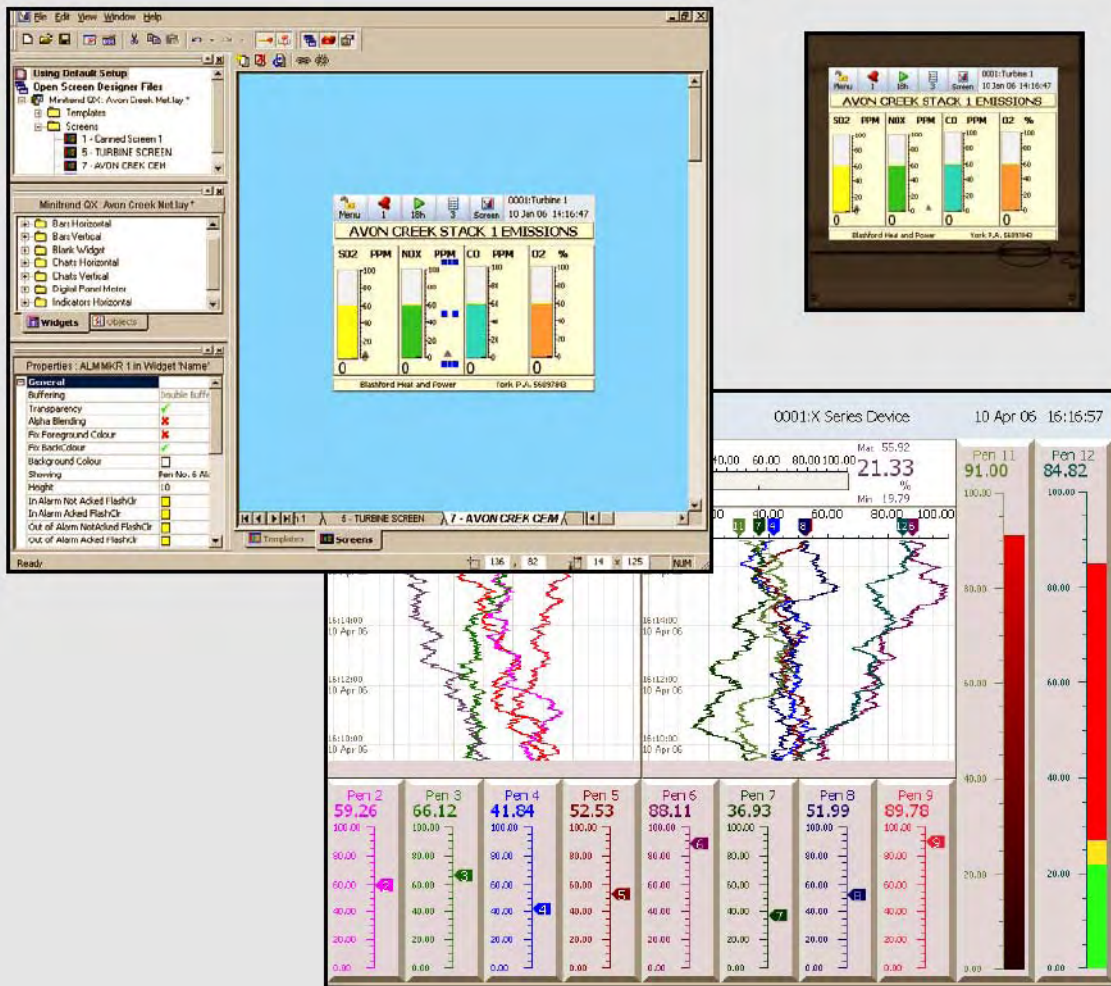


# Honeywell Screen Designer - X Series



## ADVANCED SOFTWARE SYSTEMS

For a powerful software design tool that creates unique screen layouts for your recorder

... choose **Honeywell**



# Table of Contents

<b>Software License .....</b>	<b>v</b>
<b>Notices and Trademarks .....</b>	<b>xiii</b>
Notices .....	xiii
<i>Warranty/Remedy .....</i>	<i>xiii</i>
<i>Year 2000 Compliance Statement .....</i>	<i>xiv</i>
Trademarks .....	xiv
Protocols .....	xiv
Safety .....	xiv
<b>Section 1: Preface .....</b>	<b>1</b>
This Manual .....	1
<i>Supplementary documentation .....</i>	<i>1</i>
Notes .....	2
X Series Screen Designer software overview .....	2
<b>Section 2: Introduction &amp; Installation .....</b>	<b>5</b>
CD Contents .....	5
Learning about Screen Designer .....	5
<i>Read this Manual.....</i>	<i>5</i>
System Requirements .....	6
<i>Recorder Requirements: .....</i>	<i>6</i>
Installation .....	7
<i>Start up.....</i>	<i>7</i>
<b>Section 3: X Series Screen Designer Interface .....</b>	<b>9</b>
X Series Screen Designer Interface .....	9
<i>Main Toolbar .....</i>	<i>10</i>
<i>Status Bar.....</i>	<i>14</i>
Design Window .....	14
<i>Design window toolbar.....</i>	<i>14</i>
<i>Design window tabs.....</i>	<i>15</i>
File Browser Window .....	16
<i>File Types.....</i>	<i>18</i>
<i>Layout File.....</i>	<i>19</i>
<i>Template File .....</i>	<i>20</i>
<i>Setup File.....</i>	<i>21</i>
Properties Window .....	22
<i>Template Properties.....</i>	<i>22</i>
<i>Screen Properties.....</i>	<i>22</i>
<i>Widget Properties .....</i>	<i>23</i>
<i>Object Properties.....</i>	<i>24</i>

Toolbox Window .....	25
<i>Widgets Tab</i> .....	25
<i>Objects tab</i> .....	26
Templates .....	27
<i>Template Tabs</i> .....	28
<i>Association with a Screen</i> .....	28
<i>Template Toolbar</i> .....	28
Screens .....	29
<i>Screen Tabs</i> .....	29
<i>Screen Configuration</i> .....	30
<i>Screen Toolbar</i> .....	30
<i>Screen Properties Window</i> .....	30
Widgets .....	30
<i>Widget Details</i> .....	30
<i>Types of Widgets</i> .....	30
<i>Widget Properties Window</i> .....	31
Objects .....	31
<i>Object Details</i> .....	31
<i>Types of Objects</i> .....	31
<i>Object Properties Window</i> .....	35
<i>Association with a Widget</i> .....	35
<i>Linking Objects</i> .....	35
<b>Section 4: Designing a Layout .....</b>	<b>37</b>
Starting a Layout .....	37
<i>Designing a Template</i> .....	37
<i>Designing a Widget</i> .....	38
<i>Object Properties</i> .....	40
Design Rules .....	48
.....	48
<i>Layers within a Template</i> .....	49
<i>Object Z - Order</i> .....	49
<i>Linking Objects</i> .....	52
<i>Properties Precedence</i> .....	53
<i>Configuring a Screen</i> .....	53
<i>Saving Templates and Layouts</i> .....	55
<i>Animation</i> .....	55
<i>Loading a Template into a Recorder</i> .....	55
<i>Loading a Setup from a Recorder into Screen Designer</i> .....	56
<i>Loading a Setup from the Trend Manager Pro software</i> .....	56
<b>Index .....</b>	<b>57</b>

## NOTICE OF LICENSED SOFTWARE

### HONEYWELL END USER LICENSE AGREEMENT

This End User License Agreement (“Agreement”) is a legal contract between **Honeywell International Inc.**, acting through its Honeywell Process Solutions business, having an office at 2500 West Union Hills Drive, Phoenix, AZ 85027-5139 (“Honeywell”), and Licensee. The right to use the Licensed Software is granted only on the condition that Licensee agrees to the following terms. **IF LICENSEE DOES NOT AGREE TO THE TERMS OF THIS AGREEMENT, THEN HONEYWELL AND ITS LICENSORS ARE UNWILLING TO LICENSE THE LICENSED SOFTWARE TO LICENSEE, IN WHICH CASE LICENSEE MAY RETURN THE PACKAGE WITHIN THIRTY (30) DAYS AFTER SHIPMENT TO THE ENTITY FROM WHICH THE LICENSE WAS PURCHASED, AND THE AMOUNT LICENSEE PAID FOR THE LICENSED SOFTWARE WILL BE REFUNDED.**

#### 1. DEFINITIONS.

**1.1 “Authorized User”** means an individual Licensee employee or independent contractor authorized by Licensee to access and use the Software provided by **Honeywell**, subject to the terms of this Agreement.

**1.2 “Confidential Information”** means: (i) the Licensed Software; (ii) the technology, ideas, know how, documentation, processes, algorithms and trade secrets embodied in the Licensed Software; (iii) any software keys related to the Software; and (iv) any other information, whether disclosed orally or in written or magnetic media, that is identified (if oral) or marked (if written) as “confidential,” “proprietary” or with a similar designation at the time of such disclosure. Confidential Information shall not include any information that is: (a) published or otherwise available to the public other than by breach of this Agreement by Licensee; (b) rightfully received by Licensee from a third party without confidential limitations; (c) independently developed by Licensee as evidenced by appropriate records; or (d) known to Licensee prior to its first receipt of same from **Honeywell** as evidenced by appropriate records. If any Confidential Information must be disclosed to any third party by reason of legal, accounting or regulatory requirements beyond the reasonable control of Licensee, Licensee shall promptly notify **Honeywell** of the order or request and permit **Honeywell** (at its own expense) to seek an appropriate protective order.

**1.3 “Documentation”** shall mean **Honeywell** published user documentation for the Licensed Software, which may be in the form of user manuals and/or other related documentation, in written or electronic object code form.

**1.4 “Intellectual Property Rights”** means all copyrights, trademarks, trade secrets, patents, mask works and other intellectual property rights recognized in any jurisdiction worldwide, including all applications and registrations with respect thereto.

**1.5 “Licensee”** means the entity that purchased the license to the Licensed Software solely for use of the Licensed Software at the Licensed Site.

**1.6 “Licensed Processor”** means a **Honeywell**-approved processor (which may be a control system or product, a computer, or a specific number of computing devices in a network environment), which processor is owned, leased, or otherwise controlled by Licensee and on which Licensee is authorized to install and use the Software pursuant to the terms and conditions of this Agreement.

**1.7 “Licensed Site”** means the specific address of Licensee’s facility where the Licensed Processor is located, as specified in Licensee’s Purchase Order.

**1.8 “Licensed Software”** means the Object Code of the Software identified in Licensee’s Purchase Order and/or for which Licensee has purchased a license under this Agreement, including all updates, revisions, modifications, or changes thereto to the extent licensed by Licensee under this Agreement, and all full or partial copies thereof.

**1.9 “Licensed Use”** means use of the Object Code form only of Licensed Software by the Authorized Users.

**1.10 “Object Code”** means computer programming code in a form not readily perceivable by humans and suitable for machine execution without the intervening steps of interpretation or compilation.

**1.11 “Purchase Order”** means an order form submitted by Licensee to obtain rights to use Licensed Software under this Agreement.

**1.12 Software”** means computer programming code, in Object Code and/or Source Code, and Documentation, in written or electronic form, including updates (if any), and all modifications thereto and full or partial copies thereof. For the avoidance of doubt, Software may include Licensed Software and Unlicensed Software.

**1.13 “Source Code”** means computer programming code in human readable form that is not suitable for machine execution without the intervening steps of interpretation or compilation.

**1.14 “Unlicensed Software”** means Software that may be included on electronic storage media containing the Licensed Software provided by **Honeywell** that Licensee is not authorized to access or use under this Agreement.

2. **LICENSE GRANT.** Subject to Licensee’s compliance with the terms and conditions of this Agreement and payment of any applicable fees, **Honeywell** hereby grants to Licensee and Licensee accepts a restricted, personal, non-transferable, non-exclusive, internal-use only license, without the right to sublicense, to: (i) use Licensed Software, solely for Licensee’s internal purposes in accordance with the Licensed Use, on Licensed Processor(s), at the Licensed Site; and (ii) make up to two (2) copies (or the number of copies allowed under applicable law) of the Licensed Software in non-printed, machine-readable form, to be used solely for archival or backup purposes (“Archival Copies”). Licensee shall include all copyright and trade secret notices and serial numbers on the Archival Copies, which shall be owned solely by **Honeywell** or its third-party suppliers.

3. **RESTRICTIONS.**

**3.1 General.** Except as expressly permitted by this Agreement, Licensee may not: (i) modify the Licensed Software; (ii) translate, reverse engineer, decompile, disassemble (except to the extent applicable laws specifically prohibit such restriction) or attempt to derive the Source Code of Software provided to Licensee in Object Code, or create derivative works of the Licensed Software or let any third party do any of the foregoing; (iii) reproduce the Licensed Software other than as specified above; (iv) sublicense, rent, lease, loan, timeshare, sell, distribute, disclose, publish, assign or transfer any rights, grant a security interest in, transfer possession of the Licensed Software or electronically transfer the Licensed Software from one computer to another over a network other than Licensee’s internal network as permitted under this Agreement; or (v) alter or remove any of **Honeywell** or its licensors’ copyright or proprietary rights notices or legends appearing on or in the Licensed Software. Licensee shall reproduce such notices on any copies of the Licensed Software Licensee is permitted to make. Licensee is responsible for informing all Authorized Users of the restrictions set forth in this Agreement with respect to use of the Licensed Software.

**3.2 Keys and Access.** Honeywell agrees to provide to Licensee any Software keys necessary to permit Licensee to gain access to the Licensed Software contained on the media shipped to Licensee. Notwithstanding anything to the contrary in this Agreement, Licensee hereby acknowledges that Licensee shall have no right or license to any Unlicensed Software, that any Unlicensed Software is included therein solely as a matter of administrative convenience, and Licensee further agrees not to attempt to gain access to, or permit any third party to attempt to gain access to, such Unlicensed Software. Licensee shall not disclose the Software keys to any third party. Licensee shall not circumvent, or attempt to circumvent, any license management, security devices, access logs, or other measures provided in connection with the Licensed Software, or permit or assist any Authorized User or any third party to do the same.

**3.3 Third Party Software.** The Licensed Software may contain or be derived from materials of third party licensors. Such third party materials may be subject to restrictions in addition to those listed in this Section 3.0, which restrictions, if any, are included in the documents accompanying such third party software.

4. **OWNERSHIP.** Honeywell and its licensors shall retain exclusive ownership of all worldwide Intellectual Property Rights in and to the Licensed Software. Licensee hereby assigns to Honeywell any such rights Licensee may have or obtain in and to the foregoing. All rights in and to the Licensed Software not expressly granted to Licensee in this Agreement are expressly reserved for Honeywell and its licensors.
5. **CONFIDENTIAL INFORMATION.** Licensee shall not use or disclose any Confidential Information, except as expressly authorized by this Agreement, and shall protect all such Confidential Information using the same degree of care which Licensee uses with respect to its own proprietary information, but in no event with safeguards less than a reasonably prudent business would exercise under similar circumstances. Licensee shall take prompt and appropriate action to prevent unauthorized use or disclosure of the Confidential Information.
6. **TERM AND TERMINATION.** This Agreement shall continue for so long as Licensee uses the Licensed Software, provided that this Agreement will immediately terminate upon Licensee's entry into bankruptcy, receivership, insolvency or dissolution proceedings; or upon Licensee's breach of this Agreement, unless Licensee cures such breach within ten (10) days after Honeywell provides written notice of such breach. Upon termination, Licensee agrees: (i) not to use the Licensed Software for any purpose whatsoever; (ii) to return or destroy the Licensed Software and any copy then in Licensee's possession, at the direction of Honeywell; and (iii) to certify to Honeywell that such destruction has taken place. Upon termination Honeywell may repossess all copies of the Licensed Software then in Licensee's possession or control. These remedies shall be cumulative and in addition to any other remedies available to Honeywell. The following Sections shall survive any termination of this Agreement: Sections 1, 3.1, 3.3, 4, 5, 6, 8, 9.2, 10, 11, and 12.
7. **SUPPORT.** The Software license fees do not include support, installation or training. Support, installation and training services, to the extent offered by Honeywell, may be separately purchased at Honeywell then-current rates.

## 8. LICENSEE OBLIGATIONS.

**8.1 Records.** Licensee shall maintain complete, current and accurate records documenting the location of the Licensed Software (in all forms) in Licensee's possession.

**8.2 Compliance Verification.** To ensure compliance with the terms of this Agreement, **Honeywell** or its designated representative shall have the right to: (i) request that Licensee send a written certification of compliance with the terms and conditions of this Agreement within thirty (30) days of **Honeywell's** request; and (ii) conduct an inspection and audit upon reasonable notice of the records set forth in Section 8.1 of this Agreement, electronic logs of access to the Software, and the relevant books and records of Licensee, and to obtain true and correct photocopies thereof, during regular business hours at Licensee's offices and in such a manner as not to interfere unreasonably with Licensee's normal business activities. In no event shall such certifications be requested or audits be conducted hereunder more frequently than once every six (6) months. If any such audit should disclose any underpayment of fees, Licensee shall promptly pay **Honeywell** such underpaid amount, together with interest thereon at a rate of one and one-half percent (1.5%) per month or partial month during which such amount was owed and unpaid, or the highest rate allowed by law, from the date such amount originally became due until finally paid. If the audit reveals that Licensee has underpaid **Honeywell** by five percent (5%) or more of the amount owed, Licensee shall immediately reimburse **Honeywell** for its reasonable costs and expenses associated with such audit.

## 9. LIMITED WARRANTY; WARRANTY DISCLAIMER.

**9.1 Limited Warranty.** If the license to the Licensed Software was purchased from a party other than **Honeywell**, **Honeywell** disclaims all warranties for the Licensed Software (as further described in Section 9.2) and the warranty, if any, shall be provided solely by the party from which the license was purchased. If the license to the Licensed Software was purchased directly from **Honeywell**, **Honeywell** warrants that the media on which the Licensed Software is delivered will be free from defects in materials or workmanship for a period of ninety (90) days from the date of shipment of such media to Licensee ("Warranty Period"). If during the Warranty Period the media on which Licensed Software is delivered proves to be defective, **Honeywell** will repair or replace such media, at **Honeywell's** option, as Licensee's sole remedy for any breach of warranty hereunder. Licensee assumes full responsibility for: (i) the selection of the Licensed Software; (ii) the proper installation and use of the Licensed Software; (iii) verifying the results obtained from the use of the Licensed Software; and (iv) taking appropriate measures to prevent loss of data. **Honeywell** does not warrant that the quality or performance of the Licensed Software will meet Licensee's requirements or that Licensee will be able to achieve any particular results from use or modification of the Licensed Software or that the Licensed Software will operate free from error.

**9.2 Warranty Disclaimer.** EXCEPT AS EXPRESSLY SET FORTH IN THIS SECTION 9, **Honeywell** AND ITS LICENSORS DISCLAIM ALL WARRANTIES, EXPRESS, IMPLIED AND STATUTORY INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT OF THIRD PARTY RIGHTS. NO ORAL OR WRITTEN INFORMATION OR ADVICE GIVEN BY **Honeywell**, ITS DEALERS, DISTRIBUTORS, AGENTS OR EMPLOYEES SHALL IN ANY WAY INCREASE THE SCOPE OF THIS WARRANTY. Some jurisdictions do not allow the limitation or exclusion of implied warranties or how long an implied warranty may last, so the above limitations may not apply to Licensee. This warranty gives Licensee specific legal rights and Licensee may have other rights that vary from jurisdiction to jurisdiction.

10. **INFRINGEMENT INDEMNITY.** **Honeywell** will defend any suit against Licensee to the extent based on a claim that the Licensed Software as delivered by **Honeywell** infringes a valid United States patent or copyright, and indemnify for any final judgment assessed against Licensee resulting from such suit, provided that Licensee notifies **Honeywell** at such time as it is apprised of the third-party claim, and agrees to give sole and complete authority, information and assistance (at **Honeywell's** expense) for the defence and disposition of the claim. **Honeywell** will not be responsible for any compromise or settlement made without **Honeywell's** consent. The foregoing notwithstanding, **Honeywell** shall have no liability for any claim of infringement based on: (a) use of other than the current release of the Licensed Software if such claim would have been avoided by the use of the then-current release provided **Honeywell** has announced the release prior to the initiation of the infringement claim; (b) any modification of the Licensed Software by an entity other than **Honeywell**; (c) any use or combination of the Licensed Software with any program, data or equipment not supplied by **Honeywell**; (d) any use of the Licensed Software other than as expressly permitted in this Agreement; (e) products or processes developed pursuant to Licensee's direction, design, or specification; or (f) any settlement or compromise of such claim made without **Honeywell's** written consent. Further, Licensee agrees to indemnify and defend **Honeywell** to the same extent and subject to the same restrictions set forth in **Honeywell's** obligations to Licensee as set forth in this "Infringement Indemnity" section for any suit against **Honeywell** based upon a claim of infringement resulting from (a), (b), (c), (d), (e), or (f) above. In the event that the Licensed Software is held in any such suit to infringe such a right and its use is enjoined, or if in the opinion of **Honeywell** the Licensed Software is likely to become the subject of such a claim, **Honeywell** at its own election and expense will either (i) procure for Licensee the right to continue using the Licensed Software or (ii) modify or replace the Licensed Software so that it becomes non-infringing while giving substantially equivalent performance. In the event that (i) or (ii) above are not, in **Honeywell's** sole determination, obtainable using reasonable commercial efforts, then **Honeywell** may terminate this Agreement and refund the amount Licensee paid **Honeywell** under this Agreement for the Licensed Software which is the subject of such claim, less a reasonable charge for Licensee's past beneficial use based on depreciation of the Licensed Software on a straight line basis over a period of five (5) years from the Effective Date. THIS SECTION STATES LICENSEE'S SOLE RECOURSE AND EXCLUSIVE REMEDY AND **HONEYWELL'S** ENTIRE LIABILITY FOR ANY CLAIM OF INFRINGEMENT.
11. **LIMITATION OF LIABILITY. HONEYWELL** AND ITS LICENSORS SHALL NOT BE LIABLE FOR ANY INCIDENTAL, SPECIAL, CONSEQUENTIAL OR INDIRECT DAMAGES OF ANY KIND (INCLUDING DAMAGES FOR INTERRUPTION OF BUSINESS, PROCUREMENT OF SUBSTITUTE GOODS, LOSS OF PROFITS, OR THE LIKE) REGARDLESS OF THE FORM OF ACTION WHETHER IN CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT PRODUCT LIABILITY OR ANY OTHER LEGAL OR EQUITABLE THEORY EVEN IF **HONEYWELL** HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL **HONEYWELL'S** AGGREGATE CUMULATIVE LIABILITY FOR ANY CLAIMS ARISING OUT OF OR RELATED TO THIS AGREEMENT EXCEED THE AMOUNTS PAID BY LICENSEE FOR THE LICENSED SOFTWARE. THE LIMITED WARRANTY, LIMITED REMEDIES, WARRANTY DISCLAIMER AND LIMITED LIABILITY ARE FUNDAMENTAL ELEMENTS OF THE BASIS OF THE BARGAIN BETWEEN **HONEYWELL** AND LICENSEE. **HONEYWELL** WOULD NOT BE ABLE TO PROVIDE THE SOFTWARE WITHOUT SUCH LIMITATIONS.

## 12. GENERAL.

**12.1 Governing Law and Forum.** This Agreement shall be governed in all respects by the laws of the United States of America and the State of New York without regard to conflicts of law principles. The parties agree that the United Nations Convention on Contracts for the International Sale of Goods is specifically excluded from application to this Agreement. All disputes arising under this Agreement shall be brought exclusively in the state or federal courts in New York, New York, as permitted by law. Licensee consents to the personal jurisdiction of the above courts.

**12.2 Injunctive Relief.** It is understood and agreed that, notwithstanding any other provisions of this Agreement, breach of the provisions of this Agreement by Licensee may cause **Honeywell** irreparable damage for which recovery of money damages would be inadequate, and that **Honeywell** shall therefore be entitled to obtain timely injunctive relief to protect **Honeywell's** rights under this Agreement in addition to any and all remedies available at law.

**12.3 Notices.** All notices to **Honeywell** shall be in writing and shall be directed to:

**Honeywell International Inc.**  
Honeywell Process Solutions  
2500 West Union Hills Drive  
Phoenix, AZ 85027-5139  
Attn: General Counsel

**12.4 No Agency.** Nothing contained herein shall be construed as creating any agency, employment relationship, partnership, principal-agent or other form of joint enterprise between the parties.

**12.5 Force Majeure.** Neither party shall be liable hereunder by reason of any failure or delay in the performance of its obligations hereunder (except for the payment of money) on account of strikes, shortages, riots, insurrection, fires, flood, storm, explosions, acts of God, war, governmental action, labour conditions, earthquakes, material shortages or any other cause which is beyond the reasonable control of such party. Except for payment obligations, neither party will be liable to the other for any failure to meet its obligations due to any cause beyond the non-performing party's reasonable control. If the inability to perform continues for longer than 90 days, either party may terminate this Agreement by providing written notice to the other party and Licensee will pay **Honeywell** for products delivered and services performed prior to termination. Force majeure events may include but are not limited to: (1) government embargoes, (2) blockades, (3) seizure or freeze of assets, (4) delays or refusals to grant an export license or the suspension or revocation thereof, (5) any other acts of any government that would limit the ability for contract performance, (6) fires, earthquakes, floods, severe weather conditions, (7) any other acts of God, (8) quarantines or regional medical crises, (9) labour strikes or lockouts, (10) riots, strife, insurrection, civil disobedience, armed conflict, terrorism or war, declared or not (or impending threat of any of the foregoing, if such threat might reasonably be expected to cause injury to people or property), (11) shortages or inability to obtain materials or components and (12) inability or refusal by Licensee's directed third party suppliers to provide **Honeywell** parts, services, manuals, or other information necessary to the goods or services to be provided by **Honeywell** under this Agreement.

**12.6 Waiver.** The failure of either party to enforce at any time any of the provisions of this agreement shall not be construed to be a continuing waiver of any provisions hereunder nor shall any such failure prejudice the right of such party to take any action in the future to enforce any provisions hereunder.

**12.7 Severability.** In the event any provision of this Agreement is determined to be illegal, invalid, or unenforceable, the validity and enforceability of the remaining provisions of this Agreement will not be affected and, in lieu of such illegal, invalid, or unenforceable provision, there will be added as part of this Agreement one or more provisions as similar in terms as may be legal, valid and enforceable under applicable law.

