

Temprecord Active Display User's Manual

© 2019 Temprecord International Ltd.



User's Manual for Temprecord Active Display Software.

Temprecord Active Display User's Manual

Version 1.46

May 2019

*This is the User's Manual for the
Temprecord Active Display (TAD)
software. The contents of this manual
mirror the online help provided with the
application, but the format of this PDF
file is better suited to printing.*

Temprecord Active Display (TAD) User's Manual

© 2019 Temprecord International Ltd.

All rights reserved. No parts of this work may be reproduced in any form or by any means - graphic, electronic, or mechanical, including photocopying, recording, taping, or information storage and retrieval systems - without the written permission of the publisher.

Products that are referred to in this document may be either trademarks and/or registered trademarks of the respective owners. The publisher and the author make no claim to these trademarks.

While every precaution has been taken in the preparation of this document, the publisher and the author assume no responsibility for errors or omissions, or for damages resulting from the use of information contained in this document or from the use of programs that may accompany it. In no event shall the publisher and the author be liable for any loss of profit or any other commercial damage caused or alleged to have been caused directly or indirectly by this document.

Produced May 2019

Contents

Foreword	0
Part I Introduction to the TAD System	8
1 Contents.....	8
2 Manual Declarations and Definitions.....	9
3 System Requirements.....	9
4 Software Installation.....	10
5 Command-line Installation.....	12
6 Software Uninstallation.....	14
7 Folders used in TAD Operation.....	15
8 Installation with External Files.....	16
9 Starting TAD.....	18
10 Startup Error Messages.....	20
11 TAD Main Menu.....	22
File Menu	22
TAD Options Files	23
View Menu	24
Select Menu	25
12 TAD System Tray Icon Messages.....	26
13 Closing Temprecord Active Display.....	26
14 About TAD Help.....	28
Part II Summary Tab	29
1 Showing and Hiding Channels.....	30
2 Showing local channels only.....	31
3 Channel Number Column (Summary Screen).....	31
4 Active Column (Summary screen).....	32
5 Default Column.....	32
6 Name Column.....	33
7 I/O Column.....	34
8 Measured Parameters Columns.....	34
9 Alarm Column.....	35
10 Status Column.....	35
Part III Channel Setup Dialog	37
1 Channel Setup - Details Tab.....	40
2 Channel Setup - Logging Tab.....	42
3 How TAD samples channels that are outside the limits.....	45
4 Channel Setup - Reports Tab.....	47
5 Channel Setup - Alarms Tab.....	49
6 Channel Setup - Channel Errors and Heartbeat.....	52

7	Channel Setup - Validation Tab.....	52
	Performing Validation Tests	54
8	Channel Setup - Configuration Tab.....	55
9	Channel Setup - Export and Spot Check.....	57
10	Channel Setup - Calibration.....	59
Part IV Detail Tab		62
1	Overview	62
2	Description of Fields.....	63
Part V Channels Tab		66
1	Adding a Channel.....	67
2	Removing a Channel.....	68
3	Moving and Docking Channels.....	68
4	Resizing Channels.....	69
5	Cloning a Channel.....	70
6	Displaying the Channel Name	71
7	Displaying the Channel Location ID.....	72
Part VI Reports Tab		73
1	Recent Reports.....	74
2	Generating Reports.....	75
3	Report layout.....	76
4	Vaccine Status.....	79
Part VII Graph Tab		82
1	Adding Channels to the Graph Tab.....	83
2	Enabling Traces on the Graph.....	83
3	Zooming - Using the Zoom Buttons.....	84
4	Zooming - Using the Mouse.....	86
5	Graph Hinting	86
6	Event / Status Markers.....	87
7	Graph Alert Indication.....	88
8	Moving about the Graph.....	89
9	Scaling the Graph when CO2 is displayed.....	91
Part VIII Log Tab		93
1	Log Entry.....	93
2	Logged Event Detail.....	94
3	Finding Logged Events on the Graph.....	95
4	Adding a Note to the Event Log.....	96
5	Pop-up Alarms.....	98
6	Expanded Event Detail (PDF Channel Report).....	98

Part IX Options Tab	100
1 About TAD.....	101
2 Access Options.....	101
3 Moving the master password file.....	106
4 Recovering from lost or damaged password files.....	107
5 Changing the Access Level.....	109
6 General Options.....	110
7 Site Detail Options.....	114
8 Datafile Options.....	114
9 Master/Slave Options.....	118
10 Channel Options.....	121
11 Backup Options.....	122
12 Export Options.....	126
13 Spot Check Options.....	128
14 How destination folder specifications are interpreted.....	132
15 Formatting file and folder names with date-times.....	133
16 Web Options.....	136
17 Web Backup.....	137
18 Web Restore.....	139
19 Proxy Settings.....	142
20 Validation Options.....	143
21 Reporting Options.....	143
General Report Options	144
Summary Report Options	146
Channel Report Options	149
Validation Report Options	152
22 Defaults Options.....	153
23 Alerts Options.....	159
24 Alert appearance.....	164
25 Alert Sounds.....	165
26 Sentinel Options.....	166
27 Camera Options.....	168
28 Screen Capture Options.....	169
29 Email Options.....	174
Email "From:" Address Options	177
Email Heartbeat Options	178
Default Heartbeat Action on Abnormal Logger Channels	181
30 System Options.....	181
31 Startup Log.....	182
32 Error Log.....	182
33 Debug Options.....	182
34 Meta-strings.....	183
35 Adminstrator Backup and Restore.....	186

Part X Appendices	192
1 Digital I/O Connections.....	192
2 TAD Product Specifications.....	193
Index	195

1 Introduction to the TAD System



This help text pertains to versions of the Temprecord Active Display (TAD) software from version 1.47 onwards. Earlier versions of TAD may not have some of the features described in this help.

The TAD system has been developed to actively monitor up to 255 data channels that are connected to an ethernet network (LAN) located within a building. Temperature, relative humidity, pressure, and Carbon Dioxide (CO₂) concentration data from the active channels are accessed by TAD employing calibrated Temprecord data loggers and pressure sensors that are fitted inside the yellow TAD data collection boxes strategically placed around the monitored area.

Any changes in temperature, humidity, pressure or CO₂ conditions that are outside maximum and minimum preset limits set by the user in the TAD program will cause TAD to activate an alarm event. The alarm event is written to the TAD log file for auditing and reporting purposes.

When the TAD system enters an alarm state, the user has three options available to receive notification of the alarm event from the TAD monitoring station.

The alert notification options are:

- An email message alert can be sent to one or more email addresses.
- An SMS message (a 'TXT') can be sent to a device on the mobile phone network.
- The in-built auxiliary digital outputs connected to TAD hardware can be activated to sound an audible alarm anywhere on the site or trigger a remote input to security alarm system that will notify the alarm monitoring company that the TAD system is in an alarm condition.

The in-built auxiliary output can be configured to either sound an audible alarm or flash a warning light or if required activate the alarm and warning light together.

TAD has a comprehensive reporting capability that can be set-up to report the environmental details of your product storage areas exactly when you require them. The TAD system can be configured to generate reports hourly, daily, weekly or monthly, or the user can generate a report on demand for an instant up-to-date channel report or summary report. All reports are generated as PDF files and can be archived under date-formatted folders.

The TAD system also has an automated data file backup feature. The data files are archived in a proprietary format as date-format named files (*.tdf) or as ASCII text *.csv files.

See Also:

- [Contents](#)
- [Manual Declarations and Definitions](#)
- [System Requirements](#)
- [Software Installation](#)
- [Software Uninstallation](#)
- [Starting TAD](#)
- [TAD Main Menu](#)
- [TAD System Tray Icon Messages](#)
- [Closing Temprecord Active Display](#)
- [About TAD Help](#)

1.1 Contents

- [Introduction to the TAD System](#)

- [Summary Tab](#)
- [Channel Setup Dialog](#)
- [Detail Tab](#)
- [Channels Tab](#)
- [Reports Tab](#)
- [Graph Tab](#)
- [Log Tab](#)
- [Options Tab](#)
- [Appendices](#)

1.2 Manual Declarations and Definitions

Definitions used in this Manual

For the purposes of this manual the company name Temprecord International Ltd. will be abbreviated as 'TIL'.

