
Screen Designer

The Power of Ultimate Design

v5

Table of Contents

Table of Contents		iii
	Screen Designer	
	- The Power of Ultimate Design -	1
	Why do you need Screen Designer?	2
	How does it work?	2
Chapter 1:	<i>Introduction and Installation</i>	3
	About this Manual	3
	Learning About Screen Designer	3
	Windows System Requirements	3
	Installation	4
Chapter 2:	<i>Touring the Interface</i>	5
	Design Area	5
	Drop Down Menus	6
	Templates	6
	Layouts	6
	Widgets	6
	Parameter/Value Windows	6
	The Tool Bar	7
	Grab Handles	7
	Widget Library	7
	Shortcuts	7
	Bitmaps	7
	On Line Help	8
	Glossary	8
Chapter 3:	<i>Widgets?</i>	9
	What is a Widget	9
	The DPM Widget	11
	The Bar Widget	14
	The Chart Widget	20
	The Bitmap Widget	23
	The Events List Widget	27
	The Status Bar Widget	29

Chapter 4:	<i>Screen Designing</i>	33
	Planning your Screen	33
	Screen design starts here	33
	Tool Bar Functions	34
	User Defined Text	36
	Colour Palette	36
	Non Expert mode	37
	Expert Mode	37
	Screen Designs	37
	Displaying Layouts	38
	Set Data Source	39
	Set Recorders Screen	39
	Saving Screen Layouts	39
	Printing Screen Layouts	39
Chapter 5:	<i>Widget Library</i>	41
	The Library	41
	Bitmap Librarys	42
Index		43

Screen Designer

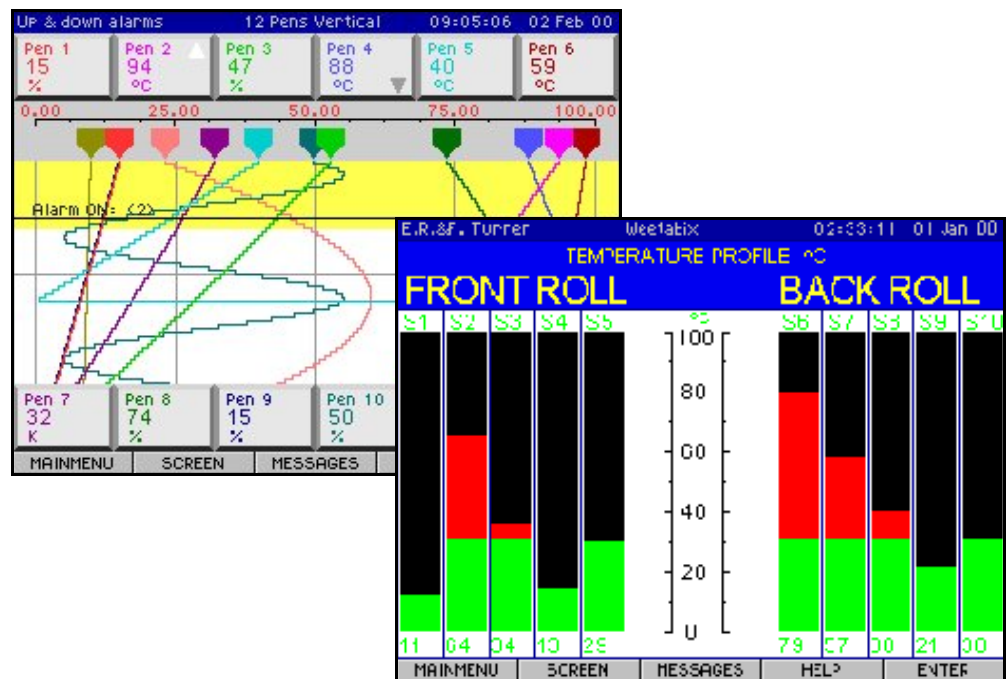
- The Power of Ultimate Design -

Welcome to *Screen Designer* for *Minitrend V5* and *Multitrend Plus V5* recorders. A complete software tool with total design flexibility to produce the ultimate in customised display layouts.

Screen Designer enables the customer to design unique display for transfer on to the recorder screen. Screen layouts can be created using any combination of indicators such as trending Charts, Digital Panel Meters (DPM), Bargraphs, Bitmaps, Digital pictures and Plant diagrams. Flexibility allows each type of indicator to have elements of its appearance changed to create an individual presentation.

The *Screen Designer* software design package is compatible with both *Minitrend V5* and *Multitrend Plus V5* recorders so layouts can be transferred on to single or multiple recorders giving continuity and standardisation of process data.

This software can be used in conjunction with *Trend Manager V5 Suite*.



Why do you need Screen Designer?

Screen Designer has been developed to meet the ever increasing demand for instant information which is customised for efficient operator interpretation. This software tool enables the user to quickly develop totally customised screens displaying easy to read data.

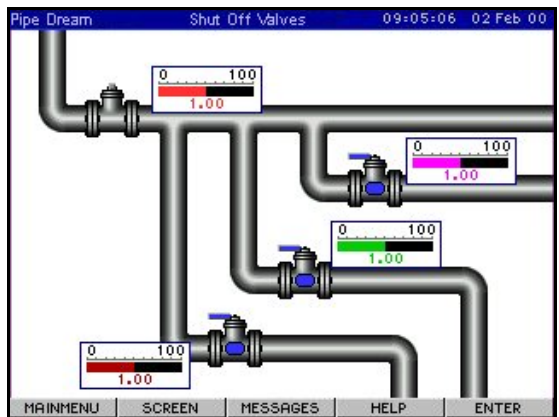
The recorder's screen can become a complex display of information, monitoring readings and acquiring data. Use screen designer to display data for clear and precise presentation of process data.

How does it work?

Graphical devices, called **Widgets**, are positioned on to a blank template representing the recorder's screen. The widgets are made up from individual objects which can be modified to suit the users requirements. Each widget displays data in different formats e.g. Chart, Bargraph, or Digital readouts. These can be used in conjunction with Bitmaps to create an exclusive screen design.

A widget interprets the different ways to display data activity. See **"Widgets?"** on page 9. in the *Screen Designer* manual.

Examples of Screen Designs on a Minitrend V5.



Chapter 1: Introduction and Installation

About this Manual

This user's guide provides information about the *Screen Designer* tools and commands.

It provides step by step instructions for use on Windows 95™, 98, NT and Windows 2000. Before using this manual, install *Screen Designer* by following the instructions given in *Screen Designer* Installation. Take time to read through this manual starting with Chapter 2, **“Touring the Interface” on page 5.**

Screen Designer documentation and software assumes the user has a working knowledge of Windows and its conventions.

Learning About Screen Designer

User Guide

Contains a **Tour of the Interface**, a section on **Widgets?** and **Screen Designing** with complete information on using all the commands and features.

The Help system

Contains all the information in the *Screen Designer* User Guide.

Standard Widget Library

These widgets can be used as they are or further customised by the designer. See “What is a Widget” on page 9.

Windows System Requirements

The system prerequisites stated below are in line with the minimum required to run Siemens software package *SIREC D Manager*.



- 200 MHz Pentium processor
- 3.5" floppy disk drive
- CD - ROM drive
- Windows™ 95, 98, NT ver. 4.0 or Service pack 3 (onwards) and Windows 2000
- 32 Mbyte or more of RAM (64 Mbyte recommended)
- 16 bit colour graphics (24 bit recommended)
- 10 Mbyte free hard disk space
- a Mouse

Installation

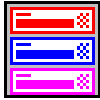
Before installing the software on to your PC, it is recommended to close down all other applications, including any programs that automatically load during the start up procedure.



- place CD into drive
- go to 'My Computer'
- select CD ROM drive
- select Screen Designer icon
- Follow the installation instructions on the screen

During installation you will be asked to confirm the drive and directory into which you would like the software installed. The default drive and file path is C:\Program Files\Siemens\SIRECD.

Start up



Screen Designer

The *Screen Designer* software has been installed on the hard drive of your computer (C) in 'Program Files' unless during set up you have changed the destination folder. Double click on the '**Siemens**' file, then double click on the SIRECD file. In this file is the *Screen Designer* folder. To start the program double click the *Screen Designer* icon.

Screen Designer has a comprehensive on-line Help facility which includes detailed instructions on how to do each operation and detailed explanation of all application areas.

Chapter 2: Touring the Interface

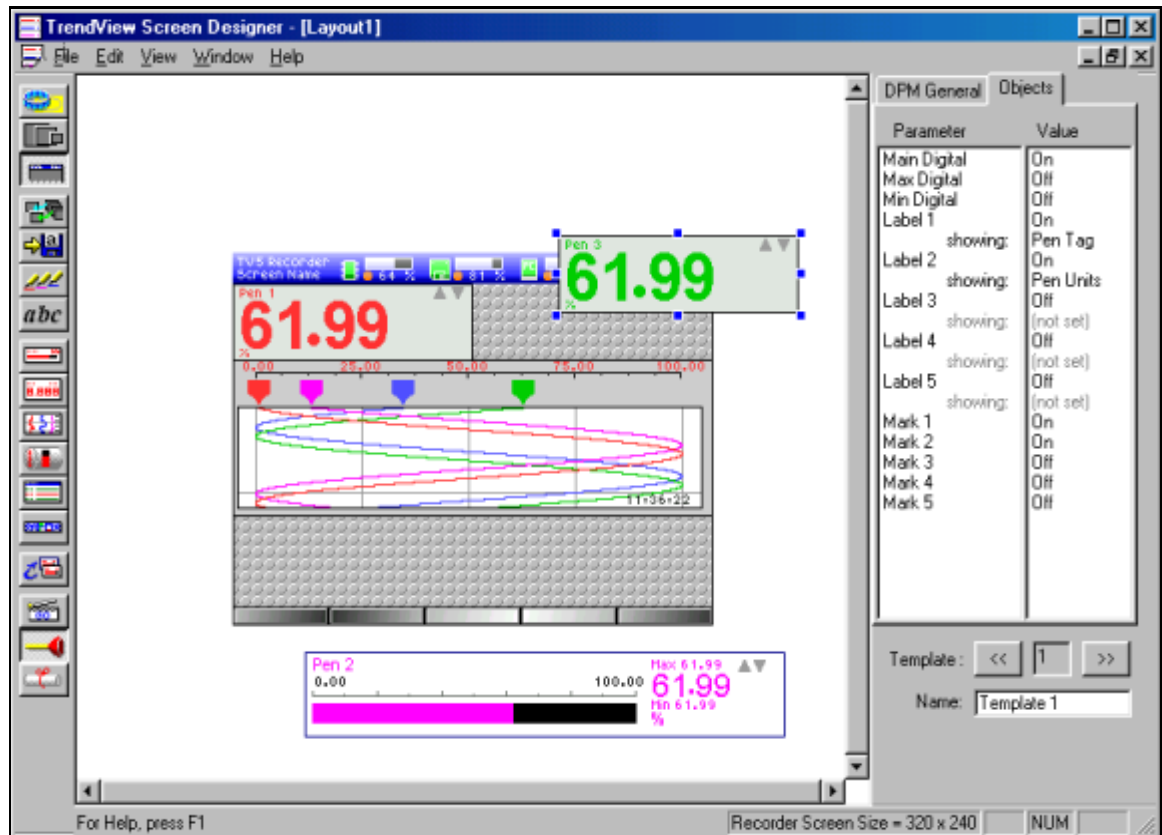
Design Area

The design area comprises of a **Toolbar** displayed down the left side of the screen, the design area in the middle, containing a blank **Template** and two windows labelled **Parameter** and **Value**.

How it works?

Screen Designer uses templates to represent the recorder's screen size. The template is designed and saved as a layout. Up to 10 templates can be saved in one layout. When the layout is complete, it is verified by the *Screen Designer* software and saved on to a floppy disk. The disk is then inserted into the recorder and the screen layout loaded on to the recorder.

Templates are design by using **Widgets** selected from the tool bar. Widgets display data in different graphical formats. The widgets are positioned on the template and aspects of the widget can be changed using the parameter and value windows. Each widget contains **Objects** which, in expert mode, can be modified as required



Drop Down Menus

The drop-down menu tool bar runs along the top of the screen. It has a familiar Windows style layout including File, Edit, View, Window and Help features. Use the left mouse button to select the drop-down menu option or the keyboard method by pressing the ALT key and entering the underlined letter for that option.

The **File** menu produces New, Open, Close, Save, Save As, Print, Print Preview and Print Setup features. **Edit** reveals Cut, Copy and Paste. **View** has the Widget Shadow option which casts a shadow under the widget when it is moved or resized. **Window** contains two modes of displaying more than one layout either cascade or tile plus the Arrange Icons facility. The **Help** accesses the Help Topics section within *Screen Designer* and version information About Screen Designer.

Templates

This is the area where screens are created and designed. Along the top of the template is the blue status bar displaying system information. The status bar can be toggled Off or left as a plain blue strip. Along the bottom of the template is a grey bar emulating the button bar on the recorder, this is always visible.

Graphical devices known as **Widgets** are selected from the tool bar and positioned on to the **Template**. When the template is complete a new one can be selected and a new screen can be designed.

A template is a single screen in a layout, there can be up to 10 templates per layout.

Layouts

Up to 10 templates can be created in one screen **Layout**. The layout, when complete, is transferred on to floppy disk which is inserted into the recorder. The layout is then loaded onto the recorder's screen. When the layout is saved and transferred to disk it is verified by the *Screen Designer* software and can be renamed for ease of recognition.