**12.8 Headings.** The section headings appearing in this Agreement are inserted only as a matter of convenience and in no way define, limit, construe, or describe the scope or extent of such section or in any way affect this Agreement.

**12.9 Government End Users.** The Software is a “commercial item” as that term is defined in 48 C.F.R. 2.101, consisting of “commercial computer software” and “commercial computer software documentation” as such terms are used in 48 C.F.R. 12.212. Consistent with 48 C.F.R. 12.212 and 48 C.F.R. 227.7202-1 through 227.7202-4, Licensee will provide the Software to U.S. Government End Users only pursuant to the terms and conditions therein and herein.

**12.10 Assignment.** Licensee may not delegate, assign or transfer this Agreement, the license(s) granted or any of Licensee’s rights or duties hereunder, including by way of merger (regardless of whether Licensee is the surviving entity) or acquisition, and any attempt to do so, without **Honeywell’s** express prior written consent, which shall not be unreasonably withheld, shall be void. **Honeywell** may assign this Agreement, and its rights and obligations hereunder, in its sole discretion. Any attempt to assign or delegate in violation of this clause will be void.

**12.11 Compliance with Laws** Software and technical information delivered under this Agreement is subject to U.S. export control laws and may be subject to export or import regulations in other countries. Licensee agrees to strictly comply with all such laws and regulations. Licensee will obtain import, export, re-export approvals and licenses required for Software, services and technical data delivered and will retain documentation to support compliance with those laws and regulations. **Honeywell** will not be liable to Licensee for any failure to provide Software, services, transfers or technical data as a result of government actions that impact **Honeywell’s** ability to perform, including (1) the failure to provide or the cancellation of export or re-export licenses; (2) any subsequent interpretation of applicable import, transfer or export law or regulation after the date of any order or commitment that has a material adverse effect on **Honeywell’s** performance; or (3) delays due to Licensee’s failure to follow applicable import, export, transfer, or re-export laws and regulations. Licensee shall not sell, transfer, export or re-export any Software, services or technical data for use in activities that involve the design, development, production, use or stockpiling of nuclear, chemical or biological weapons, or missiles, nor use Software, services or technical data in any facility which engages in activities relating to such weapons or missiles. In addition, Software, services or technical data may not be used in connection with any activity involving nuclear fission or fusion, or any use or handling of any nuclear material until Licensee, at no expense to **Honeywell**, has insurance coverage, indemnities, and waivers of liability, recourse and subrogation, acceptable to **Honeywell** and adequate in **Honeywell’s** opinion to protect **Honeywell** against any type of liability.

**12.12 Language.** This Agreement is in the English language only, which language shall be controlling in all respects, and all versions of this Agreement in any other language shall be for accommodation only and shall not be binding on the parties to this Agreement. All communications and notices made or given pursuant to this Agreement, and all documentation and support to be provided, unless otherwise noted, shall be in the English language.

Entire Agreement; Modification. This Agreement constitutes the entire agreement between Licensee and **Honeywell** and supersedes in their entirety any and all oral or written agreements previously existing between Licensee and **Honeywell** with respect to the subject matter hereof. The terms and conditions of any purchase order or other instrument issued by Licensee in connection with this Agreement shall be of no force or effect. This Agreement may only be amended or supplemented by a writing that refers explicitly to this Agreement and that is signed by duly authorized representatives of Licensee and **Honeywell**.

THE LICENSED SOFTWARE AND ACCOMPANYING DOCUMENTATION ARE PROTECTED BY UNITED STATES COPYRIGHT LAW AND INTERNATIONAL TREATY. UNAUTHORIZED REPRODUCTION OR DISTRIBUTION IS SUBJECT TO CIVIL AND CRIMINAL PENALTIES.

BY INSTALLING OR USING THE LICENSED SOFTWARE, YOU ACKNOWLEDGE THAT YOU HAVE READ THIS AGREEMENT, UNDERSTAND IT AND AGREE TO BE BOUND BY ITS TERMS AND CONDITIONS.



# Notices and Trademarks

## Notices

Copyright 2006 by Honeywell

Issue 2 - June 2006

Issue 3 - October 2006

Issue 4 - August 2009

### **Warranty/Remedy**

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Contact your local sales office for warranty information. If warranted goods are returned to Honeywell during the period of coverage, Honeywell 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. Specifications may change 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.

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

***Honeywell Process Solutions  
2500 W.Union Hills Drive  
Phoenix, AZ 85027***

**Screen Designer** is a U.S. trademark of Honeywell  
Other brand or product names are trademarks of their respective owners.

## Year 2000 Compliance Statement

The **Screen Designer** software is Year 2000 compliant in accordance with the BSI DISC PD2000-1 definition, provided that the host PC, its BIOS, operating system and any other active applications are also Year 2000 compliant.

## Trademarks



- Microsoft, MS-DOS, Windows, Windows 2000, Windows XP and Windows CE are all registered trademarks of Microsoft Corporation.
- Compact Flash and CF are trademarks of the SanDisk Corporation.
- For the purpose of this manual the <sup>TM</sup> and <sup>®</sup> symbols will not follow their own trademark names or registered trademark names

Company names and Product names mentioned in this manual are trademarks or registered trademarks of their individual owners.

## Protocols

### *Safety and Symbol Identification*

Table 1.1 :

Symbol	Description
 <b>WARNING</b>	The <b>WARNING</b> symbol indicates a potentially hazardous situation, which, if not avoided, <b>could result in death or serious injury.</b>
 <b>CAUTION</b>	This <b>CAUTION</b> symbol may indicates a potentially hazardous situation, which, if not avoided, <b>may result in property damage.</b>
<b>NOTICE</b>	A <b>NOTICE</b> symbol indicates important information that must be remembered and aids in job performance.

## Safety

### **NOTICE**

#### **Screen Designer for safety indication**

When adding charts on custom screens whenever a pen value could be relied on for safety, a chart must be accompanied by one of the other indicators - pen pointer, bar or DPM.

This is to meet the safety standard's requirements to provide out-of-range indication.

# Section 1: Preface

The **Minitrend QX**, and **Multitrend SX** graphics recorders are the latest development in solid-state replacement for traditional paper recorders.

With many more options, features and functions available, these recorders are able to meet a wide range of applications and requirements including: Power, Water Treatment, Thermal Processing, Food and Beverage, Pharmaceutical/Biotech and Manufacturing industries.

## This Manual

This manual explains how to use the **X Series Screen Designer** software, which has been specially developed to create fully customisable screens for the **Minitrend QX**, and **Multitrend SX** recorders.

The software is very intuitive and easy to use. There is design sequence to ensure a quick and easy design that involves an order in which layouts need to be created. It is highly recommended that the user reads the manual *before* using the software. This will familiarise the user with the **X Series Screen Designer** user Interface, the terminology and tools used to create layouts and the rules of designing.

This manual provides information to the user about **X Series Screen Designer** tools, commands and design techniques. It provides step by step instructions for using **X Series Screen Designer** on Windows™. See "[System Requirements](#)" on page 6.

The **X Series Screen Designer** software will auto run on installation from the CD or download from the web. Follow the instructions for "[Installation](#)" on page 7.

**X Series Screen Designer** documentation and software assumes the user has working knowledge of Windows™ and its conventions.

The first step is to read the manual.

## Supplementary documentation

Supplementary documentation to accompany these recorders are:

Table 1.1 : Supplementary documentation

Manual	Part number
<b>X Series User Manual</b>	<b>43-TV-25-30</b>
<b>TrendManager Pro Software Suite Manual</b>	<b>43-TV-25-11</b>

## Notes

- The contents of this manual are correct at the time of issue. The contents may change at any time without prior notification. This is due to continuous developments to the recorder and its functionality.
- Every effort has been made to ensure the accuracy of this document; however, should there be any anomalies found, please contact your nearest **Honeywell** supplier. See the back page for contact addresses.
- All rights are reserved. No part of this manual should be copied or reproduced, stored on a retrieval system or transmitted in any form without the prior written permission from **Honeywell** International Inc.

## X Series Screen Designer software overview

**X Series Screen Designer** enables the user to design unique layouts for transfer on to a recorder.

### **Overview**

Layouts, which represent the screens shown on a recorder, are designed by placing widgets and objects onto templates, which represent the recorder's screens. Widgets are graphical containers for objects; objects display elements that represent data in different graphical forms. Objects can be shown in a combination of display devices eg. Bargraph, Chart, Digital or combinations of these. Widgets and objects are placed on a template from which multiple screens can be created. The screens based on this template all look alike, but they can show different data. The completed design is then saved as a layout (.lay file), which can be loaded into the recorder.

The **X Series Screen Designer** User Interface is easy to use and provides a user-friendly environment containing:

- **The Design window** - shows the area for creating layouts using templates and screens.
- **The File Browser window** - helps the user manage and navigate the open files
- **The Toolbox window** - contains the Standard widgets and objects the User can use to create templates and screens.
- **The Properties window** - shows the user all the characteristics associated with an object, widget, template or screen:

The **X Series Screen Designer** software design package is compatible with both **Mini-trend QX** and **Multitrend SX** recorders. Layouts can be transferred onto single or multiple recorders giving continuity and standardisation of process data.

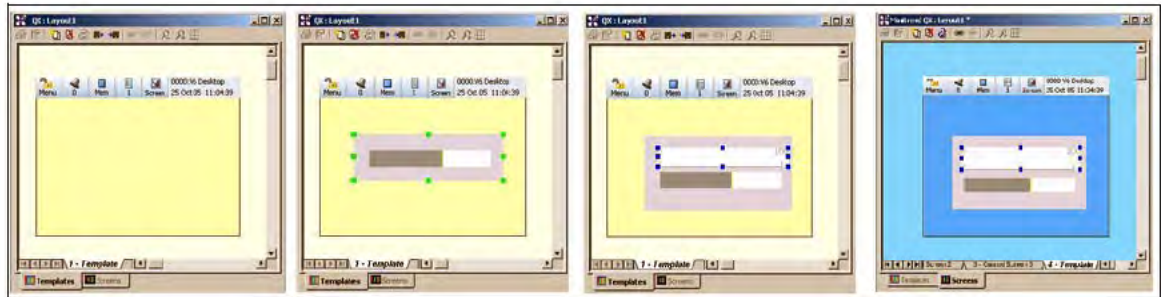
### **Why do you need X Series Screen Designer?**

**X Series 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.

## How does it work?

The **X Series Screen Designer** software is a familiar Windows™ based environment displaying information in separate window areas around the main design space. Toolbars, menus, drag and drop, undo/redo and left/right mouse click actions are used in the application interface.

The simple process of creating a layout is as follows:



Blank template

A Horizontal Bar widget added

Scale object added to the widget

Screen added from a template

- The user starts with a blank template. The template represents a screen (or screens) to be shown on the recorder.
- Select either a blank widget or a pre-defined widget from the widgets tab in the Toolbox window. Drag and drop the widget onto the template.
- If a blank widget is selected it will not contain any objects. Note that you can resize the blank widget or any of the pre-defined widgets. Select an object from the objects tab in the Toolbox window. Drag and drop an object from the Toolbox window onto the widget. Objects can be added to a blank widget or a pre-defined one. Objects display the data in various graphical forms, such as a Scale, Pen Pointer, Alarm Marker, Text, Bar or Digital etc.
- Each widget and object, when selected, has a detailed list of properties that can be extensively modified to suit the user's requirements. The properties are displayed in the Properties window. Green resize handles appear around a widget when it is selected and blue resize handles appear around an object when it is selected.
- Many objects can be placed onto a widget; many widgets can be placed onto a template.
- When the template is finished, a screen can be created from it. The screen can show the Pens, Alarms or Inputs/Outputs, as required. To do this, select the screens tab and select the Add Screens icon. Add the new screen based on the template. These are saved together as a layout (.lay file).
- The layout can then be loaded into the recorder via, Compact Flash, USB or FTP interface. Note that in order to load layouts into a recorder, the recorder must have the Custom Screens option active. Refer to the recorder's User manual for more details on firmware options.



## Section 2: Introduction & Installation

**X Series Screen Designer** is compatible with **Honeywell's TrendManager Software Suite** for the **X Series** recorders

### CD Contents

- **Screen Designer** Installation Setup
- **Screen Designer** Demos
- Documentation (Manual Pack)
- Recorder Firmware
- Recorder Installation Instructions

### Learning about Screen Designer

#### Read this Manual

This user manual gives an overview of the **X Series Screen Designer** Interface, details of the components within **Screen Designer** and easy step by step instructions on how to create new layouts.

Take time to read through each section of the manual.

Start at the *"Installation" on page 7*, before loading on the software, then go to *"Section 3: X Series Screen Designer Interface" on page 9*. Here you will find full explanations of each component in the **Screen Designer** interface.

Finally go to *"Section 4: Designing a Layout" on page 37*. This will describe how to design and build custom screens.

## System Requirements

The system pre-requisites stated below are in line with the minimum required to run **Screen Designer** for the **X Series** recorders.



- 1GHz Pentium processor or higher
- CD - ROM drive
- Monitor recommended screen resolution 1024 x 768mm (min), high colour
- Windows™ 2000 and XP
- 512 Mbyte of RAM (min)
- 16 bit colour graphics (24 bit recommended)
- 50 Mbyte free hard disk space
- a Mouse
- Compact Flash card reader or USB connector

### Recorder Requirements:

To transfer **Screen Designer** layouts onto the recorder, the credits for the Customs Screens firmware option is required for the recorder.

To use a recorder in Designer Mode, a USB mouse is required to be connected directly to the recorder (front or rear) and Designer Mode activated by clicking on the Screen button and then the Edit button in the recorder's Menu bar.

Another way to use the Designer Mode is via the Remote Viewer. The firmware option for the Remote Control Tool needs to be active in the recorder and Passwords must be enabled in the recorder. The user then needs to browse the recorder by entering the recorder's IP address into an Internet browser. The web page will be password protected and will have the Remote Viewer download button.

## Installation

Before installing the software onto your PC, it is recommended to close down all other applications, including any programs that automatically load during your PC's start up procedure. Place the CD in the drive and the software should Auto Run. If this does not occur within 30 seconds follow the instructions below:

- place CD into drive
- go to 'My Computer'
- double-click CD ROM drive
- double-click **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\TrendManager Suite\Screen Designer.

## Start up



### Screen Designer

The **X Series Screen Designer** software has been installed on the hard drive of your computer (C) in 'Program Files' unless during set up you change the destination folder.

To start the program go to the Start button at the bottom left of your screen and select Programs (or All Programs) and go to the **Trendview Recorders** folder. Place the cursor over the **Screen Designer** program and click.

Right click on this icon to create a shortcut that can be placed on the desktop for quick access.



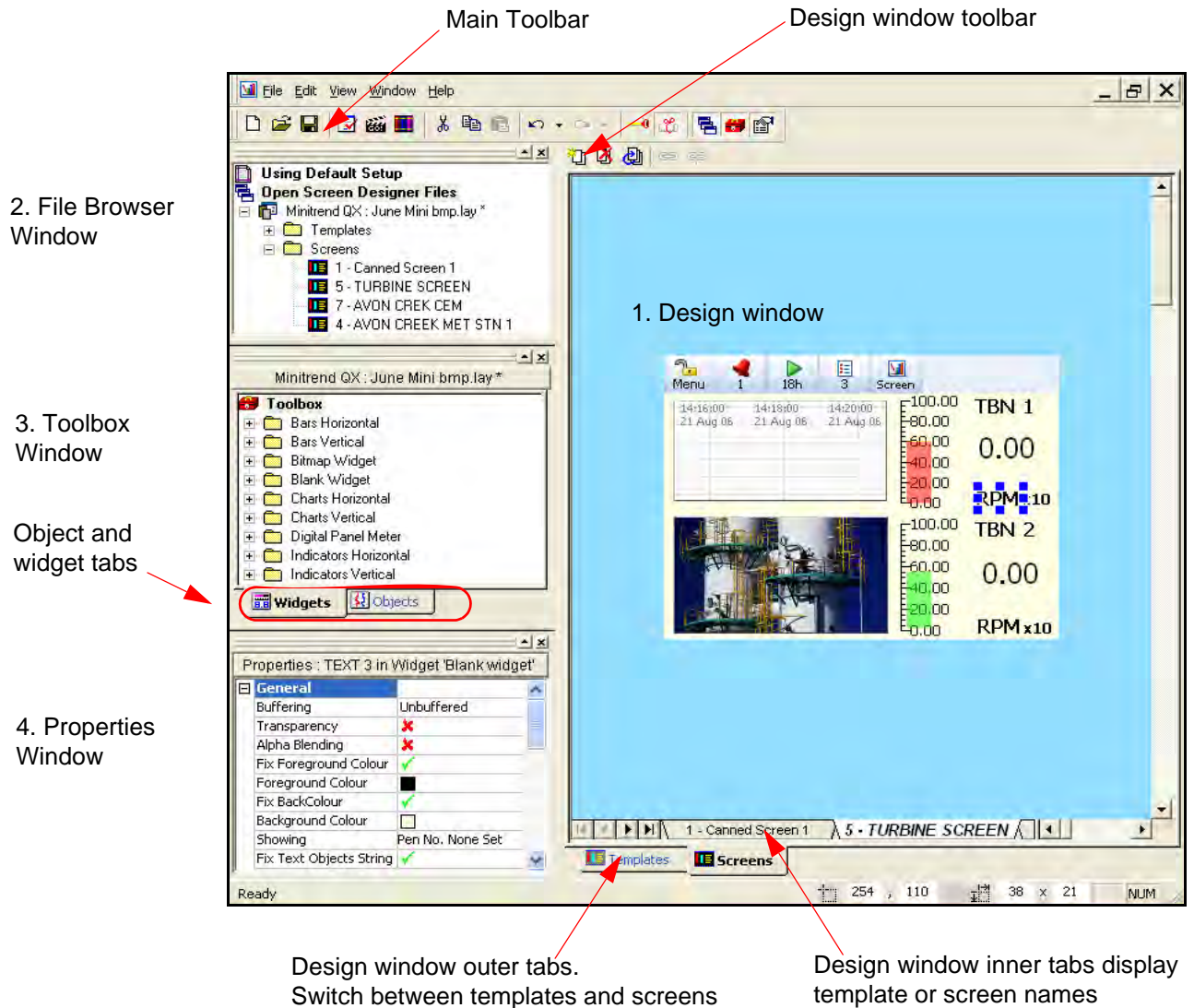
# Section 3: X Series Screen Designer Interface

## X Series Screen Designer Interface

The X Series Screen Designer User Interface consists of:

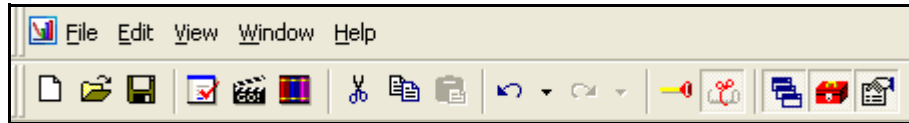
1. *“Design Window” on page 14* - Shows the contents of a layout and is the design area for creating templates and screens to produce layouts
2. *“File Browser Window” on page 16* - shows hierarchical structure of each open file eg. screens, templates, layout files.
3. *“Toolbox Window” on page 25* - 2 tabs that contain widget and object libraries the user can “Drag and Drop” into an open template in the Design window
4. *“Properties Window” on page 22* - displays the characteristics of a selected item eg. widget, object, template or screen.

Figure 3.1 Screen Designer user interface



## Main Toolbar

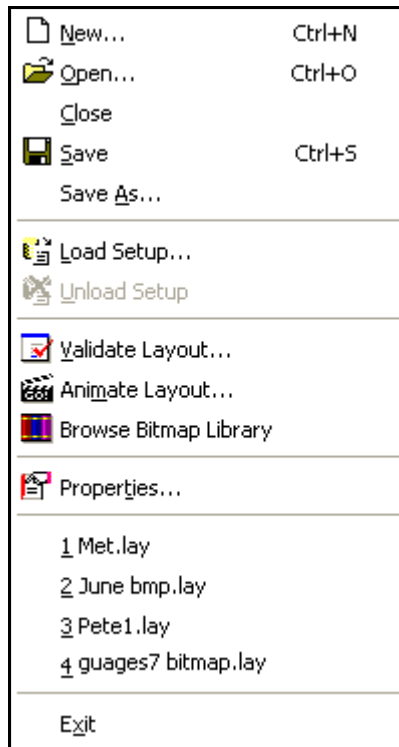
The Main Toolbar provides the user with the standard Windows user interface features including: **File**, **Edit**, **View**, **Window** and **Help**. No Help files are currently available for this version of **Screen Designer**.



Listed below are the items that appear in the Main Toolbar.

- **New** - a new blank template to create a **QX** or **SX** layout
- **Open** - opens a previously saved template file (.tpl) or layout file (.lay)
- **Save** - saves the active template document or layout document.
- **Validate Layout** - checks for overlapping or off-screen widgets in the layout. A layout having such widgets cannot be run on the recorder. A dialogue box will appear describing what errors are present.
- **GO! Animate Layout** - Launches a Desktop simulation of the recorder that mimics signal activity to the layout. screens in the layout should have their widgets set up with pen information. [See "Animation" on page 55.](#)
- **Browse Bitmaps** - Bitmap library for adding and selecting bitmaps
- **Cut** - removes the selected item to the clipboard for pasting
- **Copy** - copies the selected item to the clipboard for pasting
- **Paste** - paste an item from the clipboard
- **Undo** - undoes one or more previous commands
- **Redo** - redoes one or more previous commands
- **Sticky Widgets** - A mode that allows widgets and objects to align more easily. The mode can be toggled on or off.
- **Expert Mode** - A mode that enables the user to select the objects contained in a widget. The mode can be toggled on or off. Normal Mode just allows the widget to be selected. Default is Normal Mode.
- **File Browser** - toggles the File Browser window on and off from the application interface
- **Toolbox Window** - toggles the Toolbox Window on and off from the application interface
- **Properties Window** - toggles the Properties Window on and off from the application interface

## File Menu



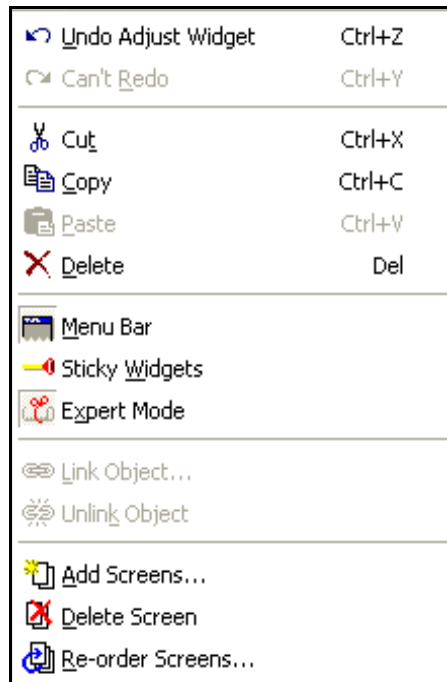
Listed below are the items that appear in the File menu.

- **New** - a new blank template to create a **QX** or **SX** layout
- **Open** - opens a previously saved template file (.tpl) or layout file (.lay)
- **Close** - closes the layout currently being displayed
- **Save** - saves the active template document or layout document.
- **Save As** - saves the active template document or layout document. Allows you to specify a different location or name for the file.
- **Load Setup** - loads a recorder setup to use its settings for all open template documents and layout documents
- **Unload Setup** - unloads the currently loaded setup file and reverts to the default setup
- **Validate Layout** - checks for overlapping or off-screen widgets in the layout. A layout having such widgets cannot be run on the recorder. A dialogue box will appear describing what errors are present.
- **Animate Layout** - Launches a Desktop simulation of the recorder that mimics signal activity to the layout. screens in the layout should have their widgets set up with pen information. [See "Animation" on page 55.](#)
- **Browse Bitmap Library** - Bitmap library for adding and selecting bitmaps
- **Properties** - displays the number of templates and screens used and available for a layout
- **Most Recently Used File List** - A list of the latest previously opened files. Select a file to open it.
- **Exit** - closes **Screen Designer** (a prompt to save any unsaved layouts will appear if required)

## Edit Menu

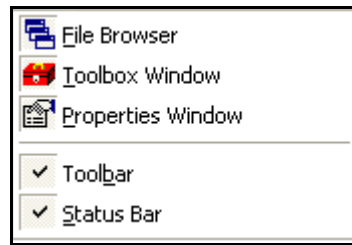
The contents of the Edit drop down menu will change depending on whether a template or screen is being displayed in the Design window. For example, if a template is being displayed, then the Edit menu will offer Add template, Delete template and Re-order templates or screens, depending of what is currently displayed in the Design window.

Listed below are the items that appear in the Edit menu



- **Undo** - Undoes one or more previous commands
  - **Redo** - Redoes one or more previous commands
  - **Cut** - removes the selected item to the clipboard for pasting
  - **Copy** - copies the selected item to the clipboard for pasting
  - **Paste** - paste an item from the clipboard
  - **Delete** - deletes selected item
  - **Menu Bar** - shows or hides the menu bar on the template or screen currently being displayed.
  - **Sticky Widgets** - A mode that allows widgets and objects to align more easily. The mode can be toggled on or off.
  - **Expert Mode** - A mode that enables the user to select the objects contained in a widget. The mode can be toggled on or off. Normal Mode just allows the widget to be selected. Default is Normal Mode.
- 
- **Link Object** - links objects having a scale to maintain their relative zero and span relationship. Objects having a scale include the alarm markers object, the bar object, the chart object, the pen pointers object, and the scale object. Objects must be of the same orientation.
  - **Unlink Object** - un-links an object from another object
  - **Add Template/Screen** - adds a template/screen to an open file in the Design window
  - **Delete Template/Screen** - deletes the template/screen that is currently being displayed
  - **Re-Order Templates/Screens** - specify the display order of the screens or templates in a layout
  - **Insert Template From File** - (only available when you are in the template tab). Inserts just a template, stored as a template (.tpl) file from a location of your choice into the open layout.
  - **Save Template** - (only available when you are in the template tab). Just saves the selected template to a template (.tpl) file to a location of your choice. Does not save any screen information in the layout.