The online real time monitoring system known as the Temprecord Active Display System will be abbreviated as 'TAD'.

Administration rights will be abbreviated to 'admin rights'.

Settings that apply to all installed channels will be referred to as 'Global Settings'.

Settings from the configuration tabs from the channel setup dialog will be described as 'Local Channel Settings'.

The file TAD.TDF (normally located in the folder C:\Documents and Settings\All Users\Application Data\Temprecord\TAD\Datafiles\) is referred to as the 'TAD data/log file'.

Authorisations

The TAD software is authorised for use with all TAD online monitoring systems installed by TIL or installation contractors accredited by TIL.

Only authorised sites can make a copy of TAD installation files for back-up purposes.

Unauthorized copying of TAD software files is NOT PERMITTED without the prior knowledge and permission of Temprecord International Ltd.

Copyrights

Windows is a registered trademark of Microsoft Corporation.

IBM is a registered trademark of IBM Corporation

© 2019 Temprecord International Ltd
All rights reserved.
<http://www.temprecord.com>

1.3 System Requirements

Operating System

Windows XP Professional (SP3) or later is required for operation of TAD.

Computer Requirements

Minimum TAD desktop computer requirements
Pentium P4 processor or later

1GB RAM
100GB hard disk drive
Minimum 1024 x 768 resolution display screen
Network (LAN) accessibility with access to outgoing mail (SMTP) server

Hardware Requirements (TAD)

- Minimum of 1 x temperature channel (yellow TAD reader box). A maximum of 255 Channels may be installed and configured for any one site.

The channels can be configured to monitor temperature, relative humidity, clean room pressure or CO2 concentration. A humidity channel can also monitor temperature.

The TAD reader box includes electronics to implement a Temprecord Reader, an ethernet to serial interface and either a temperature or humidity (RH) Temprecord calibrated data logger, a pressure transducer, or a CO2 concentration sensor.

- Switch-mode 7.5VDC power supply rated to service installed number of TAD Channels and alarm module. Temprecord can recommend an appropriate unit rated for your site depending on the number of TAD channels installed.
- 8-Port (or more depending on the number of installed channels) 10/100 Mbps fast ethernet LAN switch dedicated exclusively for TAD system.
- Appropriately rated uninterruptible power supply (UPS) to service the TAD computer, TAD channels and LAN switch.
-

Site Requirements

The user will need **Administrator** rights assigned to the TAD computer to allow installation and configuration of the TAD software.

Physical access to the computer running TAD is required to administer and configure TAD. It is not possible to control the application from another computer.

It is not recommended that other applications are run on the TAD computer.

A stable power supply such as a UPS is recommended. The computer itself must be configured so that it never hibernates or goes into standby, as these will cause the TAD program to stop running. Screen savers, or turning off the hard disk are permissible.

The data file TAD.TDF needs to reside on the computer running TAD, and TAD needs to be configured in **Master** mode. Computers running TAD in **Slave** mode can be remote computers on the network.

1.4 Software Installation



There are several TAD functions which depend on files being in the locations specified by the default folders presented when you install. You are strongly advised to install TAD into the default folders.

TAD can also be installed by running the setup program from a command prompt. This can be useful for mass roll-outs of TAD. See [Command-line Installation](#) for more information.

To install the TAD software to a TAD computer workstation, use the following steps...

The most up-to-date TAD software can be downloaded from the Temprecord web site: www.temprecord.com or an autorun software installation CD can be obtained from Temprecord International Ltd.

The downloaded file will be called **tad-setup.zip**. The user will need to extract **tad-setup.exe**, the executable file to a folder on the workstation PC. It is recommended that the user create a folder called

Temprecord then create a folder called TAD\ within the Temprecord\ folder. The downloaded TAD software file(s) may be stored in the TAD\ folder for future use as well as backup. The user can begin installation of the TAD software by double-clicking the file tad-setup.exe.

The following dialog will display:



Figure 1: Software Installation: Setup Dialog

Follow the on-screen pop-up installation instructions:



It is possible to install TAD preconfigured such that the when the installation completes, some of the settings have already been tailored to the user's installation. This is achieved by including some additional files with the installation executable tad-setup.exe. See [Installation with External Files](#) for more information.



Temprecord tries to preserve existing behaviour when you are updating to newer versions of TAD, but you are strongly advised to check the behaviour of your installation after any upgrade to satisfy yourself that there has been no unintended regression of existing functionality.

AutoRun the TAD software Installation CD

If the user is supplied with an autorun TAD software installation CD:

- Place the CD into the CD drive of the computer where the TAD software will be installed.
- Click Start on the task bar then click Run.
- On the Run dialog box, click Browse and navigate to the folder on the installation CD where the tad-setup.exe executable file is located (usually under TAD folder).

- When tad-setup.exe is displayed in the Run dialog box, click OK. This will start the TAD software installer.
- Read any installation messages that appear during the setup process and click on either the Next or OK buttons until the install process has finished.

The installation process will create a Temprecord Active Display shortcut Icon on your desktop



and/or create a quick launch TAD Icon on the task bar of your desktop.

Installation of TAD is now complete. The user should now configure the TAD software to suit their site requirements.

First, the user needs to configure all of the **Global Settings**, then configure the settings for each channel as required by their application.

See also:

[Command-line Installation](#)

[Installation with External Files](#)

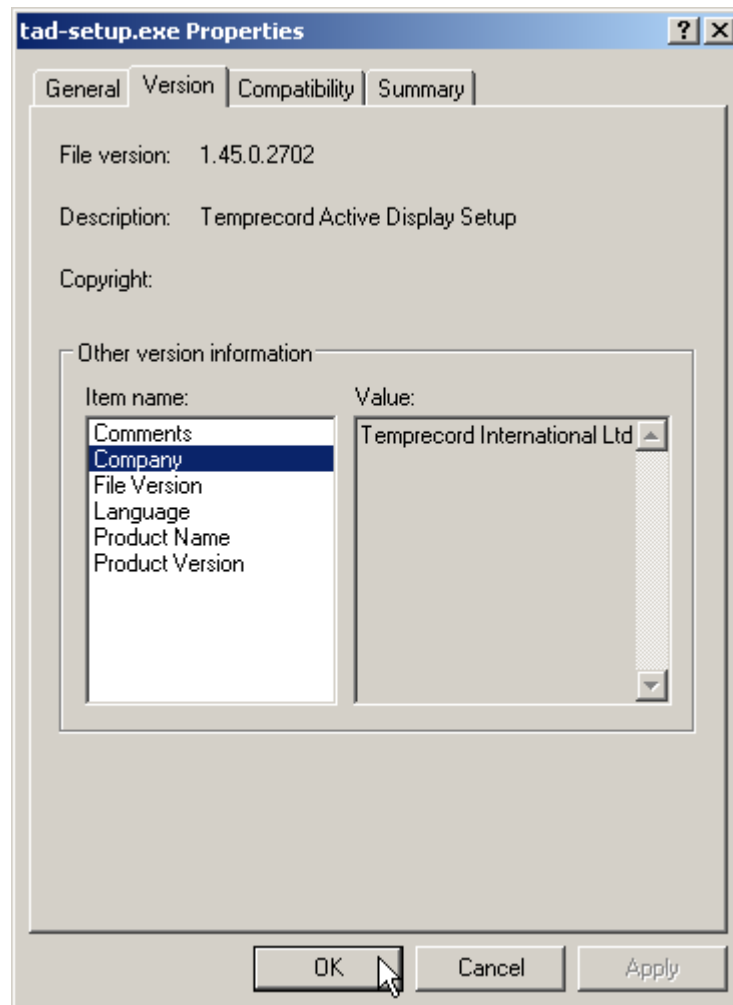
[Folders used in TAD Operation](#)

[Software Uninstallation](#)

1.5 Command-line Installation

TAD can also be installed from a command prompt (a "DOS Box"), or by running the setup program from a batch file.

