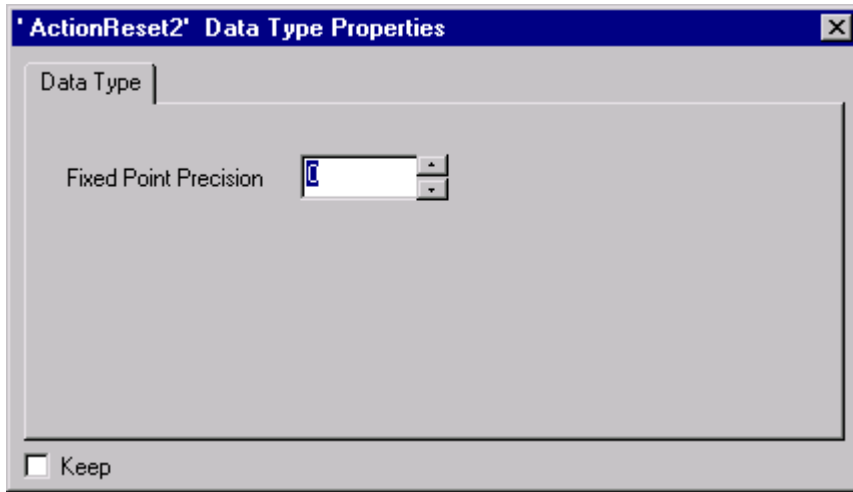
3.3.3 Further properties

Selecting further properties from a cell brings up the property page for that cell. Clicking outside of the page will close the page. A Keep option at the bottom is available for retaining its persistence.

3.3.3.1 Data Type Property

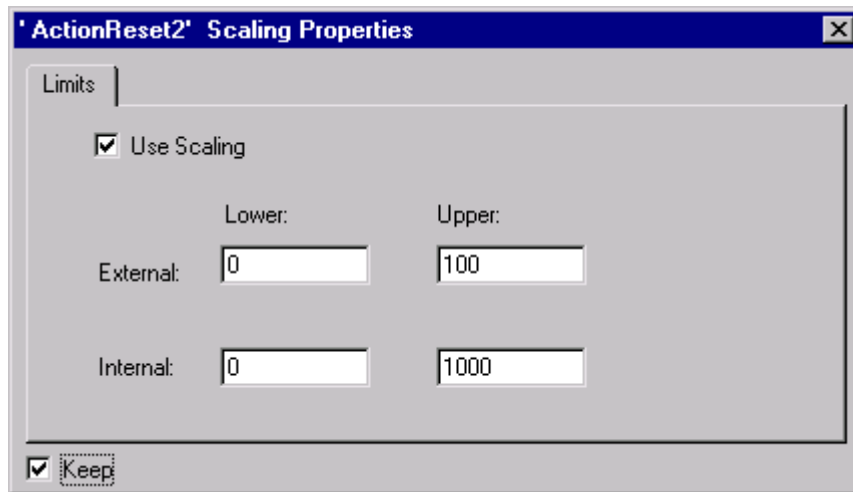
A point configured as a Text or Packed Text point can have the Text Length specified in this property dialog. 16 or 32 bit data types can specify a fixed point precision. Bit types can specify the extraction of a bit from a source word by nominating one of the data bits. Floating point types cannot make use of the Data type property.