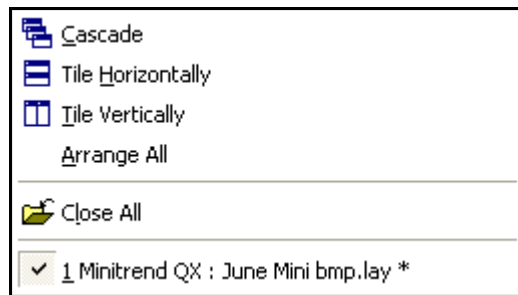
## View Menu



The contents of the View menu are:

- **File Browser** - toggles the File Browser window on and off from the application interface
- **Toolbox Window** - toggles the Toolbox Window on and off from the application interface
- **Properties Window** - toggles the Properties Window on and off from the application interface
- **Toolbar** - toggles the main Toolbar on and off at the top of the application interface
- **Status Bar** - toggles the status bar on and off at the bottom of the application interface

## Window Menu



Contents of the Window menu are:

- **Cascade** - will display multiple Design windows overlapping each other
- **Tile Horizontally** - will display multiple Design windows underneath each other
- **Tile Vertically** - will display multiple Design windows side by side
- **Arrange All** - arranges all minimised Design windows at the bottom of the design area.
- **Close All** - closes all template documents and layout documents that are open
- Lists all of the template documents and screen documents open in **Screen Designer**. A tick mark is shown against the document that is currently active.

## Help

No Help files are currently available for this version of **Screen Designer**.

- **About** - license and version information

## Status Bar

This is the grey bar that runs along the bottom of the interface.



On the left it displays the status “Ready” or the prompt for a Toolbar button or menu command. In the middle the first pair of co-ordinates refer to the realtime horizontal and vertical position, in pixels, of the selected object or widget in relation to the top left corner of the template or screen. The second pair of co-ordinates to the right refer to the width and height, in pixels, of the selected object or widget.

Drag the object or widget to resize/reposition it or type in the dimensions or the position into the boxes and press enter to ensure exact size and position.

On the far right of the status bar is displayed NUM, which indicates that NUM Lock is set on the PC’s keyboard. CAP is also displayed, and if shown, indicates that CAP Lock is set on the PC’s keyboard

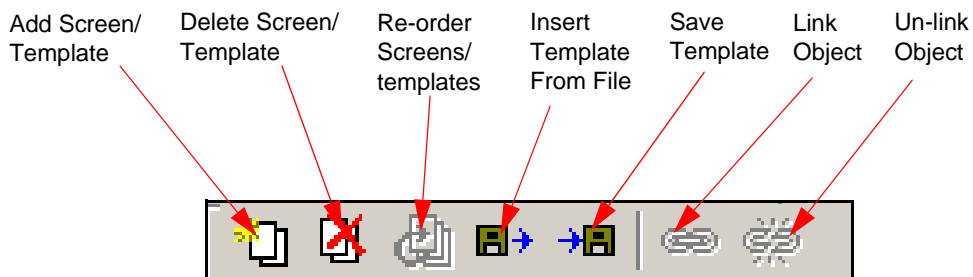
When a widget or object is selected its Left, Top, Right, and Bottom co-ordinates are displayed in the Properties window. These co-ordinates can be changed by entering new values in the Properties window.

## Design Window

The Design window is the area where a layout is created. This is started by selecting a new template from the Design window to which widgets and objects are added. When this is complete, a screen can be added using the template. Next, pen/channel mapping configuration can be performed on the screen. Finally, the layout document can be saved as a layout (.lay) file. These files can all be viewed in the File Browser window. The same template can be used to create many screens.

### Design window toolbar

Along the top of the Design window is a toolbar that will display similar sets of buttons depending on whether the templates or screens outer tab is selected.

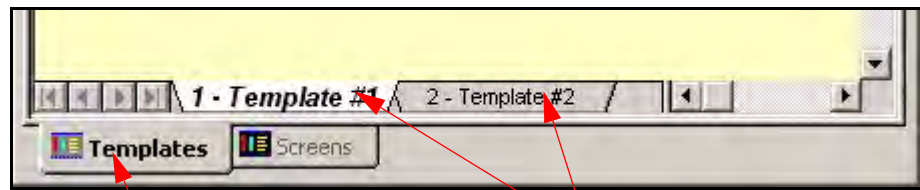


## Design window tabs

The Design window has tabs to display the different areas of the layout. There are two sets of tabs at the bottom of the window. The outer set of tabs switches between templates and screens. The inner set of tabs displays all the templates or screens depending on which of the outer tabs has been selected.

Multiple Design windows can be open at the same time.

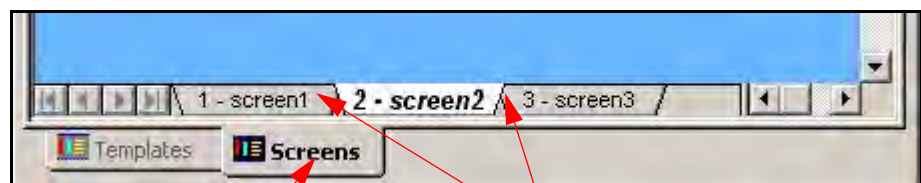
Figure 3.2 Templates outer and inner tabs



Templates outer tab

Template inner tabs

Figure 3.3 Screens outer and inner tabs

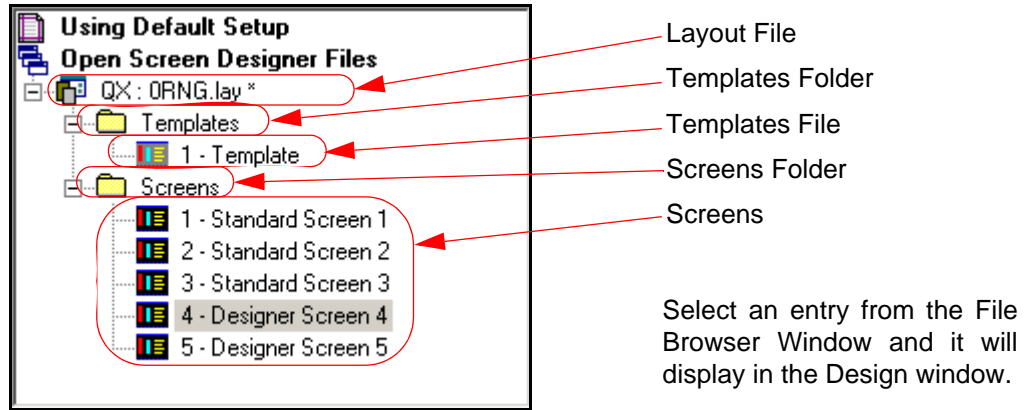


Screen outer tab

Screen inner tabs

# File Browser Window

Figure 3.4 File Browser Window

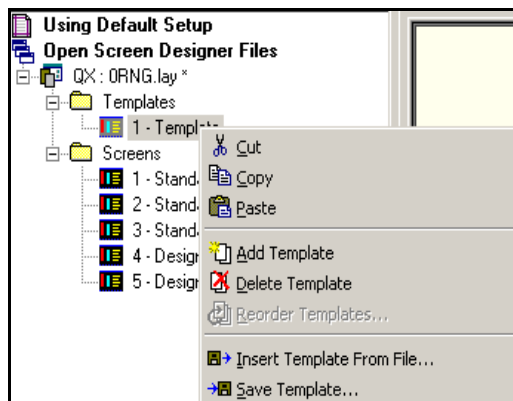


The File Browser Window shows the hierarchical structure of each open file in **X Series Screen Designer**. It lists templates and screens in separate sections. Each section can be expanded or collapsed as denoted by a + or - symbol. Click on a + symbol to expand a section. Click on a - symbol to collapse a section.

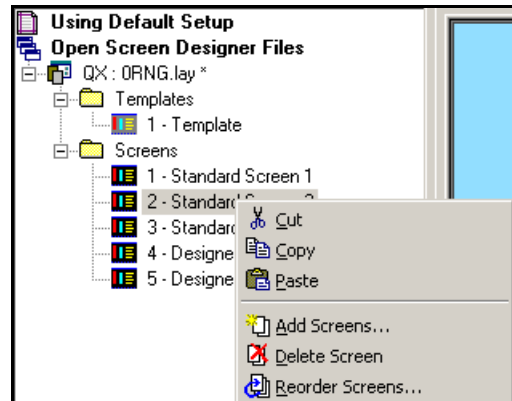
The names of templates and screens are displayed in the File Browser Window. Each template and screen can be re-named for ease of identification. To rename a template or screen, select the template or screen entry and wait a second. Select the same entry again and an edit box will appear around it. Enter a new name then press the enter key on the keyboard when the entry is finished.

Right click on a template or screen entry in the File Browser window to show a menu of allowable commands that apply to that template or screen.

Right click template commands



Right click screen commands



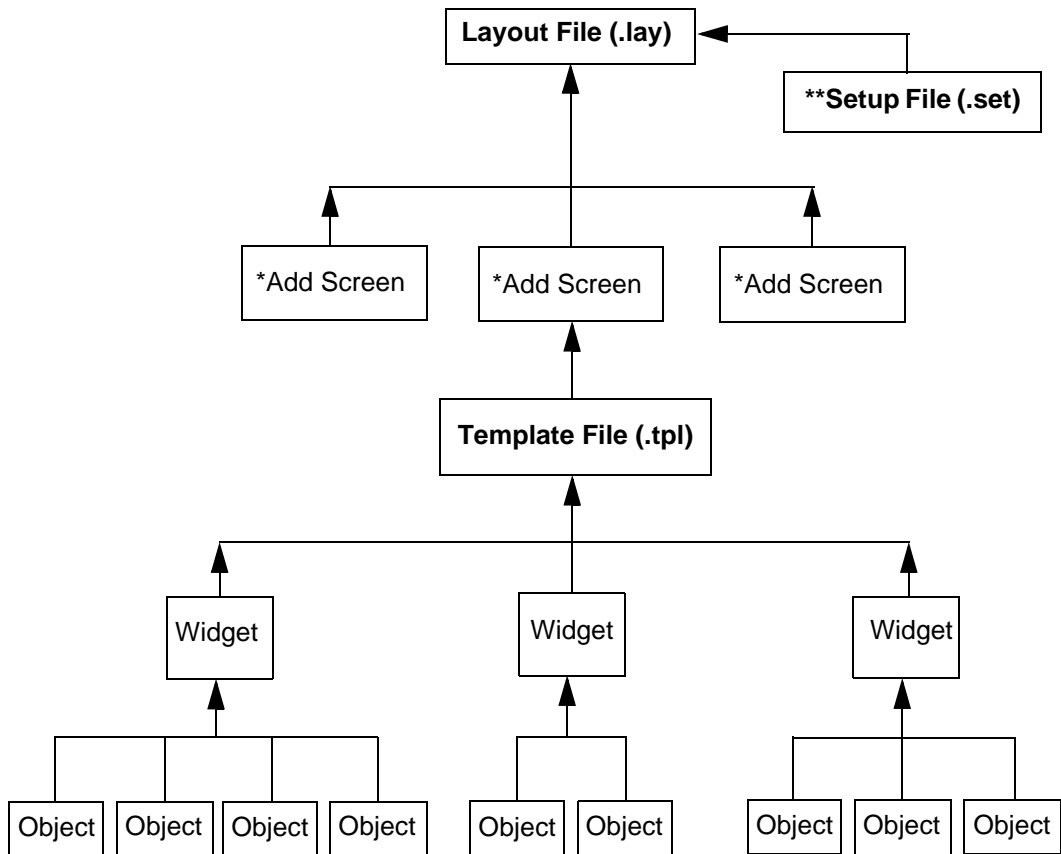
**Table 3.1 : Right click template and screen commands**

<b>Template commands</b>	<b>Screen commands</b>
<b>Cut</b> - removes the template to the clipboard for pasting	<b>Cut</b> - removes the screen to the clipboard for pasting
<b>Copy</b> - copies the template to the clipboard for pasting	<b>Copy</b> - copies the screen to the clipboard for pasting
<b>Paste</b> - pastes the template on the clipboard to the same layout or to a different layout	<b>Paste</b> - pastes the screen from the clipboard to the same layout or to a different layout
<b>Add Template</b> - adds a new template	<b>Add Screens</b> - Adds one or more new screens. You specify the template for each screen that you add.
<b>Delete Template</b> - deletes this template	<b>Delete Screen</b> - deletes this screen
<b>Re-order Templates</b> - allows the user to change the display order of the templates that are shown in the File Browser window and in the Design window	<b>Re-order Screens</b> - allows the user to change the display order of the screens that are shown in the File Browser window and in the Design window.
<b>Insert Template From File</b> - opens the Insert template dialog to search for a template in an existing template (.tpl) file to insert into the active layout	
<b>Save Template</b> - opens the Save As dialog to specify the location in which to save this template to a template (.tpl) file.	

## File Types

- “*Layout File*” on page 19 - contains one or more templates, zero or more screens
- “*Template File*” on page 20 - contains a single template
- “*Setup File*” on page 21 - contains a single setup only (imported from TrendManager software, not created in **Screen Designer**).

Figure 3.5 Example of what a Layout File can consist of



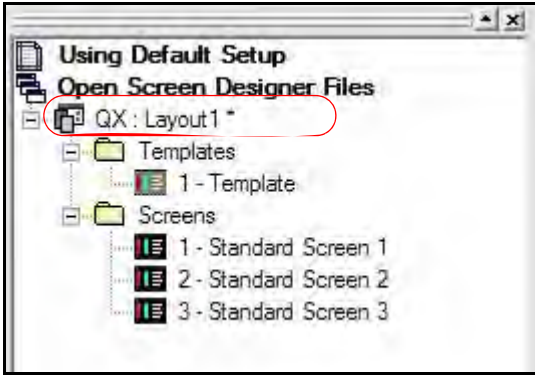
A minimum of one template and one screen is enough to create a layout file.

\*A screen is not a file type but a pen/channel mapping device that is saved together with the template(s) as a layout file (.lay).

\*\* A Setup file cannot be opened or created in **Screen Designer**. The setup file is loaded into the **Screen Designer** software and includes all the recorder setup information such as the pen and pen/channel configuration.

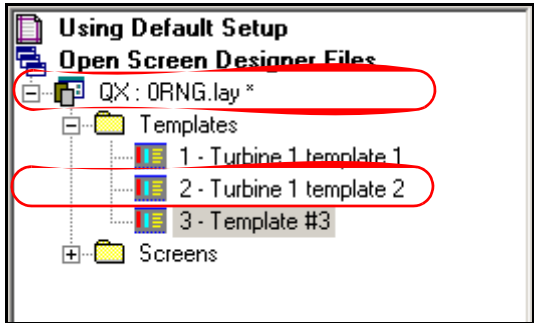
## Layout File

Table 3.2 :

Layout File (.lay)	
<b>Purpose</b>	Contains the screen configuration (objects, widgets, templates and screens) of a recorder. The user can load the screen configuration into the recorder separately from its setup.
<b>Contents</b>	Contains one or more templates Note that there is always at least one template (even if it is empty) in a layout, and the user cannot delete the only template remaining in a layout. Contains zero or more screens
<b>File Creation Details</b>	In order to create a layout file, <b>Screen Designer</b> prompts the user for the recorder type. <b>Screen Designer</b> uses the recorder type to determine the screen size of the templates to be created in the layout. <b>Screen Designer</b> saves the recorder type that was specified by the user in the layout file.
<b>Tabs in Design window</b>	Templates tab Template #1 Name tab to template #n Name tab Screens tab Screen #1 Name tab to screen #n Name tab
<b>Contents Shown in File Browser Window</b>	<p>The recorder type and file name is shown for each layout file as shown in the example below. A setup that has been loaded into <b>Screen Designer</b> is associated with every layout open in <b>Screen Designer</b>. The first entry shown in the File Browser window is the setup being used (either the default setup or a user specified setup). Each template listed shows the template number and name, and each screen listed shows the screen number and name.</p> 

## Template File

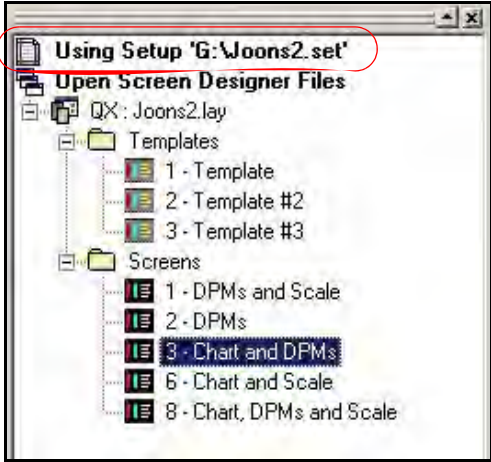
Table 3.3 :

Template File (.tpl)	
<b>Purpose</b>	Contains a single template. The user can load this template into a recorder and set up screens in the recorder based on it. A template can be inserted into a layout open in <b>Screen Designer</b> .
<b>Contents</b>	Contains a single template
<b>File Creation Details</b>	<p>A template file can be created from a template being displayed in <b>Screen Designer</b> by clicking on the Save Template button on the File Design window toolbar or by selecting the Save Template command on the Edit menu. The template can also be saved by right clicking on the template entry in the File Browser window and selecting the Save Template command from the menu.</p> <p><b>Screen Designer</b> saves the recorder type that was specified by the user in the template file.</p>
<b>Tabs in Design window</b>	<p>Templates tab            Template #1 Name tab            Screens tab            No Screens Configured tab</p>
<b>Contents Shown in File Browser Window</b>	<p>The recorder type, template name, and file name is shown for each template file as shown in the example below.</p> 

## Setup File

The Setup File contains a single setup for a recorder. A Setup file is not opened or viewed by **Screen Designer**. A setup file can be loaded into **Screen Designer** and will apply to all layouts open in **Screen Designer**. When a setup file is loaded into **Screen Designer**, its settings, such as pen tag and unit information, will be used in displaying all of the layouts open in **Screen Designer** and for the animation of any layout open in **Screen Designer**.

Table 3.4 :

Setup File (.set)	
<b>Purpose</b>	Contains the physical configuration (a setup) of a recorder (pens, I/O, and communications). The user can load a setup to the recorder separately from its screen configuration. Loading a setup in screen Designer allows <b>Screen Designer</b> to display the actual user-entered pen information on templates and screens, such as the pen tag, pen units, or pen description, rather than generic text, such as "Pen 1", "%", or "", respectively. Only one setup at time can be loaded into <b>Screen Designer</b> and the loaded setup will apply to all layouts in use.
<b>Contents</b>	Contains a single setup
<b>File Creation Details</b>	A Setup file cannot be created by <b>Screen Designer</b> .
<b>Tabs in Design window</b>	There is no Design window shown for a setup. The user does not open or close a Setup file in <b>Screen Designer</b> .
<b>Contents Shown in File Browser Window</b>	The first entry listed in the File Browser window shows which setup is being used for all layouts open in <b>Screen Designer</b> . This is either the default setup or a user specified setup. 

# Properties Window

The Properties Window can be dragged and docked to any edge of the application interface. It can also float in the application interface. The same is true for the File Browser Window and the Toolbox Window, although they can be docked only to the left or right edge of the application interface.

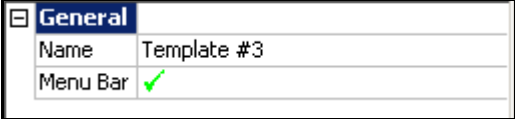
When a template, screen, widget or object is selected in the Design window a full list of characteristics for that item is displayed in the Properties window. The characteristics can be changed in the Properties window and the changes can be seen immediately in the Design window.

The Properties window will display:

- Template Properties - [See “Template Properties” on page 22.](#)
- Screen properties - [See “Screen Properties” on page 22.](#)
- Widget properties - [See “Widget Properties” on page 23.](#)
- Object properties - [See “Object Properties” on page 24.](#)

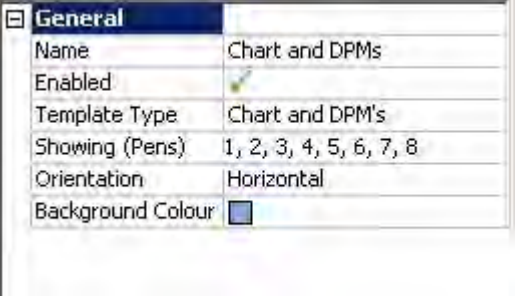
## Template Properties

Table 3.5 : Example of Template Properties

	<p><b>General</b></p> <p>Name - Select to Change the name</p> <p>Menu bar - Toggles the recorder menu bar on and off at the top of the template and at the top of all screens based on the template.</p>
---	--

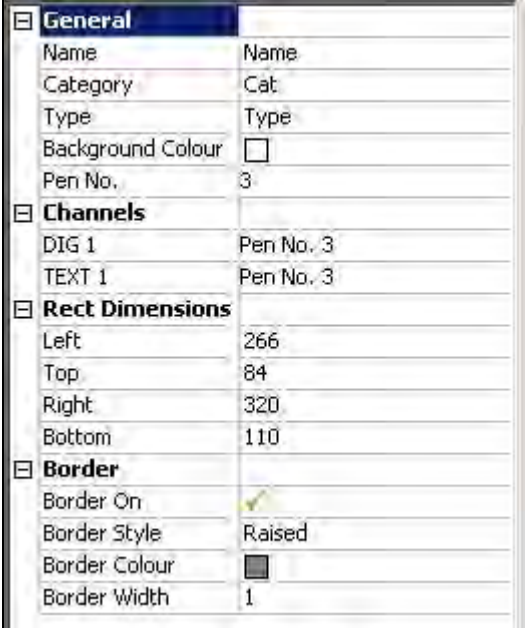
## Screen Properties

Table 3.6 : Example of Screen Properties

	<p><b>General</b></p> <p>Name - Select to Change the name</p> <p>Enabled - Toggle On and Off to enable or disable this screen. A disabled screen will not be shown on the recorder.</p> <p>Template Type - Select from a list of all templates in the layout.</p> <p>Showing (Pens) - Add and remove pens for this screen</p> <p>Orientation - (Not DPMs). Set the orientation to Vertical or Horizontal for Scales and Charts.</p> <p>Background Colour - Colour palette to set background colour</p>
---	--

## Widget Properties

Table 3.7 : Example of a Properties window for a Digital Widget in a Screen

	<table border="1"> <thead> <tr> <th colspan="2">General</th> </tr> </thead> <tbody> <tr> <td>Name</td> <td>- each widget instance can be given its own name</td> </tr> <tr> <td>Category</td> <td>- A widget category (such as Bar widget) can contain different types of widgets in that category (such as Horizontal, for a horizontal bar widget, or Vertical, for a vertical bar widget)</td> </tr> <tr> <td>Type</td> <td>- of widget from the Toolbox</td> </tr> <tr> <td>Background Colour</td> <td>- colour palette for the widget background</td> </tr> <tr> <td>Pen No.</td> <td>- a quick way to assign a single pen to all objects in a widget rather than having to specify individually the same pen for each object. For example, if a widget contains a bar, scale, digital, and alarm markers object, all of these objects can be set up to use the same pen by just specifying Pen No.</td> </tr> <tr> <th colspan="2">Channels - Channels specify where objects in the widget get their data from</th> </tr> <tr> <td>DIG 1</td> <td>- First Digital shown on this widget</td> </tr> <tr> <td>TEXT 1</td> <td>- First Text item shown on this widget</td> </tr> <tr> <th colspan="2">Rect. Dimensions - Dimensions of the widget</th> </tr> <tr> <td>Left</td> <td>- position of the left edge of the widget on the template</td> </tr> <tr> <td>Top</td> <td>- position of the top edge of the widget on the template</td> </tr> <tr> <td>Right</td> <td>- position of the right edge of the widget on the template</td> </tr> <tr> <td>Bottom</td> <td>- position of the bottom edge of the widget on the template</td> </tr> <tr> <th colspan="2">Border - edge around the widget</th> </tr> <tr> <td>Border On</td> <td>- turns the border on around the widget</td> </tr> <tr> <td>Border Style</td> <td>- Raised, Flat or Inset</td> </tr> <tr> <td>Border Colour</td> <td>- colour palette for the widgets border</td> </tr> <tr> <td>Border Width</td> <td>- enter border width, up to 15 pixels</td> </tr> </tbody> </table>	General		Name	- each widget instance can be given its own name	Category	- A widget category (such as Bar widget) can contain different types of widgets in that category (such as Horizontal, for a horizontal bar widget, or Vertical, for a vertical bar widget)	Type	- of widget from the Toolbox	Background Colour	- colour palette for the widget background	Pen No.	- a quick way to assign a single pen to all objects in a widget rather than having to specify individually the same pen for each object. For example, if a widget contains a bar, scale, digital, and alarm markers object, all of these objects can be set up to use the same pen by just specifying Pen No.	Channels - Channels specify where objects in the widget get their data from		DIG 1	- First Digital shown on this widget	TEXT 1	- First Text item shown on this widget	Rect. Dimensions - Dimensions of the widget		Left	- position of the left edge of the widget on the template	Top	- position of the top edge of the widget on the template	Right	- position of the right edge of the widget on the template	Bottom	- position of the bottom edge of the widget on the template	Border - edge around the widget		Border On	- turns the border on around the widget	Border Style	- Raised, Flat or Inset	Border Colour	- colour palette for the widgets border	Border Width	- enter border width, up to 15 pixels
General																																							
Name	- each widget instance can be given its own name																																						
Category	- A widget category (such as Bar widget) can contain different types of widgets in that category (such as Horizontal, for a horizontal bar widget, or Vertical, for a vertical bar widget)																																						
Type	- of widget from the Toolbox																																						
Background Colour	- colour palette for the widget background																																						
Pen No.	- a quick way to assign a single pen to all objects in a widget rather than having to specify individually the same pen for each object. For example, if a widget contains a bar, scale, digital, and alarm markers object, all of these objects can be set up to use the same pen by just specifying Pen No.																																						
Channels - Channels specify where objects in the widget get their data from																																							
DIG 1	- First Digital shown on this widget																																						
TEXT 1	- First Text item shown on this widget																																						
Rect. Dimensions - Dimensions of the widget																																							
Left	- position of the left edge of the widget on the template																																						
Top	- position of the top edge of the widget on the template																																						
Right	- position of the right edge of the widget on the template																																						
Bottom	- position of the bottom edge of the widget on the template																																						
Border - edge around the widget																																							
Border On	- turns the border on around the widget																																						
Border Style	- Raised, Flat or Inset																																						
Border Colour	- colour palette for the widgets border																																						
Border Width	- enter border width, up to 15 pixels																																						

For more information see [“Designing a Widget” on page 38](#)

# Object Properties

Table 3.8 : Example of properties for a Digital Object in a Screen

General		General
Buffering	Unbuffered	Buffering - redraws off line to reduce screen flicker if this is set to double-buffered
Transparency	<input checked="" type="checkbox"/>	Transparency - inactive part of the object becomes transparent
Alpha Blending	<input checked="" type="checkbox"/>	Alpha Blending - semi transparent state for overlaying objects
Fix Foreground Colour	<input checked="" type="checkbox"/>	Fix Foreground Colour - Tick to fix colour for the active part of the object
Foreground Colour	<input type="checkbox"/>	Fix BackColour - Tick to fix colour for the background of the object
Fix BackColour	<input checked="" type="checkbox"/>	Background Colour - Colour palette for the background of the object
Background Colour	<input type="checkbox"/>	Showing - None set. This will display the pen showing on this object
Showing	Pen No. None Set	Enable Alarm - Enables an Alarm for that Digital object
Enable Alarm	<input checked="" type="checkbox"/>	Flash Foreground on Alarm - Foreground flashes when alarm active
Flash Foreground On Alarm	<input checked="" type="checkbox"/>	Flash Bkground on Alarm - Background flashes when alarm active
Flash Bkground on Alarm	<input checked="" type="checkbox"/>	Change ForeClr on Alarm - Change the colour of the foreground alarm
Change ForeClr On Alarm	<input checked="" type="checkbox"/>	Foreground Alarm Clr - Colour palette for the foreground alarm
Foreground Alarm Clr	<input type="checkbox"/>	Fix Number Format - Number format options appear when ticked
Fix Number Format	<input checked="" type="checkbox"/>	<b>Rect. Dimensions</b> - Dimensions of the object
<b>Numb Format</b>		Left - position of the left edge of the object on the template
Notation	Normal	Top - position of the top edge of the object on the template
Auto	Auto	Right - position of the right edge of the object on the template
After Decimal	Variable	Bottom - position of the bottom edge of the object on the template
<b>Rect Dimensions</b>		<b>Border</b> - edge around the object
Left	128	Border On - turns the border on around the object
Top	207	Border Style - Raised, Flat or Inset
Right	180	Border Colour - colour palette for the object border
Bottom	229	Border Width - enter border width, up to 15 pixels
<b>Border</b>		
Border On	<input checked="" type="checkbox"/>	
Border Style	Raised	
Border Colour	<input type="checkbox"/>	
Border Width	1	

For more detailed information see ["Object Properties" on page 40](#)

# Toolbox Window

The Toolbox Window, in the middle left of the screen, has two tabs for widgets and objects. Sets of pre-defined widgets and objects have been created and loaded into the Toolbox library.