The setup program is normally called `tad-setup.exe`. You can determine what version of TAD any particular copy of `tad-setup.exe` will install by right-clicking the file in Explorer and selecting **Properties**.



Command-line Installation Examples

NOTE: The following examples will most likely wrap at the ends of lines when the text does not fit in the help window. Make sure when you enter the commands into a batch file that there are no hard carriage return characters anywhere but at the end of the commands.

```
tad-setup
```

Starts the TAD installer graphical interface. The installation is a standard Windows installer, with opportunities to select the installation folder, start menu entries, etc.

```
tad-setup.exe /SILENT /SP- /LOG="%UserProfile%\Desktop\TAD installation log.txt" /SUPPRESSMSGBOXES /DIR="%ProgramFiles%\TAD\" /GROUP="TAD"
```

Starts the TAD installer in unattended setup mode. The installation will take place into the standard TAD directories. A log of the installation will be left on the desktop..

```
tad-setuptad-setup.exe /SILENT /SP- /LOG="%UserProfile%\Desktop\TAD installation log.txt" /SUPPRESSMSGBOXES /DIR="%ProgramFiles%
```

```
\TAD\" /GROUP="TAD" /NoMoxaInstall
```

Starts the TAD installer in unattended setup mode. The installation will take place into the standard TAD directories. A log of the installation will be left on the desktop. The installer will not pause at the end of TAD installation and give you the opportunity to install the Moxa Network Enabler software.

```
tad-setuptad-setup.exe /SILENT /SP- /LOG="%UserProfile%\Desktop\TAD
installation log.txt" /SUPPRESSMSGBOXES /DIR="%ProgramFiles%
\TAD\" /GROUP="TAD" /NoStartUpMenu
```

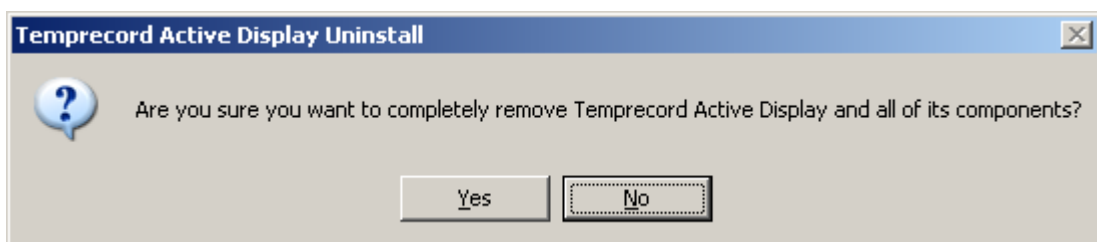
Starts the TAD installer in unattended setup mode. The installation will take place into the standard TAD directories. A log of the installation will be left on the desktop. No entry for the TAD program will be made in the Startup Menu folder, and so TAD will not automatically start when Windows starts.

An example batch file named `TAD Default Setup.bat` is copied to the `Program Files\TAD` folder as part of installation. You can inspect this file with `Notepad` and modify it according to your needs.

1.6 Software Uninstallation

To uninstall TAD from a computer, carry out the following steps:

- Click the `Start` button
- Click `All Programs`
- Click the menu entry for TAD (the name of this entry will depend on how it was installed)
- Click on `Uninstall TAD`:



- Click the `Yes` Button

The uninstallation process should begin and continue to completion. There are no choices, questions or prompts with uninstallation.



Uninstalling TAD removes the program executable files, program start menu entries, any desktop shortcuts, and any quick launch taskbar icons. You should however note that:

- If you have configured TAD to start automatically on Windows startup, this will fail and depending on the version of Windows, may cause the computer startup sequence to "snag". You should therefore remove any shortcuts to TAD in the computer `Startup` folder.

- TAD's datafiles are left intact, as is the channel configuration file, and the global settings INI file. If you should reinstall TAD in the same folder, things should "pick up" from where they left off.
- If there were any emails queued, uninstallation will leave these intact, and if TAD is re-installed, it will attempt to resume sending them.
- If files need to be removed for privacy or security reasons you should examine the [Options/System](#) tab and note the locations of these files so that you can delete the folder contents after uninstallation.
- TAD stores some passwords in the file `TAD.INI`. These are strongly encrypted but you may choose to delete the file `TAD.INI`.

See also

[Installing TAD](#)

1.7 Folders used in TAD Operation

A default installation of TAD will normally create the following folders (paths are given in [gray](#) for a Windows XP installation. The folder names under Windows 7 and above are equivalent but may display differently under those operating systems because of Windows' use of symbolic links, and these alternate pathnames are shown again in [green](#)).

Summary Reports	C:\Documents and Settings\All Users\Documents\Temprecord\TAD\Summary Reports\ C:\Users\Public\Documents\Temprecord\TAD\Summary Reports\
Channel Reports	C:\Documents and Settings\All Users\Documents\Temprecord\TAD\Channel Reports\ C:\Users\Public\Documents\Temprecord\TAD\Channel Reports\
Spot Check Reports	C:\Documents and Settings\All Users\Documents\Temprecord\TAD\Spot Check\ C:\Users\Public\Documents\Temprecord\TAD\Spot Check\
Exported CSV Files	C:\Documents and Settings\All Users\Documents\Temprecord\TAD\Export\ C:\Users\Public\Documents\Temprecord\TAD\Export\
Primary System Files	C:\Documents and Settings\All Users\Documents\Temprecord\TAD\Primary\ C:\Users\Public\Documents\Temprecord\TAD\Primary\
TAD.INI File	C:\Documents and Settings\All Users\Application Data\Temprecord\TAD\ C:\ProgramData\Temprecord\TAD\
TAD.CFG File	C:\Documents and Settings\All Users\Application Data\Temprecord\TAD\Datafiles\ C:\ProgramData\Temprecord\TAD\Datafiles
Local.ACF file	C:\Documents and Settings\<user>\Local Settings\Application Data\Temprecord\ C:\Users\<user>\AppData\Local\Temprecord\
Master.ACF file	C:\Documents and Settings\All Users\Application Data\Temprecord\ C:\ProgramData\Temprecord\
Datafiles	C:\Documents and Settings\All Users\Application Data\Temprecord\TAD\Datafiles\

	C:\ProgramData\Temprecord\TAD\Datafiles\
Backup	C:\Documents and Settings\All Users\Application Data\Temprecord\TAD\Backup\ C:\ProgramData\Temprecord\TAD\Backup\
Local web backup	C:\Documents and Settings\All Users\Application Data\Temprecord\TAD\Web Backup\ C:\ProgramData\Temprecord\TAD\Web Backup\
Web restore	C:\Documents and Settings\All Users\Application Data\Temprecord\TAD\Web Restore\ C:\ProgramData\Temprecord\TAD\Web Restore\
Installation Logs	C:\Documents and Settings\All Users\Application Data\Temprecord\TAD\Installation Logs\ C:\ProgramData\Temprecord\TAD\Installation Logs\
Startup Logs	C:\Documents and Settings\All Users\Application Data\Temprecord\TAD\Startup Logs \ C:\ProgramData\Temprecord\TAD\Startup Logs\
Error Logs	C:\Documents and Settings\All Users\Application Data\Temprecord\TAD>Error Logs \ C:\ProgramData\Temprecord\TAD>Error Logs\
Debug Logs	C:\Documents and Settings\All Users\Application Data\Temprecord\TAD\Debug Logs\ C:\ProgramData\Temprecord\TAD\Debug Logs\
Temporary email attachments	C:\Documents and Settings\<user>\Local Settings\Temp\Temprecord\TAD\Email C: \Users\<user>\AppData\Local\Temp\Temprecord\TAD\Email\
Temporary web backup files	C:\Documents and Settings\<user>\Local Settings\Temp\Temprecord\TAD\Web\ C: \Users\<user>\AppData\Local\Temp\Temprecord\TAD\Web\

See also:[Software Installation](#)[Installation with External Files](#)

1.8 Installation with External Files

This topic describes how you can configure installation packages to pre-install configuration set-ups when TAD is installed. This is achieved by including external files with the setup executable.