Layouts have a file type of .lyt and must be saved in a folder called FROMPC.tv.

Widgets

Widgets are graphical representations for displaying data in various forms.

- The **DPM widget** is a Digital Panel Meter displaying data readings in a digital form.
- The **Bar widget** presents data as a bargraph indicator, also with a digital reading.
- The **Chart widget**, used to show data graphing across the screen using pen traces.
- The **Bitmap widget**, displays bitmaps which can be loaded and modified.
- The **Events Lists widget**, listing alarm activity and events.
- The **Status Bar widget** displaying system information such as disk space available. For more information see [“Widgets?” on page 9](#).

Parameter/Value Windows

When a widget is selected the features relating to that widget are displayed in the **Parameter** and **Value** windows to the right of the screen. Each widget will have a **General tab** and an **Objects tab** showing the parameters and the values of those features. The general tab has the same list for all widgets concerned with the appearance, such as the size and colour. The Objects tab switches the features, such as labels, digits and scales, On and Off. Parameter and value windows also appear when an object part of a widget is selected in expert mode. See [“Expert Mode” on page 37](#).

The Tool Bar

The **Tool Bar**, displayed down the left side of the design area, contains buttons that activate commands. Float the mouse cursor over each icon to display its function. To select an item, use the left mouse button to click on the icon required. See [“Tool Bar Functions” on page 34.](#)

Grab Handles

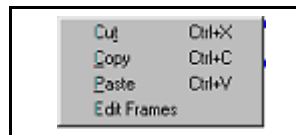
When a widget is selected coloured squares appear around it, these are grab handles used for resizing the widget. Blue grab handles indicate the whole widget has been selected. To ensure the whole widget is selected, hold down the shift key when selecting.

Red grab handles signify an object part of the widget has been selected in expert mode. See [“Expert Mode” on page 37.](#) The Bar widget has an embedded widget within it. The embedded widget is a Digital Panel Meter and has green grab handles when selected. See [“Embedded DPM Widget” on page 18.](#)

Widget Library

The library of widgets has been created to assist the designer in developing new screen layouts. Contained within the library are a selection of pre-designed widgets including bars, digital panel meters and charts. Each one has a different appearance and can be transferred onto the template using the copy and paste functions. See [“Widget Library” on page 41.](#)

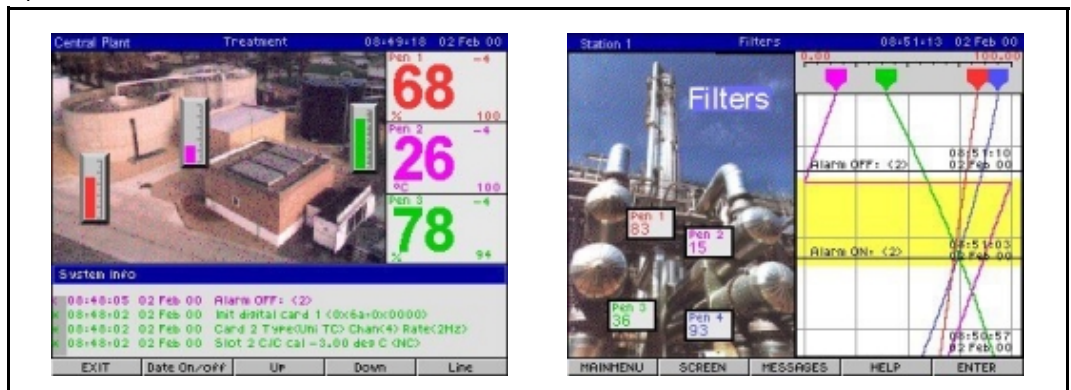
Shortcuts



Click the right mouse button once anywhere in the work area to reveal this menu. Select options to cut, copy and paste. Keyboard commands for these functions are also displayed. The Edit Frames option is only available for Bitmap widgets.

Bitmaps

Bitmaps (A.bmp format file) can be imported on to a template and widgets placed on top to depict activity within that image. They can also be used to enhance a screen design, such as a company logo or other relevant images.



Bitmaps can only be loaded on to a **V5 Minitrend** that has the mimic option fitted, also referred to as mimic flash. This is extra memory specifically for loading bitmaps. The **Multitrend Plus V5** has this option fitted as standard.

On Line Help

On Line Help is available from the Help drop down menu at the top of the screen.

Glossary

- **Bar:** Or bargraph Is the coloured area within the Bar widget indicating the input signal from a pen or channel.
- **Bitmap:** The digital representation of an image.
- **Chart:** The chart is the area representing pen traces in a graph like mode.
- **DPM:** Digital panel meter, referred to as DPM, this gives a numeric value of the signal input.
- **Events List:** A record of data activity, including alarm lists, on the recorder.
- **Font:** A character set, comprising of letters, numbers, punctuation marks and symbols of a distinctive proportion and design.
- **General tab:** Found in the parameter and value windows containing information about a selected widget.
- **Grab handles:** Coloured squares that appear around a widget when it is selected, used for resizing.
- **Label:** An identifier or tag.
- **Layout:** Made up of templates containing screen designs for transfer on to the recorder's screen.
- **Marker:** Markers or marks represent a point where something is activated such as an alarm or an event.
- **Mode:** A software setting or operating state.
- **Object:** A graphical element contained within the frame box of a selected widget.
- **Object tab:** Found in the parameter and value windows containing information about objects within a widget.
- **Palette:** A library of available colours.
- **Parameter window:** Contains the attributes relating to a selected widget.
- **Status bar:** Displays the state of system information within the recorder, e.g. disk space.
- **Template:** A single screen within a layout made up of widgets.
- **Toolbar:** Part of the Screen Designer interface containing icons that represent commands.
- **User defined text:** Text written by the user which is added into a list for labeling within widgets.
- **Value window:** Contains the values of attributes relating to a selected widget.
- **Widget:** A graphical object which displays data in different forms.
- **Widget Library:** Contains widgets pre-designed for use in designing screen layouts.

Chapter 3: Widgets?

What is a Widget

A **Widget** is a graphical device within *Screen Designer* to assist in building customised screen layouts. The widgets display data in different graphical forms.

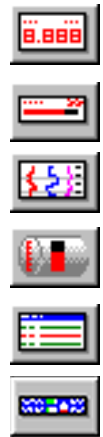
Widgets are selected from the tool bar and appear on the **Template** in the middle of the screen. Each widget is made up of **objects** which are displayed in the parameter and value windows to the right of the screen. Using **Expert mode** each one of these objects can be modified to suit individual requirements.

In this chapter each widget, and its objects, are explained in detail describing what they do, how they do it and how to modify them.

When selecting a widget from the **Tool bar**, it will appear on the in the middle of the screen. Click on the widget to select it and the object details of that widget will appear in the **Parameter and Value** windows, to the right of the template.

The Widgets are:-

- **DPM - Digital Panel Meter**
- **Bar - Bargraph with Embedded DPM widget**
- **Chart - Traces displayed on a graph**
- **Bitmap - Bitmap images load as a widget**
- **Events List - Lists activity on the recorder**
- **Status Bar - Displays system information**



When the whole widget is selected **Blue Grab Handles** will appear around it. The **Bar Widget** has an **Embedded DPM Widget** within it, this has green grab handles when selected. When the **Expert mode icon** is selected from the tool bar, all the objects within the widget are accessible and have red grab handles when selected.

[see "Tool Bar Functions" on page 34](#)

Widgets in Expert mode

In **Expert mode** each individual **object** has its own identity with its own list of **Parameters and Values**. These objects have red grab handles and can be modified using the parameter and value windows but can only be moved within its own widget. [see "Expert Mode" on page 37](#)

Overlapping Widgets

When a widget is placed on top of another, such as a **Bitmap widget**, be aware that when the bitmap widget is selected the other widget will disappear. The selected widget comes to the front and the other widget goes behind. Use the 'Send to back' function from the tool bar. This can be used on any overlapping widgets.

Blank areas on the template

Any part of the template left showing the grey background will be displayed on the recorder as a black background. Use blank widgets to fill up the template. Use a DPM, Bar or Chart widget and turn off all the objects, this will leave a blank widget. Set the background colour of the widget to match.

Set Data Source



The **Source** is where the data originates from, the source of the data must be set here for DPM, Bar, Chart or Bitmap widgets. This icon only becomes active when a widget has been selected. The **Set Source Box** will appear requiring information on where the source data is coming from, either pen or channel number. When the chart widget is selected the **Configure Chart Box** appears, this requires traces to be added to the chart and the source for those traces set, either a pen or channel number. The range or limit of the indicating scale is set in the **Zero** and **Span** boxes. A 4% over-range and under-range applies to all signal inputs.



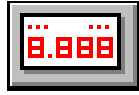
Hot Tips!

This box appears throughout this section with reminders of tips and short-cuts.

Hot Tips !

- Widgets will appear in the recorder pen colour order.
- Extra text can be added at any time. [see "User Defined Text" on page 36](#)
- To select the whole widget hold down the shift key whilst selecting the widget.
- Pressing delete, with any part of a widget selected, will delete the whole widget.
- Right click on the mouse button to access copy, cut and paste options.
- Widgets can be resized when objects are toggled off/on in the Objects tab.
- Set the data source for a widget by selecting the Set Source icon. 
- Use the Go icon to animate the widgets on or off the template. 
- Use the directional arrows on the keyboard to help position widget objects.

The DPM Widget



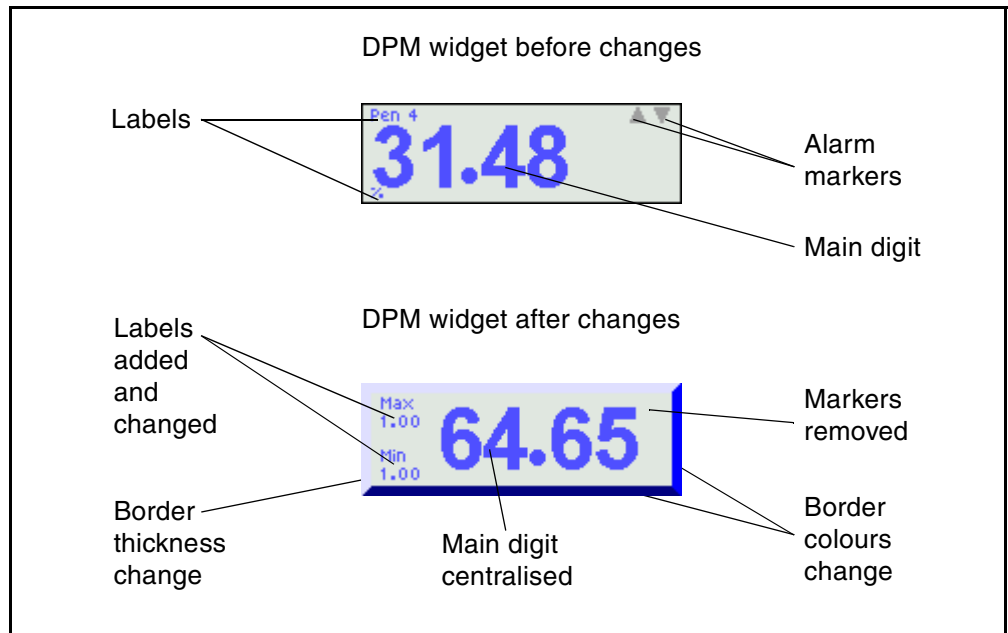
The **Digital Panel Meter (DPM)** widget, when selected, has the standard general **Parameter and Value** windows plus an **Objects tab**. These are displayed in the windows to the right of the **Template**.

The Parameter and Value windows

Select the widget to produce tabs in the **Parameter and Value** windows. These tabs list features and objects within the widget. The **General tab** displays standard features common to all widgets. The **Objects tab** displays the object parts that go to make up that widget.

Each DPM widget can have colour changes to the **Background** display and to the **Foreground** digits. The **Border** can be thickened and each side can change colour to give an inset or raised effect. The font size of the digits can be changed and justified.

To set the data source of a widget, select the **Set Source** icon on the left hand tool bar. Choose **Pen** or **Channel** as the data source then allocate the scale limits required.



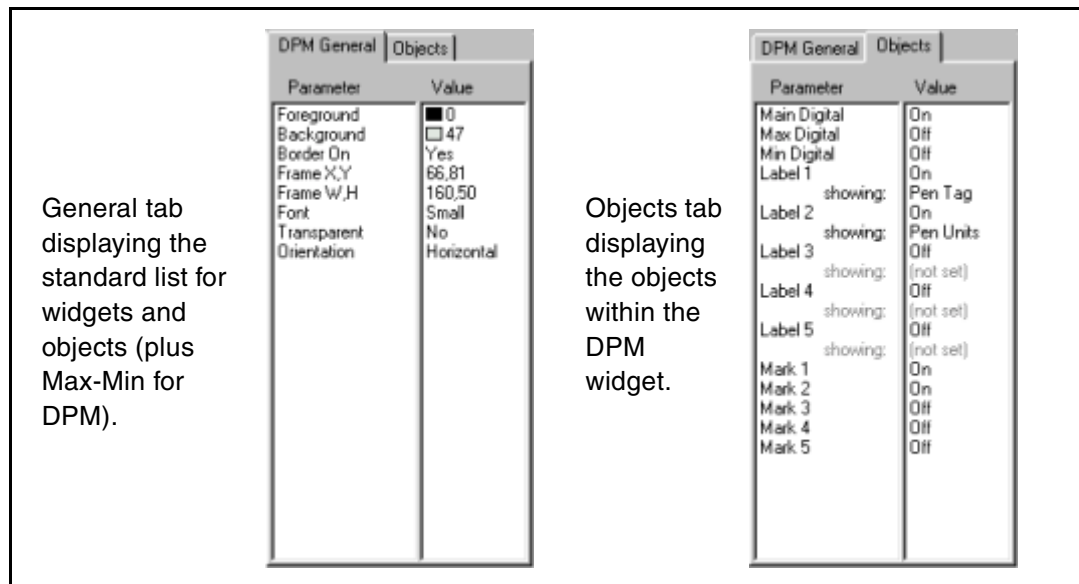
DPM General tab

The **General** tab appears for each widget and for each object within the widget when expert mode is being used.