## Widgets Tab

The widgets tab has been divided up into folders containing a selection of pre-designed widgets. Each folder will expand displaying each variation of a particular widget type. Each widget is different.

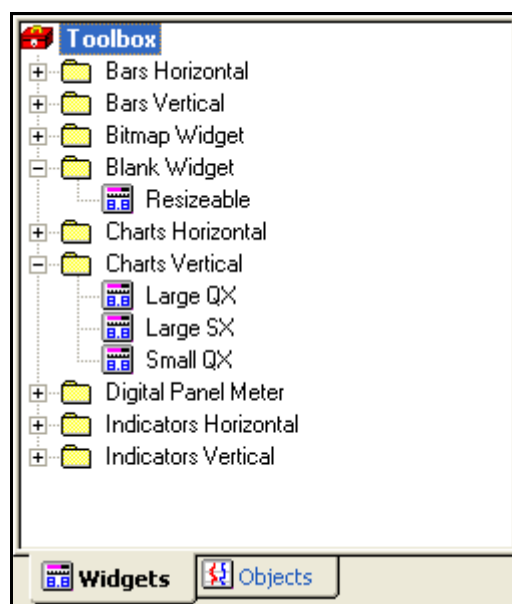
For example, in the "Indicators Horizontal" folder there are 8 widgets,.There are 4 widgets for the **QX** and 4 widgets for the **SX** recorder. This list shows the type of variations:

- **QX Bar Type 1** - contains Bar and Scale objects
- **QX Bar Type 2** - contains a Bar, a Scale and Alarm Markers objects
- **QX Bar Type 3** - contains Bar and Scale objects with alpha blending and transparency switched on
- **QX Bar Type 4** - contains a Bar, a Scale and Alarm Marker objects with alpha blending and transparency switched on

Select the most suitable widget from the list and Drag and Drop the pre-defined widgets onto a template. Or select the Blank re-sizeable widget and add your own objects from the objects tab.

A widget on a template can be renamed for ease of identification in the Properties window.

Figure 3.6 Toolbox window - Widgets tab



## Objects tab

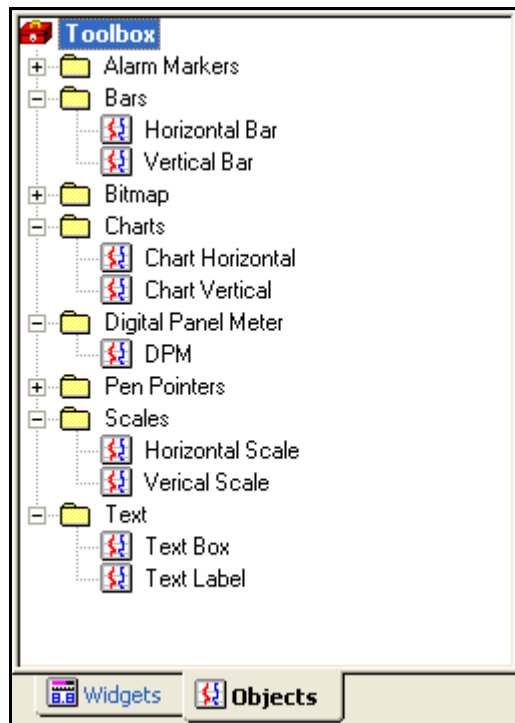
The objects tab has been divided up into folders containing a selection of pre-designed objects. Each folder will expand displaying each variation of a particular object type. Each object is different.

For example, in the “Charts” folder there is a “Chart Horizontal” object and a “Chart Vertical” object.

Select the desired object from the list and Drag and Drop it onto a blank widget or a pre-defined widget.

Select the objects tab to display a list of pre-defined objects that the user can Drag and Drop into a widget.

Figure 3.7 Toolbox window - Objects tab



# Templates

A template is the area where widgets are placed to create a layout. Adding a screen based on a template will enable channels to be mapped and pen information to be displayed on the screen. The same template can be used in many layouts if they are required to look the same.

For example: Template #1 has 4 DPMs. Add Screen 1 which has pens 1 to 4 configured. Template #1 can be used again with Screen 2 which has pens 5 to 8 configured.

A template can be saved on its own as a Template (.tpl) file. The template file can be loaded into a recorder and the pen/channel configuration can be set up on the recorder.

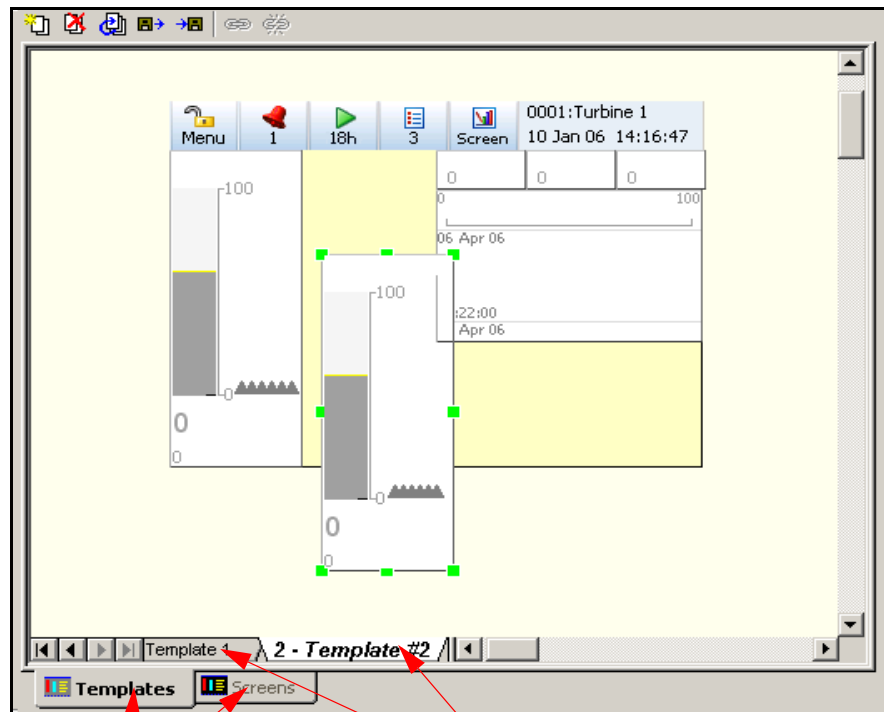
To start a new layout design go to **New** in the main tool bar, or to open an existing layout file go to **Open** and browse for the desired layout (.lay).

When you start a new layout there are two sizes to choose from depending on the type of recorder. Select one from the list and a new Design window will appear in the middle of the PC's screen displaying Template #1.

Up to 32 templates can be used per layout.

For more information on the template file specification see ["Template File" on page 20](#)

**Figure 3.8 Design window showing a new template and a Vertical bar widget from the Toolbox**



Outer tabs to switch between templates and Screens

Inner tabs show all the templates available for this layout



## CAUTION

### IMPORTANT NOTICE FOR TEMPLATES AND SCREENS

Any changes to a template will affect all screens which use the template. Also be aware that any design changes made in a screen will affect all of the other screens using that template and will change the template itself.

This **CAUTION** symbol may indicate a potentially hazardous situation, which, if not avoided, **may result in property damage.**

## Template Tabs

At the bottom of the Design window are two sets of tabs. The outer tabs are to swap between viewing templates or screens. When templates are selected on the outer tab then the inner tabs will display just templates. From the toolbar at the top of the Design window there are icons to add, delete and re-order templates.

A layout can consist of many templates. It is when you add a screen to the layout that you choose which template is going to be used for that screen.

A layout with many templates can be loaded into the recorder and different templates can be selected at the recorder level to create new screens. [See “Loading a Template into a Recorder” on page 55.](#)

## Association with a Screen

To see which screens use which template go to the Properties Window for each screen and check the template Type property. The purpose of adding a template to a screen is so the user can set up channel/pen configuration. When the screen and the template are complete the two are saved as a layout (.lay). To add a screen click on the screens tab and go to the toolbar and select Add Screens.

## Template Toolbar

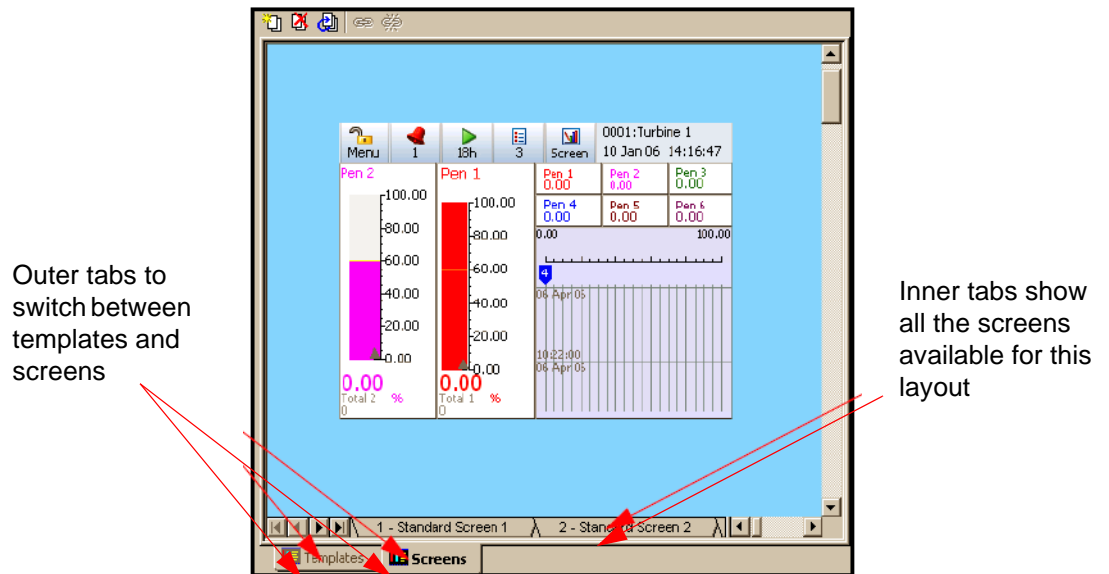
The Design window toolbar changes depending on if a template or screen is being displayed in the Design window. The toolbar runs along the top of the Design window when a layout has been opened. [See “Design window toolbar” on page 14.](#)

# Screens

A screen is added to a template and provides pen/channel configuration for each object or widget on the template.

## Screen Tabs

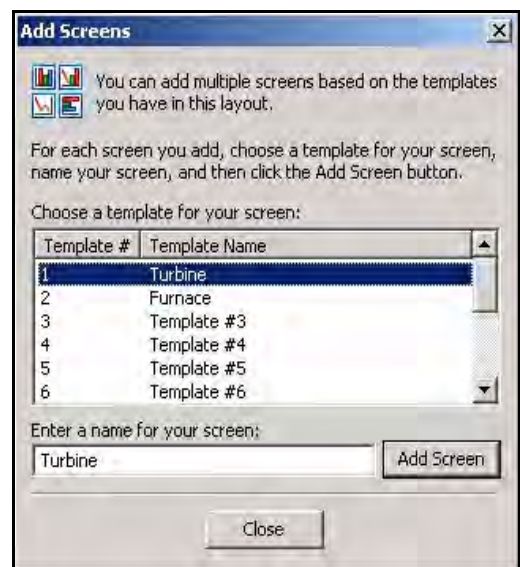
At the bottom of the Design window are two sets of tabs. The outer tabs are to swap between viewing templates or screens. The inner tabs will display the names given to the screens. From the toolbar at the top of the Design window there are icons to add, delete and re-order screens.



## Add a Screen

When a template is complete select the screens (outer) tab and go to the screen toolbar at the top and select Add Screens. The Add Screens box will appear with a list of templates that can be chosen for the screens to be added. At the bottom of the Add screens box is where you can rename each screen to be added. By default the template you have selected from the list will appear in here.

The user can add multiple screens using this dialog before deciding to close it.



Up to 32 screens can be used in one layout.

## Screen Configuration

Screen configuration is assigning each object and/or widget to a pen/channel. See [“Configuring a Screen” on page 53](#).

## Screen Toolbar

The Design window toolbar changes depending on if a template or a screen is being displayed in the Design window. The toolbar runs along the top of the Design window when a layout has been opened. See [“Design window toolbar” on page 14](#).

## Screen Properties Window

When a blank area of the screen is selected the characteristics of the screen will be displayed in the Properties window. Some of the individual characteristics can be changed in the Properties window, including the screen name, see [Table 3.4 on page 21](#).

# Widgets

## Widget Details

- Up to 64 widgets can be used per template.
- You can cut, copy, paste and delete widgets on a template.
- Widgets can be resized using the green coloured blocks that appear around the edge when it is selected, known as resize handles.
- Objects are confined to the boundaries of a widget for moving and resizing.
- A widget cannot contain another widget, only objects. For details of widget properties see [“Widget Properties” on page 23](#).

## Types of Widgets

### Standard Widgets

Standard widgets are found in the widgets tab in the Toolbox window. The widgets tab will contain several styles of pre-designed widgets for immediate use. They can be dragged & dropped onto a template to aid in designing the template quickly.

Standard widgets in the Toolbox are:

Table 3.9 :

Widget	Description
Bars	A selection of Horizontal and Vertical Bars with Scales & Alarm Markers
Bitmap	Blank for own design; can be re-sized. Contains a blank bitmap object
Blank Widget	Blank for own design; can be re-sized
Chart	Horizontal and Vertical Chart object plus pen pointers, alarm markers.
Digital Panel Meter	A selection of Digital Panel Meters
Indicators	A selection of Horizontal and Vertical transparent Indicators (Bars with Scales & Alarm Markers) designed for use with Bitmaps

## **User Defined Widgets**

User defined widgets are ones that the user has created and saved or by taking a blank widget or a standard widget and modifying it to create a new widget.

The user can create a new widget from scratch by selecting a blank widget from the widgets tab in the Toolbox window and dragging and dropping it onto a template. Add objects to the widget to create the desired design. Widgets have to be saved as a part of a template.

## **Association with an Object**

A widget is a graphical display container for objects. Up to 64 objects can be placed into a widget. None of the objects can be resized beyond the boundaries of the widget. [See “Objects” on page 31.](#)

## **Widget Properties Window**

When a blank area of the widget is selected the characteristics of the widget will be displayed in the Properties window. Any objects on the widget will also appear on the properties window, listed under Channels. When the widget is selected, green resizing handles will appear around the edge of the widget. The individual characteristics of the widget can be changed in the Properties window, see [“Properties Window” on page 22](#)

### **NOTICE**

If a widget has many objects in it, it is sometimes difficult to know where to select a blank area of the widget. It is easy to select an object by mistake instead. You can force selecting the widget instead of an object in it by holding down the Ctrl key on the keyboard while you click anywhere in the widget.

## **Objects**


### **Object Details**

- Up to 64 objects can be used per widget.
- You can cut, copy, paste and delete objects from a widget.
- Objects can be resized using the blue coloured handles that appear around the edge when it is selected.
- Objects can also be linked to other objects, see [“Linking Objects” on page 35.](#)
- For details of object properties see [See “Object Properties Window” on page 35..](#)


### **Types of Objects**

#### **Alarm Markers Object**

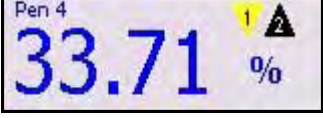
The Alarm Markers object will appear only if the Alarms are enabled for the pen that it uses. Alarm markers can be set to flash when an alarm is active. The colour of the alarm marker can also be set. When an alarm markers object has its Height property set to greater than 15, the alarm number will appear in the marker.



Vertical and Horizontal Alarm Marker objects



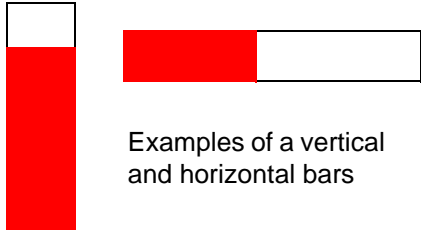
High Alarm active on a DPM



Low Alarm active on a DPM

**Bar Object**

A Bar object is a Bargraph indicator representing the input signal in a graphical form, ascending or descending in a vertical orientation or increasing to the right or the left in a horizontal orientation. To read a bar measurement accurately use a Digital object and or a Scale object.




Examples of a vertical and horizontal bars

**Bitmap Object**


Bitmaps can be added to a bitmap object on a template to create a background image. Other widgets can be placed on top to depict activity within that image. They can also be used to enhance a screen design, such as adding a company or product logo.

Either drag and drop a bitmap widget onto the design area (it already contains a blank bitmap object) or drag and drop a bitmap object onto any existing widget. When resizing the bitmap, hold the shift key down to keep the aspect ratio.

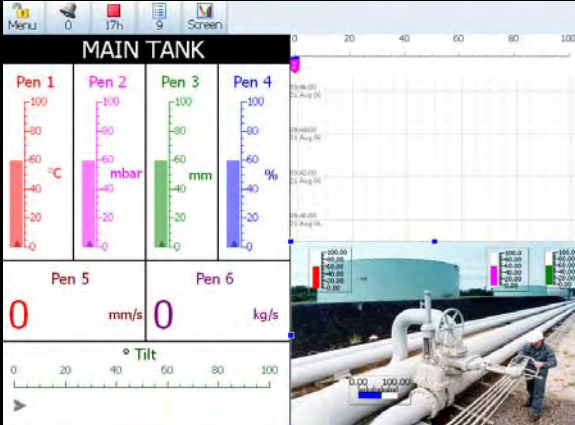
**Bitmap Library**



First, make sure you have the blank bitmap object selected then you can browse the bitmap library in the toolbar or in the File menu. Select a new bitmap and this will be inserted into the blank bitmap object. [See "Adding Bitmaps" on page 33.](#)



Bitmap inserted into a blank object on a blank widget

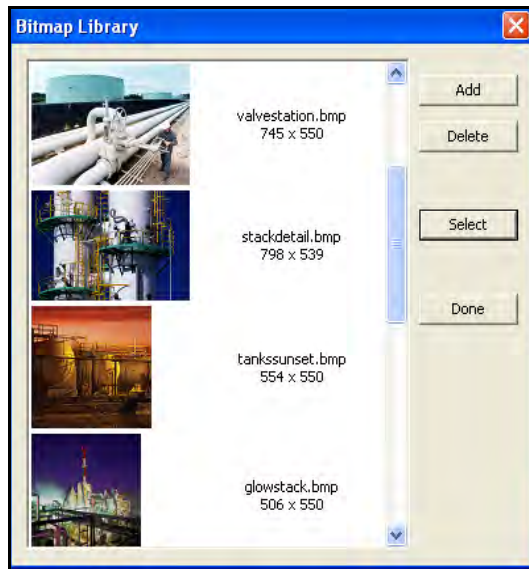


MAIN TANK

Pen 1 100 0 °C	Pen 2 100 0 mbar	Pen 3 100 0 mm	Pen 4 100 0 %
Pen 5 0 mm/s	Pen 6 0 kg/s	Tilt 0 20 40 60 80 100	

Bitmap inserted onto a widget in an existing layout

## Adding Bitmaps



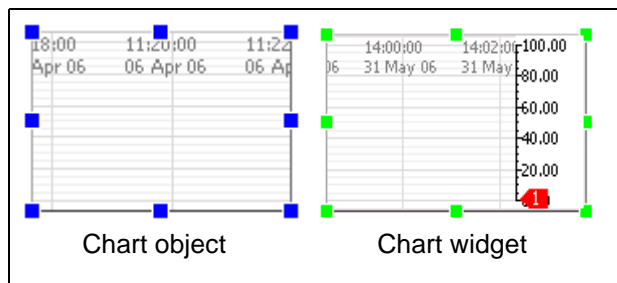
The bitmap library contains a few examples. To add your own bitmaps select the Add button and browse to the location of the bitmap you require on your PC.

To insert a bitmap you must first have a bitmap object selected in the layout. Go to the library, highlight the desired bitmap and press Select.

Bitmaps can be added and deleted from the library as required. Ensure that you do not delete any bitmaps from the library that are used in a layout, as they will disappear from the layout.

To Re-size a bitmap and maintain the aspect ratio of the original image hold down the Shift key on the keyboard when resizing using the grab handles

## Chart Object



The Chart object can display multiple pen traces. The chart object has no Pen Pointers or Scale; it is just a Chart.

If a Chart, Scale and Pen Pointers object are required, select a Chart widget instead of a Chart object.

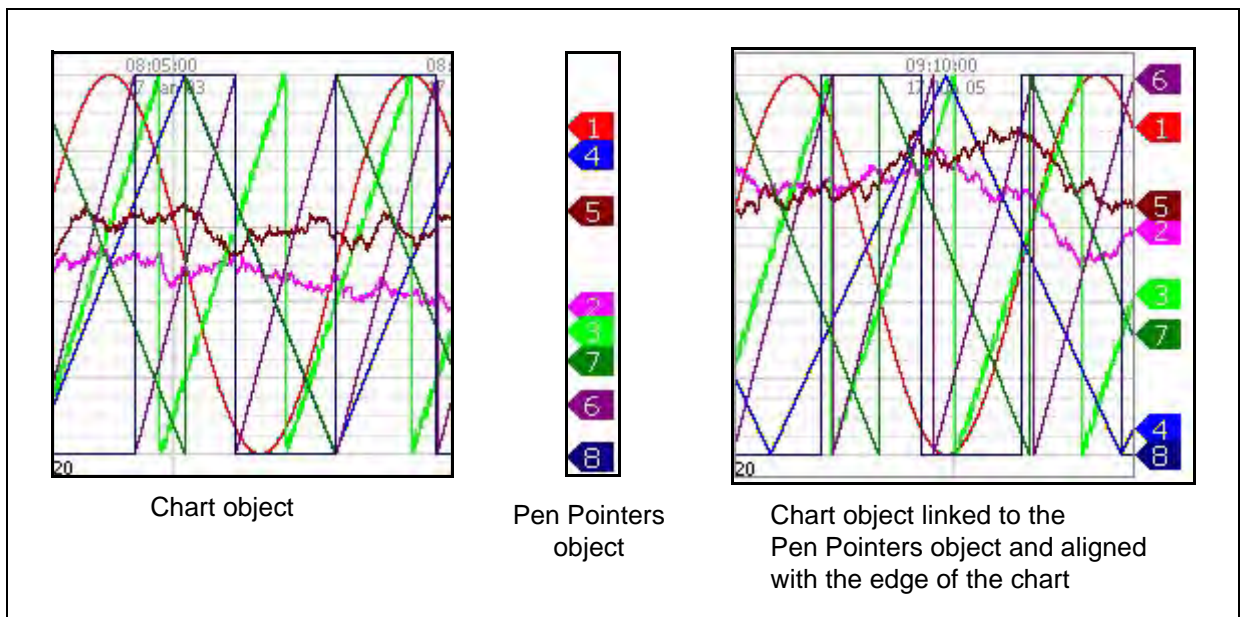
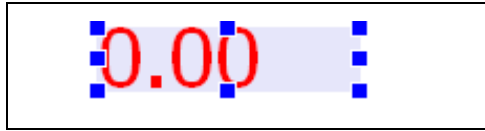


Chart object

Pen Pointers object

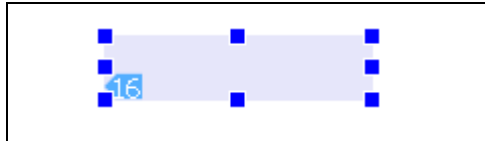
Chart object linked to the Pen Pointers object and aligned with the edge of the chart

### Digital Object



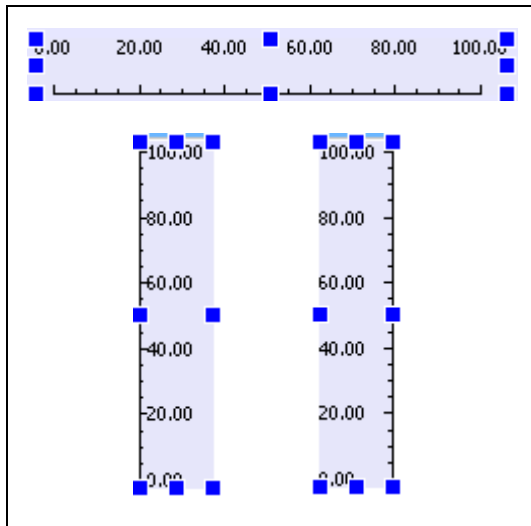
A Digital object is a numeric reading of the input signal. Used on their own or with a Bar object.