External files included with the setup executable will be ignored if the corresponding file is already present on the target computer. External files are intended to be used on "clean" installs, where TAD has not been installed prior.

TAD Configuration Files

TAD depends on three configuration files for its operation. These files remember the changes to the settings made by TAD after it is installed. These files are

- TAD.INI
- TAD.CFG
- Master.ACF

TAD.INI

The INI file remembers all "global" system settings. The INI file normally resides in folder:

C:\Documents and Settings\All Users\Application Data\Temprecord\TAD\

TAD.CFG

The CFG file is responsible for remembering all of settings for each individual channel. TAD always expects to find the CFG file in the same folder as the current TAD (TAD*.TDF) data files - normally in folder:

C:\Documents and Settings\All Users\Application Data\Temprecord\TAD\Datafiles\

If one is not found there it will create a new "empty" one. If you unexpectedly see no channels defined when you open TAD, it is likely because you have moved the location of the datafile folder and not copied or moved the TAD.CFG file to the same new location.

Master.ACF

The file Master.ACF is an encrypted file that contains the username and password information for TAD and any other Temprecord applications that employ Temprecord's access control system. It is normally found in folder:

C:\Documents and Settings\All Users\Application Data\Temprecord\



Don't change these file locations unless you understand the effect it will have on TAD operation

External Installation Files

When the TAD installer runs, it checks to see if there are additional files supplied with the installation exe file. These files - called **external** files - can be used to provide initial installation settings for TAD. For example, you can arrange to install TAD with a particular channel setup, or a preconfigured set of usernames and passwords.

These external files if present must be in the same folder as the file `tad-setup.exe`, and must have the filenames:

- External.INI (copied across and renamed to TAD.INI)
- External.CFG (copied across and renamed to TAD.CFG)
- External.ACF (copied across and renamed to Master.ACF)

These files are copied across and renamed only if the corresponding file isn't found in the default installation folder for that file, so no existing configuration file should be overwritten by a subsequent installation.



If these external files are present, and corresponding counterparts are not found on the system TAD is being installed onto, the files are copied into their installation default folders. If you should later change the location of any of these folders, it is your responsibility to ensure the corresponding configuration file is copied or moved to the new location. You can always see the actual location of each of these files by inspecting the [System](#) page on the [Options tab](#).

Preparing External Installation Files

In order to prepare the external files to include with the installation package, you should install TAD on a computer that is as close as possible to the intended target installation machine.

If you want to include a preconfigured set of usernames and passwords for use by Temprecord applications that implement the access control system, set those usernames and passwords up on your test installation, then take a copy of the file .

C:\Documents and Settings\All Users\Application Data\Temprecord\Master.acf

and copy it to the installation media, renaming it to External.acf.

If you want to include a preconfigured global configuration, setting things such as the folder for TAD datafiles, backup files, etc. set those options up on your test installation, then take a copy of the file .

C:\Documents and Settings\All Users\Application Data\Temprecord\TAD\TAD.ini

and copy it to the installation media, renaming it to External.ini.

Finally, if you want to include preconfigured channel configurations, setting things such as the channel names, sample periods, COM Ports, etc. - anything that you can configure via the [Channel Setup Dialog](#) - set those options up on your test installation, then take a copy of the file .

C:\Documents and Settings\All Users\Application
Data\Temprecord\TAD\Datafiles\TAD.cfg

and copy it to the installation media, renaming it to External.cfg.

When you distribute the installation media, make sure these files are in the same folder as the setup executable file `tad-setup.exe`. If file files are distributed on a CD-ROM or USB key for example, copy the file `tad-setup.exe` and any external files to the root folder. If you are distributing the installation files as a ZIP archive, arrange the archive so that all the files extract to the same folder.

See also:

[Software Installation](#)

[Folders used in TAD Operation](#)

1.9 Starting TAD

Start the TAD software by double-clicking on the Temprecord Active Display application icon on your desktop. The main menu screen with File, View & Help tabs will be displayed. TAD displays the Summary tab by default as the first screen.



Main Menu - View pull-down menu

Click **View** to display the view pull-down menu. Select and click **All Channels** to display the maximum number of channels (1 to 255) on the **Summary** screen. Later the user may choose **Fitted Channels** to display only the channels that are present in that installation.

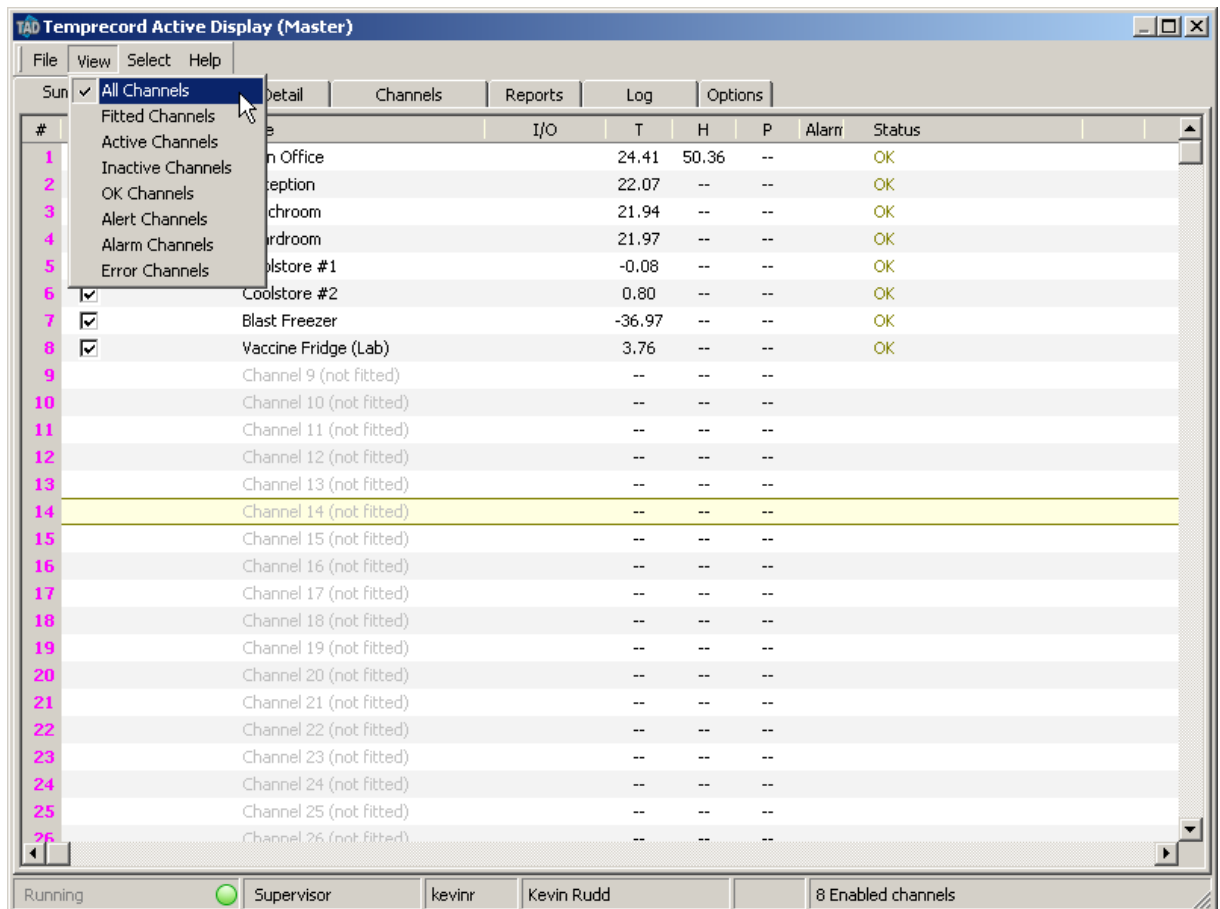


Figure 2: Main Menu: View Selection

There are six tabs at the top of the TAD screen: Summary, Detail, Channels, Graph, Log and Options. Trained TIL personnel will configure the entire TAD system during the commissioning phase of the TAD installation at your Site.