3.3.3.2 *Scaling Property*

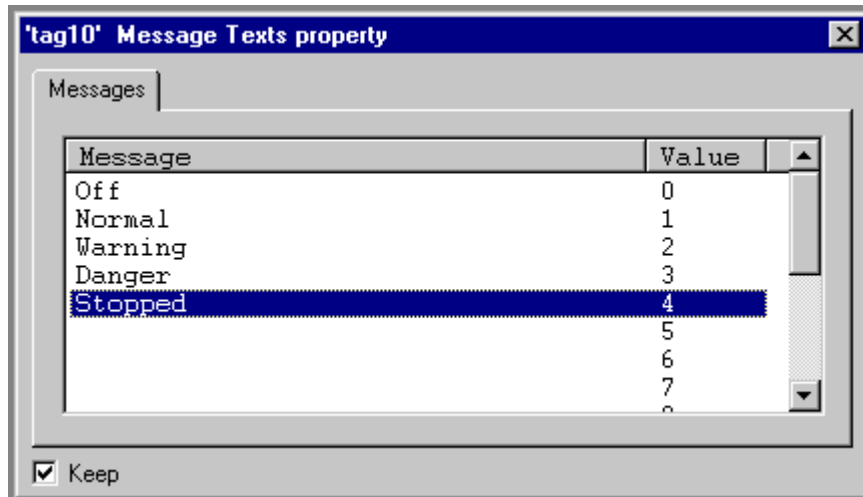
By default, a new point will have no scaling, but can be specified when needed. The Scaling property allows the scale ranges to be set. External scaling and Internal Scaling.



The image shows a dialog box titled "ActionReset2' Scaling Properties". It has a "Limits" tab selected. Inside the dialog, there is a checked checkbox labeled "Use Scaling". Below this, there are two rows of input fields. The first row is labeled "External:" and has two fields: "Lower:" with the value "0" and "Upper:" with the value "100". The second row is labeled "Internal:" and has two fields: "Lower:" with the value "0" and "Upper:" with the value "1000". At the bottom left of the dialog, there is a checked checkbox labeled "Keep".

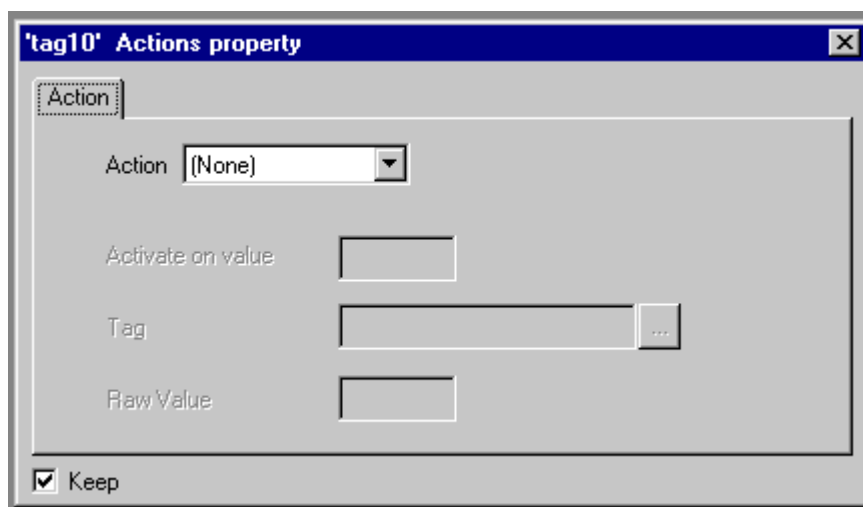
3.3.3.3 Message Text Property

Numeric points can have 16 text messages assigned to them. These can be edited in this property.



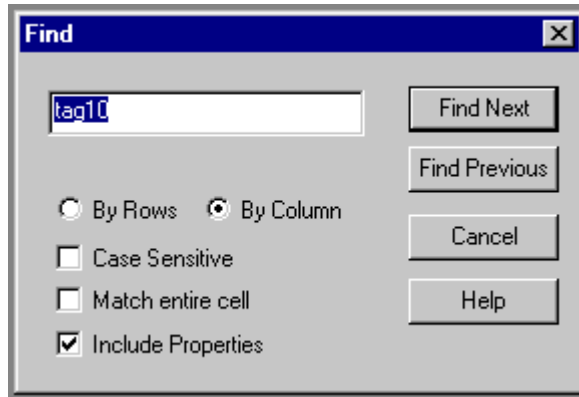
3.3.3.4 Actions property

This property of a point can be used to specify an action when the point has reached a certain numeric value.