Below is a breakdown of the standard **General tab**.

- **Foreground** - Select this option to change the colour of the **Digitals** and **Labels** on the widget. Select the number in the values window opposite **Foreground** and a small colour palette will appear. Click on this to produce a full colour palette.
- **Background** - This is the area behind the objects on the widget. Select this option to change the colour of the background on the widget. Select the number in the values window opposite **Background** and a small colour palette will appear. Click on this to produce a full colour palette. [see "Colour Palette" on page 36](#)

- **Border On** - Select this, in the values window, to produce an options bar containing a Yes/No option and a format button. The format button will reveal the **Configure Border** box with options for changing the border effect, thickness or colour. To change the effect choose from **Blank, Flat, Raised** or **Inset** options. To change the thickness of the border, click on the up/down arrows next to the thickness box. To change the colour of the border, click on one of the borders to reveal a full colour palette. Each side of the border can be a different colour. To close select X. see “**Colour Palette**” on page 36
- **Frame X, Y** is the position of the widget or object on the template in relation to the datum at the top left corner of the template (including the blue status bar). This can be changed by manually entering the co-ordinates and pressing return on the keyboard. To close select X.
- **Frame W, H** is the width and height of the widget or object. This can be changed by manually entering the measurements and pressing return on the keyboard. To close select X.
- **Font** - Click on this to reveal a drop down menu with a choice of **Small, Medium, Large** or **Mega** text sizes. Select the size required and close using the X.
- **Transparent** - This function toggles the background from being a solid colour to a transparent background. Useful for putting widgets on top of bitmaps.
- **Orientation** - This determines the direction of the widget or the object inside the widget.



DPM Objects tab

The DPM widget displays one large **Main Digital** numeric read-out with one **Min** and one **Max Digital**, plus up to five identification labels and five alarm markers. The three digitals, five labels and five marks can be toggled on/off by selecting the whole widget (blue handles), and going to the objects tab in the parameter and value windows.

DPM's in Expert mode

Select expert mode to access the objects within the widget. When selected, red grab handles will appear and details of that object will be displayed in the parameter and value windows.

Only the **Main Digital, Label 1** (Pen Tag) and **Label 2** (Pen Units) will be 'On' by default. The objects are toggled on/off in the objects tab when the whole DPM widget is selected (blue grab handles).

Digital General tab

The **Digital** objects have the standard general parameter and value windows plus the four listed below. The general digital tab defaults to Yes for automatic configuration. To change the set up of the digitals, toggle Automatic to No to activate the list below.

- **Sig. Digits** means significant digits. It works like decimal places but specifies the number of digits *before* the decimal point.
- Specify the amount of **Decimal Places** by clicking in the values window, entering a value and pressing enter on the keyboard.
- **0 Padded** places another 0 before the decimal place on the bottom scale limit.
- **Left Justify** keeps the digits close to the left hand edge of its area.

The Labels



There are up to five labels available, each with the standard general parameter and value windows. Only two of the labels will show as default, the **Pen Units** and **Pen Tag** labels. To toggle the labels on/off, select the whole DPM widget and go to the objects tab. User defined text can be added at any time so specific labels can be created and will appear in the labels list for all widgets, [see "User Defined Text" on page 36](#)

The Alarm Markers

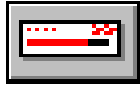
There are up to five **Alarm Markers** available, these can be toggled on/off by selecting the whole DPM widget and going to the objects tab. Two markers appear by default. The marker object has two items listed in the parameter and value windows.

- **Size** - this can be changed to small, medium, large or mega size font.
- **Frame** - this is the markers position within the embedded DPM widget.

Hot Tips !

- Widgets will appear in the recorder pen colour order.
- Extra text can be added at any time. [see "User Defined Text" on page 36](#)
- To select the whole widget hold down the shift key whilst selecting the widget.
- Pressing delete, with any part of a widget selected, will delete the whole widget.
- Right click on the mouse button to access copy, cut and paste options.
- Widgets can be resized when objects are toggled off/on in the Objects tab.
- Set the data source for a widget by selecting the Set Source icon. 
- Use the Go icon to animate the widgets on or off the template. 
- Use the directional arrows on the keyboard to help position widget objects.

The Bar Widget



The bargraph or **Bar widget** is divided into two parts, the **Main Bar widget** and the **Embedded DPM widget**. The main bar widget, when selected, has blue grab handles and a embedded DPM widget, when selected has green grab handles.

The embedded DPM widget can be toggled on/off by selecting the whole widget (blue handles) and going to the **Objects tab** in the parameter and value windows.

The Parameter and Value windows

Select a widget to produce tabs in the **Parameter and Value** windows. These tabs list features and objects within the widget. The **General tab** lists standard features common to all widgets. The **Objects tab** displays the object parts that go to make up that widget.

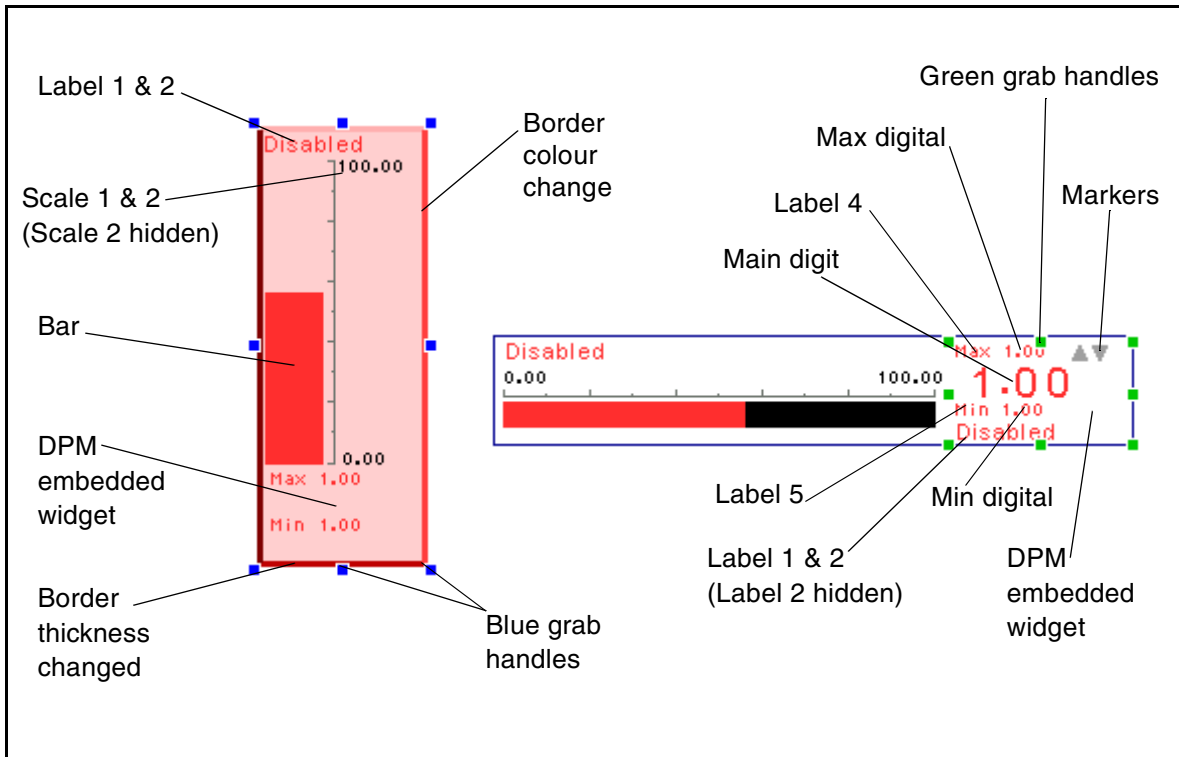
Bar General tab

The **Bar General tab** will consist of the same objects as described in “**DPM General tab**” on page 11. The bar widget has the standard general parameter and value windows plus an objects tab.

Bar Objects tab

The **Objects tab** contains objects available for use in the bar widget. There are three digitals, which can be toggled on/off, five labels which can also be toggled on/off or changed and five marks which can be toggled on/off.

The **Main Bar widget** has the option of changing the border thickness or changing the colour of each side of the border.



Bar Widget in Expert mode

The **Bar widget** in expert mode breaks down into six objects. The **Bar** itself, the **DPM**, two **Scales** and two **Labels**. When one of these objects are selected, red grab handles will appear. In expert mode each object will have its details displayed in the parameters and values windows on the right.

The **Embedded DPM widget** breaks down into objects, three **Digitals**, five **Labels** and five **Marks**. To turn on or off any of the objects it is necessary to select the whole widget, go to the objects tab and toggle on/off. For example, to change the **Pen tag** on the **Bar**, select the whole widget (blue handles) and toggle Off **Label 1**. To turn off the **Main Digitals** on the DPM select the DPM widget (green handles), go to the objects tab and toggle Off the main digital.

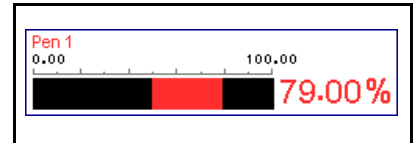
Each individual object can be turned On or Off or changed and can be moved any where within its own widget.

The Bar

The **Bar object**, when selected, will have its details displayed in the parameters and values windows on the right of the template. The bar object has the standard general parameters and values windows plus the list below.

Bar General tab

- The **Level cap** indicates the top of the indicating bar.
- **Cap Colour** is the colour of the **Level cap** on top of the indicating level. This will be greyed out unless **Level cap** is used.
- **Bar type** can be changed from up (which is also left to right on a horizontal scale) to indicating down (right to left). To set the base point from which the indicator starts, select based and enter an amount in **Base Point**.
- **Base point** is where the scale indicator will start. For example, set the base point at 50, on a 0-100% scale, the indicating level will start half way along the bar. Bar type must be set to based.
- The next three **Bar style**, **Above colour** and **Below colour** may not be active if the foreground colour on the **Bar General tab** is set to 'Use Pen Colour'. To change these objects first set the **Foreground colour** on the **Bar General tab** to the colour required. Return to the **Bar tab** and notice the indicating level on the bar has changed to the same colour, this is the **Above colour**. The **Below colour** can also be changed if, for example, the bar indicator from a **Base point** half way along the scale, with one colour showing the level above and another colour showing below the set base point.



Scale General tab

The **Scale** has the standard general parameter and value windows plus:-

- **Graduations** which toggle on/off.
- **Labels** which toggle on/off.
- **Label position** which can be above or below the graduations (left or right on a vertical scale).

-
- **Graduation direction** which puts the graduation marks above or below of the base line (left or right on a vertical scale).

Scale General more....tab

The first six on the list can be toggled on/off by placing the cursor in the values window opposite the item requiring change.



- **Autoscale** defaults to 'Yes', enters major and minor graduations in a standard format depending on the top and bottom ranges defined.
- **BaseLine** toggles on/off the main scale line.
- **Major grads** and **Minor grads** will toggle on/off the major and minor graduations.
- **Label limits** toggles on/off the two labels at either end of the scale range.
- **Label Major** toggles on/off the major graduation labels.
- **Limit font** changes the font size for the two labels at either end of the scale range.
- **Major font** changes the font sizes for the major graduation labels.
- **Baseline colour, Major colour** and **Minor colour** all have colour palettes to choose from.
- **Full width** extends the graduations to the full width of the scale object area.
- **Major length** and **Minor length** can be typed in followed by enter on the keyboard, to set the length of major and minor graduations.
- Under the **Number Format** heading is **Automatic** which is set to 'Yes' by default. To activate any of the items listed underneath, change **Automatic** to read 'No' in the value window.
- **Sig. Digits** means significant digits. It works like decimal places but specifies the number of digits *before* the decimal point.
- **Decimal places** requires specifying the amount of digits after the decimal point.
- **0 Padded** places another 0 before the decimal place on the bottoms scale limit.
- **Left justify** ensures the scale numbers are level to the end of the graduations.

A second scale is available, if required, and a second label. Labels can have their text changed by selecting the whole widget, go to the objects tab, select the label and change the text in the values window. As an object, the label has the standard general parameter and value windows.

The Labels


There are two labels available, each with the standard general parameter and value windows. Only one of the labels will show as default, the *Pen Tag, Label 1*. To toggle the labels on/off, select the whole *Bar widget* and go to the objects tab. User defined text can be added at any time so specific labels can be created and will appear in the labels list for all widgets, see [“User Defined Text” on page 36](#)

Hot Tips !

- Widgets will appear in the recorder pen colour order.
- Extra text can be added at any time. see [“User Defined Text” on page 36](#)
- To select the whole widget hold down the shift key whilst selecting the widget.
- Pressing delete, with any part of a widget selected, will delete the whole widget.
- Right click on the mouse button to access copy, cut and paste options.
- Widgets can be resized when objects are toggled off/on in the Objects tab.
- Set the data source for a widget by selecting the Set Source icon. 
- Use the Go icon to animate the widgets on or off the template. 
- Use the directional arrows on the keyboard to help position widget objects.