### Pen Pointers Object



Pen Pointers can show multiple pens and are mainly used with charts to follow the exact position of the last reading with the pen number marked on each pointer. A pen pointer can be set to flash when an alarm is active on that pen.

### Scale Object



The Scale object can be set to display any numeric value (max 23 decimal places). This is set in the "Showing" item in the Properties window for a Scale object in a screen tab. A Scale object is usually associated with a bar.

This example shows a horizontal scale with the label position at the top. The two vertical scales display left and right graduation and label direction

### Text Object



Text objects can be used for adding the Pen tag/units, Labels, Max/Min, Totals or any text required. Choose a single line Text Label or a multiline Text Box.



## Object Properties Window

When an object is selected the characteristics of the object will be displayed in the Properties window on the right. When the object is selected blue resizing handles will appear around the edge of the object. The individual characteristics of the object can be changed in the Properties window, see [“Object Properties” on page 40](#).

## Association with a Widget

A widget is a container for objects. Up to 64 objects can be placed into a widget. None of the objects can be resized beyond the boundaries of the widget. See [“Widget Details” on page 30](#).

## Linking Objects

Objects containing a scale can be linked together so that they are locked at the same size and will resize together. For more information see [“Linking Objects” on page 52](#)



# Section 4: Designing a Layout

## Starting a Layout

A layout can consist of one or more templates. The template(s) have widgets placed on them and objects can be added to the widgets. When the template design is complete a screen is added to the layout where the pen/channel configuration is set up. The layout is then saved as a .lay file type.

To start a new layout design:

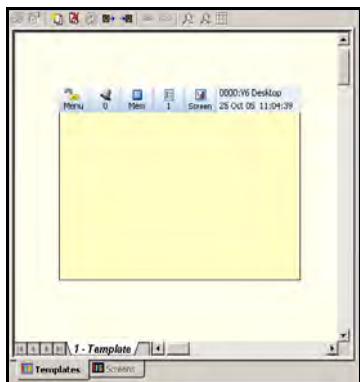
1. Open **Screen Designer**
2. Click on New from the main toolbar.
3. Choose from two recorder types in the drop down list.
4. This will produce a layout with a blank template. By default this template will be named Template #1.

## Designing a Template

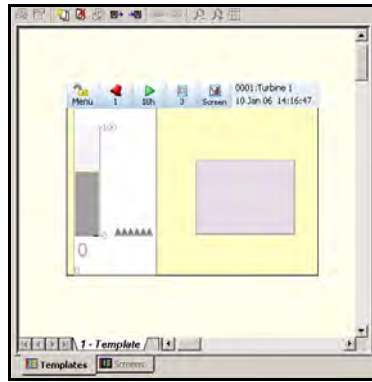
The template area is the design area that is equivalent to the recorder screen size. The idea is to create a design by placing widgets onto the template and then placing objects on to the widgets. Widgets are just containers for objects. Objects will graphically represent the data on the recorder's screen.

Standard widgets are available from the widgets tab in the Toolbox. These are pre-designed widgets that can be used just as they are. [See "Standard Widgets" on page 30.](#)

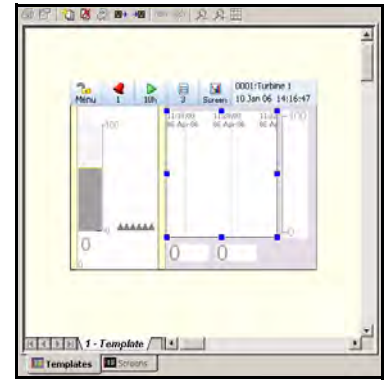
Figure 4.1 Template, Widget and Object



Blank template



A standard vertical Bar widget and a blank widget



The blank widget has a Chart, a Scale and two DPM objects added

In this example we will start with a blank template:

1. From the Toolbox window select, drag and drop a blank widget or a standard widget from the widgets tab in the Toolbox. Drag this onto the template.

2. When the widget is selected green resize handles appear around the edge and its properties will display in the Properties window. At this stage you may wish to change the background colour, border details etc.
3. One or many widgets may be placed onto the template, but must not overlap or go outside the template area.
4. Validate the layout to ensure there are no overlapping widgets
5. When the template is complete, select the screens outer tab and go to the Add Screens icon in the toolbar and add one or more screens that use the template.
6. Add pen configuration details and save the layout.

### **Expert Mode**



To select objects on a widget, Expert Mode must be active. The Expert Mode icon is in the Main Toolbar at the top of the Design window.

To select the widget in Expert Mode and not an object in the widget, hold down the Ctrl key on your keyboard and select as normal with the mouse cursor. This is useful when there are many objects in the widget, and it is difficult to find an empty area of the widget to click on to select the widget.

### **Shortcuts**

Right click on an object or widget and select Cut, Copy, Paste or Delete.

### **Object Order**

When placing objects on top of each other it can become difficult to select an object that is overlapped by another. The order of how the objects overlap can be changed by right-clicking on the object and selecting Order; this is known as the Z-Order.

- Bring Forward: - moves an object one step higher in the Z-order
- Send Backward: - moves an object one step lower in the Z-order
- Bring to Front: - moves an object to the top of the Z-order
- Send to Back - moves an object to the bottom of the Z-order

Charts and Bitmaps should always stay behind other objects. For more information see [“Object Z - Order” on page 49.](#)

## **Designing a Widget**

Widgets are graphical containers for objects; objects display elements that represent data in different graphical forms. Widgets are built up using a selection of standard objects from the objects tab in the Toolbox. Only objects can be placed in a widget; a widget cannot be placed in another widget.

Widgets, when selected, have green resize handles and can be moved and resized within the confines of the design area of the template.

### **Adding Objects**

Drag and Drop a blank or standard widget to the template:

1. From the Toolbox window, select, drag and drop an object from the objects tab onto the widget.

2. When an object is selected, blue resize handles will appear and its properties will display in the Properties window. Objects have many properties that can be changed. For a definition of each property see [“Object Properties” on page 24](#).
3. One or many objects can be placed onto the widget. Many widgets may be placed on the template.
4. When the template is complete, select the screens outer tab and go to the Add Screens icon in the Toolbar. Here you can add one or more screens using the template you just designed.
5. Add pen/channel configuration details by going to the “Showing” item in the Properties window. Pen/channel configuration can be performed per object or per widget. When complete the template and screen information can be saved as a layout (.lay) file.

The user can add more objects and more widgets to a design and change a layout. objects, when selected, can be moved and resized within the confines of a widget.

### **Bitmaps**

For information on inserting bitmaps into your layout see [“Bitmap Object” on page 32](#).

### **Pen Colours**

The colours of the objects on the widget are determined by the pen/channel configuration that is set up in the Properties Window. See [“Configuring a Screen” on page 53](#). Alternatively the colours can be changed individually in the properties window.

**Table 4.1 : Pen colours**

Pen #	Colour	RGB	Pen #	Colour		Pen #	Colour	
1	Red	225/0/0	17	Red Tint	255/39/87	33	Red Tint2	255/39/87
2	Magenta	225/0/225	18	Dark Purple	109/81/139	34	Dark Purple 2	109/81/139
3	Green	0/128/0	19	Olive	87/146/76	35	Olive 2	87/146/76
4	Blue	0/0/225	20	Light Navy	0/94/118	36	Light Navy 2	0/94/118
5	Dark Red	196/0/0	21	Light Orange	253/83/48	37	Light Orange 2	253/83/48
6	Dark Magenta	128/0/128	22	Light Purple	174/113/211	38	Light Purple 2	174/113/211
7	Dark Green	0/74/0	23	Light Olive	139/168/0	39	Light Olive 2	139/168/0
8	Dark Blue	0/0/137	24	Cyan	83/174/172	40	Cyan 2	83/174/172
9	Mid Red	235/39/87	25	Mid Orange	255/100/0	41	Mid Orange 2	255/100/0
10	Mid Magenta	109/81/142	26	Aqua	0/231/157	42	Aqua 2	0/231/157
11	Mid Green	87/146/76	27	Salmon	211/148/133	43	Salmon 2	211/148/133
12	Mid Blue	0/94/118	28	Dark Sand	201/144/41	44	Dark Sand 2	201/144/41
13	Light Red	253/83/48	29	Dark Olive	0/59/44	45	Dark Olive 2	0/59/44
14	Light Magenta	174/116/209	30	Lime Green	111/255/109	46	Lime Green 2	111/255/109
15	Light Green	139/168/0	31	Light Slate	74/74/81	47	Light Slate 2	74/74/81
16	Light Blue	83/174/255	32	Brown	96/0/0	48	Brown 2	96/0/0

## Object Properties

Practically all the elements of an object can be changed: Size, Foreground Colour, Background Colour, Orientation, Alpha Blending, Transparency, position on the template, Border, plus many more properties that are individual to each type of object.

The following tables give examples of each type of object and a list of their properties that can be changed.

### Chart Object Properties

Table 4.2 : Example of a Chart Object properties window in the Screen tab

<table border="1"> <thead> <tr> <th colspan="2">General</th> </tr> </thead> <tbody> <tr><td>Alpha Blending</td><td><input type="checkbox"/></td></tr> <tr><td>Fix Foreground Colour</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>Foreground Colour</td><td><input type="color"/></td></tr> <tr><td>Fix BackColour</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>Background Colour</td><td><input type="color"/></td></tr> <tr><td>Showing</td><td>None Set</td></tr> <tr><td>Orientation</td><td>Horizontal</td></tr> <tr><td>Chart Speed</td><td>Fast</td></tr> <tr><td>Fix Alarm Colour</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>Bkg Alarm Colour</td><td><input type="color"/></td></tr> <tr><td>Fix Message Colour</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>Message Colour</td><td><input type="color"/></td></tr> <tr><td>Fix Font Colour</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>Font Colour</td><td><input type="color"/></td></tr> <tr><td>Height</td><td>11</td></tr> <tr> <th colspan="2">Rect Dimensions</th> </tr> <tr><td>Left</td><td>125</td></tr> <tr><td>Top</td><td>38</td></tr> <tr><td>Right</td><td>269</td></tr> <tr><td>Bottom</td><td>199</td></tr> <tr> <th colspan="2">Border</th> </tr> <tr><td>Border On</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>Border Style</td><td>Raised</td></tr> <tr><td>Border Colour</td><td><input type="color"/></td></tr> <tr><td>Border Width</td><td>1</td></tr> </tbody> </table>	General		Alpha Blending	<input type="checkbox"/>	Fix Foreground Colour	<input checked="" type="checkbox"/>	Foreground Colour	<input type="color"/>	Fix BackColour	<input checked="" type="checkbox"/>	Background Colour	<input type="color"/>	Showing	None Set	Orientation	Horizontal	Chart Speed	Fast	Fix Alarm Colour	<input checked="" type="checkbox"/>	Bkg Alarm Colour	<input type="color"/>	Fix Message Colour	<input checked="" type="checkbox"/>	Message Colour	<input type="color"/>	Fix Font Colour	<input checked="" type="checkbox"/>	Font Colour	<input type="color"/>	Height	11	Rect Dimensions		Left	125	Top	38	Right	269	Bottom	199	Border		Border On	<input checked="" type="checkbox"/>	Border Style	Raised	Border Colour	<input type="color"/>	Border Width	1	<table border="1"> <thead> <tr> <th>General</th> </tr> </thead> <tbody> <tr> <td>Alpha Blending - semi transparent state for overlaying objects</td> </tr> <tr> <td>Fix Foreground Colour - Tick to fix colour for the horizontal and vertical graph lines of the chart.</td> </tr> <tr> <td>Foreground Colour - Set foreground colour using colour palette</td> </tr> <tr> <td>Fix BackColour - Tick to fix colour for the background of the object</td> </tr> <tr> <td>Background Colour - Colour palette for the background of the object</td> </tr> <tr> <td>Showing - Specify which pens to show on the chart</td> </tr> <tr> <td>Orientation - Horizontal or Vertical Chart traces</td> </tr> <tr> <td>Chart Speed - Fast, Medium or Slow</td> </tr> <tr> <td>Fix Alarm Colour - Tick to fix the alarm background colour for the Chart</td> </tr> <tr> <td>Bkg Alarm Colour - Colour palette for the background of the chart when an alarm is triggered</td> </tr> <tr> <td>Fix Message Colour - Tick to fix the colour for any Messages on the Chart</td> </tr> <tr> <td>Message Colour - Colour palette for the Message Colour</td> </tr> <tr> <td>Fix Font Colour - Tick to fix the colour of the Font for Text on the Chart (eg. date/time stamp)</td> </tr> <tr> <td>Font Colour - Colour palette for the Font Colour</td> </tr> <tr> <td>Height - Change the Font height for Text used on the Chart</td> </tr> <tr> <th>Rect Dimensions</th> </tr> <tr> <td>Left - position of the left edge of the object on the template</td> </tr> <tr> <td>Top - position of the top edge of the object on the template</td> </tr> <tr> <td>Right - position of the right edge of the object on the template</td> </tr> <tr> <td>Bottom - position of the bottom edge of the object on the template</td> </tr> <tr> <th>Border</th> </tr> <tr> <td>Border On - turns the border on around the object</td> </tr> <tr> <td>Border Style - Raised, Flat or Inset</td> </tr> <tr> <td>Border Colour - colour palette for the object border</td> </tr> <tr> <td>Border Width - enter border width, up to 15 pixels</td> </tr> </tbody> </table>	General	Alpha Blending - semi transparent state for overlaying objects	Fix Foreground Colour - Tick to fix colour for the horizontal and vertical graph lines of the chart.	Foreground Colour - Set foreground colour using colour palette	Fix BackColour - Tick to fix colour for the background of the object	Background Colour - Colour palette for the background of the object	Showing - Specify which pens to show on the chart	Orientation - Horizontal or Vertical Chart traces	Chart Speed - Fast, Medium or Slow	Fix Alarm Colour - Tick to fix the alarm background colour for the Chart	Bkg Alarm Colour - Colour palette for the background of the chart when an alarm is triggered	Fix Message Colour - Tick to fix the colour for any Messages on the Chart	Message Colour - Colour palette for the Message Colour	Fix Font Colour - Tick to fix the colour of the Font for Text on the Chart (eg. date/time stamp)	Font Colour - Colour palette for the Font Colour	Height - Change the Font height for Text used on the Chart	Rect Dimensions	Left - position of the left edge of the object on the template	Top - position of the top edge of the object on the template	Right - position of the right edge of the object on the template	Bottom - position of the bottom edge of the object on the template	Border	Border On - turns the border on around the object	Border Style - Raised, Flat or Inset	Border Colour - colour palette for the object border	Border Width - enter border width, up to 15 pixels
General																																																																															
Alpha Blending	<input type="checkbox"/>																																																																														
Fix Foreground Colour	<input checked="" type="checkbox"/>																																																																														
Foreground Colour	<input type="color"/>																																																																														
Fix BackColour	<input checked="" type="checkbox"/>																																																																														
Background Colour	<input type="color"/>																																																																														
Showing	None Set																																																																														
Orientation	Horizontal																																																																														
Chart Speed	Fast																																																																														
Fix Alarm Colour	<input checked="" type="checkbox"/>																																																																														
Bkg Alarm Colour	<input type="color"/>																																																																														
Fix Message Colour	<input checked="" type="checkbox"/>																																																																														
Message Colour	<input type="color"/>																																																																														
Fix Font Colour	<input checked="" type="checkbox"/>																																																																														
Font Colour	<input type="color"/>																																																																														
Height	11																																																																														
Rect Dimensions																																																																															
Left	125																																																																														
Top	38																																																																														
Right	269																																																																														
Bottom	199																																																																														
Border																																																																															
Border On	<input checked="" type="checkbox"/>																																																																														
Border Style	Raised																																																																														
Border Colour	<input type="color"/>																																																																														
Border Width	1																																																																														
General																																																																															
Alpha Blending - semi transparent state for overlaying objects																																																																															
Fix Foreground Colour - Tick to fix colour for the horizontal and vertical graph lines of the chart.																																																																															
Foreground Colour - Set foreground colour using colour palette																																																																															
Fix BackColour - Tick to fix colour for the background of the object																																																																															
Background Colour - Colour palette for the background of the object																																																																															
Showing - Specify which pens to show on the chart																																																																															
Orientation - Horizontal or Vertical Chart traces																																																																															
Chart Speed - Fast, Medium or Slow																																																																															
Fix Alarm Colour - Tick to fix the alarm background colour for the Chart																																																																															
Bkg Alarm Colour - Colour palette for the background of the chart when an alarm is triggered																																																																															
Fix Message Colour - Tick to fix the colour for any Messages on the Chart																																																																															
Message Colour - Colour palette for the Message Colour																																																																															
Fix Font Colour - Tick to fix the colour of the Font for Text on the Chart (eg. date/time stamp)																																																																															
Font Colour - Colour palette for the Font Colour																																																																															
Height - Change the Font height for Text used on the Chart																																																																															
Rect Dimensions																																																																															
Left - position of the left edge of the object on the template																																																																															
Top - position of the top edge of the object on the template																																																																															
Right - position of the right edge of the object on the template																																																																															
Bottom - position of the bottom edge of the object on the template																																																																															
Border																																																																															
Border On - turns the border on around the object																																																																															
Border Style - Raised, Flat or Inset																																																																															
Border Colour - colour palette for the object border																																																																															
Border Width - enter border width, up to 15 pixels																																																																															

## Bar Object Properties

Table 4.1 : Example of Object Properties for a Bar in the Screen tab

<div style="border: 1px solid black; padding: 5px;"> <div style="background-color: #003366; color: white; padding: 2px;"><b>General</b></div> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Buffering</td><td>Double Buffered</td></tr> <tr><td>Transparency</td><td style="text-align: center;">✘</td></tr> <tr><td>Alpha Blending</td><td style="text-align: center;">✘</td></tr> <tr><td>Fix Foreground Colour</td><td style="text-align: center;">✔</td></tr> <tr><td>Foreground Colour</td><td style="text-align: center;">■</td></tr> <tr><td>Fix BackColour</td><td style="text-align: center;">✔</td></tr> <tr><td>Background Colour</td><td style="text-align: center;">□</td></tr> <tr><td>Showing</td><td>Pen No. None Set</td></tr> <tr><td>Bar Type</td><td>Up</td></tr> <tr><td>Bar Style</td><td>Solid</td></tr> <tr><td>Orientation</td><td>Vertical</td></tr> <tr><td>LevelCap</td><td style="text-align: center;">✔</td></tr> <tr><td>Level Cap Colour</td><td style="text-align: center;">■</td></tr> <tr><td>Fix TopLimit</td><td style="text-align: center;">✔</td></tr> <tr><td>Top Limit</td><td>100.0</td></tr> <tr><td>Fix BottomLimit</td><td style="text-align: center;">✔</td></tr> <tr><td>Bottom Limit</td><td>0.0</td></tr> <tr><td>Over Range Triangle FlashClr1</td><td style="text-align: center;">■</td></tr> <tr><td>Over Range Triangle FlashClr2</td><td style="text-align: center;">■</td></tr> <tr><td>Under Range Triangle FlashClr1</td><td style="text-align: center;">■</td></tr> <tr><td>Under Range Triangle FlashClr2</td><td style="text-align: center;">■</td></tr> <tr><td>Inval Reading FlashClr1</td><td style="text-align: center;">■</td></tr> <tr><td>Inval Reading FlashClr2</td><td style="text-align: center;">■</td></tr> <tr><td>Upscale Burnout FlashClr1</td><td style="text-align: center;">■</td></tr> <tr><td>Upscale Burnout FlashClr2</td><td style="text-align: center;">■</td></tr> <tr><td>Downscale Burnout FlashClr1</td><td style="text-align: center;">■</td></tr> <tr><td>Downscale Burnout FlashClr2</td><td style="text-align: center;">■</td></tr> </table> </div>		Buffering	Double Buffered	Transparency	✘	Alpha Blending	✘	Fix Foreground Colour	✔	Foreground Colour	■	Fix BackColour	✔	Background Colour	□	Showing	Pen No. None Set	Bar Type	Up	Bar Style	Solid	Orientation	Vertical	LevelCap	✔	Level Cap Colour	■	Fix TopLimit	✔	Top Limit	100.0	Fix BottomLimit	✔	Bottom Limit	0.0	Over Range Triangle FlashClr1	■	Over Range Triangle FlashClr2	■	Under Range Triangle FlashClr1	■	Under Range Triangle FlashClr2	■	Inval Reading FlashClr1	■	Inval Reading FlashClr2	■	Upscale Burnout FlashClr1	■	Upscale Burnout FlashClr2	■	Downscale Burnout FlashClr1	■	Downscale Burnout FlashClr2	■	<div style="border: 1px solid black; padding: 5px;"> <div style="background-color: #003366; color: white; padding: 2px;"><b>General</b></div> <p>Buffering - redraws off line to reduce screen flicker</p> <p>Transparency - inactive part of the object becomes transparent</p> <p>Alpha Blending - semi transparent state for overlaying objects</p> <p>Fix Foreground Colour - Tick to fix colour for the active part of the object</p> <p>Foreground Colour - Set foreground colour using colour palette</p> <p>Fix BackColour - Tick to fix colour for the background of the object</p> <p>Background Colour - Colour palette for the background of the object</p> <p>Showing - Set up channel as - Data from Pen, Alarm for Pen or Input Channel</p> <p>Bar Type - direction of active object: Up, Down, None or Based (from a set point)</p> <p>Bar Style - Solid, Fade, Dynamic or Traffic Light (*see below)</p> <p>Orientation - of the bar: Horizontal or Vertical</p> <p>Level Cap - Line at the top of the active part of the object</p> <p>Level Cap Colour - Colour of the line at the top of the active part of the object</p> <p>Fix Top Limit - Tick to set the top limit of the object. eg. to set up a traffic light effect</p> <p>Top Limit - Set top limit of object</p> <p>Fix Bottom Limit - Tick to set the bottom limit of the object</p> <p>Bottom Limit - Set bottom limit of object</p> </div>
Buffering	Double Buffered																																																							
Transparency	✘																																																							
Alpha Blending	✘																																																							
Fix Foreground Colour	✔																																																							
Foreground Colour	■																																																							
Fix BackColour	✔																																																							
Background Colour	□																																																							
Showing	Pen No. None Set																																																							
Bar Type	Up																																																							
Bar Style	Solid																																																							
Orientation	Vertical																																																							
LevelCap	✔																																																							
Level Cap Colour	■																																																							
Fix TopLimit	✔																																																							
Top Limit	100.0																																																							
Fix BottomLimit	✔																																																							
Bottom Limit	0.0																																																							
Over Range Triangle FlashClr1	■																																																							
Over Range Triangle FlashClr2	■																																																							
Under Range Triangle FlashClr1	■																																																							
Under Range Triangle FlashClr2	■																																																							
Inval Reading FlashClr1	■																																																							
Inval Reading FlashClr2	■																																																							
Upscale Burnout FlashClr1	■																																																							
Upscale Burnout FlashClr2	■																																																							
Downscale Burnout FlashClr1	■																																																							
Downscale Burnout FlashClr2	■																																																							
<div style="border: 1px solid black; padding: 5px;"> <div style="background-color: #003366; color: white; padding: 2px;"><b>Rect Dimensions</b></div> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Left</td><td>11</td></tr> <tr><td>Top</td><td>56</td></tr> <tr><td>Right</td><td>41</td></tr> <tr><td>Bottom</td><td>191</td></tr> </table> </div>		Left	11	Top	56	Right	41	Bottom	191	<div style="border: 1px solid black; padding: 5px;"> <div style="background-color: #003366; color: white; padding: 2px;"><b>Rect Dimensions</b></div> <p>Left - position of the left edge of the object on the template</p> <p>Top - position of the top edge of the object on the template</p> <p>Right - position of the right edge of the object on the template</p> <p>Bottom - position of the bottom edge of the object on the template</p> </div>																																														
Left	11																																																							
Top	56																																																							
Right	41																																																							
Bottom	191																																																							
<div style="border: 1px solid black; padding: 5px;"> <div style="background-color: #003366; color: white; padding: 2px;"><b>Border</b></div> </div>		<div style="border: 1px solid black; padding: 5px;"> <div style="background-color: #003366; color: white; padding: 2px;"><b>Border</b></div> <p>Border On - turns the border on around the object</p> <p>Border Style - Raised, Flat or Inset</p> <p>Border Colour - colour palette for the object border</p> <p>Border Width - enter border width, up to 15 pixels</p> </div>																																																						
<div style="border: 1px solid black; padding: 5px;"> <div style="background-color: #003366; color: white; padding: 2px;"><b>Markers</b></div> </div>		<div style="border: 1px solid black; padding: 5px;"> <div style="background-color: #003366; color: white; padding: 2px;"><b>Markers</b></div> <p>Show Max Markers - Tick to display Max markers</p> <p>Show Min Markers - Tick to display Min markers</p> <p>Reset Markers - Clears the Max and Min values</p> <p>Marker Colour - Colour palette to set marker colour</p> </div>																																																						

## Bar Style

### Solid

A solid bar is all one colour of the active part of the bar

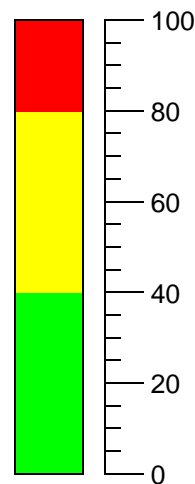
### Fade

Once active the Gradient Start/End Colour Select will display below. Using the colour palette select the colours to start and end the colour fade of the active part of the bar

### Traffic light

The Bar Style called Traffic Light consists of three colours; Red, Amber and Green in one bar object. **Screen Designer** only needs to know the two break points: Traffic Breakpoint Green, where the bar changes from green to amber and Traffic Breakpoint Amber, where the bar changes from amber to red.