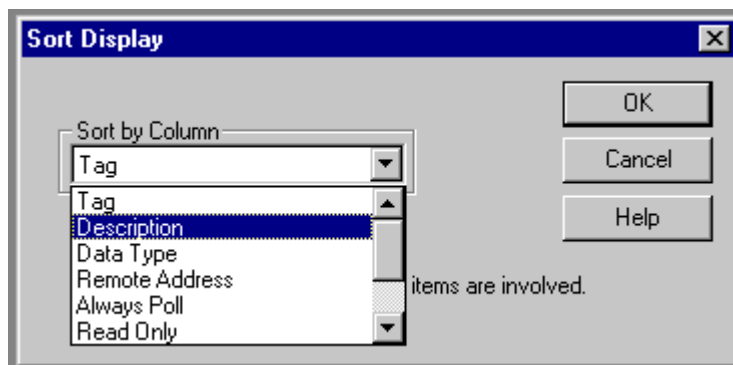
3.3.4 The Find window

This dialog is used for locating some text in the grid. A search direction can be specified and a few matching options are available. A Successful find will highlight the grid cell in red.



3.3.5 Sorting the display

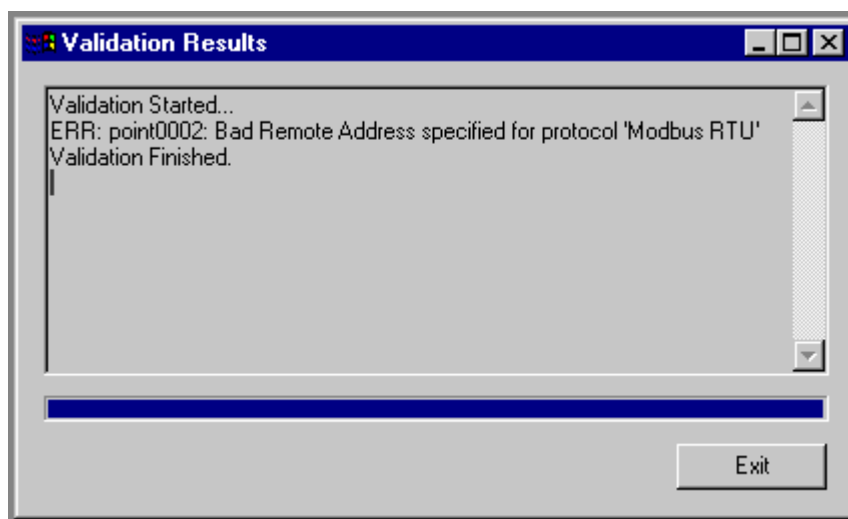
The sorting option can be selected if points need to be grouped in a different order. The ordering can be done on any of the point columns. Generally, points loaded will be in tag order. The sort dialog can change the order to something like remote address order.



3.3.6 Validation of points

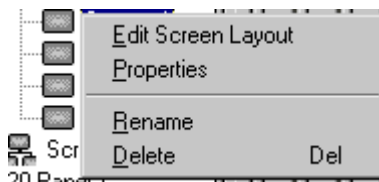
Points added to the grid, will need a number of checks before they can be stored. Checking the format of the remote address is valid for the chosen protocol is one of these checks. If the validation has detected any problems, the problem will be reported in a Results Window, with a brief description of the problem. Normally, during validation the results window appears, giving a visual progress indication at the bottom.

The validation process is also called before saving takes place, to ensure the points on the grid are valid.