Embedded DPM Widget

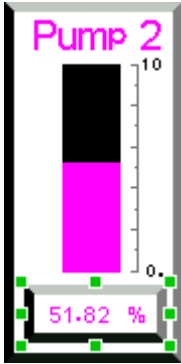
The **Bar** is the only widget with another widget embedded within it. The **Embedded widget** is a DPM (Digital Panel Meter). This can be switched off by selecting the whole **Bar widget** (blue grab handles) go to the **Objects tab** and toggle the **DPM** off. The embedded DPM widget can be selected by clicking in the digital area at the right hand end of the bar widget. The embedded DPM widget will have green grab handles and can be moved anywhere within the bar widget. **Objects** within the embedded DPM widget are all fully accessible in expert mode. To toggle on/off any of the objects, select the whole embedded DPM widget (green handles) and go to the objects tab to amend. When one of the objects are selected, red grab handles will appear. In expert mode each object will have its details displayed in the parameter and value windows on the right.



This shows the bar and embedded DPM widgets in their original state.

This shows the bar and embedded DPM widgets after some alterations.

- Orientation changed to Vertical.
- Bar and embedded DPM widget resized.
- Labels deleted, changed in size.
- User defined text added (Pump 2).
- Borders thickened and raised.



The embedded DPM widget displays all the same General and Objects tab as the DPM widget.

When selected the embedded DPM widget has green grab handles.

DPM General		Objects
Parameter	Value	
Foreground	<input checked="" type="checkbox"/>	0
Background	<input type="checkbox"/>	1
Border On	Yes	
Frame X,Y	5,136	
Frame W,H	71,23	
Font	Small	
Transparent	No	
Orientation	Horizontal	
Max-Min	Yes	

Embedded DPM General tab

When the **Embedded DPM** is selected a complete list of objects is displayed in the standard general parameter and value windows plus an objects tab.

The embedded DPM general tab will consist of the same objects as described in [“DPM General tab” on page 11.](#)

Embedded DPM Objects tab

The **Objects tab** contains objects available for use in the DPM. There are three digitals, which can be toggled on/off, five labels which can also be toggled on/off or changed and five marks which can be toggled on/off.

The Embedded DPM Widget in expert mode

The **Objects** within the embedded DPM widget are all fully accessible in expert mode. To toggle on/off any of the objects, select the whole embedded DPM widget (green handles) and go to the objects tab.

When one of the objects is selected red grab handles will appear. Each object will have its details displayed in the parameter and value windows on the right of the template.

Digital General tab

Within the embedded DPM widget are three digital objects, **Main digital**, **Max digital** and **Min digital**. All three have the standard general parameter and value windows plus the list below. The digitals general tab defaults to 'Yes' for automatic configuration. To change the set up of the digitals, toggle **Automatic** to 'No' to activate the list below.

- **Sig. Digits** means significant digits. It works like decimal places but specifies the number of digits *before* the decimal point.
- Specify the amount of **Decimal Places** by clicking in the values window, entering a value and pressing enter on the keyboard.
- **0 Padded** places another 0 before the decimal place on the bottoms scale limit.
- **Left Justify** keeps the digits close to the left hand edge of its area.

The Labels

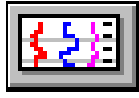
There are up to five labels available, each with the standard general parameter and value windows. Only three of the labels will show as default, the **Max**, **Min** and **Pen tag**, **Labels 1**. To toggle the labels on/off, select the embedded DPM widget and go to the objects tab. User defined text can be added at any time, [see "User Defined Text" on page 36](#)

The Alarm Markers

There are up to five **Alarm Markers** available, these can be toggled on/off by selecting the embedded DPM widget and go to the objects tab. Two markers appear by default. The marker object has two items listed in the parameter and value windows.

- **Size** - this can be changed to **Small**, **Medium**, **Large** or **Mega** size font.
- **Frame** - this is its position within the embedded DPM widget.

The Chart Widget



The **Chart widget** first appears as a blank grey box, information is required before the chart can be displayed. The chart widget requires the source of the data to be set before anything will be displayed on the widget. see [“Set Source for Chart Widget” on page 20](#)

The Parameter and Value windows

Select a widget to produce tabs in the **Parameter and Value** windows. These tabs list features and objects within the widget. The **General tab** lists standard features common to all widgets. The **Objects tab** displays the object parts that go to make up that widget.

Chart General tab

The **Chart General tab** will consist of the same objects as described in [“DPM General tab” on page 11](#). The chart widget has the familiar standard general parameter and value windows plus:

- **Graduations** which toggle on/off.
- **Labels** which toggle on/off.
- **Label position** which can be above or below the graduations (left or right on a vertical scale).
- **Graduation direction** which puts the graduation marks to the above or below of the base line (left or right on a vertical scale).

Chart Objects tab

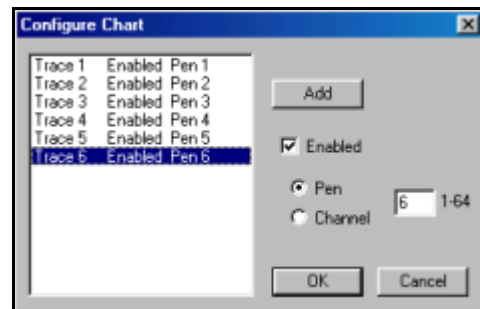
The chart widget consists of three main parts the **Chart**, the **Scale** and the **Pointers**. The **Objects tab** reveals four sets of charts, scales and pointers, only chart 1 will be ‘On’ by default. As the other charts, scales and pointers are switched on they will load directly on top of the existing chart, scales and pointer, until they are selected and moved. The chart, scale and pointers becomes separate objects in expert mode. see [“Chart Widget in Expert mode” on page 21](#)

Set Source for Chart Widget

To set the source for the traces first select the chart widget and click on the **Set Source** icon to produce the **Configure Chart** box.



Click on ‘Add’ to add the **Traces** to the chart, these can be enabled or disabled. Select the source of the trace, from the **Pen** or from the **Channel**. Add as many traces as required, use the mouse to click on the traces to change any of the details. Click on the **Go** icon to animate the chart and display all the traces that have been enabled. The range or limit of the indicating scale is set in the **Zero** and **Span** boxes. A 4% over-range and under-range applies to all signal inputs.



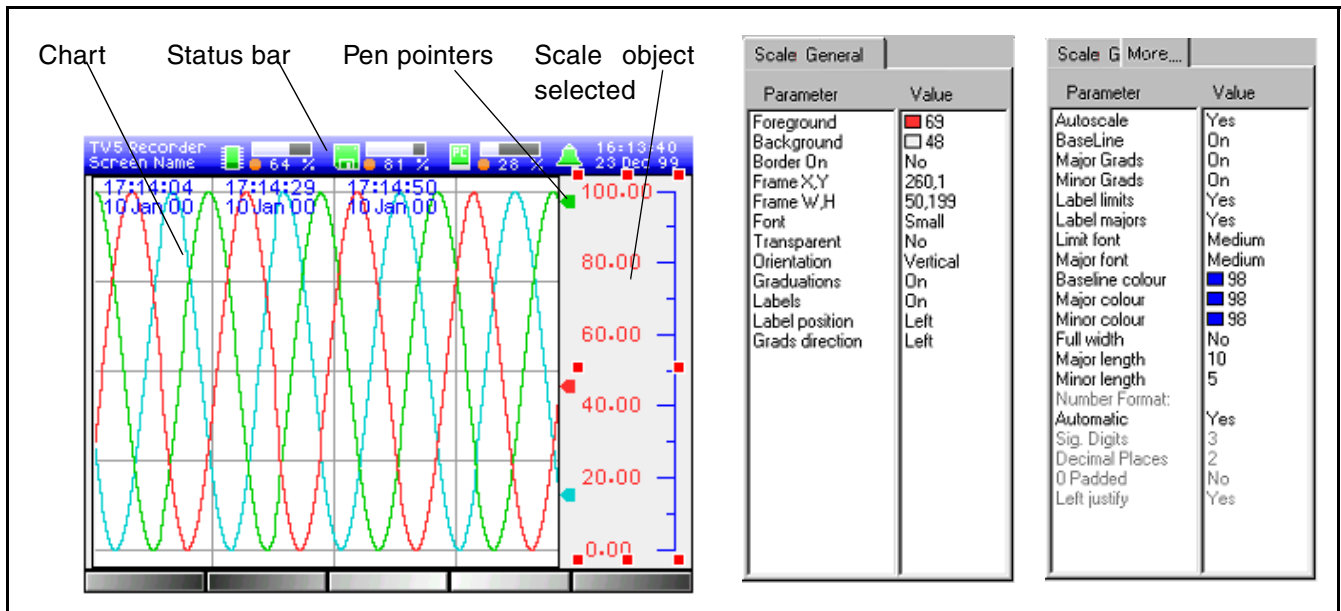


Chart Widget in Expert mode

In **Expert mode** the objects of the chart are accessible for modification. There are three objects, the **Chart**, the **Scale** and the **Pointers** (or **Pens**). When one of the objects is selected red grab handles will appear. In expert mode each object will have its details displayed in the parameter and value windows on the right.

Chart General tab

The **Chart object** has a **Traces tab** which has all the **Traces** listed and switched to visible by default. Each trace displayed can be toggled on/off as required.

Pen Pointers General tab

The **Pointers** or pen object has the standard general parameter and value windows including an option to change the pointer size.

Scale General tab

The **Scale object** has the standard general tab plus four extra items to modify the scale.

- **Graduations** toggles on/off.
- **Labels** toggles on/off.
- **Label position** right or left of the scale.
- **Graduation direction** left or right of the scale base line.



Scale general more...

The first six on the list can be toggled on/off by placing the cursor in the value window opposite.

- **Autoscale** set to 'Yes' this enters major and minor graduations in a standard format depending on the top and bottom scale ranges defined.
- **BaseLine** switches on/off the main scale line.
- **Major grads** and **Minor grads** will toggle on/off the major and minor graduations.
- **Label limits** toggles on/off the two labels at either end of the scale range.
- **Label Major** toggles on/off the major graduation labels.
- **Limit font** changes the font size for the two labels at either end of the scale range.
- **Major font** changes the font sizes for the major graduation labels.
- **Baseline colour, Major colour** and **Minor colour** all have colour palettes to choose from.
- **Full width** extends the graduations to the full width of the scale object area.
- **Major length** and **Minor length** can be typed in followed by enter on the keyboard, to set the length of major and minor graduations.
- Under the **Number Format** heading is **Automatic** which is set to 'Yes' by default. To activate any of the items listed underneath, change **Automatic** to read 'No' in the value window.
- **Sig. Digits** means significant digits. It works like decimal places but specifies the number of digits *before* the decimal point.
- **Decimal places** requires specifying the amount of digits after the decimal point.
- **0 Padded** places another 0 before the decimal place on the bottom scale limit.
- **Left Justify** ensures the scale numbers are level to the end of the graduations.

A second scale is available if required and a second label. Labels can have their text changed by selecting the whole widget, go to the objects tab, select the label and change the text in the values window. As an object, the label has the standard general parameter and value windows.

Hot Tips !

- Widgets will appear in the recorder pen colour order.
- Extra text can be added at any time. [see "User Defined Text" on page 36](#)
- To select the whole widget hold down the shift key whilst selecting the widget.
- Pressing delete, with any part of a widget selected, will delete the whole widget.
- Right click on the mouse button to access the copy, cut and paste options.
- Widgets can be resized when objects are toggled off/on in the Objects tab.
- Set the data source for a widget by selecting the Set Source icon. 
- Use the Go icon to animate the widgets on or off the template. 
- Use the directional arrows on the keyboard to help position widget objects.

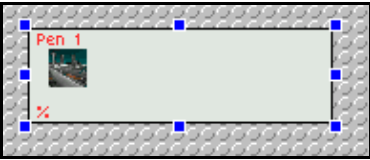
The Bitmap Widget

Bitmaps can only be loaded on to a *V5 Minitrend* that has the mimic option fitted, also referred to as mimic flash. This is extra memory specifically for loading bitmaps. The *Multitrend Plus V5* has this option fitted as standard.




Hit the **Bitmap** icon to produce the **Load Bitmap** box. Select the bitmap required and click on the Open button. Try the standard colour conversion unless the bitmap is particularly grey, if so use the colour boost option. The grey scale indicator can be adjusted if required, 0% equals no grey and 100% will produce a black and white image.

The **Bitmap** image will appear within its own widget along with two label options.



This is how the **Bitmap** appears when loaded on to the template.



This is how the **Bitmap** looks after some alterations.

The bitmap image has been stretched to fit the template.

Label 1 changed with user defined text, label 2 deleted.

A bar widget modified and placed on top of the bitmap image.

The Parameter and Value windows

Select a widget to produce tabs in the **Parameter and Value** windows. These tabs list features and objects within the widget. The **General tab** lists standard features common to all widgets. The **Objects tab** displays the object parts that go to make up that widget.

Bitmap General tab

The **Bitmap General tab** will consist of the same objects as described in “**DPM General tab**” on page 11. The bitmap widget has the standard general parameter and value windows and an objects tab.

Bitmap Objects tab

Under the **Objects tab** the bitmap is set to On by default. There is a **Stretch to fit** option which will fill the whole widget area with the **Bitmap** image. Once the **Stretch to fit** option has been used, it must be resized using the grab handles. Two **Labels** are displayed and set to be On as default.