Note that the majority of the Global Configuration and Channel Configuration options require TAD Supervisor or admin access to change them.

Running TAD for the First Time

The first time TAD is run after a "clean" (new) installation, there may be messages displayed when it creates the files it requires for correct operation. These files are:

TAD.INI

This is the configuration file that contains the settings for the program operation. Creation of this file on startup implies that all the program settings will be set to their installation default values.

TAD.CFG

This is the configuration file that contains the settings for each channel. Creation of this file on startup implies that all channels will be disabled, and the channel settings will be set to their installation default values.

TAD.TDF


This is the datafile TAD writes the logged information to. In fact the logged information is held in numerous TAD*.TDF files, but the file TAD.TDF is the one being written to at any particular time. At regular intervals (determined by the settings in the [Datafile tab](#)), the file TAD.TDF is rolled over and renamed, and a new TAD.TDF file is created.

You may also see these messages displayed when TAD is unable to find the files as it starts if the files have been deleted or moved for example. See the topic [Startup Error Messages](#) for more information.

1.10 Startup Error Messages

The following is a list of messages that can display on starting TAD. Under normal operation, TAD should start up without any messages being displayed, and any messages that are persistent indicate a problem with the TAD hardware or configuration. Studying the startup log can also provide information about TAD initialisation.

A message marked with **Alert** should normally only display the first time TAD is run. A message marked with **Error** indicates a more serious problem, and it is unlikely that TAD will run correctly.

Error	Unable to find INI file The INI file <file name> specified on the command line was not found. TAD will look for an INI file in the CommonAppData folder and use that one if found.	TAD was started with the /INIFILE command-line option, but the INI file specified with the command option could not be found. TAD will look in the default location for the INI file.
Alert	Unable to find INI file An INI file was not found at <file name>. One will be created.	TAD was unable to open the INI file shown. This message may display the first time you run TAD, or after the existing INI file has been deleted or moved.
Error	Unable to find folder The folder <folder name> specified on the command line was not found. A folder will be created.	TAD was started with the /DATAFILE command-line option, but the folder specified with the command option could not be found. TAD will attempt to create the folder.
Error	Unable to create datafile folder The datafile folder <folder name> could not be created.	<p>TAD was started with the /DATAFILE command-line option, but the folder specified with the command option could not be found. TAD has attempted to create the folder and has not been successful. Consult the startup log for more details.</p> <p>Check that the folder is not read-only, and that you have sufficient privileges.</p>
Alert	Unable to find channel configuration folder A channel configuration folder was not found at <folder name>. This folder will be created.	<p>The folder specified in the TAD datafile folder control does not exist. TAD will create it now.</p> <div>  <p>Check that you intended to use a new folder for the TAD channel configuration file (and therefore the TAD datafile. This message will also display if you enter a folder name and mis-type the name.</p> </div>
Error	Unable to create channel configuration data folder The channel configuration data folder <folder name> could not be created.	<p>TAD attempted to create the folder to store the TAD datafile and channel configuration file in, but was not successful. Consult the startup log for more details.</p> <p>Check that the folder is not read-only, and that you have sufficient privileges.</p>

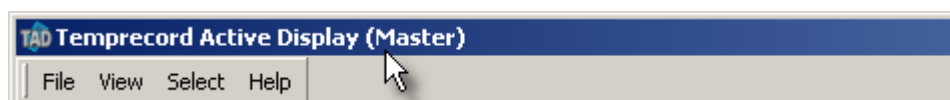
Alert	Unable to find Channel file A channel configuration file was not found at <file name>. One will be created.	The channel configuration file default location is in the same folder as the TAD datafiles (TDF files). If the file TAD.CFG is not found in this folder TAD will create one with default settings.
Alert	No TAD datafile found The data file <file name> was not found and will be created on the local drive.	<div>  <p>Note that if the file TAD.TDF is missing, but there are other TAD*.TDF files in the folder, TAD will read those files and append the new TAD.TDF file to that dataset. Any TAD*.TDF files that are present and dated after the current date will be ignored.</p> </div>
Error	Unable to create new Data File The data file <file name> could not be created	<p>TAD attempted to create the new TAD.TDF datafile, but encountered an error. Consult the startup log for more details.</p> <p>Check that the folder is not read-only, and that you have sufficient privileges.</p>
Error	Unable to create Data File The data file <file name> could not be created as this instance of TAD is configured as a Master' and the data file specified is not on a local drive.	TAD has been started as a Master, but the datafile specified is not on a local drive. When running as a master, TAD requires a datafile to be on a local (non-network) drive
Error	Unable to open Data File The data file <file name> could not be opened.	<p>TAD was unable to open the TAD.TDF datafile Consult the startup log for more details.</p> <p>Check that the folder is not read-only, and that you have sufficient privileges.</p>
Error	Unable to open Data File The data file <file name> could not be opened as this instance of TAD is configured as a Master and the data file specified is not on a local drive.	TAD has been started as a Master, but the datafile specified is not on a local drive. When running as a master, TAD requires a datafile to be on a local (non-network) drive
Error	Unable to create new Data File The data file <file name> could not be created	<p>TAD was unable to create the new TAD.TDF datafile Consult the startup log for more details.</p> <p>Check that the folder is not read-only, and that you have sufficient privileges.</p>
Error	Unable to open Data File The data file <file name> could not be opened.	<p>TAD was unable to open the TAD.TDF datafile Consult the startup log for more details.</p> <p>Check that the folder is not read-only, and that you have sufficient privileges.</p>
Error	Data File not found The data file <file name> was not found (Slave mode active).	TAD has been started as a Slave, but the datafile specified was not found. If the TAD Master is running

		on a network machine, check that the machine is running and the network has connectivity.
Error	Unable to open digital I/O node The auxiliary I/O module could not be opened.	TAD is configured to use digital I/O for an auxiliary alarm function, but was unable to open the node. Consult the startup log for more details.

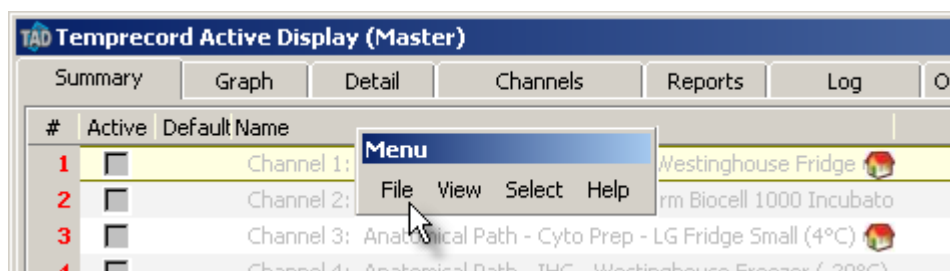
See also

[Starting TAD](#)

1.11 TAD Main Menu



All of the functions of TAD are accessed from the main menu. Although the main menu is normally located at the top of the TAD window, it can be moved to other docking positions, or floated.