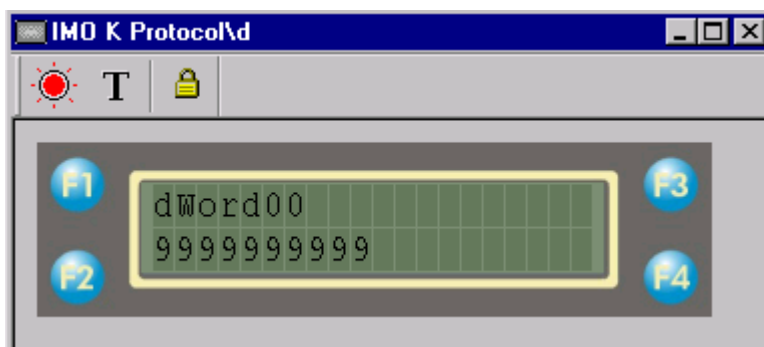


3.4 Screen Item

- A screen item represent one frame of display on the panel
- Screens are always under screen groups in the tree
- The order they are in tree represents the navigation order on the panel. The top is first and the bottom last.
- The order can be changed by dragging and dropping on a new position. The screen is dropped on the item you want to be above it.
- Screens can be dragged to any group on the same or other panel
- The menu



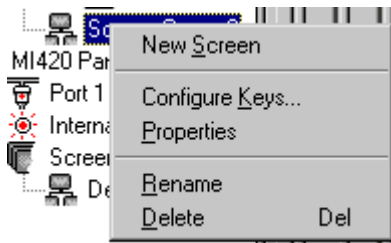
- Edit screen creates this window, as does double clicking the item.



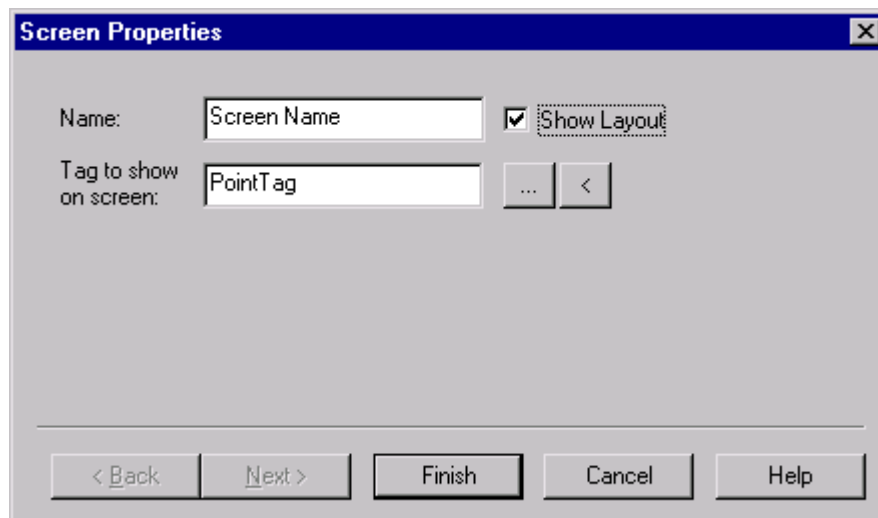
- If no function keys are defined then when this screen is displayed on the panel the screen's group functions apply, otherwise the defines functions override the group's

3.4.1 Screen Groups

- These are the level above screens
- They represent a grouping of screens
- The groups are navigated in group mode on the panel
- The tree order is the order they appear on the panel
- They define the default function key actions for all screens in the group without function key actions
- They enable you to create new screens

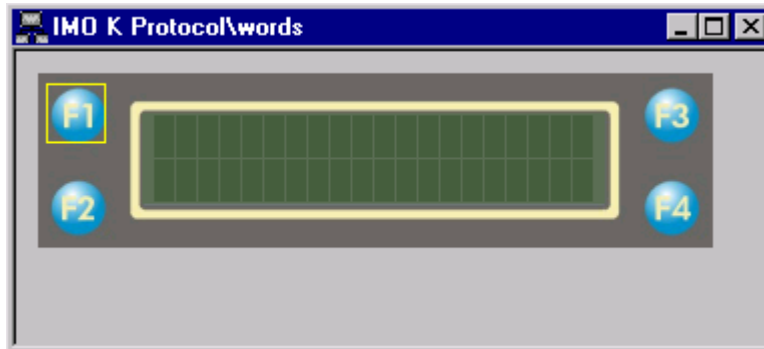


- 'New screen' creates a new screen



'Finish' will open the screen window, as in screen section previous, provided show layout is checked.