Overlapping Widgets

When a widget is placed on top of another, such as a **Bitmap widget**, be aware that when the bitmap widget is selected the other widget will disappear. The selected widget comes to the front and the other widget goes behind. Use the 'Send to back' function from the tool bar. This can be used on any overlapping widgets.

Blank areas on the template

Any part of the template left showing the grey background will be displayed on the recorder as a black background. Use blank widgets to fill up the template. Use a DPM, Bar or Chart widget and turn off all the objects, this will leave a blank widget. Set the background colour of the widget to match.

Bitmaps conserving memory

Screen layouts that are made up from a lot of individual bitmaps will take up a lot of memory space. To cut down on memory space, design the screen layout using all the static bitmaps first and save this as one bitmap in another program such as Paint Shop Pro. Copy and paste the bitmap back into *Screen Designer* and add the variable bitmaps to the layout. Assign the pen configurations to the variable bitmaps using the 'Set Source' icon.

Assigning a pen to the bitmap

Remember to attach a pen to the variable bitmaps using the 'Set Source' icon. Each bitmap can have a separate pen or the same pen can be assigned to a set of bitmaps when creating a sequence. [see "Animated Bitmaps" on page 25](#) and ["Set Data Source" on page 10](#).

NB. It is important that the pens assigned to bitmaps are available on the recorder or the bitmap will not load correctly.

The Bitmap Widget in Expert mode

The **Bitmap** in expert mode has three objects, the bitmap image and two labels.

The Bitmap

The **Bitmap object** has the standard general parameter and value as well as a **Stretch to fit** option which will fill the whole widget area with the **Bitmap** image. Once the bitmap has used the **Stretch to fit** option it must be resized using the grab handles.

The Labels

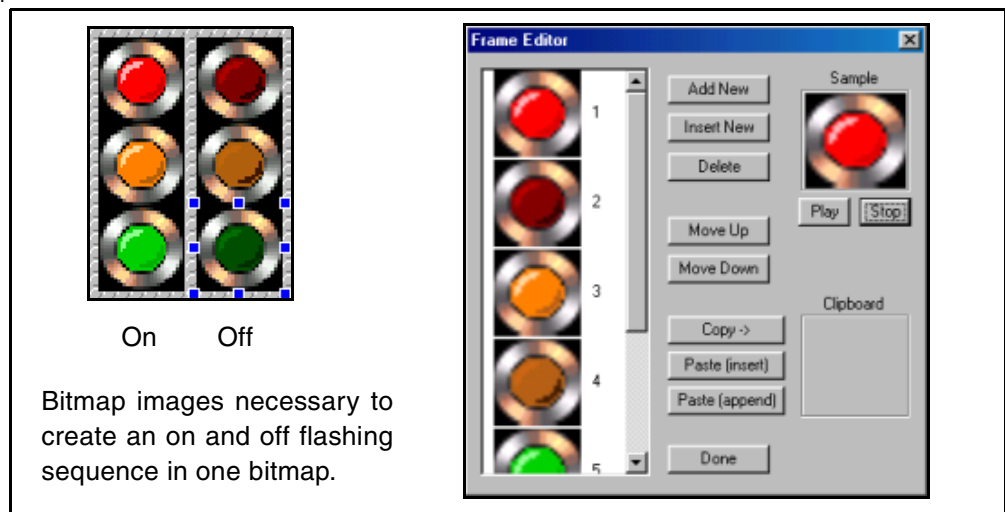
The two labels both have a **Text General tab** with the standard general parameter and value windows. **Label 1** is set to **Pen Tag** and **Label 2** is set to **Pen Units**.

User defined text can be added at any time, [see "User Defined Text" on page 36](#)

Animated Bitmaps

Many bitmaps can be displayed on one template.

Bitmaps can be edited together to create a sequence. To compile a sequence of bitmaps, ensure all the bitmap images required for the sequence are available. Load the first one on to the template as normal, select it and then right click on the image to produce the **Frame Editor** box. The frame editor box will display the bitmap image as Frame 1, click on 'Add New' and select the next bitmap image to be second in the sequence. The sequence can be changed using the move up and move down buttons. Images can be repeated using the copy and paste buttons and deleted at any time with the delete button. Sequences of animation can be tested when the frames are in place and are shown in the sample box. Build the sequence up adding the bitmap images until complete then press done.

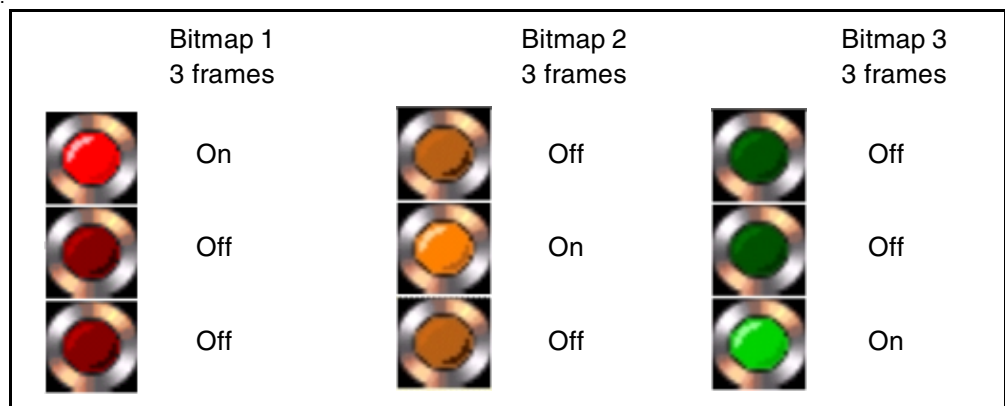


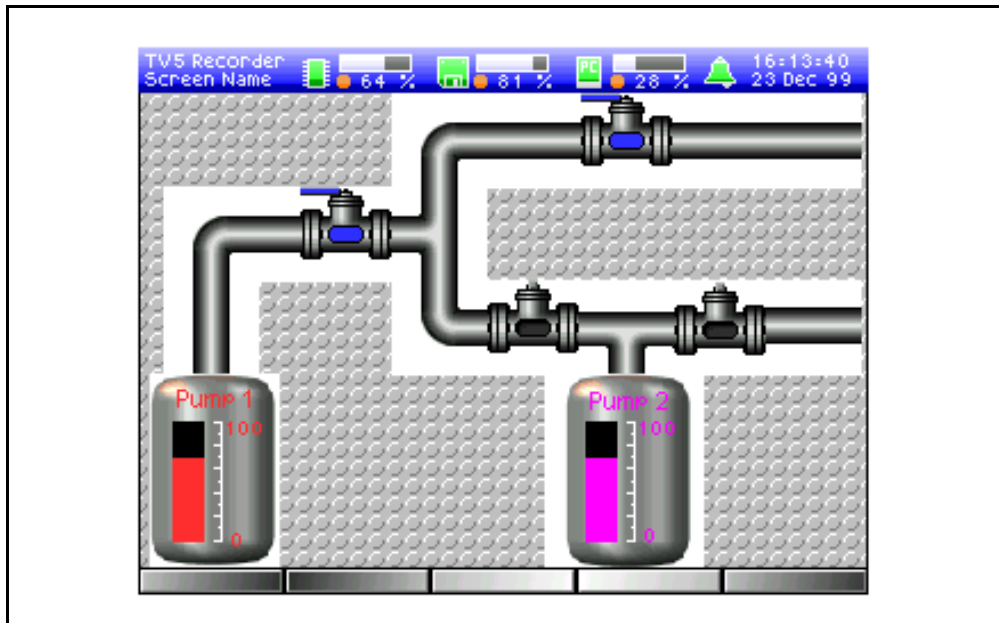
On Off
Bitmap images necessary to create an on and off flashing sequence in one bitmap.

A light sequence can be achieved by creating three separate bitmaps each with three images. If the three bitmaps are then allocated the same pen the sequence will run in order.

Timing a sequence is dependant on how many frames there are divided by the full scale range. If the scale range limits are 0-100% and there are five frames the first frame will last between 0-20%, the second frame from 20-40% and so on till the scale reaches 100% and then the sequence will play in reverse, not return to 0.



The same pen is attached to each bitmap to achieve this timed sequence. Ensure any pen assigned to a bitmap is available on the recorder.



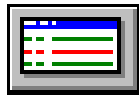


To simply show a valve turning on and off there must be bitmap images in both states. With only two images the time of the On and Off states will be divided equally. On a scale ranging from 0-100% the first frame will be active up to 50% and the second frame up to 100%. The second frame will remain active as the signal drops from 100% to 50% then the first frame will be enabled at 50% down to 0 and back up to 50, and so on.

Hot Tips !

- Widgets will appear in the recorder pen colour order.
- Extra text can be added at any time. [see “User Defined Text” on page 36](#)
- To select the whole widget hold down the shift key whilst selecting the widget.
- Pressing delete, with any part of a widget selected, will delete the whole widget.
- Right click on the mouse button to access copy, cut and paste options.
- Widgets can be resized when objects are toggled off/on in the Objects tab.
- Set the data source for a widget by selecting the Set Source icon. 
- Use the Go icon to animate the widgets on or off the template. 
- Use the directional arrows on the keyboard to help position widget objects.

The Events List Widget



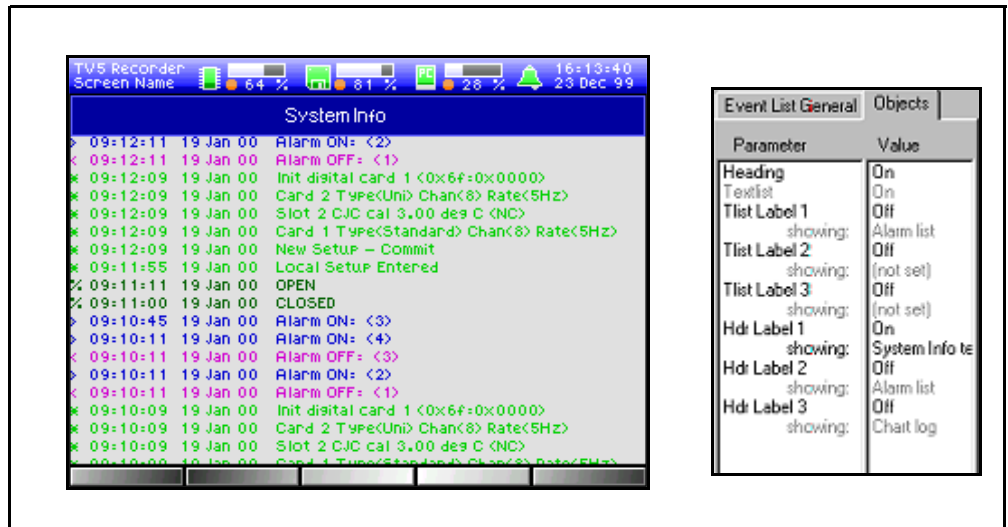
The **Events List Widget** is a record of data activity on the recorder. Events are activated and displayed in the list only when **Event Markers** have been set in the recorder setup. The events list widget replicates the events list in the recorder, found by pressing the **Messages** button on the recorder.

The Parameter and Value windows

Select a widget to produce tabs in the **Parameter and Value** windows. These tabs list features and objects within the widget. The **General tab** lists standard features common to all widgets. The **Objects tab** displays the object parts that go to make up that widget.

Events List General tab

The **Events List General tab** will consist of the same objects as described in “**DPM General tab**” on page 11. The **Events List widget** consists of the standard general parameter and value window plus an **Icon** and **Date** option. The icon appears at the front of the list for identifying the type of event. The date is an option in the list which will display the date and the time the event was logged. Both options can be toggled on/off by selecting the main events list widget and go to the objects tab.



Events List Objects tab

The **Objects tab** reveals the parameter and value of the events list including the heading, three text list labels and three heading labels which can be added.

The Heading

The **Heading** is the blue strip at the top of the events list. This can be switched on/off in the objects tab by selecting the item in the value window.

The Text List labels

Text List Labels are extra labels for use within the text list area or they can be toggled on/off. Labels can be set from the list supplied or a new label defined. [see “User Defined Text” on page 36](#)

The Header Labels

Header label 1 is set ‘On’ as default and reads ‘System Info’ this can be altered or toggled on/off. Labels can be set from the list supplied or a new label defined. [see “User Defined Text” on page 36](#)


Events List in Expert mode

There are two **objects** within the **Events List widget**, the **Heading** and the **Text list** which can be selected in expert mode.

The **Header object** has the standard general parameter and value windows plus an objects tab. The **Objects tab** consists of three labels available. A list of optional text is listed when selecting the label value.

The **Text list** object also has the standard general parameter and value windows plus an objects tab. The objects tab shows three labels available with a list of options when selecting the label value.

Hot Tips !

- Widgets appear in the recorder pen colour order.
- Extra text can be added at any time. [see “User Defined Text” on page 36](#)
- To select the whole widget hold down the shift key and select the widget.
- Pressing delete, with any part of a widget selected, will delete the whole widget.
- Right click on the mouse button to access the copy, cut and paste options.
- Widgets can be resized when objects are toggled off/on in the Objects tab.
- Use the Go icon to animate the widgets on or off the template. 
- Use the directional arrows on the keyboard to help position widget objects.

The Status Bar Widget



The **Status Bar widget** replaces the fixed status bar on the template but can be moved to any position on the template. The status bar widget has exactly the same layout as the fixed one but in expert mode the objects can be accessed.