**See Also:**

[File Menu](#)

[View Menu](#)

[Select Menu](#)

1.11.1 File Menu

Save Settings

The Save Settings menu entry (or **Ctrl-S**) can be used to save the current TAD configuration on demand. TAD regularly saves the configuration anyway, so there should be no need to routinely use this function.

Save Options

The Save Options menu entry can be used to create a [TAD Options File](#). A TAD options file contains whatever command line options are required to start TAD with its current configuration.

Minimize to Tray

Use this entry to minimize the TAD main window to the system tray. TAD will continue to operate and data will still be logged.

Restoring TAD

To restore TAD after it has been minimized to the tray, right-click the tray icon and select **Restore**.

Exiting TAD

Use this entry to close the TAD program.

See Also:

[TAD Options Files](#)

[Closing TAD](#)

1.11.2 TAD Options Files

TAD can be started with an options filename as a command-line parameter. This options file is a text file with valid command-line options specified. Any number of command line options can be specified. TAD options files always have the extension .TOF. If TAD is started with an options filename as the parameter, the command line options are read from the file and processed exactly as if they had been specified on the command line. So if the file `Example.tof` contains:

```
/slave  
/diagnostics /summary  
/INIFile "C:\TAD.INI"
```

and TAD is started with the command line:

TAD Example

the result will be exactly as if TAD had been started with the command line:

```
TAD /slave /diagnostics /summary /INIFile "C:\TAD.INI"
```



Any parameter entered on the command line that is not a command-line option (i.e. starting with the slash (/) delimiter) is assumed to be the name of an option file. If no filetype is specified, .TOF is assumed. If you want to use a filename with a different extension, you can specify the extension as well.

If the name of the options file is not a fully qualified absolute filename, TAD looks for the file in the current folder. If it doesn't find it there, it looks in the TAD application data folder.

Options files can be created and edited with any editor such as Notepad, but to simplify the creation of these options files, TAD now has a [File menu](#) function to save the current settings in an options file. Using the above example, if TAD is started with the command line options:

```
TAD /slave /diagnostics /summary /INIFile "C:\TAD.INI"
```

and then while TAD is operating, the `File/Save Options` function is used, the TOF file created will contain those command-line options specified. By default, TAD always includes the following lines in an options file:

```
/master (or /slave)  
/INIFile <name of INI file>  
/DataFile <name of TDF file path>
```

If any other diagnostic functions are enabled, TAD also adds the appropriate command line options to the options file. For example, if the diagnostics function to log export diagnostics has been enabled, the line:

```
/diagnostics /export
```

will be added to the file.



When using a test editor to create TAD options files, take care when specifying pathnames and filenames. Where these contain spaces, the path and file names must be enclosed in double quotes. It is good practice to always enclose path and filenames in quotes, regardless of whether they contain embedded spaces.



If TAD has been started with the name of an options file as a parameter, or the [File/Save Options](#) function has been used to save the current options set to a TOF file in the current TAD session, then the options will be saved to the same file automatically when TAD exits. Thus once you have loaded an options file, or saved the current setup to an options file, you don't need to worry about TAD remembering your setup from that point on.



When TAD writes the options for master/slave operation to the options file, the current state of the [Master/Slave](#) control on the [Master/Slave Options](#) tab is written to the file, even if this was changed after TAD was started. This also applies to the TDF data file path specified on the [Datafile Options](#) tab.

Bearing in mind that the setting of these controls does not take effect until the next time TAD is started, this behaviour makes it easier to create options files for different configurations. For example, TAD could be started in Master mode, then Slave mode could be selected, and the datafile path changed. At that point you could save the current configuration to an options file (say "SlaveTest.TOF") and exit TAD. Then TAD could be started with the command line:

```
TAD SlaveTest
```

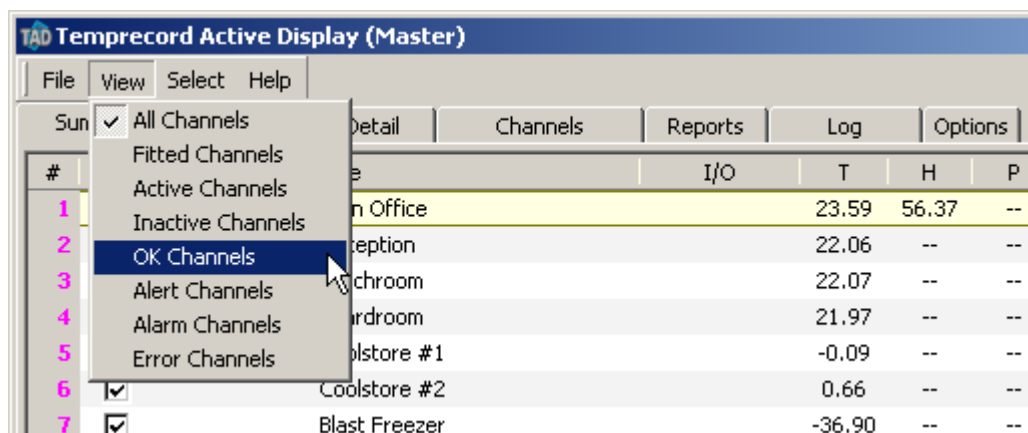
to start TAD with that configuration.

The use of options files can be handy when testing TAD in different configurations.

See also
[File menu](#)

1.11.3 View Menu

The menu allows you to tailor what channels are displayed in the summary view.



View All Channels

When this option is selected, all channels (1 through 255) are displayed, regardless of status.

View Fitted Channels

Shows only those channels that are configured as either *Active* or *Inactive*. Any channel configured as *Not fitted* will not show.

View Active Channels

Shows only those channels that are configured as *Active*. Any channel configured as *Not fitted* or *Inactive* will not show.

View Inactive Channels

Shows only those channels that are configured as *Inactive*. Any channel configured as *Not fitted* or *Active* will not show.

View OK Channels

Shows only those channels that are configured as *Active* and have no *Alert*, *Alarm*, or *Error* condition associated with them.

View Alert Channels

Shows only those channels that are configured as *Active* and have a condition of *Alert* or greater. associated with them.

View Warning Channels

Shows only those channels that are configured as *Active* and have a condition of *Warning* or greater. associated with them.

View Alarm Channels

Shows only those channels that are configured as *Active* and have a condition of *Alarm* or greater. associated with them.

View Error Channels

Shows only those channels that are configured as *Active* and have a condition of *Error* or greater. associated with them.

1.11.4 Select Menu

Use the *Select* menu to switch between the different tabs of the TAD main form. You can also accomplish this by holding the *Alt* key down and pressing the initial letter of the tab name, e.g. *Alt-G* will select the *Graph* tab.

Select Summary Tab (Alt-S)

Selects the [Summary tab](#), which shows an overall view of the TAD channels, one channel per line.

Select Detail Tab (Alt-D)

Selects the [Detail tab](#), which shows relevant data from whichever channel is selected on the *Summary* view.

Select Channels Tab (Alt-C)

Selects the [Channels tab](#), which acts as a placeholder for channel toolbars.

Select Graph Tab (Alt-T)

Selects the [Graph tab](#), which shows up to traces of data from up to 4 channels.


Select Log Tab (Alt-L)

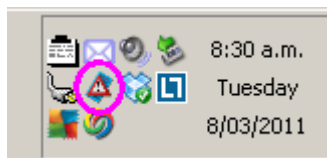
Selects the [Log tab](#), which shows a time history of past events.

Select Options Tab (Alt-O)

Selects the [Options tab](#), which provides access to TAD Options.

1.12 TAD System Tray Icon Messages

While TAD is running, the current status is also shown in the system “tray”. This is the area normally positioned in the bottom right of the screen where the clock is usually displayed. The TAD icon (shown here as ) in the tray changes according to the status of TAD.