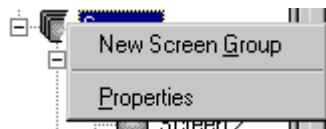
- 'Configure keys' enables you to configure the keys for the group



- Screen groups can be dragged to different panels so long as they are not the default group
- If the real panel only has a default group then it never goes to groups mode but displays the first screen instead
- If a group has no screens then the panel does not display the group in group mode

3.4.2 'Screens and Groups' item

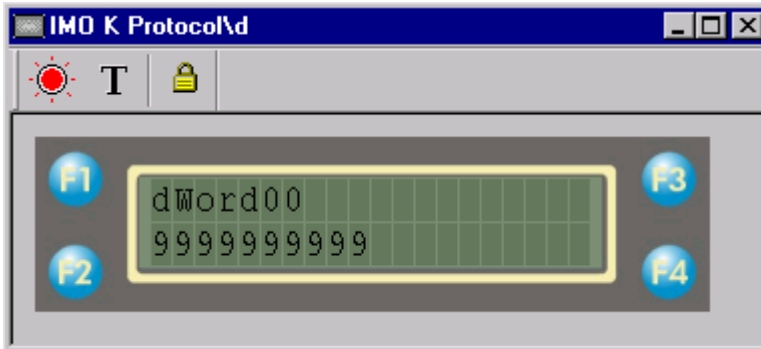
- The 'Screens and Groups' item defines where all screen groups go and is not used by the panel
- You can create screen groups from this item



3.4.3 Screen configuration

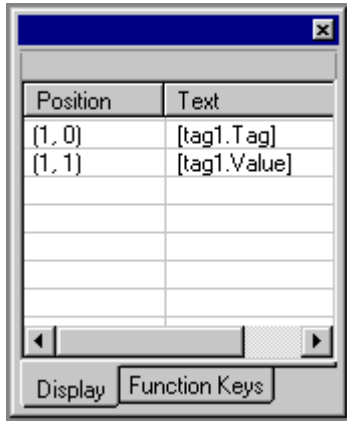
Running 'Edit Screen Layout' from the main project tree starts the screen editing window. The window contains a representation of the Panel being configured. Depending on which panel type has been chosen, the panel face image may change. Each screen configured should be considered as a page or snapshot of that panel.

This is where the display for the panel is configured. The four keys F1 to F4 can be assigned a function. At the top of the window are the tools for adding to the LCD display. The first icon adds point based information onto the screen. The second adds static text, while the third is used for specifying the page security. Right click function keys or text on the LCD to bring up properties of that object.



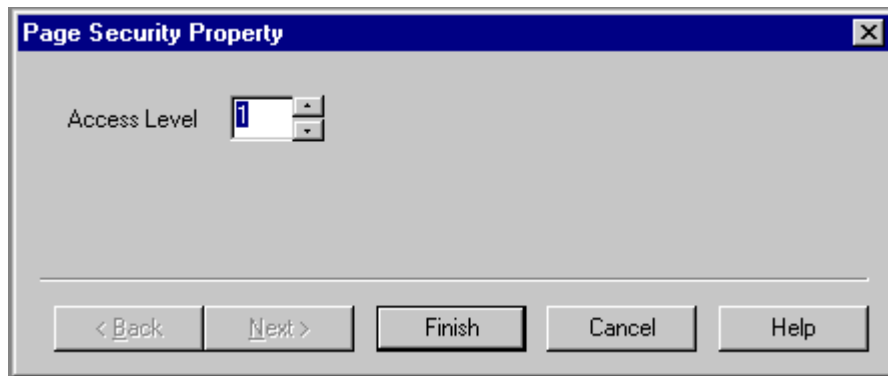
A screen can be constructed from a number of components such as in the previous screenshot. The screen has two components, which appears in an overview list. This list shows the component and its position within the LCD. By default, this list is not visible. To view it, right click outside the panel to bring up the View popup menu. Select the Screen Properties menu, which will not have a tick mark next to it. From the list, clicking a component highlights it on the LCD representation. Pressing the delete key deletes the component selected.