The Parameter and Value windows

Select a widget to produce tabs in the **Parameter and Value** windows. These tabs list features and objects within the widget. The **General tab** lists standard features common to all widgets. The **Objects tab** displays the object parts that go to make up that widget.

Status Bar General tab

The **Status Bar General tab** will consist of the same objects as described in “**DPM General tab**” on page 11. The **Status Bar widget** has the standard general parameter and value windows and an objects tab.

Status Bar Objects tab

The **Objects tabs** contains a list of ten labels and an icon which can be toggled on/off and an option to change the label text.

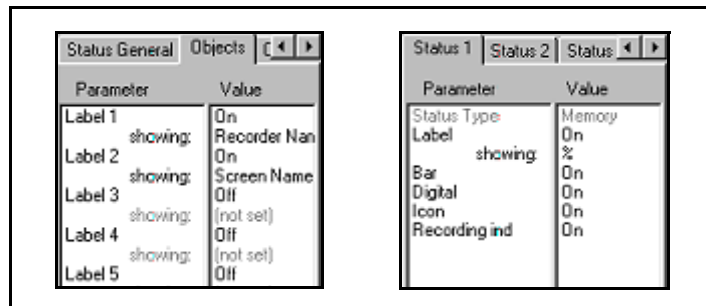
Objects tab

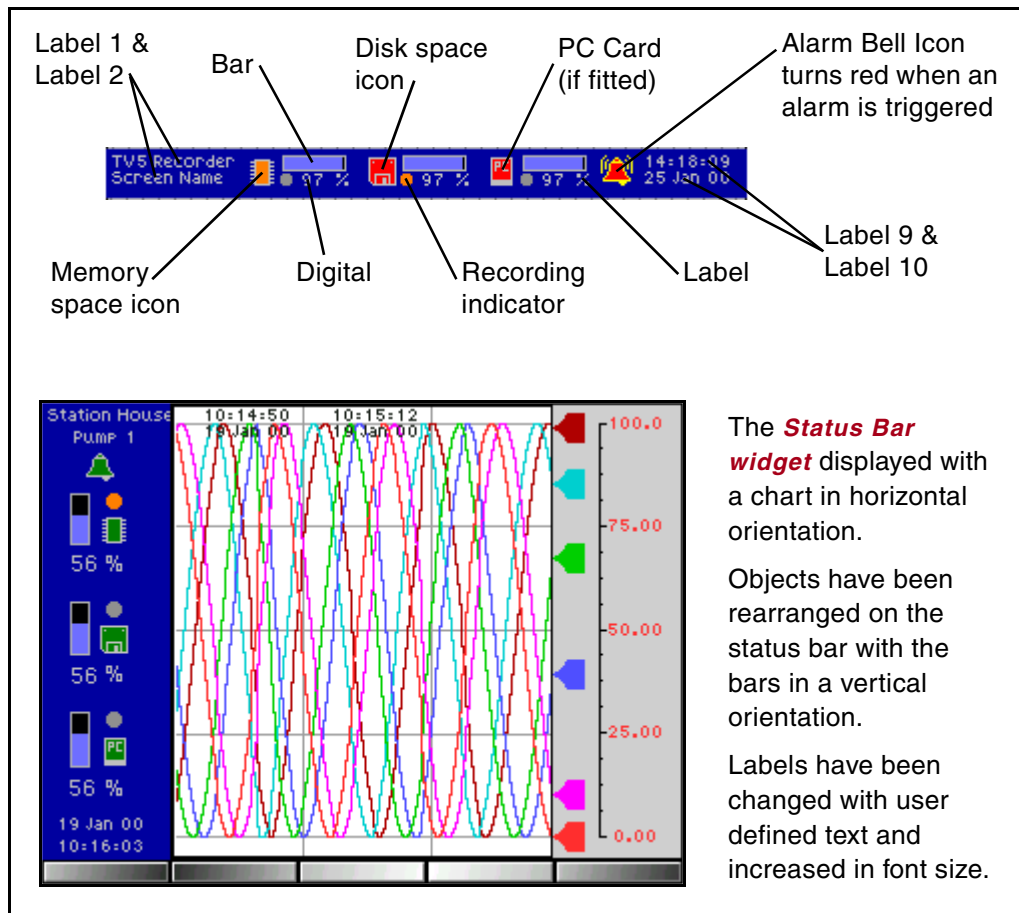
Displayed here are ten **Labels** available for use within the status bar widget. Four of these labels default to On, **Label 1(Recorder name)**, **Label 2 (Screen name)**, **Label 9 (Date)** and **Label 10 (Time)**. **Labels 3, 4, 5, 6, 7, and 8** are switched Off and read ‘not set’, click in the value window to toggle the labels On/Off. To set the label, click on ‘not set’ to reveal a list of labels. User defined text can be added at any time, see “**User Defined Text**” on page 36 The **Icon** represents the Bell, which changes colour when an alarm is triggered.

Status Tabs 1, 2 & 3

Use the arrow keys to produce the **Status tabs**. **Status 1** is for the **Memory state**, identified by the **Chip Icon** including a **Bar, Digitals, Recording marker** and a **Label**. Using the right arrow key go to **Status 2**. **Status 2** is the **Disk state**, identified by **Disk Icon** and including a **Bar, Digitals Recording marker** and a **Label**. Using the right arrow key once more, go to **Status 3** tab. **Status 3** is for the PC card (if fitted). This is identified by the **PC Icon** and includes a **Bar, Digitals, Recording marker** and a **Label**.

The **Status bar** will detect which devices are active in the unit. If there is no **PC card** fitted it will not appear in the status.





Status Bar in Expert mode

The icons for the **Chip**, **Floppy Disk** and **PC card** icons are **Bitmaps**. The chip relates to the amount of memory space used and goes orange when 80% full. The floppy icon represents the amount of space used on the floppy disk and goes red at 95% full. The PC icon displays the amount of space used on the PCMCIA card (if fitted), this icon goes red at 95% full. And finally the alarm bell icon which lights up red to indicate that an alarm has been triggered.

The Icons

All these **Icons** have the standard general parameter and value windows plus a 'stretch to fit' facility for bitmaps. Each icon, except the **Alarm bell**, has a bar, digitals, a recording marker and a label associated with it which are optional.

The Bars

The **Bar object** has the standard general parameter and value windows as well as a bar tab. The **Bar tab** consists of the same items found on the bar widget and works in exactly the same way.

- **Background** and **Foreground**. Both the background and foreground colours can be changed.

- **Border** can be changed to have different border effects, colour and thickness can be modified.
- **Frame** and **Font** sizes are listed.
- Other options are a **Transparent** background or change the **Orientation** to vertical or horizontal and resize using the red grab handles.

The Digitals

The **Digital object** has the standard general parameter and value windows plus a digital tab. The **Digital tab** defaults to 'Yes' for automatic configuration. To change the set up of the digitals, toggle **Automatic** to 'No' to activate the list below.

- **Sig. Digits** means significant digits. It works like decimal places but specifies the number of digits *before* the decimal point.
- Specify the amount of **Decimal Places** by clicking in the values window, entering a value and pressing enter on the keyboard.
- **0 Padded** places another 0 before the decimal place on the bottoms scale limit.
- **Left Justify** keeps the digits close to the left hand edge of its area.


The Labels

The two text labels at either end of the **Status bar** have the standard general and value list for toggling items on/off or for label changes.

The Recording indicator

The **Recording indicator** object is identified by a round circle which turns orange when recording is taking place. The **Marker tab** has size and frame parameters which can have their values changed.

Hot Tips !

- Extra text can be added at any time. [see "User Defined Text" on page 36](#)
- To select the whole widget hold down the shift key whilst selecting the widget.
- Pressing delete, with any part of a widget selected, will delete the whole widget.
- Right click on the mouse button to access copy, cut and paste options.
- Widgets can be resized when objects are toggled off/on in the Objects tab.
- Use the Go icon to animate the widgets on or off the template. 
- Use the directional arrows on the keyboard to help position widget objects.

Chapter 4: Screen Designing

Planning your Screen

Have a good idea what you want to achieve with your new screen, sketch out or plan your design. Think about the information you want to display and how you wish to display it. Each widget displays data in different graphical forms, select the widgets which best suit the data, e.g. graph, digital, or bargraph.

Things to consider before designing a layout.

1. **What is the screen size of my recorder?**
2. **Do I require charts, digital panel meters, bars, bitmaps or an events list or a combination of these.**
3. **Do I require the widgets to reflect the colours of the pens (set as default).**
4. **Do I know my recorder configuration for setting up the data source for traces, pens and channels on each widget.**
5. **Is this going to be a standard design for future layouts or different layouts on each recorder.**
6. **Do you require Bitmaps as part of the screen design and are all the images you require available.**

Screen design starts here

The process of creating, saving and loading a new screen design is a simple and quick step by step procedure. A lot of time can be spent on the design of the screen depending on how complex the concept is.

Step 1 Read the manual.

Step 2 Familiarise yourself with all the functions in Screen Designer, e.g. Widgets and Tool Bar functions.

Step 3 Plan your screen.

Step 4 Create your screen by placing widgets on the template and modifying to suit, design as many screens as required with up to 20 templates to one layout.

Step 5 Set the Source of the data.

Step 6 Set recorder's Screen ready for transfer to recorder.

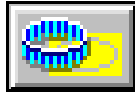
Step 7 Verify and Save the Layout in File 'Frompc.tv' as File type' .lyt' on to floppy disk.

Step 8 Insert disk into recorder and Load Layout.

A good understanding of the tool bar functions and how widgets work is advisable before starting to use *Screen Designer*.

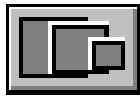
Tool Bar Functions

The **Tool Bar**, displayed down the left side of the design area, contains buttons that activate commands. Float the mouse cursor over each icon to display its function. To select an item, use the left mouse button to click on the icon required.



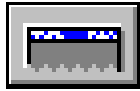
Add New Template

When the **Screen Designer** is first opened, Template 1 is displayed in the centre of the screen and can be used straight away. Use the **Add New Template** icon to start a new screen design, with up to 10 templates per layout. The number of the current template being used is displayed below the **Parameter and value windows**. Select a new template for each new design or modify an existing one. Templates can be selected using the back and forward arrow buttons. [see "Templates" on page 6.](#)



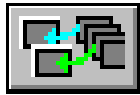
Change Screen Size

Click on this icon to increase or decrease the size of the design area. There are two sizes to choose from, the smaller one represents the **Minitrend V5** screen and the larger one, the **Multitrend Plus V5**.



Status Bar

The **Status Bar**, shown as the blue area along the top of the template, represents the status bar on the recorder screen. Click on the icon to remove the status bar, repeat to show it as a plain blue bar and once more to display the full status bar (default). This status bar can be replaced by a **Status Bar** widget which can be modified in expert mode. [see "The Status Bar Widget" on page 29.](#)



Set recorder's screens

This command configures the screen's setup ready for transfer on to the recorder. Select this icon to activate the **Set Recorder Screens Box**, here the completed templates can be selected and allocated to a screen. Each channel can be assigned a pen, total or counter setting. The same template can be allocated to any number of screens all with different recorder settings.



Verify and Save layout for transfer to recorder

When this icon is selected Screen Designer's software will examine the design and verify it is complete and ready for transfer to disk. No further action is required unless one or more of the widgets has not been placed entirely on the template. A warning message will appear identifying any overhanging widget(s). Reposition the offending widget and repeat this function.



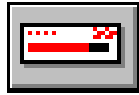
Set Source

The **Source** is where the data originates from, the source of the data must be set here for DPM, Bar, Chart or Bitmap widgets. This icon only becomes active when a widget has been selected. The **Set Source Box** will appear requiring information on where the source data is coming from, either pen or channel number. When the chart widget is selected the **Configure Chart Box** appears, this requires traces to be added to the chart and the source for those traces set, either a pen or channel number. The range or limit of the indicating scale is set in the **Zero** and **Span** boxes. A 4% over-range and under-range applies to all signal inputs.