Traffic Breakpoint Green is set to 40,  
Traffic Breakpoint Amber is set to 80.






### Dynamic

The Bar Style called Dynamic consists of three colours: Red, Amber and Green in one bar object. Unlike the Traffic light, which will show all three colours on the active part of the bar at the same time, the Dynamic style will change the whole bar to just one colour. **Screen Designer** only needs to know the two break points: Dynamic Breakpoint Green, where the whole bar changes from green to amber and Dynamic Breakpoint Amber, where the whole bar changes from amber to red.

## Digital Object Properties

Table 4.2 : Example of a Digital Object properties window in the Screen tab

<input type="checkbox"/> <b>General</b>		<b>General</b>	
Buffering	Unbuffered	Buffering - redraws off line to reduce screen flicker	
Transparency	<input checked="" type="checkbox"/>	Transparency - inactive part of the object becomes transparent	
Alpha Blending	<input checked="" type="checkbox"/>	Alpha Blending - semi transparent state for overlaying objects	
Fix Foreground Colour	<input checked="" type="checkbox"/>	Fix Foreground Colour - Tick to fix colour for the active part of the object	
Foreground Colour		Foreground Colour - Set foreground colour using colour palette	
Fix BackColour	<input checked="" type="checkbox"/>	Fix BackColour - Tick to fix colour for the background of the object	
Background Colour	<input type="checkbox"/>	Background Colour - Colour palette for the background of the object	
Showing	Pen No. None Set	Showing - Set up channel as - Data from Pen, Alarm for Pen or Input Channel	
Enable Alarm	<input checked="" type="checkbox"/>	Enable Alarm - Enables any alarm features for the digital	
Flash Foreground On Alarm	<input checked="" type="checkbox"/>	Flash Foreground on Alarm - Foreground (number) will flash in alarm	
Flash Bkground on Alarm	<input checked="" type="checkbox"/>	Flash Bkground on Alarm - Background will flash when in alarm	
Change ForeClr On Alarm	<input checked="" type="checkbox"/>	Change ForeClr on Alarm - Colour of numbers will change in alarm	
Foreground Alarm Clr		Foreground Alarm Clr - Set foreground (number) colour when in alarm	
Fix Number Format	<input checked="" type="checkbox"/>	Fix Number Format - Tick to activate Numb Format options	
<input type="checkbox"/> <b>Numb Format</b>		<b>Numb Format</b>	
Notation	Normal	Notation - Toggle between Scientific or Normal number format.	
Auto	Auto	Auto - Toggle Between Auto and User Defined. Auto is set to 2 decimal places, User Defined allows one or more decimal places	
After Decimal	Variable	After Decimal - Enter the number of decimal places.	
<input type="checkbox"/> <b>Rect Dimensions</b>		<b>Rect Dimensions</b>	
Left	128	Left - position of the left edge of the object on the template	
Top	207	Top - position of the top edge of the object on the template	
Right	180	Right - position of the right edge of the object on the template	
Bottom	229	Bottom - position of the bottom edge of the object on the template	
<input type="checkbox"/> <b>Border</b>		<b>Border</b>	
Border On	<input checked="" type="checkbox"/>	Border On - turns the border on around the object	
Border Style	Raised	Border Style - Raised, Flat or Inset	
Border Colour		Border Colour - colour palette for the object border	
Border Width	1	Border Width - enter border width, up to 15 pixels	

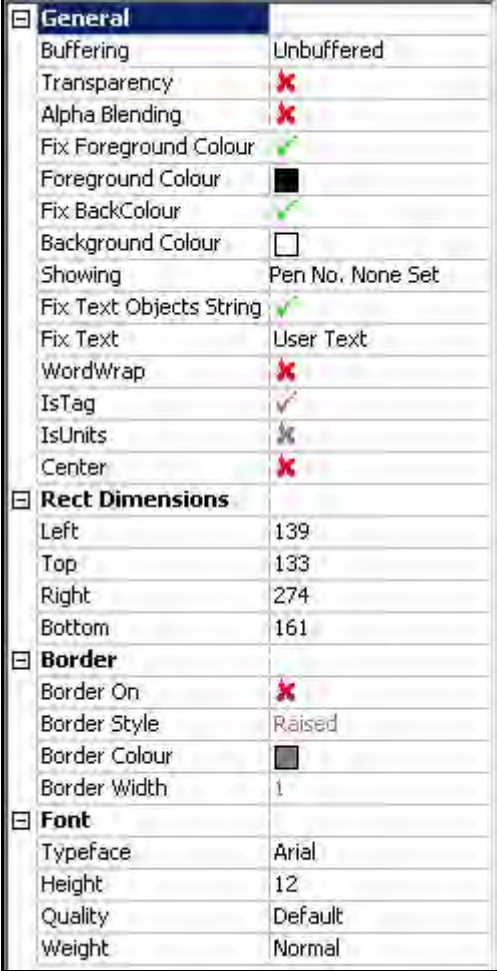
## Scale Object Properties

Table 4.3 : Example of a Scale Object properties window in the Screen tab

<table border="1"> <thead> <tr> <th colspan="2">General</th> </tr> </thead> <tbody> <tr><td>Buffering</td><td>Unbuffered</td></tr> <tr><td>Transparency</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>Alpha Blending</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>Fix Foreground Colour</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>Foreground Colour</td><td><input type="color"/></td></tr> <tr><td>Fix BackColour</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>Background Colour</td><td><input type="color"/></td></tr> <tr><td>Showing</td><td>Pen No. None Set</td></tr> <tr><td>BaseLine</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>Fix BaseLine Clr</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>BaseLine Colour</td><td><input type="color"/></td></tr> <tr><td>Full Width</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>Fix Grads Clr</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>Grads Colour</td><td><input type="color"/></td></tr> <tr><td>Grads Direction</td><td>Right</td></tr> <tr><td>Label Limits</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>Label Majors</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>Label Position</td><td>Right</td></tr> <tr><td>Major Graduations</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>Major Grad Length</td><td>8</td></tr> <tr><td>Minor Graduations</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>Minor Grad Length</td><td>4</td></tr> <tr><td>Orientation</td><td>Vertical</td></tr> <tr><td>Major Font Height</td><td>12</td></tr> <tr><td>Limit Font Height</td><td>12</td></tr> <tr><td>Fix Number Format</td><td><input checked="" type="checkbox"/></td></tr> <tr> <th colspan="2">Numb Format</th> </tr> <tr><td>Notation</td><td>Normal</td></tr> <tr><td>Auto</td><td>Auto</td></tr> <tr><td>After Decimal</td><td>0</td></tr> <tr> <th colspan="2">Rect Dimensions</th> </tr> <tr><td>Left</td><td>146</td></tr> <tr><td>Top</td><td>82</td></tr> <tr><td>Right</td><td>203</td></tr> <tr><td>Bottom</td><td>227</td></tr> <tr> <th colspan="2">Border</th> </tr> <tr><td>Border On</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>Border Style</td><td>Raised</td></tr> <tr><td>Border Colour</td><td><input type="color"/></td></tr> <tr><td>Border Width</td><td>1</td></tr> </tbody> </table>	General		Buffering	Unbuffered	Transparency	<input checked="" type="checkbox"/>	Alpha Blending	<input checked="" type="checkbox"/>	Fix Foreground Colour	<input checked="" type="checkbox"/>	Foreground Colour	<input type="color"/>	Fix BackColour	<input checked="" type="checkbox"/>	Background Colour	<input type="color"/>	Showing	Pen No. None Set	BaseLine	<input checked="" type="checkbox"/>	Fix BaseLine Clr	<input checked="" type="checkbox"/>	BaseLine Colour	<input type="color"/>	Full Width	<input checked="" type="checkbox"/>	Fix Grads Clr	<input checked="" type="checkbox"/>	Grads Colour	<input type="color"/>	Grads Direction	Right	Label Limits	<input checked="" type="checkbox"/>	Label Majors	<input checked="" type="checkbox"/>	Label Position	Right	Major Graduations	<input checked="" type="checkbox"/>	Major Grad Length	8	Minor Graduations	<input checked="" type="checkbox"/>	Minor Grad Length	4	Orientation	Vertical	Major Font Height	12	Limit Font Height	12	Fix Number Format	<input checked="" type="checkbox"/>	Numb Format		Notation	Normal	Auto	Auto	After Decimal	0	Rect Dimensions		Left	146	Top	82	Right	203	Bottom	227	Border		Border On	<input checked="" type="checkbox"/>	Border Style	Raised	Border Colour	<input type="color"/>	Border Width	1	<table border="1"> <thead> <tr> <th>General</th> </tr> </thead> <tbody> <tr><td>Buffering - redraws off line to reduce screen flicker</td></tr> <tr><td>Transparency - inactive part of the object becomes transparent</td></tr> <tr><td>Alpha Blending - semi transparent state for overlaying objects</td></tr> <tr><td>Fix Foreground Colour - Tick to fix colour for the scale numbers</td></tr> <tr><td>Foreground Colour - Set foreground colour using colour palette</td></tr> <tr><td>Fix BackColour - Tick to fix colour for the background of the object</td></tr> <tr><td>Background Colour - Colour palette for the background of the object</td></tr> <tr><td>Showing - Set up channel as Data from Pen, Alarm for Pen or Input Channel</td></tr> <tr><td>BaseLine - Switch on or off. The main line the graduations line up against</td></tr> <tr><td>Fix BaseLine Clr - Fix the colour of the BaseLine</td></tr> <tr><td>BaseLine Colour - Colour palette for BaseLine colour</td></tr> <tr><td>Full Width - All graduations become the full width of the object</td></tr> <tr><td>Fix Grads Clr - Fix the colour of all the graduations</td></tr> <tr><td>Grads Colour - Colour palette for graduation colour</td></tr> <tr><td>Grads Direction - Set the graduation direction to the Baseline</td></tr> <tr><td>Label Limits - Switch the zero and span labels on or off</td></tr> <tr><td>Label Majors - Switch on or off the labels for the major graduations (not limits)</td></tr> <tr><td>Label Position - Position all labels to the Baseline</td></tr> <tr><td>Major Graduations - Switch Major graduations on or off</td></tr> <tr><td>Major Grad Length - Enter the length in pixels of the Major graduations</td></tr> <tr><td>Minor Graduations - Switch Minor graduations on or off</td></tr> <tr><td>Minor Grad Length - Enter the length in pixels of the Minor graduations</td></tr> <tr><td>Orientation - Horizontal or Vertical object orientation</td></tr> <tr><td>Major Font Height - Set text height for Major graduations</td></tr> <tr><td>Limit Font Height - Set text height for zero and span labels</td></tr> <tr><td>Fix Number Format - Set Notation and Auto or User Defined decimal places</td></tr> <tr> <th>Numb Format</th> </tr> <tr><td>Notation - Toggle between Scientific or Normal number format.</td></tr> <tr><td>Auto - Toggle Between Auto and User Defined.</td></tr> <tr><td>After Decimal - Select and enter the number of decimal places.</td></tr> <tr> <th>Rect Dimensions</th> </tr> <tr><td>Left - position of the left edge of the object on the template</td></tr> <tr><td>Top - position of the top edge of the object on the template</td></tr> <tr><td>Right - position of the right edge of the object on the template</td></tr> <tr><td>Bottom - position of the bottom edge of the object on the template</td></tr> <tr> <th>Border</th> </tr> <tr><td>Border On - turns the border on around the object</td></tr> <tr><td>Border Style - Raised, Flat or Inset</td></tr> <tr><td>Border Colour - colour palette for the object border</td></tr> <tr><td>Border Width - enter border width, up to 15 pixels</td></tr> </tbody> </table>	General	Buffering - redraws off line to reduce screen flicker	Transparency - inactive part of the object becomes transparent	Alpha Blending - semi transparent state for overlaying objects	Fix Foreground Colour - Tick to fix colour for the scale numbers	Foreground Colour - Set foreground colour using colour palette	Fix BackColour - Tick to fix colour for the background of the object	Background Colour - Colour palette for the background of the object	Showing - Set up channel as Data from Pen, Alarm for Pen or Input Channel	BaseLine - Switch on or off. The main line the graduations line up against	Fix BaseLine Clr - Fix the colour of the BaseLine	BaseLine Colour - Colour palette for BaseLine colour	Full Width - All graduations become the full width of the object	Fix Grads Clr - Fix the colour of all the graduations	Grads Colour - Colour palette for graduation colour	Grads Direction - Set the graduation direction to the Baseline	Label Limits - Switch the zero and span labels on or off	Label Majors - Switch on or off the labels for the major graduations (not limits)	Label Position - Position all labels to the Baseline	Major Graduations - Switch Major graduations on or off	Major Grad Length - Enter the length in pixels of the Major graduations	Minor Graduations - Switch Minor graduations on or off	Minor Grad Length - Enter the length in pixels of the Minor graduations	Orientation - Horizontal or Vertical object orientation	Major Font Height - Set text height for Major graduations	Limit Font Height - Set text height for zero and span labels	Fix Number Format - Set Notation and Auto or User Defined decimal places	Numb Format	Notation - Toggle between Scientific or Normal number format.	Auto - Toggle Between Auto and User Defined.	After Decimal - Select and enter the number of decimal places.	Rect Dimensions	Left - position of the left edge of the object on the template	Top - position of the top edge of the object on the template	Right - position of the right edge of the object on the template	Bottom - position of the bottom edge of the object on the template	Border	Border On - turns the border on around the object	Border Style - Raised, Flat or Inset	Border Colour - colour palette for the object border	Border Width - enter border width, up to 15 pixels
General																																																																																																																												
Buffering	Unbuffered																																																																																																																											
Transparency	<input checked="" type="checkbox"/>																																																																																																																											
Alpha Blending	<input checked="" type="checkbox"/>																																																																																																																											
Fix Foreground Colour	<input checked="" type="checkbox"/>																																																																																																																											
Foreground Colour	<input type="color"/>																																																																																																																											
Fix BackColour	<input checked="" type="checkbox"/>																																																																																																																											
Background Colour	<input type="color"/>																																																																																																																											
Showing	Pen No. None Set																																																																																																																											
BaseLine	<input checked="" type="checkbox"/>																																																																																																																											
Fix BaseLine Clr	<input checked="" type="checkbox"/>																																																																																																																											
BaseLine Colour	<input type="color"/>																																																																																																																											
Full Width	<input checked="" type="checkbox"/>																																																																																																																											
Fix Grads Clr	<input checked="" type="checkbox"/>																																																																																																																											
Grads Colour	<input type="color"/>																																																																																																																											
Grads Direction	Right																																																																																																																											
Label Limits	<input checked="" type="checkbox"/>																																																																																																																											
Label Majors	<input checked="" type="checkbox"/>																																																																																																																											
Label Position	Right																																																																																																																											
Major Graduations	<input checked="" type="checkbox"/>																																																																																																																											
Major Grad Length	8																																																																																																																											
Minor Graduations	<input checked="" type="checkbox"/>																																																																																																																											
Minor Grad Length	4																																																																																																																											
Orientation	Vertical																																																																																																																											
Major Font Height	12																																																																																																																											
Limit Font Height	12																																																																																																																											
Fix Number Format	<input checked="" type="checkbox"/>																																																																																																																											
Numb Format																																																																																																																												
Notation	Normal																																																																																																																											
Auto	Auto																																																																																																																											
After Decimal	0																																																																																																																											
Rect Dimensions																																																																																																																												
Left	146																																																																																																																											
Top	82																																																																																																																											
Right	203																																																																																																																											
Bottom	227																																																																																																																											
Border																																																																																																																												
Border On	<input checked="" type="checkbox"/>																																																																																																																											
Border Style	Raised																																																																																																																											
Border Colour	<input type="color"/>																																																																																																																											
Border Width	1																																																																																																																											
General																																																																																																																												
Buffering - redraws off line to reduce screen flicker																																																																																																																												
Transparency - inactive part of the object becomes transparent																																																																																																																												
Alpha Blending - semi transparent state for overlaying objects																																																																																																																												
Fix Foreground Colour - Tick to fix colour for the scale numbers																																																																																																																												
Foreground Colour - Set foreground colour using colour palette																																																																																																																												
Fix BackColour - Tick to fix colour for the background of the object																																																																																																																												
Background Colour - Colour palette for the background of the object																																																																																																																												
Showing - Set up channel as Data from Pen, Alarm for Pen or Input Channel																																																																																																																												
BaseLine - Switch on or off. The main line the graduations line up against																																																																																																																												
Fix BaseLine Clr - Fix the colour of the BaseLine																																																																																																																												
BaseLine Colour - Colour palette for BaseLine colour																																																																																																																												
Full Width - All graduations become the full width of the object																																																																																																																												
Fix Grads Clr - Fix the colour of all the graduations																																																																																																																												
Grads Colour - Colour palette for graduation colour																																																																																																																												
Grads Direction - Set the graduation direction to the Baseline																																																																																																																												
Label Limits - Switch the zero and span labels on or off																																																																																																																												
Label Majors - Switch on or off the labels for the major graduations (not limits)																																																																																																																												
Label Position - Position all labels to the Baseline																																																																																																																												
Major Graduations - Switch Major graduations on or off																																																																																																																												
Major Grad Length - Enter the length in pixels of the Major graduations																																																																																																																												
Minor Graduations - Switch Minor graduations on or off																																																																																																																												
Minor Grad Length - Enter the length in pixels of the Minor graduations																																																																																																																												
Orientation - Horizontal or Vertical object orientation																																																																																																																												
Major Font Height - Set text height for Major graduations																																																																																																																												
Limit Font Height - Set text height for zero and span labels																																																																																																																												
Fix Number Format - Set Notation and Auto or User Defined decimal places																																																																																																																												
Numb Format																																																																																																																												
Notation - Toggle between Scientific or Normal number format.																																																																																																																												
Auto - Toggle Between Auto and User Defined.																																																																																																																												
After Decimal - Select and enter the number of decimal places.																																																																																																																												
Rect Dimensions																																																																																																																												
Left - position of the left edge of the object on the template																																																																																																																												
Top - position of the top edge of the object on the template																																																																																																																												
Right - position of the right edge of the object on the template																																																																																																																												
Bottom - position of the bottom edge of the object on the template																																																																																																																												
Border																																																																																																																												
Border On - turns the border on around the object																																																																																																																												
Border Style - Raised, Flat or Inset																																																																																																																												
Border Colour - colour palette for the object border																																																																																																																												
Border Width - enter border width, up to 15 pixels																																																																																																																												

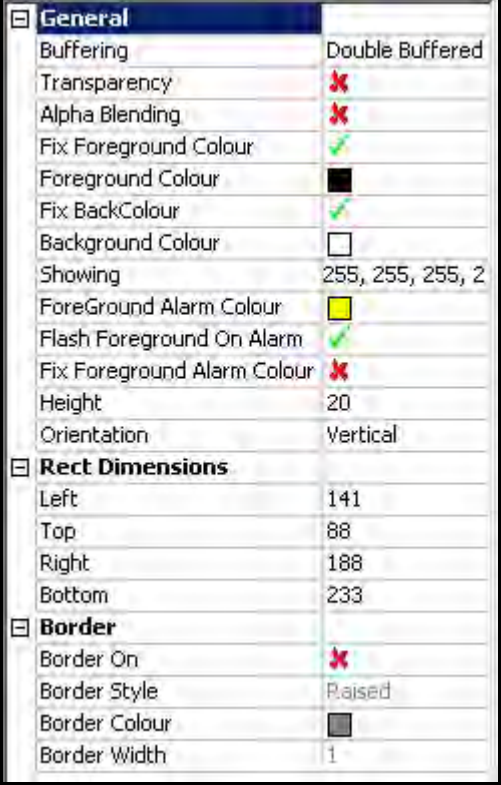
## Text Object Properties

Table 4.4 : Example of a Text Object properties window in the Screen tab

	<table border="1"> <thead> <tr> <th colspan="2">General</th> </tr> </thead> <tbody> <tr> <td>Buffering</td> <td>redraws off line to reduce screen flicker</td> </tr> <tr> <td>Transparency</td> <td>inactive part of the object becomes transparent</td> </tr> <tr> <td>Alpha Blending</td> <td>semi transparent state for overlaying objects</td> </tr> <tr> <td>Fix Foreground Colour</td> <td>Tick to fix colour for the object text</td> </tr> <tr> <td>Foreground Colour</td> <td>Set foreground colour using colour palette</td> </tr> <tr> <td>Fix BackColour</td> <td>Tick to fix colour for the background of the object</td> </tr> <tr> <td>Background Colour</td> <td>Colour palette for the background of the object</td> </tr> <tr> <td>Showing</td> <td>Set up channel as Data from Pen, Alarm for Pen or Input Channel</td> </tr> <tr> <td>Fix Text Objects String</td> <td>Tick to enter User Defined text</td> </tr> <tr> <td>Fix Text</td> <td>Enter User Defined text using the keyboard</td> </tr> <tr> <td>WordWrap</td> <td>Wraps Multi-line text to the next line within the object</td> </tr> <tr> <td>IsTag</td> <td>Text will read what is entered as a Tag</td> </tr> <tr> <td>IsUnits</td> <td>Text will read what is entered as Units</td> </tr> <tr> <td>Center</td> <td>Centralises the text in the object</td> </tr> <tr> <th colspan="2">Rect Dimensions</th> </tr> <tr> <td>Left</td> <td>position of the left edge of the object on the template</td> </tr> <tr> <td>Top</td> <td>position of the top edge of the object on the template</td> </tr> <tr> <td>Right</td> <td>position of the right edge of the object on the template</td> </tr> <tr> <td>Bottom</td> <td>position of the bottom edge of the object on the template</td> </tr> <tr> <th colspan="2">Border</th> </tr> <tr> <td>Border On</td> <td>turns the border on around the object</td> </tr> <tr> <td>Border Style</td> <td>Raised, Flat or Inset</td> </tr> <tr> <td>Border Colour</td> <td>colour palette for the object border</td> </tr> <tr> <td>Border Width</td> <td>enter border width, up to 15 pixels</td> </tr> <tr> <th colspan="2">Font</th> </tr> <tr> <td>Typeface</td> <td>Select a font typeface from the drop down list</td> </tr> <tr> <td>Height</td> <td>Type in a font height. Applies when Word wrap is ticked</td> </tr> <tr> <td>Quality</td> <td>Choose from Default, Antialiased or Cleartype</td> </tr> <tr> <td>Weight</td> <td>Choose from Normal, Medium, Semi-bold, Bold</td> </tr> </tbody> </table>	General		Buffering	redraws off line to reduce screen flicker	Transparency	inactive part of the object becomes transparent	Alpha Blending	semi transparent state for overlaying objects	Fix Foreground Colour	Tick to fix colour for the object text	Foreground Colour	Set foreground colour using colour palette	Fix BackColour	Tick to fix colour for the background of the object	Background Colour	Colour palette for the background of the object	Showing	Set up channel as Data from Pen, Alarm for Pen or Input Channel	Fix Text Objects String	Tick to enter User Defined text	Fix Text	Enter User Defined text using the keyboard	WordWrap	Wraps Multi-line text to the next line within the object	IsTag	Text will read what is entered as a Tag	IsUnits	Text will read what is entered as Units	Center	Centralises the text in the object	Rect Dimensions		Left	position of the left edge of the object on the template	Top	position of the top edge of the object on the template	Right	position of the right edge of the object on the template	Bottom	position of the bottom edge of the object on the template	Border		Border On	turns the border on around the object	Border Style	Raised, Flat or Inset	Border Colour	colour palette for the object border	Border Width	enter border width, up to 15 pixels	Font		Typeface	Select a font typeface from the drop down list	Height	Type in a font height. Applies when Word wrap is ticked	Quality	Choose from Default, Antialiased or Cleartype	Weight	Choose from Normal, Medium, Semi-bold, Bold
General																																																													
Buffering	redraws off line to reduce screen flicker																																																												
Transparency	inactive part of the object becomes transparent																																																												
Alpha Blending	semi transparent state for overlaying objects																																																												
Fix Foreground Colour	Tick to fix colour for the object text																																																												
Foreground Colour	Set foreground colour using colour palette																																																												
Fix BackColour	Tick to fix colour for the background of the object																																																												
Background Colour	Colour palette for the background of the object																																																												
Showing	Set up channel as Data from Pen, Alarm for Pen or Input Channel																																																												
Fix Text Objects String	Tick to enter User Defined text																																																												
Fix Text	Enter User Defined text using the keyboard																																																												
WordWrap	Wraps Multi-line text to the next line within the object																																																												
IsTag	Text will read what is entered as a Tag																																																												
IsUnits	Text will read what is entered as Units																																																												
Center	Centralises the text in the object																																																												
Rect Dimensions																																																													
Left	position of the left edge of the object on the template																																																												
Top	position of the top edge of the object on the template																																																												
Right	position of the right edge of the object on the template																																																												
Bottom	position of the bottom edge of the object on the template																																																												
Border																																																													
Border On	turns the border on around the object																																																												
Border Style	Raised, Flat or Inset																																																												
Border Colour	colour palette for the object border																																																												
Border Width	enter border width, up to 15 pixels																																																												
Font																																																													
Typeface	Select a font typeface from the drop down list																																																												
Height	Type in a font height. Applies when Word wrap is ticked																																																												
Quality	Choose from Default, Antialiased or Cleartype																																																												
Weight	Choose from Normal, Medium, Semi-bold, Bold																																																												