The function keys tab operates in a similar way, showing the function key assignments that can be set to none when delete is pressed.



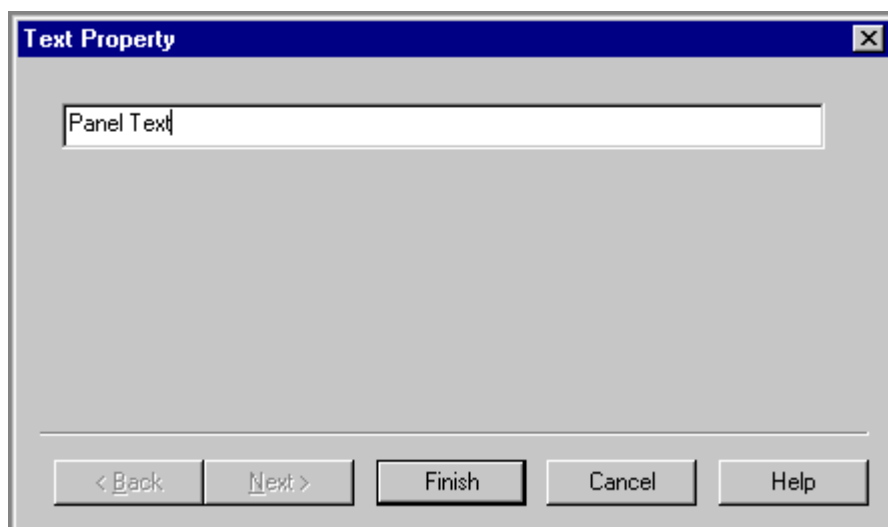
3.4.4 Page Security

The Padlock Icon at the top invokes the dialog shown below. This simply allow the screen to be assigned an access value from 0 to 10. Level 0 being a no-limits status.



3.4.5 Adding Static Text

Static text is added using the T icon. After confirming the text with the finish button, moving the mouse pointer over the LCD shows the position of the text, if the left button was pressed. Once added to the LCD, it can be repositioned by dragging it to the required location.



3.4.6 Adding Point based component

Adding a point based component, the window as seen below is shown. This requires a point tag to be specified. This can be typed manually into the space, or selected from a point browser. A new point can also be added if need be.

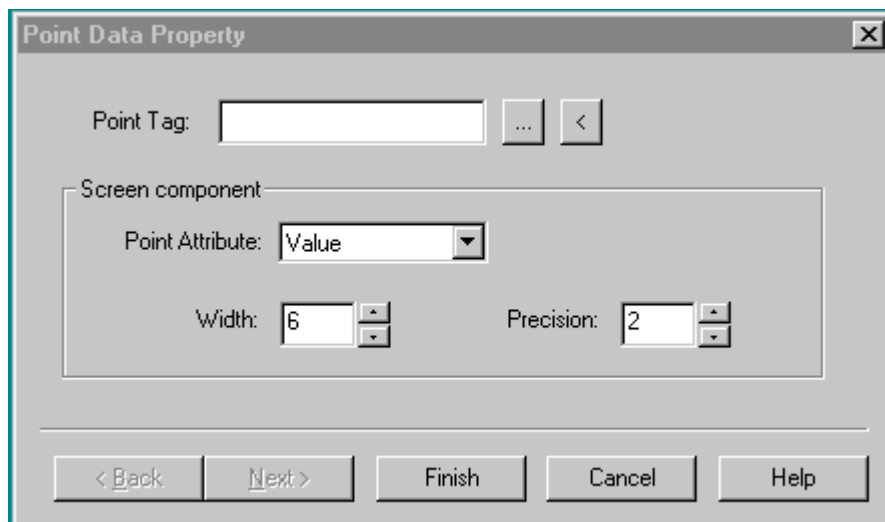
Select a point attribute to use. Value, Message or Tag are allowed.

Value uses the point value.

Messages uses the Message Text of a point

Tag shows the points name.

The Width and precision can also be specified. For a message and tag types, only the Width value will be used.