The possible icons are:



No error conditions exist on any channel

There are channels in a warning state (e.g. the upper temperature limit in a channel has just been exceeded).

There are channels in an alarm state (e.g. the upper temperature limit in a channel has been exceeded for longer than the limit delay).

There are channels in an error state (e.g. a channel has lost communication with the logger).

Action: If the main screen of TAD is not displayed, maximise TAD by double-clicking the tray icon and check the status of the channel showing the warning icon. Take all necessary action to return the channel to its normal operating condition.

Action: If the main screen of TAD is not displayed, maximise TAD by double-clicking the tray icon and check the status of the channel showing the alarm icon. Take all necessary action to return the channel to its normal operating condition.

Note: You can hover the mouse over the tray icon to display a hint which will provide a brief summary of the system status.

1.13 Closing Temprecord Active Display

Overview

When the X at the top right corner of the TAD screen is clicked to close the TAD application, a pop-up *Close Temprecord Active Display* dialog is presented with three options and three corresponding buttons. Please read the warning in bold before responding to this dialog.

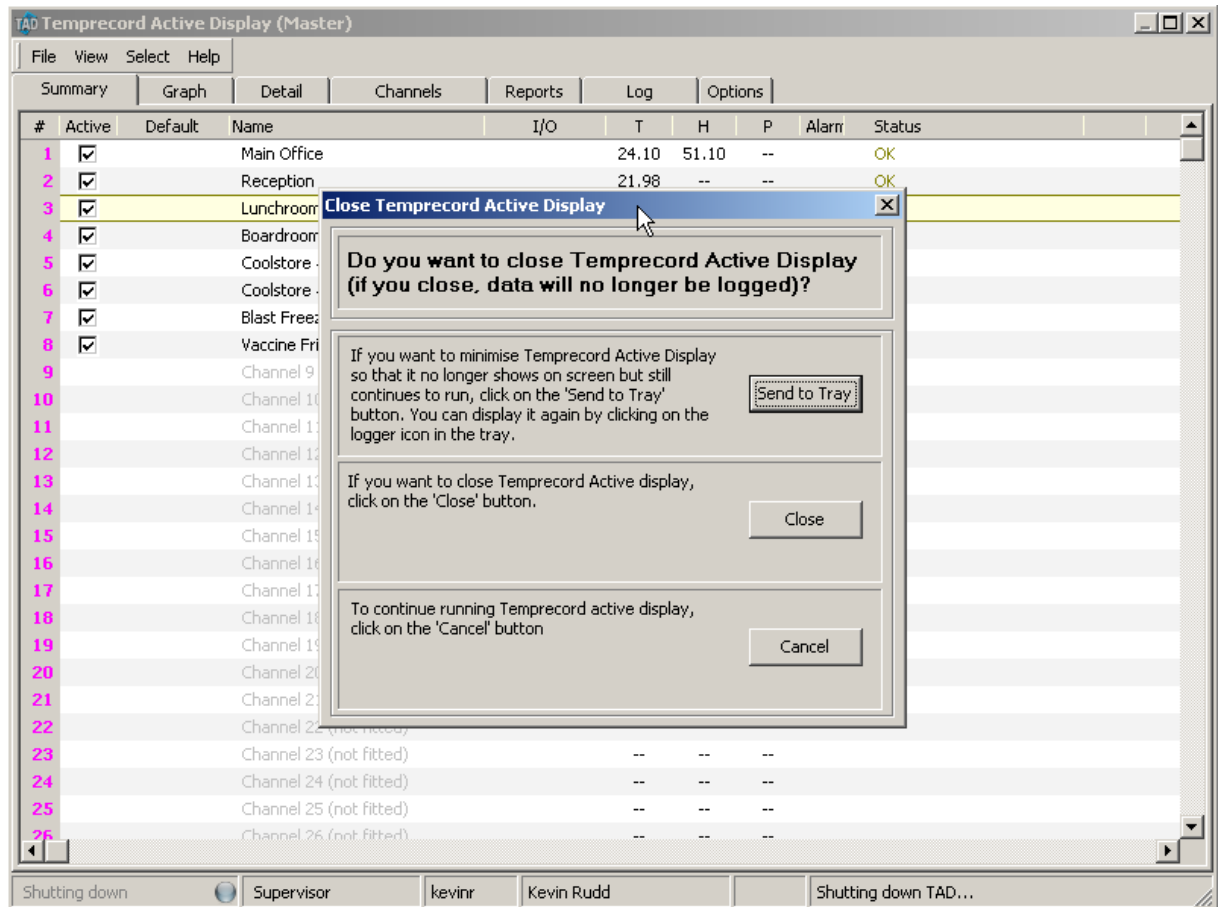


Figure 87: Close TAD or Send to Tray Dialog

Send to Tray

To keep TAD running in the background while you use your computer to work with other applications click on the button labeled **Send to Tray**. When you click on this option the TAD screen will minimise. TAD will still be running in the background.

To restore the TAD screen back to full size click on the teal coloured TAD icon in the system tray found at the lower right corner of your computer screen.

Clicking on the teal coloured TAD icon in the system tray when the TAD screen is maximized will again minimise the TAD screen.

Close

By clicking on the close button this will completely shut down the TAD software. The TAD system will cease to log data to the TAD log file.

However if the loggers inside the yellow TAD Reader boxes placed around your building were started at commissioning time they will still be independently logging environmental data from their respective locations.

If the loggers were started at commissioning time they will most probably be logging in **loop overwrite** mode. This means they log data until their internal memory is full, then the logger will start to overwrite the earliest data with new data.

Cancel

Clicking on the **Cancel** button will close the **Close Temprecord Active Display** dialog without shutting down the TAD system.

1.14 About TAD Help

Temprecord Active Display v.1.47

**Windows XP/7/Vista/8/8.1/10
English-Language HTML Help**

Copyright © 1992-2019
Temprecord International Ltd.
All Rights Reserved.
<http://www.temprecord.com>
info@temprecord.com

Portions Copyright Indy, IndySSL <http://www.indyproject.org>

Authored using Help And Manual <http://www.helpandmanual.com>

Produced May 2019

2 Summary Tab

(Configurable at Administrator and Supervisor Levels Only)

Overview

The **Summary** tab can display all of the 1 to 255 available channels configured on the TAD System. Any TAD system channel can be configured from this screen either by double-clicking anywhere on the channel number line or by right-clicking on a channel number line then selecting **Edit this Channel** option from the right-click pop-up dialog. Channel setup is described in more detail in the **Summary / Channel Setup** section of this manual.

The User may choose any one the eight selections listed under the **View** pull-down menu for **Summary** screen viewing options. **Fitted Channels** selection for viewing is recommended. This screen also indicates in the **Active** column which Channels are enabled or disabled. The **Default** column indicates which channels are using the global default settings.

The summary page also displays the names/descriptions given to the channels and if selected the temperature, humidity, pressure and/or CO2 data from those channels and their current status i.e. whether the channel is **O.K.** (i.e. in service) or **Not in Service**. Also included is the digital input / output status monitoring in the **I/O** column, if the digital I/O functionality is enabled for the channel.

#	Active	Default	Name	I/O	T	H	P	Alarm	Status
1	<input checked="" type="checkbox"/>		Main Office		23.47	52.84	--		OK
2	<input checked="" type="checkbox"/>		Reception		21.92	--	--		OK
3	<input checked="" type="checkbox"/>		Lunchroom		22.03	--	--		OK
4	<input checked="" type="checkbox"/>		Boardroom		22.08	--	--		OK
5	<input checked="" type="checkbox"/>		Coolstore #1		-0.06	--	--		OK
6	<input checked="" type="checkbox"/>		Coolstore #2		0.61	--	--		OK
7	<input checked="" type="checkbox"/>		Blast Freezer		-37.03	--	--		OK
8	<input checked="" type="checkbox"/>		Vaccine Fridge (Lab)		3.69	--	--		OK
9			Channel 9 (not fitted)		--	--	--		

Figure 49: Summary Tab

You can adjust the width of the columns in the summary display, and the widths will be remembered for the next time TAD is started. To change the column widths, hover the mouse over the column header roughly in the position where you think the boundary between columns is. When the cursor changes to a resize cursor, press the mouse button and drag the column boundary to the desired width.