Add User Text

Text can be changed for any of the pre-generated labels or text can be defined by the user. Anywhere where a label appears **User Text** can be added using the **abc** icon. Click on this to produce the 'Edit User Definable Text' box. Type each piece of text into the top box, individually, click on Add, type in the next piece of text, click on Add and so on. This text will now appear, as an option, in a selection list for every label on every widget. [see "User Defined Text" on page 36.](#)



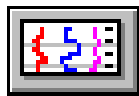
New Bar Widget

Each time this icon is pressed a **Bar Widget** will appear, up to 32 per template. The bar widget reflects the recorder's pen colours and will appear in the same colour/pen order. By clicking on the widget, blue grab handles are activated allowing the bar to be moved or resized. If the digital area, to the right of the bar, is activated, green grab handles will appear. This is an embedded widget which can be moved independently within the main bar widget. To access the objects within the widget select expert mode. [see "The Bar Widget" on page 14.](#) Each bar widget can be placed anywhere on the template. The bar widget has to be selected in order for its attributes to be displayed in the **Parameter and Value** windows on the right of the template. [see "Parameter/Value Windows" on page 6.](#)



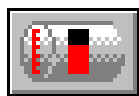
New DPM Widget

DPM stands for **Digital Panel Meter**, press the icon for a DPM widget to appear. The DPM widgets reflect the recorder's pen colours and will appear in the same order. By clicking on the DPM widget, blue grab handles are activated allowing the bar to be moved or resized. To access the objects within the widget select expert mode. [see "The DPM Widget" on page 11.](#) Each DPM widget can be placed anywhere on the template. The DPM widget has to be selected in order for its attributes to be displayed in the **Parameter and Value** windows on the right of the template. [see "Parameter/Value Windows" on page 6.](#)



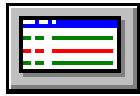
New Chart Widget

Each time this icon is pressed a **Chart Widget** will appear. By clicking on the chart area of the widget, blue grab handles are activated allowing the chart to be moved or resized. The chart widget requires configuration information before the chart can be displayed, [see "Set Source" on page 34.](#) To access the objects within the widget select expert mode, [see "The Chart Widget" on page 20.](#) The chart can be placed anywhere on the template. The chart widget has to be selected in order for its attributes to be displayed in the **Parameter and Value** windows on the right of the template. [see "Parameter/Value Windows" on page 6.](#)



New Bitmap Widget

Bitmaps can be imported on to the template by selecting this icon and choosing a **.bmp** or **.dib** file. **Screen Designer** converts the bitmaps colours to those within the recorders palette. Select Standard colour conversion unless the bitmap image is particularly grey then try the colour boost option. The grey scale indicator can be adjusted if required, 0% equals no grey and 100% will produce a black and white image. The **Bitmap** image will appear within its own widget along with two label options. Bitmaps may be resized to fit on to the template as a backdrop or wallpaper. Widgets can then be placed on top of the bitmap to highlight activity within the image. To access the objects within the widget select expert mode. [see "The Bitmap Widget" on page 23.](#)



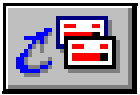
New Events List Widget

The *Events List* is a record of data activity on the recorder. The type of events represented must be setup in the recorder before the events list can show any data activity. When selected the *Parameter and Value* windows display tabs for the *Events List General*, and *Objects*, these all contain attributes that can be turned on/off or modified as required. To access the objects within the widgets select expert mode. [see “The Events List Widget” on page 27.](#)



Add New Status Bar Widget

The *Status Bar* widget will position itself on top of the status bar currently shown on the template, but it can be moved anywhere on the template like any other widget. The status bar widget has exactly the same layout as the fixed one but in expert mode the components are accessible. [see “The Status Bar Widget” on page 29.](#)



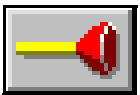
Send Widget to back

This function can be used with all widgets and is useful for placing widgets on top of each other, ideal for bitmaps. A bitmap can be loaded to fill the whole template and other widgets placed on top to indicate activity in a particular area on a specific part of the bitmap image.



Action !

The *Action!* facility, or *Go* icon, will animate the widgets by simulating a moving input signal. All widgets on or off the template can be automated without affecting their full command functionality. A 4% over-range and under-range applies to all signal inputs.



Sticky Widgets

This facility helps to align the widgets placed on the template. It works like a very fine grid and the widget snaps on to a location. The default of this icon is set to be active, but can be switched off allowing the widgets to float freely.



Expert Mode

Enable expert mode by clicking on the last icon on the list. In expert mode each individual component has its own identity with its own list of parameters and values. These components parts have red grab handles and can only be moved and modified with its own widget.

User Defined Text

Each label can be changed using a list of pre-ordained labels found in the parameter and value windows or *User Defined Text* can be added using the *abc* icon. Click on this to produce the ‘Edit User Definable Text’ box. Type each piece of text into the top box, click on Add, type in the next piece of text, click on Add and so on. When user defined text is added to a label it will appear, as an option, in every label list for every widget.

Colour Palette

Within the parameter and value windows certain features of a widget can have colour changes. This is identified by a box containing a colour and a number being displayed in the value window. The number relates to the colour number in the palette. Click on a feature, displaying a colour box and number, to reveal the colour palette icon. Select the icon to produce the full colour palette. At the bottom of the palette is the *Use Pen Colour* box, this is used to assign the default pen colour to the selected feature of the widget.



Non Expert mode

With expert mode disabled only the whole widget, and the embedded DPM widget, can be accessed. The appearance of the widget can be changed, such as colour and size. The objects within the widgets can be toggled on and off, but that is all.

To select the whole widget, hold down the shift key whilst selecting anywhere on the widget. To toggle the components on or off it is necessary to select the whole widget as these components are the items listed in the Objects tab for the widget.

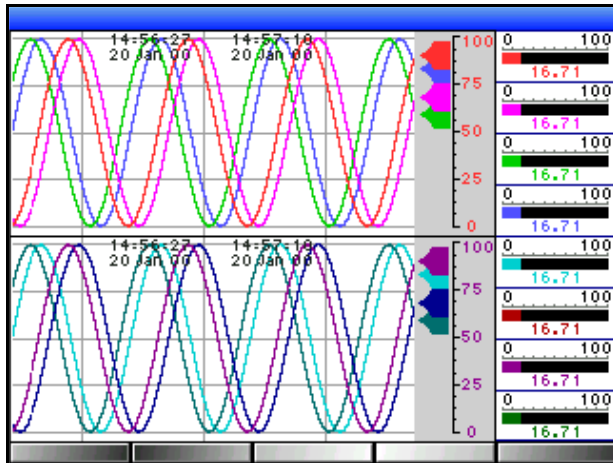
Expert Mode

Enable expert mode by clicking on the last icon on the list. In expert mode each individual component has its own identity with its own list of parameters and values. These components parts have red grab handles and can be modified using the parameters and values windows but only be moved within its own widget.



Screen Designs

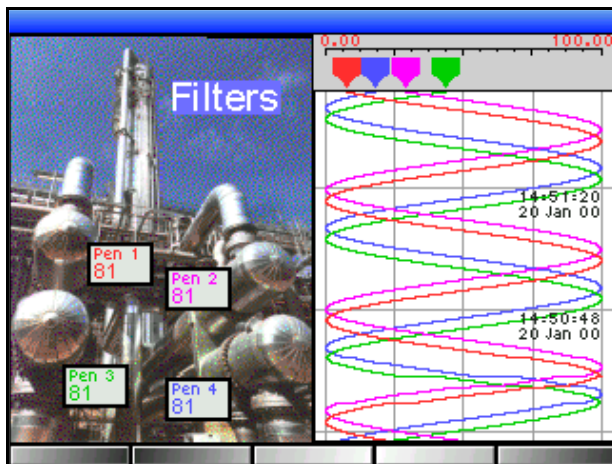
Examples of what can be achieved in Screen Designer.



This screen has been created using two Chart widgets and eight Bar widgets.

The chart widgets are in horizontal orientation with pen pointers and scales. Labels have been toggled off so the widget can be resized using the grab handles.

The bar widgets have had the embedded DPM widget switched off, the labels re-arranged and resized using the grab handles.



In this screen a bitmap has been used on half of the template. DPM widgets have had all labels, digits and marks switched off except one label and the main digit.

The chart, scale and pen pointer objects have been resized to allow the whole Chart widget to be reduced to half the width of the template.

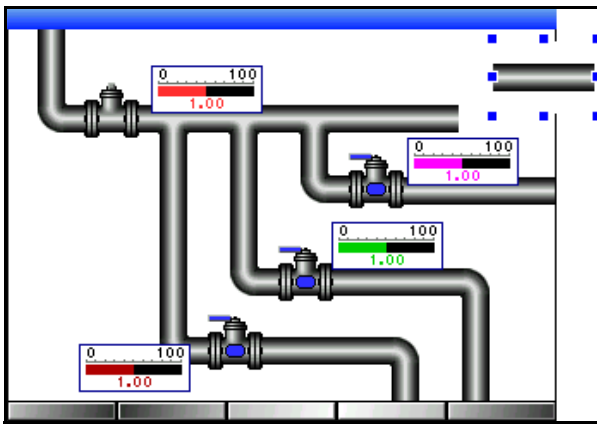
Extra labelling can be achieved by using any widget that has a label and switching everything else off.



These bitmap images have been specifically created to represent a pressure control dial. The switches are individual bitmaps so too are the strip of LEDs.

A Bar widget has been added after the embedded DPM and the labels have been removed. This leaves the bar itself and a scale.

When animated, the dial indicator moves from 0-10, the switches toggle from On to Off, the LEDs flash On and Off and the Bar widget indicator will rise and fall.



This screen is made up from individual bitmaps specially created by our team of *Screen Designers* at **Siemens**.

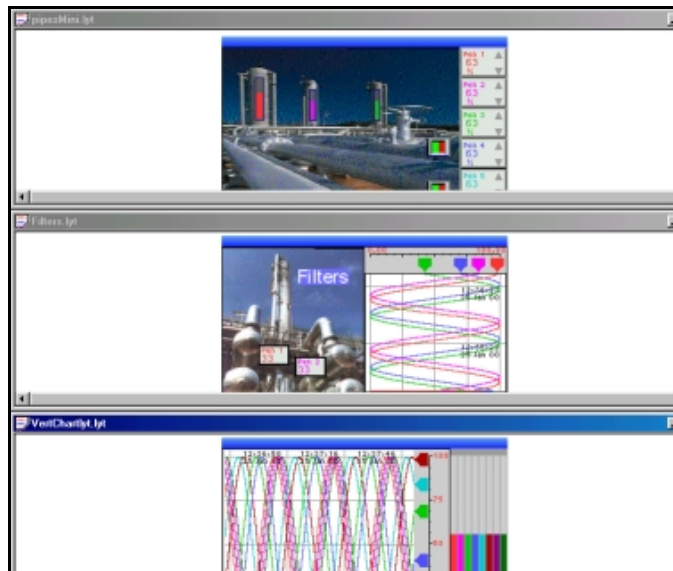
Specialised libraries of bitmaps can be created for any application upon request.

When animated, the valves are shown to turn On and shut Off and the Bar widgets indicator will rise and fall with the digital readings.

Displaying Layouts

Layouts can be displayed in **Tile** mode, showing up to 4 individual charts on the *Minitrend V5* size screen and 12 charts on a *Multitrend Plus V5* screen. [see “Drop Down Menu” on page 6](#). Go to Window and select Tile.

Examples of three separate layouts in Tile mode.



Any part of the template left showing will display as a black background when transferred on to the recorder. To ensure the screen is completely filled use any widget and turn off all the objects leaving it blank. Resize the widget to fill the whole template and reset the background colour.

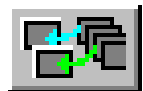
Set Data Source

The **Source** is where the data originates from, the source of the data must be set here for DPM, Bar, Chart or Bitmap widgets. This icon only becomes active when a widget has been selected. The **Set Source Box** will appear requiring information on where the source data is coming from, either pen or channel number. When the chart widget is selected the **Configure Chart Box** appears, this requires traces to be added to the chart and the source for those traces set, either a pen or channel number. The range or limit of the indicating scale is set in the **Zero** and **Span** boxes. A 4% over-range and under-range applies to all signal inputs.



Set Recorder's Screen

When the layout is complete, with up to 10 templates to one layout, click on the **'Set recorder's screen'** button. The set recorder's screen box will appear. The recorder's screen name can be changed or left as Screen 1, this will be the name that identifies this template on the recorder. Enable the screen and select which template will be Screen 1 (or renamed). 'Screen name from template' will be activated within the box once the screen has been enabled. If the template has been named in screen designer then by selecting 'screen name from template' this will rename the recorder's screen name. The template and screen will have the same name. Select each channel and allocate a pen number. The pen numbers are sequential and can be changed on each channel by selecting one and using the up and down arrow keys.



Saving Screen Layouts

When a layout is complete, if you forget to save it and go to close, it will prompt you to Save any changes. Layouts do not have to be saved anywhere specifically, so the user may create a file in a location of their choice.



When saving a layout to a floppy disk for transfer on to the recorder, use the 'Verify and save layout for transfer to recorder' button. If a widget is over hanging the template a message will appear and the offending widget will be highlighted for repositioning. To save a layout for transfer on to the recorder's screen it must be saved in File 'Frompc.tv'. Screen Designer is set to default to this file. Rename file if desired, layout 'Save as type' is Screen Designer Layout (.lyt).

The layout, saved on the floppy disk, can be opened and used again in the **Screen Designer** or placed in the recorder in order to load the layout on to the recorder's screen.