The screenshot shows a dialog box titled "Point Data Property" with a close button (X) in the top right corner. The dialog contains the following fields and controls:

- Point Tag:** A text input field followed by a browse button (three dots) and a left arrow button.
- Screen component:** A container box containing:
 - Point Attribute:** A dropdown menu currently showing "Value".
 - Width:** A numeric input field with the value "6" and up/down arrow buttons.
 - Precision:** A numeric input field with the value "2" and up/down arrow buttons.
- Navigation buttons:** A row of five buttons at the bottom: "< Back", "Next >", "Finish", "Cancel", and "Help".

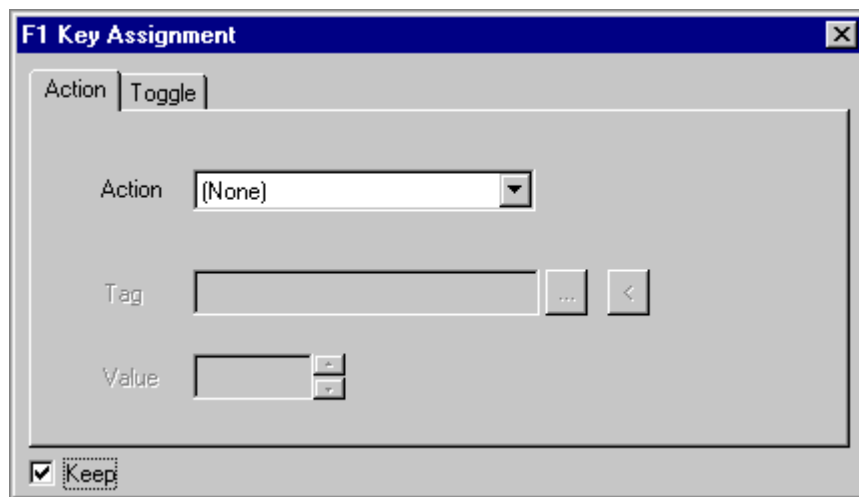
3.4.7 Function Keys

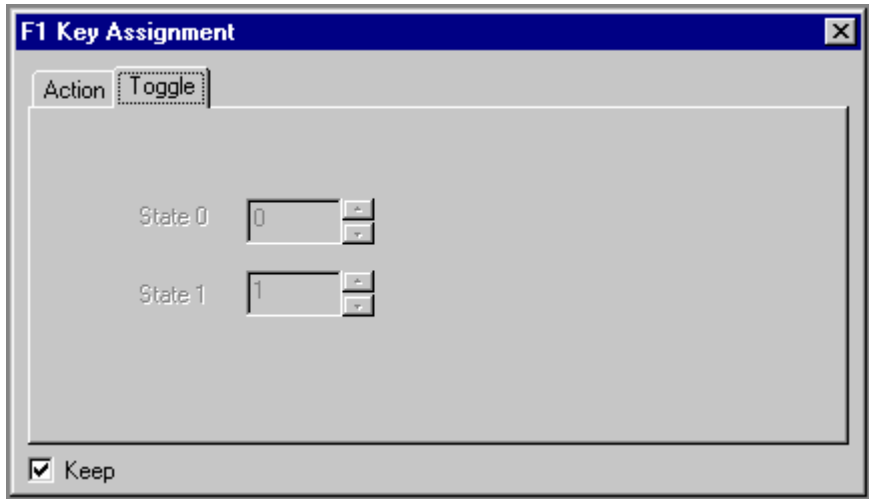
Function keys can be defined by right clicking the function keys and selecting its property. This allows a function key to be assigned a task. Possible tasks are

- Drive Out
- Display another screen
- Increment Drive out
- Decrement Drive out
- Toggle
- None


The Toggle states can be specified on the next tabbed page.