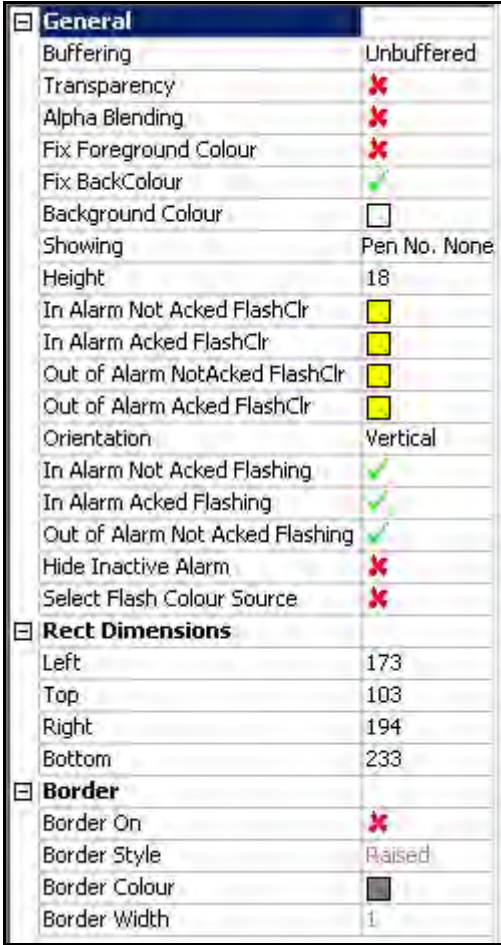
## Pen Pointers Object Properties

Table 4.5 : Example of a Pen Pointers Object properties window in the Screen tab

	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left;"><b>General</b></th> </tr> </thead> <tbody> <tr> <td style="width: 30%;">Buffering</td> <td>- redraws off line to reduce screen flicker</td> </tr> <tr> <td>Transparency</td> <td>- inactive part of the object becomes transparent</td> </tr> <tr> <td>Alpha Blending</td> <td>- semi transparent state for overlaying objects</td> </tr> <tr> <td>Fix Foreground Colour</td> <td>- Tick to fix colour for the pen pointer numbers</td> </tr> <tr> <td>Foreground Colour</td> <td>- Set foreground colour using colour palette</td> </tr> <tr> <td>Fix BackColour</td> <td>- Tick to fix colour for the background of the object</td> </tr> <tr> <td>Background Colour</td> <td>- Colour palette for the background of the object</td> </tr> <tr> <td>Showing</td> <td>- Enter the pens that the pen pointers object will show.</td> </tr> <tr> <td>ForeGround Alarm Colour</td> <td>- Set foreground (pen pointer symbol) colour when in alarm</td> </tr> <tr> <td>Flash Foreground On Alarm</td> <td>- Foreground (pen pointer symbol) will flash in alarm</td> </tr> <tr> <td>Fix Foreground Alarm Colour</td> <td>- Tick to fix the alarm colour when in alarm</td> </tr> <tr> <td>Height</td> <td>- height of the Pen Pointer. A height over 15 will show the Pen number in the Pen Pointer</td> </tr> <tr> <td>Orientation</td> <td>- Horizontal or Vertical orientation</td> </tr> <tr> <th colspan="2" style="text-align: left;"><b>Rect Dimensions</b></th> </tr> <tr> <td>Left</td> <td>- position of the left edge of the object on the template</td> </tr> <tr> <td>Top</td> <td>- position of the top edge of the object on the template</td> </tr> <tr> <td>Right</td> <td>- position of the right edge of the object on the template</td> </tr> <tr> <td>Bottom</td> <td>- position of the bottom edge of the object on the template</td> </tr> <tr> <th colspan="2" style="text-align: left;"><b>Border</b></th> </tr> <tr> <td>Border On</td> <td>- turns the border on around the object</td> </tr> <tr> <td>Border Style</td> <td>- Raised, Flat or Inset</td> </tr> <tr> <td>Border Colour</td> <td>- colour palette for the object border</td> </tr> <tr> <td>Border Width</td> <td>- enter border width, up to 15 pixels</td> </tr> </tbody> </table>	<b>General</b>		Buffering	- redraws off line to reduce screen flicker	Transparency	- inactive part of the object becomes transparent	Alpha Blending	- semi transparent state for overlaying objects	Fix Foreground Colour	- Tick to fix colour for the pen pointer numbers	Foreground Colour	- Set foreground colour using colour palette	Fix BackColour	- Tick to fix colour for the background of the object	Background Colour	- Colour palette for the background of the object	Showing	- Enter the pens that the pen pointers object will show.	ForeGround Alarm Colour	- Set foreground (pen pointer symbol) colour when in alarm	Flash Foreground On Alarm	- Foreground (pen pointer symbol) will flash in alarm	Fix Foreground Alarm Colour	- Tick to fix the alarm colour when in alarm	Height	- height of the Pen Pointer. A height over 15 will show the Pen number in the Pen Pointer	Orientation	- Horizontal or Vertical orientation	<b>Rect Dimensions</b>		Left	- position of the left edge of the object on the template	Top	- position of the top edge of the object on the template	Right	- position of the right edge of the object on the template	Bottom	- position of the bottom edge of the object on the template	<b>Border</b>		Border On	- turns the border on around the object	Border Style	- Raised, Flat or Inset	Border Colour	- colour palette for the object border	Border Width	- enter border width, up to 15 pixels
<b>General</b>																																																	
Buffering	- redraws off line to reduce screen flicker																																																
Transparency	- inactive part of the object becomes transparent																																																
Alpha Blending	- semi transparent state for overlaying objects																																																
Fix Foreground Colour	- Tick to fix colour for the pen pointer numbers																																																
Foreground Colour	- Set foreground colour using colour palette																																																
Fix BackColour	- Tick to fix colour for the background of the object																																																
Background Colour	- Colour palette for the background of the object																																																
Showing	- Enter the pens that the pen pointers object will show.																																																
ForeGround Alarm Colour	- Set foreground (pen pointer symbol) colour when in alarm																																																
Flash Foreground On Alarm	- Foreground (pen pointer symbol) will flash in alarm																																																
Fix Foreground Alarm Colour	- Tick to fix the alarm colour when in alarm																																																
Height	- height of the Pen Pointer. A height over 15 will show the Pen number in the Pen Pointer																																																
Orientation	- Horizontal or Vertical orientation																																																
<b>Rect Dimensions</b>																																																	
Left	- position of the left edge of the object on the template																																																
Top	- position of the top edge of the object on the template																																																
Right	- position of the right edge of the object on the template																																																
Bottom	- position of the bottom edge of the object on the template																																																
<b>Border</b>																																																	
Border On	- turns the border on around the object																																																
Border Style	- Raised, Flat or Inset																																																
Border Colour	- colour palette for the object border																																																
Border Width	- enter border width, up to 15 pixels																																																










## Alarm Markers Object Properties

Table 4.6 : Example of an Alarm Markers Object properties window in the Screen tab

	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: left;"><b>General</b></td> </tr> <tr> <td style="width: 30%;">Buffering</td> <td>redraws off line to reduce screen flicker</td> </tr> <tr> <td>Transparency</td> <td>inactive part of the object becomes transparent</td> </tr> <tr> <td>Alpha Blending</td> <td>semi transparent state for overlaying objects</td> </tr> <tr> <td>Fix Foreground Colour</td> <td>Tick to fix colour for the active part of the object</td> </tr> <tr> <td>Fix BackColour</td> <td>Tick to fix colour for the background of the object</td> </tr> <tr> <td>Background Colour</td> <td>Colour palette for the background of the object</td> </tr> <tr> <td>Showing</td> <td>Set up channel as data from a single Alarm for Pen</td> </tr> <tr> <td>Height</td> <td>Height of the Alarm Marker triangle. A height over 15 will show the alarm number in the alarm marker</td> </tr> <tr> <td>In Alarm Not Acked Flash Clr</td> <td>Colour palette for non acknowledged alarm</td> </tr> <tr> <td>In Alarm Acked Flash Clr</td> <td>Colour palette for acknowledged alarm</td> </tr> <tr> <td>Out of Alarm Not Acked Flash Clr</td> <td>Colour palette for flash out of alarm that is not acknowledged</td> </tr> <tr> <td>Out of Alarm Acked Flashing Clr</td> <td>Colour palette for flash out of alarm that is acknowledged</td> </tr> <tr> <td>Orientation</td> <td>Horizontal or Vertical orientation</td> </tr> <tr> <td>In Alarm Not Acked Flashing</td> <td>Tick to flash alarm that is not acknowledged</td> </tr> <tr> <td>In Alarm Acked Flashing</td> <td>Tick to flash alarm that is acknowledged</td> </tr> <tr> <td>Out of Alarm Not Acked Flashing</td> <td>flash out of alarm that is not acknowledged</td> </tr> <tr> <td>Hide Inactive Alarm</td> <td>If ticked, alarms which have been acknowledged and which go out of alarm will have their alarm marker hidden.</td> </tr> <tr> <td>Select Flash Colour Source</td> <td>If ticked, allows you to specify the colours to be used for certain flashing conditions (see the flashing colour properties above). Otherwise, default flashing colours will be used.</td> </tr> <tr> <td colspan="2" style="text-align: left;"><b>Rect Dimensions</b></td> </tr> <tr> <td>Left</td> <td>position of the left edge of the object on the template</td> </tr> <tr> <td>Top</td> <td>position of the top edge of the object on the template</td> </tr> <tr> <td>Right</td> <td>position of the right edge of the object on the template</td> </tr> <tr> <td>Bottom</td> <td>position of the bottom edge of the object on the template</td> </tr> <tr> <td colspan="2" style="text-align: left;"><b>Border</b></td> </tr> <tr> <td>Border On</td> <td>turns the border on around the object</td> </tr> <tr> <td>Border Style</td> <td>Raised, Flat or Inset</td> </tr> <tr> <td>Border Colour</td> <td>colour palette for the object border</td> </tr> <tr> <td>Border Width</td> <td>enter border width, up to 15 pixels</td> </tr> </table>	<b>General</b>		Buffering	redraws off line to reduce screen flicker	Transparency	inactive part of the object becomes transparent	Alpha Blending	semi transparent state for overlaying objects	Fix Foreground Colour	Tick to fix colour for the active part of the object	Fix BackColour	Tick to fix colour for the background of the object	Background Colour	Colour palette for the background of the object	Showing	Set up channel as data from a single Alarm for Pen	Height	Height of the Alarm Marker triangle. A height over 15 will show the alarm number in the alarm marker	In Alarm Not Acked Flash Clr	Colour palette for non acknowledged alarm	In Alarm Acked Flash Clr	Colour palette for acknowledged alarm	Out of Alarm Not Acked Flash Clr	Colour palette for flash out of alarm that is not acknowledged	Out of Alarm Acked Flashing Clr	Colour palette for flash out of alarm that is acknowledged	Orientation	Horizontal or Vertical orientation	In Alarm Not Acked Flashing	Tick to flash alarm that is not acknowledged	In Alarm Acked Flashing	Tick to flash alarm that is acknowledged	Out of Alarm Not Acked Flashing	flash out of alarm that is not acknowledged	Hide Inactive Alarm	If ticked, alarms which have been acknowledged and which go out of alarm will have their alarm marker hidden.	Select Flash Colour Source	If ticked, allows you to specify the colours to be used for certain flashing conditions (see the flashing colour properties above). Otherwise, default flashing colours will be used.	<b>Rect Dimensions</b>		Left	position of the left edge of the object on the template	Top	position of the top edge of the object on the template	Right	position of the right edge of the object on the template	Bottom	position of the bottom edge of the object on the template	<b>Border</b>		Border On	turns the border on around the object	Border Style	Raised, Flat or Inset	Border Colour	colour palette for the object border	Border Width	enter border width, up to 15 pixels
<b>General</b>																																																											
Buffering	redraws off line to reduce screen flicker																																																										
Transparency	inactive part of the object becomes transparent																																																										
Alpha Blending	semi transparent state for overlaying objects																																																										
Fix Foreground Colour	Tick to fix colour for the active part of the object																																																										
Fix BackColour	Tick to fix colour for the background of the object																																																										
Background Colour	Colour palette for the background of the object																																																										
Showing	Set up channel as data from a single Alarm for Pen																																																										
Height	Height of the Alarm Marker triangle. A height over 15 will show the alarm number in the alarm marker																																																										
In Alarm Not Acked Flash Clr	Colour palette for non acknowledged alarm																																																										
In Alarm Acked Flash Clr	Colour palette for acknowledged alarm																																																										
Out of Alarm Not Acked Flash Clr	Colour palette for flash out of alarm that is not acknowledged																																																										
Out of Alarm Acked Flashing Clr	Colour palette for flash out of alarm that is acknowledged																																																										
Orientation	Horizontal or Vertical orientation																																																										
In Alarm Not Acked Flashing	Tick to flash alarm that is not acknowledged																																																										
In Alarm Acked Flashing	Tick to flash alarm that is acknowledged																																																										
Out of Alarm Not Acked Flashing	flash out of alarm that is not acknowledged																																																										
Hide Inactive Alarm	If ticked, alarms which have been acknowledged and which go out of alarm will have their alarm marker hidden.																																																										
Select Flash Colour Source	If ticked, allows you to specify the colours to be used for certain flashing conditions (see the flashing colour properties above). Otherwise, default flashing colours will be used.																																																										
<b>Rect Dimensions</b>																																																											
Left	position of the left edge of the object on the template																																																										
Top	position of the top edge of the object on the template																																																										
Right	position of the right edge of the object on the template																																																										
Bottom	position of the bottom edge of the object on the template																																																										
<b>Border</b>																																																											
Border On	turns the border on around the object																																																										
Border Style	Raised, Flat or Inset																																																										
Border Colour	colour palette for the object border																																																										
Border Width	enter border width, up to 15 pixels																																																										

## Bitmap Object Properties

Table 4.7 : Example of a Bitmap Object properties window in the Screen tab

<table border="1"> <tr> <td colspan="2">[-] <b>General</b></td> </tr> <tr> <td>Alpha Blending</td> <td></td> </tr> <tr> <td>Name</td> <td>stackdetail.bmp</td> </tr> <tr> <td colspan="2">[-] <b>Rect Dimensions</b></td> </tr> <tr> <td>Left</td> <td>8</td> </tr> <tr> <td>Top</td> <td>136</td> </tr> <tr> <td>Right</td> <td>182</td> </tr> <tr> <td>Bottom</td> <td>235</td> </tr> <tr> <td colspan="2">[-] <b>Border</b></td> </tr> <tr> <td>Border On</td> <td></td> </tr> <tr> <td>Border Style</td> <td>Raised</td> </tr> <tr> <td>Border Colour</td> <td></td> </tr> <tr> <td>Border Width</td> <td>1</td> </tr> </table>	[-] <b>General</b>		Alpha Blending		Name	stackdetail.bmp	[-] <b>Rect Dimensions</b>		Left	8	Top	136	Right	182	Bottom	235	[-] <b>Border</b>		Border On		Border Style	Raised	Border Colour		Border Width	1	<table border="1"> <tr> <td><b>General</b></td> </tr> <tr> <td>Alpha Blending - semi transparent state for overlaying objects</td> </tr> <tr> <td>Name - Name of bitmap selected</td> </tr> <tr> <td><b>Rect Dimensions</b></td> </tr> <tr> <td>Left - position of the left edge of the object on the template</td> </tr> <tr> <td>Top - position of the top edge of the object on the template</td> </tr> <tr> <td>Right - position of the right edge of the object on the template</td> </tr> <tr> <td>Bottom - position of the bottom edge of the object on the template</td> </tr> <tr> <td><b>Border</b></td> </tr> <tr> <td>Border On - turns the border on around the object</td> </tr> <tr> <td>Border Style - Raised, Flat or Inset</td> </tr> <tr> <td>Border Colour - colour palette for the object border</td> </tr> <tr> <td>Border Width - enter border width, up to 15 pixels</td> </tr> </table>	<b>General</b>	Alpha Blending - semi transparent state for overlaying objects	Name - Name of bitmap selected	<b>Rect Dimensions</b>	Left - position of the left edge of the object on the template	Top - position of the top edge of the object on the template	Right - position of the right edge of the object on the template	Bottom - position of the bottom edge of the object on the template	<b>Border</b>	Border On - turns the border on around the object	Border Style - Raised, Flat or Inset	Border Colour - colour palette for the object border	Border Width - enter border width, up to 15 pixels
[-] <b>General</b>																																								
Alpha Blending																																								
Name	stackdetail.bmp																																							
[-] <b>Rect Dimensions</b>																																								
Left	8																																							
Top	136																																							
Right	182																																							
Bottom	235																																							
[-] <b>Border</b>																																								
Border On																																								
Border Style	Raised																																							
Border Colour																																								
Border Width	1																																							
<b>General</b>																																								
Alpha Blending - semi transparent state for overlaying objects																																								
Name - Name of bitmap selected																																								
<b>Rect Dimensions</b>																																								
Left - position of the left edge of the object on the template																																								
Top - position of the top edge of the object on the template																																								
Right - position of the right edge of the object on the template																																								
Bottom - position of the bottom edge of the object on the template																																								
<b>Border</b>																																								
Border On - turns the border on around the object																																								
Border Style - Raised, Flat or Inset																																								
Border Colour - colour palette for the object border																																								
Border Width - enter border width, up to 15 pixels																																								

## Design Rules



### CAUTION

#### IMPORTANT NOTICE FOR TEMPLATES AND SCREENS

Any changes to a template will affect all screens which use the template. Also be aware that any design changes made in a screen will affect all of the other screens using that template and will change the template itself.

This **CAUTION** symbol may indicates a potentially hazardous situation, which, if not avoided, **may result in property damage**.



### CAUTION

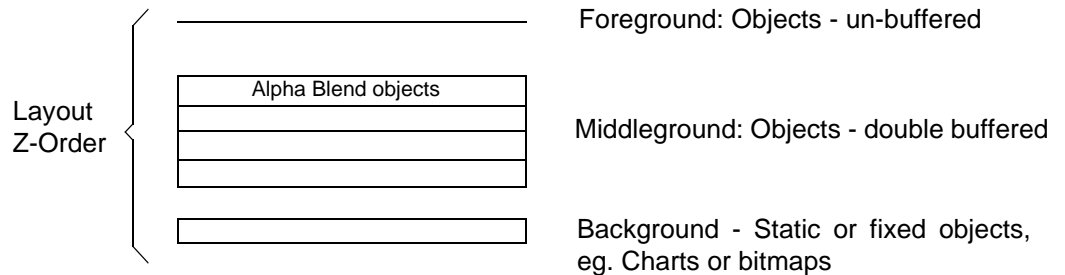
#### SCREEN DESIGNER FOR SAFETY INDICATION

When adding charts on custom screens whenever a pen value could be relied on for safety, a chart must be accompanied by one of the other indicators - pen pointer, bar or DPM. This is to meet the safety standard's requirements to provide out-of-range indication.

This **CAUTION** symbol may indicates a potentially hazardous situation, which, if not avoided, **may result in property damage**.

## Layers within a Template

Figure 4.1 Template Layers side view



When an object is placed onto a widget it automatically displays in the foreground “unbuffered”. If two objects overlap, the buffering flag must be set in the Properties window. By setting the buffering flag, the overlapping objects move from the foreground to a middleground. This enables **Screen Designer** to process the overlapping data more efficiently and reduce redraw time and any flicker effect on the screen. This allows the non-overlapping objects to stay in the foreground, un-buffered, as they do not require as much processing. For the Z-order of overlapping objects see [“Object Z - Order” on page 49](#).

For example, a Scale or Pen Pointer may be required to be placed on top of the chart object to save space. This is known as overlapping.

There may be many overlapping objects on a widget (eg. a scale may have a bar, pen pointers and alarm markers on top of it). If this is the case then it would be advisable to link the objects together so if they get resized or moved, they all maintain their zero and span position in relation to each other. Linking objects together attaches them in either a horizontal (X-axis) or vertical (Y-axis) orientation only. Objects do not have to be overlapping to be linked together. See [“Linking Objects” on page 52](#).

### Alpha Blending

As explained above, when two objects are overlapping and double-buffered, they will reside in the middle layer. If one of those is Alpha blended, it will be at the top of the middle layer. All Alpha blend objects automatically are double buffered. See [Figure 4.1, “Template Layers side view,” on page 49](#).


### Object Z - Order

The Z-order determines the sequence in which overlapping objects are displayed on the widget. Again, using the same example of a Scale with a bar, pen pointers and alarm markers on top of it, the user can put these overlapping objects in a sequence order.

The foreground only has one layer and does not have overlapping objects so is not concerned with the Z-order of objects.

The background may have one or two overlapping objects, such as two bitmaps, so minimal Z-order needs to be defined. A bitmap on top of a chart would not be recommended.

It is the middleground where most of the overlapping objects will be that the Z-order comes into use.



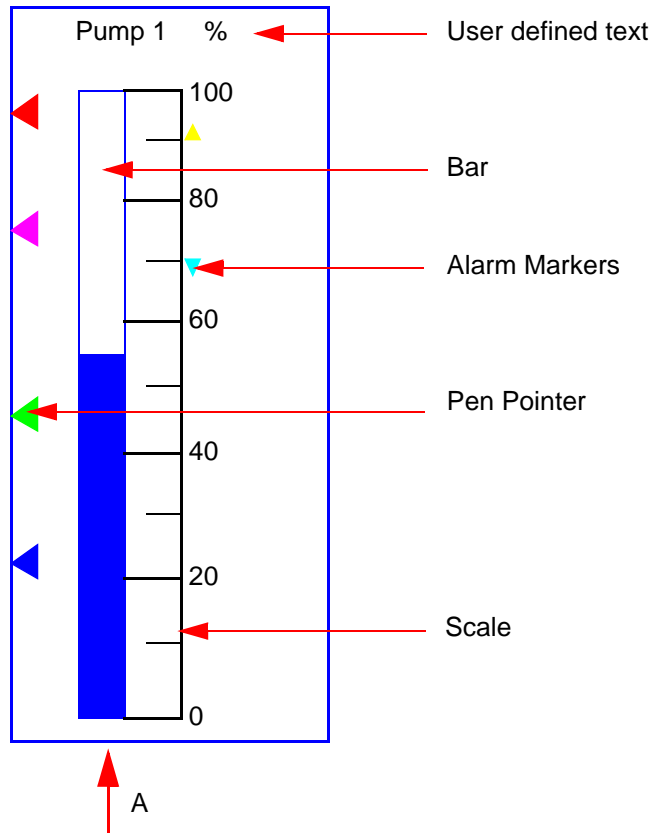
The order of how the objects overlap can be changed by right-clicking on the object and selecting Order; this is known as the Z-Order.

- Bring to Front: - moves an object to the top of the Z-order
- Send to Back - moves an object to the bottom of the Z-order
- Bring Forward: - moves an object one step higher in the Z-order
- Send Backward: - moves an object one step lower in the Z-order

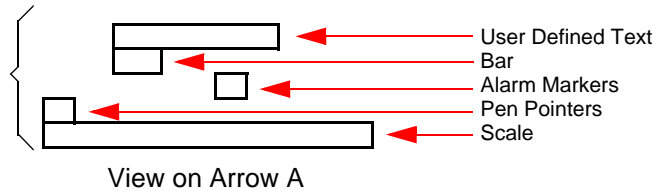
Bring to Front and Send to Back moves the object within its layer eg.Middleground.

**Figure 4.2 Example of Overlapping Objects Z-order in the Middleground**

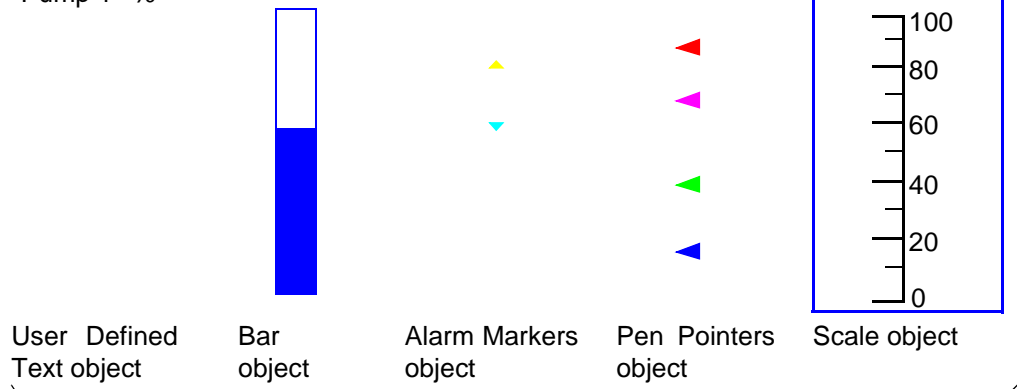
This shows the objects overlapping. These will be in the Middleground and need to be double buffered in the Properties window. Each object has a Z-order that can be changed



Change the Z-order by right clicking on an object and selecting Order. Use the Bring Forward or Send Backward menu commands. Each click will move the object one step forward or backwards in the Z-order



Pump 1 %

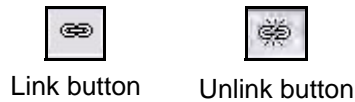


The same objects shown here individually and not overlapping

## Linking Objects

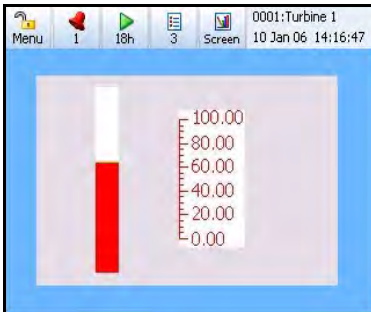
Certain objects can be linked together so that they are locked at the same size, in one orientation, and will resize or move together. For example, a Bar and a Scale can be linked as long as they are in the same orientation as each other. The bar and the scale can be apart, side by side or on top of each other. The linking will line up the top and bottom graduations of the scale with the top and bottom limits of the bar. The objects are linked only in the orientation at which they are set. Only objects within the same widget can be linked together; you cannot link objects across widgets.

In the bar and scale example in *Figure 4.3 on page 52*, the two objects are linked only in the vertical plane. Resizing or moving these objects horizontally will not affect their link positions but resizing or moving them vertically will affect their link positions.

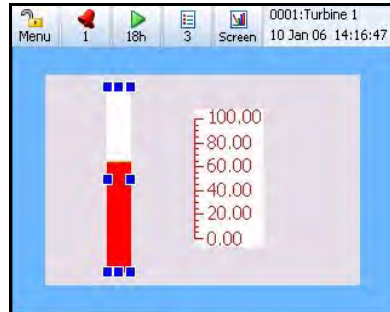


Select the first object, click the “Link Object” button in the template tool bar and then select the object you wish to link to. To unlink a linked object, select the linked object and click on the Unlink Object button from the template toolbar.

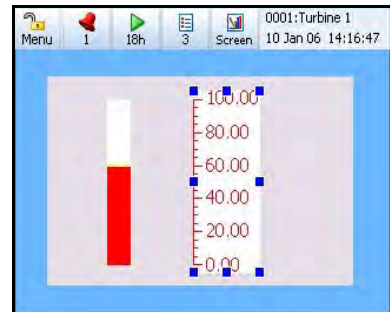
**Figure 4.3 Linking Objects**



A bar and scale object placed on the template.