Printing Screen Layouts

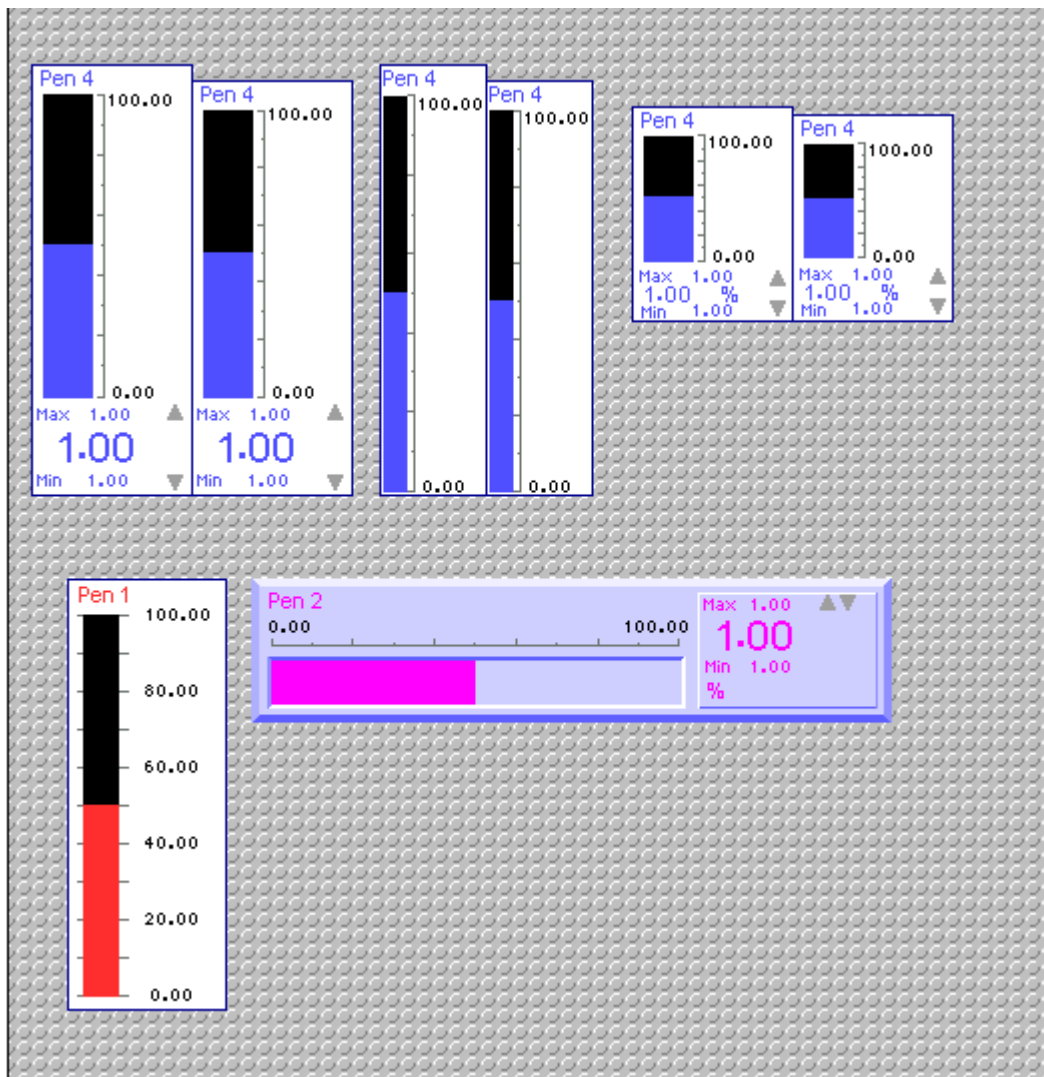
Simply go to the **File** drop down menu and select Print Preview, to show exactly what will print. Choose Print to print the layout as it is or Close and return to the layout and choose Print Setup which gives the option of landscape or portrait layout.

Chapter 5: Widget Library

The Library

The **Widget Library** has been formed to assist the designer in creating new screen layouts. The library contains pre-designed widgets including bars, DPMs and charts.

Widgets from the library can be modified in the same way as widgets selected from the tool bar.



Shown here are examples of a bar widget in different configurations. The first two shows the widget in its standard form but in a vertical orientation with one slightly shorter to allow for the status bar widget.

The second pair, also vertical, have had the embedded DPM widget removed, and the third pair have been reduced in length. These also have slightly shorter versions to allow for the status bar widget.

The bar widget, bottom left, is shown with the digitals or DPM removed and the graduation lines extended across the indicating bar.

The horizontal bar widget has had the background colour changed and the borders thickened and changed to give a raised appearance. The embedded DPM widget has also been changed to reflect the main bar widget with colour and border changes.

The digitals or embedded DPM widget at the bottom of the bar widget is a separate widget which can be turned on or off or modified using the **Parameter and Value Windows, Object** tab.

The Widget library can be accessed by going to the top drop down menu and selecting File, Open. Select this file path.

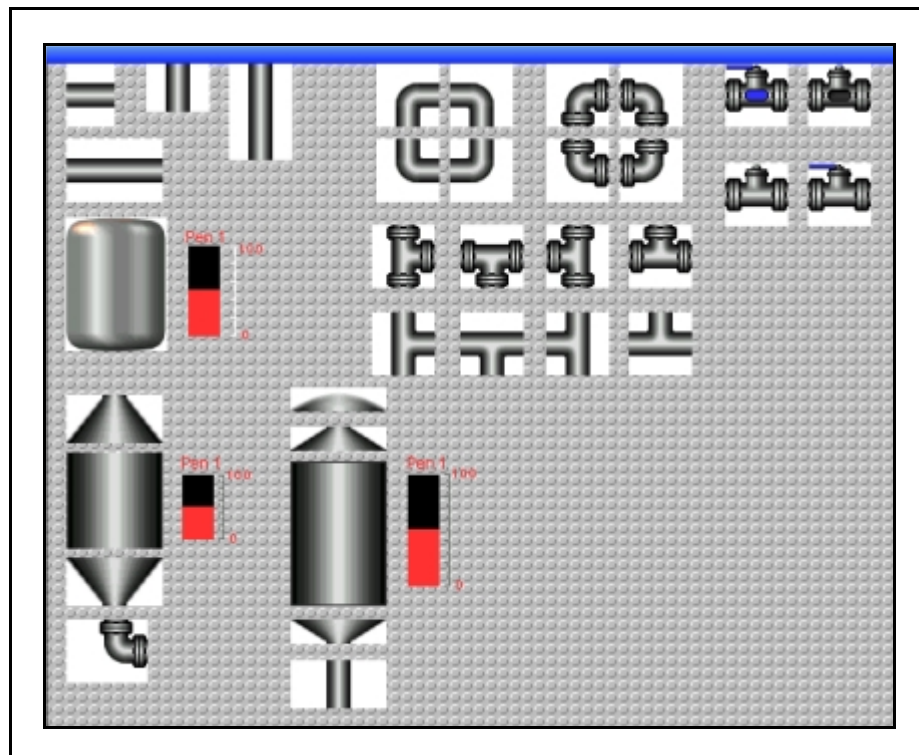
Choose File Type: Screen Designer Library (*.lby).

Click on a widget to select it, using either the right mouse button or the drop down Edit menu, choose Copy and return to the layout under design, click on the template and choose Paste. The widget can then be placed into position on the template and modified to suit.

Bitmap Libraries

Bitmap libraries can be created and built up for specific applications.

Contact **Siemens** to enquire about customer specific libraries created by our **Screen Designer** team.



Index

A

<i>Action!</i>	36
<i>Add New Template</i>	34
<i>Animated Bitmaps</i>	25

B

<i>Bar General tab</i>	14
<i>Bar Objects tab</i>	14
<i>Bar Widget</i>	14
<i>Bar Widget in Expert mode</i>	15
<i>Bitmap General tab</i>	23
<i>Bitmap in Expert Mode</i>	24
<i>Bitmap Objects tab</i>	23
<i>Bitmap Widget</i>	23
<i>Bitmaps</i>	7

C

<i>Change Screen Size</i>	34
<i>Chart General tab</i>	20
<i>Chart Objects tab</i>	20
<i>Chart Widget</i>	20
<i>Chart Widget in Expert mode</i>	21
<i>Colour Palette</i>	36

D

<i>DPM General tab</i>	11
<i>DPM Objects tab</i>	12
<i>DPM Widget</i>	11
<i>DPM's in Extert mode</i>	13
<i>Drop Down Menus</i>	6

E

<i>Embedded DPM General tab</i>	18
<i>Embedded DPM Objects tab</i>	19
<i>Embedded DPM Widget</i>	18
<i>Embedded DPM Widget in expert mode</i> ...	19
<i>Events List General tab</i>	27
<i>Events List in Expert mode</i>	28
<i>Events List Objects tab</i>	27
<i>Events List Widget</i>	27
<i>Expert Mode</i>	37

G

<i>Glossary</i>	8
<i>Grab Handles</i>	7

I

<i>Installation</i>	4
<i>Introduction</i>	3

L

<i>Layouts</i>	6
<i>Library, Widget</i>	41

M

<i>Menu Bar</i>	34
-----------------------	----

N

<i>New Bar Widget</i>	35
<i>New Bitmap</i>	35
<i>New Chart Widget</i>	35
<i>New DPM Widget</i>	35
<i>New Events List</i>	36
<i>Non Expert mode</i>	37

O

<i>On Line Help</i>	8
---------------------	---

P

<i>Parameter/Value Windows</i>	6
<i>Planning your Screen</i>	33
<i>Printing Screen Layouts</i>	39

S

<i>Save Layout to Floppy</i>	34
<i>Saving Screen Layouts</i>	39
<i>Screen design starts here</i>	33
<i>Screen Designs</i>	37
<i>Send Widget to back</i>	36
<i>Set Data Source</i>	39
<i>Set Recorder's Screens</i>	34
<i>Set Recorder's Screen</i>	39
<i>Set Source</i>	34
<i>Set Source for Chart Widget</i>	20
<i>Shortcuts</i>	7
<i>Start up</i>	4
<i>Status Bar</i>	34
<i>Status Bar General tab</i>	29
<i>Status Bar in Expert mode</i>	30
<i>Status Bar Objects tab</i>	29
<i>Status Bar Widget</i>	29
<i>Sticky Widget</i>	36
<i>System Requirements</i>	3

T

<i>Templates</i>	6
<i>The DPM Widget</i>	11
<i>The Tool Bar</i>	7
<i>Tool Bar Functions</i>	34
<i>Tour the Interface</i>	5

U

<i>User Defined Text</i>	36
--------------------------	----

VWXYZ

<i>What is a Widget ?</i>	9
<i>Widget Library</i>	7
<i>Widgets</i>	6
<i>Widgets in Expert mode</i>	9

Please take a moment to complete this questionnaire

1	Reputation
<p>How would you rate the reputation of Siemens</p> <p>Tick as appropriate</p> <p><input type="checkbox"/> A very reputable, successful company</p> <p><input type="checkbox"/> A reputable company</p> <p><input type="checkbox"/> A disreputable company</p> <p><input type="checkbox"/> No views either way</p>	

2	Service																																														
<p>How do you rate or perceive the following service levels provided by our sales staff?</p> <p>Tick as appropriate Excellent Good Fair</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Response speed</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Quality of response</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Follow up response</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Overall level of service</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table> <p>How do you rate or perceive the following service levels provided by our Technical Support Service?</p> <p>Tick as appropriate Excellent Good Fair</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Response speed</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Quality of response</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Follow up response</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Overall level of service</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table> <p>How could our service be improved upon</p> <p>.....</p> <p>.....</p> <p>How many times do you receive a visit from one of our Sales representatives? Visits every:</p> <p>1-3 months <input type="checkbox"/> 3-6 months <input type="checkbox"/> 6-12 months <input type="checkbox"/></p> <p>How does that compare to our competitors?</p> <p>More <input type="checkbox"/> Less <input type="checkbox"/> The same <input type="checkbox"/></p> <p>Score on a level of 1-10, with 10 being the best</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Quality of manuals / sales literature</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Administration / documentation and letters</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Technical expertise of our sales staff</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Sales staff ability to give informed advice</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>The quality of the Siemens sales team.</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Pricing</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Siemens understanding of your industry.</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>		Response speed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Quality of response	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Follow up response	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Overall level of service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Response speed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Quality of response	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Follow up response	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Overall level of service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Quality of manuals / sales literature	<input type="checkbox"/>	Administration / documentation and letters	<input type="checkbox"/>	Technical expertise of our sales staff	<input type="checkbox"/>	Sales staff ability to give informed advice	<input type="checkbox"/>	The quality of the Siemens sales team.	<input type="checkbox"/>	Pricing	<input type="checkbox"/>	Siemens understanding of your industry.	<input type="checkbox"/>
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Response speed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																												
Quality of response	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																												
Follow up response	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																												
Overall level of service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																												
Quality of manuals / sales literature	<input type="checkbox"/>																																														
Administration / documentation and letters	<input type="checkbox"/>																																														
Technical expertise of our sales staff	<input type="checkbox"/>																																														
Sales staff ability to give informed advice	<input type="checkbox"/>																																														
The quality of the Siemens sales team.	<input type="checkbox"/>																																														
Pricing	<input type="checkbox"/>																																														
Siemens understanding of your industry.	<input type="checkbox"/>																																														

3	Products
<p>How do you perceive our range of products?</p> <p>Tick as appropriate</p> <p><input type="checkbox"/> Products offered are better than those of competitors</p> <p><input type="checkbox"/> Products offered are worse than those of competitors</p> <p><input type="checkbox"/> Products offered are the same as those of competitors</p> <p>Any other comments</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>Are there any products that we do not provide that you would like us to provide - or any we could improve on?</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>Improvements to existing products.....</p> <p>.....</p> <p>.....</p>	

4	General
<p>If you are an existing or new customer, what made you choose Siemens.</p> <p><input type="checkbox"/> Only on price</p> <p><input type="checkbox"/> Price plus a combination of factors</p> <p><input type="checkbox"/> Prefer to deal with a reputable company</p> <p><input type="checkbox"/> Siemens offers more than the competition in terms of 'added value' over and above the product itself</p>	

<p>Thank you for completing this questionnaire.</p> <p>Please fill out your name and address below.</p> <p>Photo copy this form and Fax to us on</p> <p style="font-size: 1.2em;">+49 (0721)595 2060</p> <p>Name</p> <p>Company name</p> <p>Address</p> <p>.....</p> <p>County..... Postcode.....</p> <p>Tel:..... Fax.....</p> <p>Company business</p> <p>.....</p>	
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Warranty/Remedy

Siemens warrants goods of its manufacture as being free of defective material and faulty workmanship. Contact your local sales office for warranty information. If warranted goods are returned to Siemens during that period of coverage, Siemens will repair or replace without charge those items it finds defective. The foregoing is Buyer's sole remedy and **is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose.**

While we provide application assistance, personally, through our literature and the Siemens web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change at any time without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.