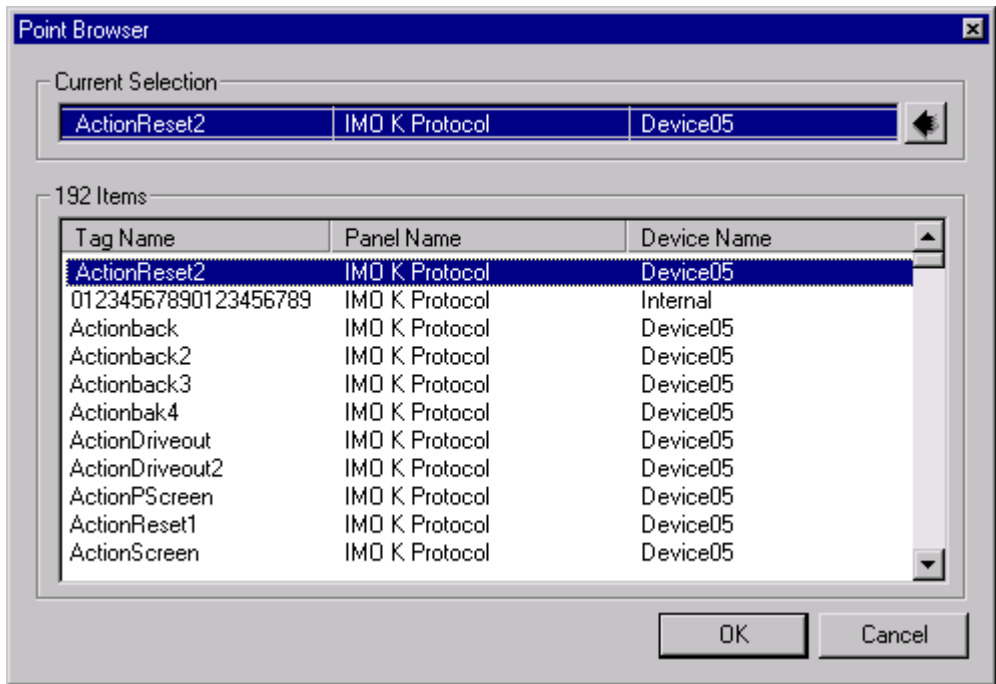
From the right clicking of the function key, there is an option called unassign key. This differs from 'None', because it uses the key assignment from the group. This allows a group to have a general set of function key assignments for a number of screens, with any special case screens being able to override the groups key definition.





3.4.7.1.1 Browser

Throughout the software the  button can be found whenever an item needs selecting. Click this button to call the browser:



Items can be selected by double clicking them or clicking them and then clicking ok.

Point Wizard <

When you see this button < in the software, pressing it will call the point wizard. Enabling you to create a point without using the spreadsheet. The wizard is a step by step way of creating a point, once the minimum steps are complete you can press the finish button to create the point and select its tag.

The screenshot shows a dialog box titled "New Point. Step 1 of 5". It contains the following fields and controls:

- Panel: IMO K Protocol
- Device: Device05 (dropdown menu)
- Identity section:
 - Tag: NewPoint (text input)
 - Description: This is a new point, created using the wizard (text input)
- Navigation buttons: < Back, Next >, Finish, Cancel, Help

The screenshot shows a dialog box titled "New Point. Step 2 of 5". It contains the following fields and controls:

- Location in Device - (Using Protocol 'IMO K10S1, K30S, K60'):
 - External Address: M0000 (text input)
 - Read Only (checkbox)
- Data Source Information section:
 - Data Type: 16 bit Unsigned (dropdown menu)
 - Fixed Point Precision: 0 (spin box)
- Navigation buttons: < Back, Next >, Finish, Cancel, Help

New Point. Step 3 of 5

Scaling

Use Scaling

External: Lower: 0 Upper: 9999

Internal: 0 9999

< Back Next > Finish Cancel Help

New Point. Step 4 of 5

Text Entries

Message	Value
on	0
off	1
	2
	3
	4
	5
	6
	7
	8

< Back Next > Finish Cancel Help

New Point. Step 5 of 5 [X]

Point Action

Action: ▾

Activation Value

Screen Tag

Raw Value

< Back Next > Finish Cancel Help