Select the first object, click the Link Object button in the template tool bar and then select the object you wish to link to.



To unlink a linked object, select the linked object and click on the Unlink Object button from the template toolbar.

Objects that can be linked are: Bar, Scale, Chart, Pen Pointers and Alarm Markers (any object that has a zero and span position). Objects that are already linked can be linked to other objects (eg. a Scale is linked to an Alarm Markers object can then be linked to a bar).

When Alarm Markers are linked to a Scale, the Alarm Markers will position themselves at the correct level for where the alarm is set.

## Properties Precedence

### Colour



A colour picker is available for those properties that have colour changes available. Certain properties will have their colour properties “Fixed” eg. Fix Foreground Colour, Fix Background Colour.

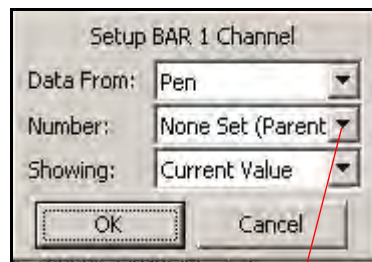
A manual change to the pen colour will over-write a fixed pen colour.

## Configuring a Screen

### Channel Mapping Widgets

Channel configuration can be done per widget or per object (i.e., either in the widget's properties window or in the object's properties window). Configure the widget if all the objects on the widget are to be mapped to the same channel. Select the widget and go to the “Channels” section in the properties window. Each object contained in the selected widget will appear in the channels section of the properties window. Each object in the widget can be assigned to the same or different Pen as a widget, Alarm for Pen or Input Channel.

For widgets and objects the setup box looks the same.

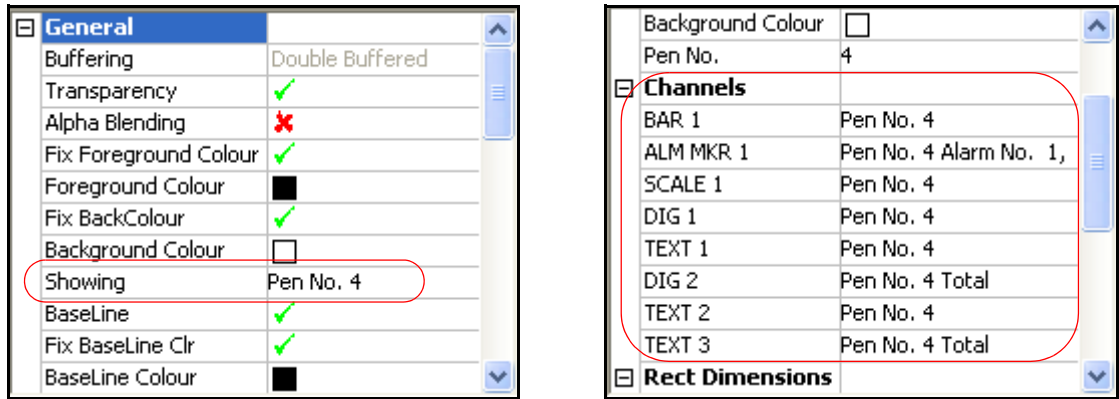


### Configure

- Data from: Pen - set the pen number what the object is going to be showing: Current Value, Minimum value, Maximum value, Average pen reading or Total. Data from: Alarm for Pen - set the pen number and the alarm number(s)
- Data from: Input Channel - set the channel number and what the object is going to be showing: Analogue, Digital, Hi Pulse or Lo Pulse
- Number: of the Pen, Alarm for Pen or Input Channel
- Showing: For Pen - Current Value, Minimum, Maximum, Average or Total value.  
For Alarm for Pen - List of available Alarms  
For Input Channel - Analogue, Digital, Hi Pulse or Lo Pulse

Screen configuration is assigning each object and/or widget to a channel/pen. Select an object or widget and go to the properties window.

**Figure 4.4 Properties window - Pen/Channel mapping**



Object pen/channel mapping

Widget pen/channel mapping

### **Channel Mapping Objects**

Channel mapping for an object is set up either in the properties window of the object itself (look for the property called "Showing") or in the properties window of the widget which contains the object (look for the object in the "Channels" section)..This will display which channel that object is currently assigned to, or where the data is coming from eg. Pen No.1.

To change channel mapping for a Scale, Bar, Digital or Text object, select the object and click in the box to the right of the "Showing" item in the properties window and select either Pen, Alarm for Pen or Input Channel. If a Pen or Alarm for Pen is required, select either the Pen number or the Parent Pen. [See "Parent Pens" on page 54.](#)

If the object is an Alarm Markers object the data will always be from "Alarm for Pen". Select the Pen number and which alarm number(s) will be showing.

Charts and Pen Pointers just need to be mapped to one or more pens.

### **Parent Pens**

Does not apply to charts or pen pointers as they normally have more than one pen displayed. The parent channel is the initial channel to be configured on a widget. All objects added to a widget (except charts and pen pointers) automatically default to using the parent channel. The parent itself allows the user to quickly make all of its objects update to use the pen number indicated by the parent. To configure the parent pen of a widget, go to "Pen No." in the properties window for the widget. To use the parent pen of a widget, go to "Channels" in the properties window for the widget or go to "Showing" in the properties window of an object.

## Saving Templates and Layouts

### Saving a Template



Save Template

A template can be saved on its own. The template can then be loaded onto the recorder via removable media, such as Compact Flash, USB key and screens can then be created by adding the pen/channel configuration on the recorder that use that template.. See [“Loading a Template into a Recorder” on page 55.](#)

To save a template, go to the Save Template icon in the Design window toolbar.

### Saving Layouts

Layouts consist of one or more templates and zero or more screens, which have the pen/channel configuration setup in it. The layout can be loaded onto the recorder via removable media, such as Compact Flash, USB key. See [“Loading a Template into a Recorder” on page 55.](#)

To save a layout go to the Save icon in the main toolbar.

## Animation

Before Loading your new layout onto a Recorder, you can use the Animation feature in **Screen Designer** to simulate the layout on the Recorder’s screen.

When your layout is complete, select the **Go!** button from the Main Toolbar to start the simulation tool. This feature can also be activated from the File menu (select Animate from the list).

If any of the pens appear in grey, this means the Demo traces in the setup being used have not been activated. In the simulator go to *Menu > Configure > Setup > Edit > General > Factory > Demo Traces* and change the Demo Traces to “Sim. if board not fitted”. By default demo traces will be active and all pens will be displayed in their default or assigned colours.

## Loading a Template into a Recorder

### Loading a Template

The Custom Screens firmware option has to be active in a recorder in order to accept templates from **Screen Designer**.

One or more templates can be loaded into a Recorder one at a time, screens added using them and displayed. Save the .tpl file as described in [“Saving a Template” on page 55.](#)

Fit the removable media into the recorder and go to Main Menu > Configure > Layout and select Load. The Device selection menu will appear for you to select the correct media and template file. Press the Load button after you have selected the desired template file to load.

To add a screen based on a template that you loaded, go to Main Menu > Configure > Layout > Edit and select Add Screen. A new standard screen will be added, which you will need to change. Go to the template Type option and select it and your template will be listed here. Select your template and your new screen will use that template. Re-name the screen as required. No pen/channel configuration is held in a template file.

To display the new screen go to the Screen button in the Main menu bar at the top of any process screen and select the Next button to scroll through the screens. Or select the List button to show the list of screens in the recorder and select your new screen.

## Loading a Layout into a Recorder

### *Loading a Layout*

The Custom Screens firmware option has to be active in a recorder in order to accept layouts from **Screen Designer**.

A single layout can be loaded into a Recorder and displayed. Save the .lay file as described in [“Saving Layouts” on page 55](#).

Fit the removable media into the recorder and go to Main Menu > Configure > Layout and select Load. The Device selection menu will appear for you to select the correct media and layout file. Press the Load button after you have selected the desired layout file to load.

Go to Main Menu > Configure > Layout > Edit if you need to edit any of the recorder screens you just loaded from the new layout.

To display the new layout go to the Screen button in the Main menu bar at the top of any process screen and select the Next button to scroll through the screens. Or select the List button to show the list of screens in the recorder.

Pen/channel configuration can be changed in the recorder for layouts loaded from Screen Designer.

## Loading a Setup from a Recorder into Screen Designer

A setup from the recorder can be saved onto a removable storage device such as a compact flash card or USB key. In the recorder go from the Main Menu to Configure > Setup > Save. Select the desired storage device and save the setup with a suitable file name. The file type extension is .set. Now to load the setup into **Screen Designer**, fit the CF or USB key into your PC and select Load Setup from the File menu. The setup file will be loaded into **Screen Designer** to be used by all layout documents and template documents open in **Screen Designer** and be visible at the top of the File Browser window.

### *Loading a Setup File into Screen Designer*

A Setup file can be imported from a recorder in order to display the actual user-entered pen information into **Screen Designer**. The pen information displayed will depend on what has been configured for the recorder, eg. pen tag and pen units. **Screen Designer** will use the recorder pen colours specified in the setup as the default pen colours. [See “Setup File” on page 21](#).

## Loading a Setup from the Trend Manager Pro software

Setups from **TrendManager Pro** software can be loaded into the **Screen Designer** software where layout changes can be made as required. No setup changes can be made in **Screen Designer**. Layouts from **Screen Designer** can be loaded into TMP where pen/channel configuration and pen assignments can be modified.

# Index

## A

<i>Add a Screen</i> .....	29
<i>Adding Bitmaps</i> .....	33
<i>Adding Objects</i> .....	38
<i>Alarm Marker Object</i> .....	31
<i>Alarm Marker Object Properties</i> .....	47, 48
<i>AlphaBlend</i> .....	49
<i>Animation</i> .....	55

## B

<i>Bar Object</i> .....	32
<i>Bar Object Properties</i> .....	41
<i>Bar Style</i> .....	42
<i>Bar Style</i> .....	42
<i>Bitmap Library</i> .....	32
<i>Bitmap Object</i> .....	32
<i>Adding Bitmaps</i> .....	33
<i>Bitmap Library</i> .....	32
<i>Resize</i> .....	33

## C

<i>CD Contents</i> .....	5
<i>Channel Mapping Objects</i> .....	54
<i>Parent Pens</i> .....	54
<i>Channel Mapping Widgets</i> .....	53
<i>Chart Object</i> .....	33
<i>Chart Object Properties</i> .....	40
<i>Configuring a Screen</i> .....	53
<i>Channel Mapping Objects</i> .....	54
<i>Channel Mapping Widgets</i> .....	53
<i>Parent Pens</i> .....	54

## D

<i>Design</i> .....	48
<i>Design Rules</i> .....	48
<i>Configuring a Screen</i> .....	53
<i>Linking Objects</i> .....	52
<i>Object Z - Order</i> .....	49
<i>Design Window</i> .....	14
<i>Design Window Tabs</i> .....	15
<i>Design Window Toolbar</i> .....	14
<i>Design Window Tabs</i> .....	15
<i>Template and Screen Tabs (outer)</i> .....	15
<i>Design Window Toolbar</i> .....	14
<i>Designing a Layout</i> .....	
<i>Adding Objects</i> .....	38
<i>AlphaBlend</i> .....	49
<i>Configuring a Screen</i> .....	53
<i>Design Rules</i> .....	48
<i>Designing a Template</i> .....	37
<i>Designing a Widget</i> .....	38
<i>Expert Mode</i> .....	38
<i>Layers within a Template</i> .....	49
<i>Linking Objects</i> .....	52
<i>Load a Setup from a Recorder</i> .....	56
<i>Load a Setup from the PC software</i> .....	56
<i>Loading a Layout into a Recorder</i> .....	56
<i>Loading a Setup File</i> .....	56
<i>Loading a Template into a Recorder</i> .....	55
<i>Object Order</i> .....	38
<i>Object Properties</i> .....	40
<i>Object Z - Order</i> .....	49
<i>Pen Colours</i> .....	39
<i>Saving Templates and Layouts</i> .....	55
<i>Shortcuts</i> .....	38
<i>Starting a Layout</i> .....	37
<i>Designing a Template</i> .....	37
<i>Expert Mode</i> .....	38
<i>Object Order</i> .....	38
<i>Shortcuts</i> .....	38
<i>Designing a Widget</i> .....	38
<i>Adding Objects</i> .....	38
<i>Object Properties</i> .....	40
<i>Pen Colours</i> .....	39
<i>Digital (DPM) Object</i> .....	34
<i>Digital Object Properties</i> .....	43

<b>E</b>	
<i>Edit Menu</i> .....	12
<i>Expert Mode</i> .....	38
<b>F</b>	
<i>File Browser Window</i> .....	16
<i>File Menu</i> .....	11
<i>File Types</i> .....	18
Layout File .....	19
Setup File .....	21
Template File .....	20
<i>Finishing a Layout</i>	
Load a Setup from a Recorder .....	56
Load a Setup from the PC software .....	56
Loading a Setup File .....	56
<b>H</b>	
<i>Help</i> .....	13
<b>I</b>	
<i>Installation</i> .....	7
Start up .....	7
<i>Introduction &amp; Installation</i> .....	5
CD Contents .....	5
Learning about Screen Designer .....	5
Recorder Requirements .....	6
System Requirements .....	6
<b>L</b>	
<i>Layers within a Template</i>	
AlphaBlend .....	49
<i>Layout File</i> .....	19
<i>Learning about Screen Designer</i> .....	5
<i>Linking Objects</i> .....	35, 52
<i>Load a Setup from a Recorder</i> .....	56
<i>Load a Setup from the PC software</i> .....	56
<i>Loading a Layout</i> .....	56
<i>Loading a Layout into a Recorder</i> .....	56
Loading a Layout .....	56
<i>Loading a Setup File</i> .....	56
<i>Loading a Template</i> .....	55
<i>Loading a Template into a Recorder</i> .....	55
Loading a Template .....	55
<b>M</b>	
<i>Main Toolbar</i> .....	10
Edit Menu .....	12
File Menu .....	11
View Menu .....	13
Window Menu .....	13
<b>O</b>	
<i>Object Details</i> .....	31
<i>Object Order</i> .....	38
<i>Object Properties</i> .....	24, 40
Alarm Marker Object Properties .....	47, 48
Bar Object Properties .....	41
Chart Object Properties .....	40
Digital Object Properties .....	43
Pen Pointer Object Properties .....	46
Scale Object Properties .....	44
Text Object Properties .....	45
<i>Object Properties Window</i> .....	35
<i>Objects</i> .....	31
Alarm Marker .....	31
Association with a Widget .....	35
Bar .....	32
Bitmap .....	32
Chart .....	33
Digital .....	34
Linking Objects .....	35
Object Details .....	31
Object Properties Window .....	35
Pen Pointers .....	34
Scale .....	34
Text .....	34
Types of Objects .....	31
Z-Order .....	49
<i>Objects Tab</i> .....	26

## P

<i>Parent Pens</i> .....	54
<i>Pen Colours</i> .....	39
<i>Pen Pointer Object Properties</i> .....	46
<i>Pen Pointers Object</i> .....	34
<i>Preface</i> .....	1
Notes .....	2
Screen Designer software overview .....	2
Supplementary documentation .....	1
This Manual .....	1
V6 Recorder Products .....	1
<i>Properties Precedence</i> .....	53
Colour .....	53
<i>Properties Window</i> .....	22
Object Properties .....	24
Properties Precedence .....	53
Screen Properties .....	22
Template Properties .....	22
Widget Properties .....	23
<i>Protocols</i> .....	xiv
Safety and Symbol Identification .....	xiv

## R

<i>Recorder Requirements</i> .....	6
<i>Resize a Bitmap</i> .....	33

## S

<i>Safety and Symbol Identification</i> .....	xiv
<i>Saving Layouts</i> .....	55
<i>Saving Templates</i> .....	55
<i>Saving Templates and Layouts</i> .....	55
Saving Layouts .....	55
Saving Templates .....	55
<i>Scale Object</i> .....	34
<i>Scale Object Properties</i> .....	44
<i>Screen Configuration</i> .....	30
<i>Screen Designer</i>	
Main Toolbar .....	10
<i>Screen Designer Interface</i> .....	9
Design Window .....	14
File Browser Window .....	16
Objects .....	31
Properties Window .....	22
Screens .....	29
Status Bar .....	14
Templates .....	27
Toolbox Window .....	25
Widgets .....	30

<i>Screen Designer software overview</i> .....	2
<i>Screen Properties</i> .....	22
<i>Screen Properties Window</i> .....	30
<i>Screen Toolbar</i> .....	30
<i>Screens</i> .....	29
Add a Screen .....	29
Screen Configuration .....	30
Screen Properties Window .....	30
Screen Toolbar .....	30
Screens Tab .....	29
<i>Setup File</i> .....	21
Loading a Setup File .....	56
<i>Shortcuts, Cut, Copy, Paste or Delete</i> .....	38
<i>Software License</i> .....	v
<i>Status Bar</i> .....	14
<i>System Requirements</i> .....	6

## T

<i>Template File</i> .....	20
<i>Template Layers</i> .....	49
<i>Template Properties</i> .....	22
<i>Template Toolbar</i> .....	28
<i>Template and Screen Tabs (outer)</i> .....	15
<i>Templates</i> .....	27
Alpha Blend .....	49
Association with a Screen .....	28
Layers within a Template .....	49
Template Tabs .....	28
Template Toolbar .....	28
<i>Text Object</i> .....	34
<i>Text Object Properties</i> .....	45
<i>Toolbox Window</i> .....	25
Objects Tab .....	26
Widgets Tab .....	25
<i>Trademarks</i> .....	xiv
<i>Type of Objects</i> .....	31
Alarm Marker .....	31
Bar .....	32
Bitmap .....	32
Chart .....	33
Digital .....	34
Pen Pointers .....	34
Scale .....	34
Text .....	34
<i>Types of Widget</i> .....	30
<i>Types of Widgets</i>	
Standard Widgets .....	30
User Defined Widgets .....	31



## U, V

<i>View Menu</i> .....	13
------------------------	----

## W

<i>Warranty/Remedy</i> .....	xiii
<i>Widget Properties</i> .....	23
<i>Widget Properties Window</i> .....	31
<i>Widgets</i> .....	30
Association with an Object .....	31
Standard Widgets .....	30
Types of Widget .....	30
User Defined Widgets .....	31
Widget Details .....	30
Widget Properties Window .....	31
<i>Widgets Tab</i> .....	25
<i>Window Menu</i> .....	13

## X, Y, Z

<i>Year 2000 Compliance Statement</i> .....	xiii
<i>Z - Order</i> .....	49



## Sales and Service

For application assistance, current specifications, pricing, or name of the nearest Authorized Distributor, contact one of the offices below.

### ASIA PACIFIC

#### Control Products

Asia Pacific Headquarters  
Phone: +(65) 6355-2828  
Fax: +(65) 6445-3033

#### Australia

Honeywell Limited  
Phone: +(61) 2-9370-4500  
FAX: +(61) 2-9370-4525  
Toll Free 1300-36-39-36  
Toll Free Fax:  
1300-36-04-70

#### China – PRC - Beijing

Honeywell China Inc.  
Phone: +(86-10) 8458-3280  
Fax: +(86-10) 8458-3102

#### China – PRC - Shanghai

Honeywell China Inc.  
Phone: (86-21) 6237-0237  
Fax: (86-21) 6237-1237

#### China - Hong Kong S.A.R.

Honeywell Ltd.  
Phone: +(852) 2953-6412  
Fax: +(852) 2953-6767

#### China – PRC - Chengdu

Honeywell China Inc.  
Phone: +(86-28) 6786-348  
Fax: +(86-28) 6787-061

#### China – PRC - Guangzhou

Honeywell China Inc.  
Phone: +(86-20) 3879-1169  
Fax: +(86-20) 3879-1269

#### China – PRC - Shenzhen

Honeywell China Inc.  
Phone: +(86) 755-518-1226  
Fax: +(86) 755-518-1221

#### Indonesia

Honeywell Indonesia  
Pte Ltd.  
Phone: +(62) 21-535-8833  
FAX: +(62) 21-5367 1008

#### IndiaTATA

Honeywell Ltd.  
Phone: +(91) 20687 0445/  
0446  
Fax: +(91) 20681 2243/ 687  
5992

#### Japan

Honeywell Inc.  
Phone: +(81) 3 5440 1425  
Fax: +(81) 3 5440 1368

#### South Korea

Honeywell Korea Co Ltd.  
Phone: +(822) 799-6167  
Fax: +(822) 792-9013

#### Malaysia

Honeywell Engineering  
Sdn Bhd  
Phone: +(60-3) 7958-4988  
Fax: +(60-3) 7958-8922

#### New Zealand

Honeywell Limited  
Phone: +(64-9) 623-5050  
Fax: +(64-9) 623-5060  
Toll Free (0800) 202-088

#### Philippines

Honeywell Systems  
(Philippines) Inc.  
Phone: +(63-2) 636-1661 /  
1662  
Fax: +(63-2) 638-4013

#### Singapore

Honeywell South East Asia  
Phone: +(65) 6355-2828  
Fax: +(65) 6445-3033

#### Thailand

Honeywell Systems  
(Thailand) Ltd.  
Phone: +(662) 693-3099  
FAX: +(662) 693-3085

#### Taiwan R.O.C.

Honeywell Taiwan Ltd.  
Phone: +(886-2) 2245-1000  
FAX: +(886-2) 2245-3242

### EUROPE

#### Austria

Honeywell Austria GmbH  
Phone: +43 (316)400123  
FAX: +43 (316)40017

#### Belgium

Honeywell SA/NV  
Phone: +31(0)205656999  
FAX: +31(0)165330746

#### Bulgaria

Honeywell EOOD  
Phone: +(359) 2 79 40 27  
FAX: +(359) 2 79 40 90

#### Czech Republic

Honeywell spol. s.r.o.  
Phone: +420-54324-5014  
FAX: +420-54324-5011

#### Denmark

Honeywell A/S  
Phone: +(45) 39 55 55 55  
FAX: +(45) 39 55 55 58

#### Finland

Honeywell OY  
Phone: +358 (3) 2727625  
FAX: +358 (3) 2728600

#### France

Honeywell SA  
Phone: +33 (0)1 60198075  
FAX: +33 (0)1 60198201

#### Germany

Honeywell GmbH  
Phone: +49 (69)8064336  
FAX: +49 (69)806497336

#### Hungary

Honeywell Kft.  
Phone: +36-1-451 4335  
FAX: +36-1-451 4343

#### Italy

Honeywell S.p.A.  
Phone: +39 02 9214 6503  
FAX: +39 0292146377

#### The Netherlands

Honeywell B.V.  
Phone: +31(0)205656999  
FAX: +31(0)165330746

#### Norway

Honeywell A/S  
Phone: (45) 39 55 55 55

#### Poland

Honeywell Sp. zo.o  
Phone: +48-22-6060900  
FAX: +48-22-6060901

#### Portugal

Honeywell Portugal Lda  
Phone: +351 21 424 5000  
FAX: +351 21 424 50 99

#### Romania

Honeywell Bucharest  
Phone: 40212110076  
FAX: +40 (40212103375)

#### Commonwealth of Independent States (CIS)

Z.A.O. Honeywell  
Phone: +(7 095) 796 98 36  
FAX: +(7 095) 796 98 93

#### Slovak Republic

Honeywell s.r.o.  
Phone: +421-2-58247 410  
FAX: +421-2-58247 415

#### Spain

Honeywell S.A.  
Phone: +34 (0)91313 61 00  
FAX: +34 (0)91313 61 30

#### Sweden

Honeywell AB  
Phone: +(46) 8 775 55 00  
FAX: +(46) 8 775 56 00

#### Switzerland

Honeywell AG  
Phone: +41 18552448  
FAX: +(41) 1 855 24 45

#### Turkey

Honeywell Turkey A.S.  
Phone: +90 216 575 6600  
FAX: +90 216 575 6637

#### Ukraine

Honeywell  
Tel : +380-44-201 44 74  
Fax: +380-44-201-44-75

#### United Kingdom

Honeywell Control Systems  
Ltd.  
Phone: +(44) 1698 481730  
FAX: +(44) 1698 481276

### MIDDLE EAST

#### Abu Dhabi U A E

Middle East Headquarters  
Honeywell Middle East Ltd.  
Phone: +971 2 4041220  
FAX: +971 2 4432536

#### Sultanate of Oman

Honeywell & Co Oman LLC  
Phone: +968 701397  
FAX +968 787351

#### Saudia Arabia

Honeywell Turki Arabia Lim-  
ited  
Phone: +966-3-341-0140  
Fax: +966-3-341-0216

#### Kuwait

Honeywell Kuwait KSC  
Phone: +965 2421327

### AFRICA

#### Mediterranean & African Distributors

Honeywell SpA  
Phone: +39 (02) 250 10 604  
FAX: +39 (02) 250 10 659

#### South Africa (Republic of)

Honeywell Southern Africa  
Honeywell S.A. Pty. Ltd.  
Phone: +27 11 6958000  
FAX +27 118051504

### NORTH AMERICA

#### Canada

Honeywell LTD  
Phone: 1-800-737-3360  
FAX: 1-800-565-4130

#### USA

Honeywell Process Solu-  
tions,  
Phone: 1-800-343-0228  
FAX: 1-815-235-6545

### LATIN AMERICA

#### Argentina

Honeywell S.A.I.C.  
Phone: +(54-11) 4383-3637  
FAX: +(54-11) 4325-6470

#### Brazil

Honeywell do Brasil & Cia  
Phone: +(55-11) 7266-1900  
FAX: +(55-11) 7266-1905

#### Chile

Honeywell Chile, S.A.  
Phone: +(56-2) 233-0688  
FAX: +(56-2) 231-6679

#### Mexico

Honeywell S.A. de C.V.  
Phone: +(52) 55 5259-1966  
FAX: +(52) 55 5570-2985

#### Puerto Rico

Honeywell Inc.  
Phone: +(809) 792-7075  
FAX: +(809) 792-0053

#### Trinidad

Honeywell Inc.  
Phone: +(868) 624-3964  
FAX: +(868) 624-3969

#### Venezuela

Honeywell CA  
Phone: +(58-2) 238-0211  
FAX: +(58-2) 238-3391

## Honeywell Process Solutions

Honeywell  
2500 W.Union Hills Drive  
Phoenix, Arizona 85027  
[www.honeywell.com/ps](http://www.honeywell.com/ps)

43-TV-03-31  
August 2009  
© 2009 Honeywell International Inc

# Honeywell