See Also

[Showing and Hiding Channels](#)

[Showing local channels only](#)

[Channel Number Column](#)

[Active Column](#)

[Default Column](#)

[Name Column](#)

[I/O Column](#)

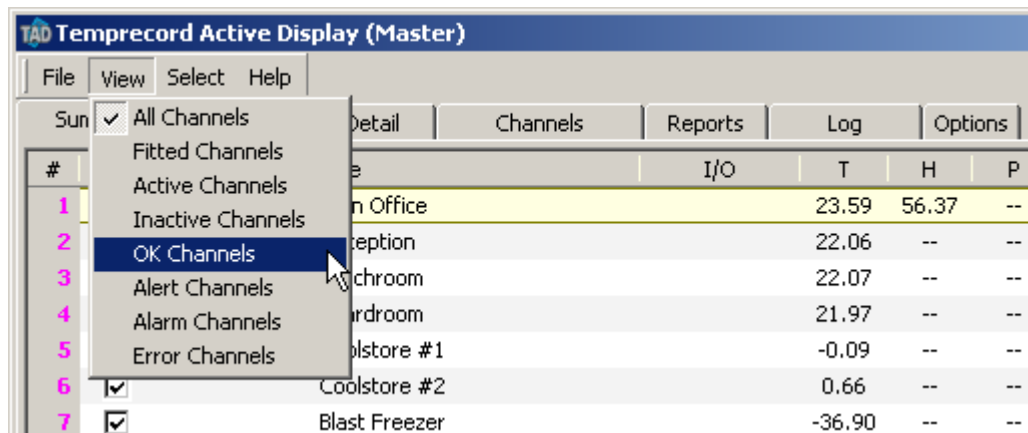
[Measured Parameters Columns](#)

[Alarm Column](#)

[Status Column](#)

2.1 Showing and Hiding Channels

The **View** menu allows you to tailor what channels are displayed in the summary view.



View All Channels

When this option is selected, all channels (1 through 255) are displayed, regardless of status.

View Fitted Channels

Shows only those channels that are configured as either **Active** or **Inactive**. Any channel configured as **Not fitted** will not show.

View Active Channels

Shows only those channels that are configured as **Active**. Any channel configured as **Not fitted** or **Inactive** will not show.

View Inactive Channels

Shows only those channels that are configured as **Inactive**. Any channel configured as **Not fitted** or **Active** will not show.

View OK Channels

Shows only those channels that are configured as **Active** and have no **Alert**, **Alarm**, or **Error** condition associated with them. Any channel configured as **Not fitted** or **Active** will not show.

View Alert Channels

Shows only those channels that are configured as **Active** and have a condition of **Alert** or greater associated with them. Any channel configured as **Not fitted** or **Active** will not show.

View Warning Channels

Shows only those channels that are configured as **Active** and have a condition of **Warning** or greater associated with them. Any channel configured as **Not fitted** or **Active** will not show.

View Alarm Channels

Shows only those channels that are configured as **Active** and have a condition of **Alarm** or greater associated with them. Any channel configured as **Not fitted** or **Active** will not show.

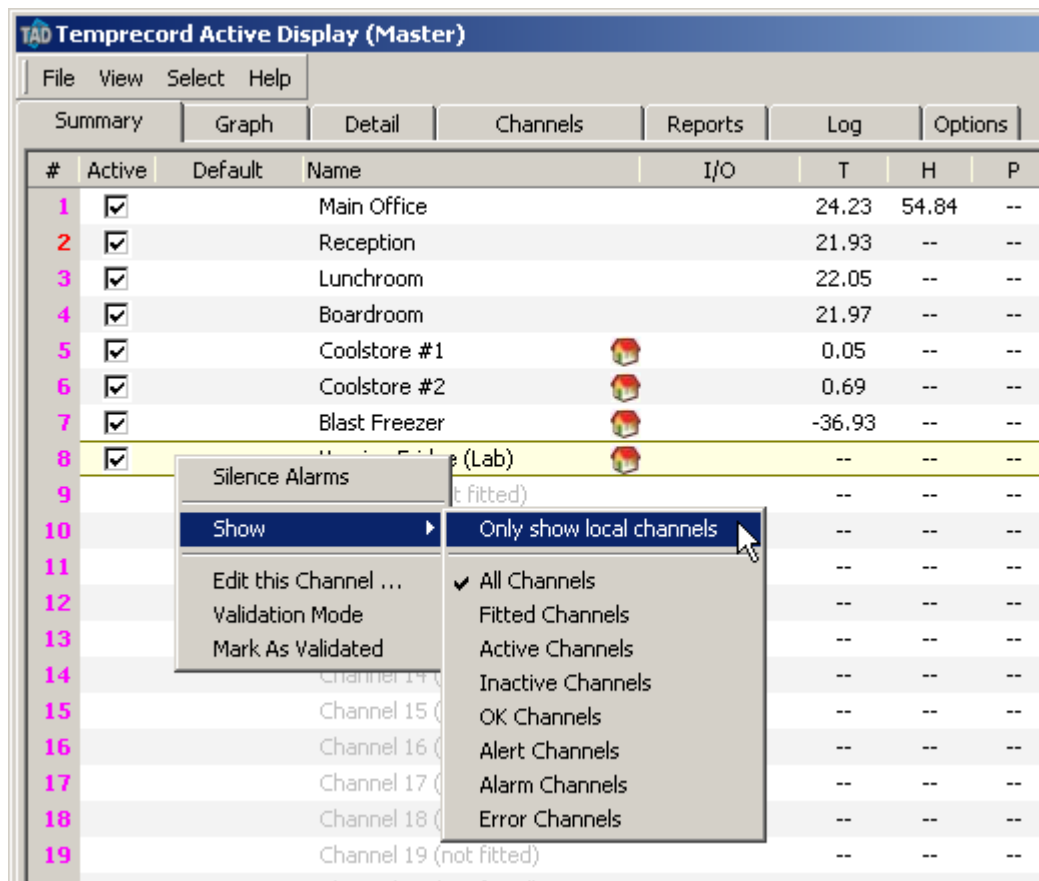
View Error Channels

Shows only those channels that are configured as **Active** and have a condition of **Error** or greater associated with them. Any channel configured as **Not fitted** or **Active** will not show.

2.2 Showing local channels only

Where a TAD system is configured as a slave, it may be useful to show only those channels that are local to the immediate area. To specify a channel as local, see the [Master/Slave options](#). A local channel is shown in the summary with a 🏠 symbol to the right of the channel name.

To show only local channels, right-click anywhere in the summary view tab and select **Only show local channels** from the pop-up menu.



2.3 Channel Number Column (Summary Screen)

Channel numbers are displayed in the # Column of the Summary Screen.

Channel Validation Info

It is possible to view channel validation information by clicking onto a channel number to select that channel and then hovering the mouse above the channel number. A displayed hint shows the current validation status of the selected channel number #.

- Validated channel numbers are displayed in black.
- Channel numbers where the channel validation has expired are displayed in red.
- Channel numbers where no validation has been performed are displayed in magenta.

#	Active	Default	Name	I/O	T	H	P	Alarm	Status
1	<input checked="" type="checkbox"/>		Main Office		24.12	57.21	--		OK
2	<input checked="" type="checkbox"/>		Reception		22.02	--	--		OK
3	<input checked="" type="checkbox"/>		Lunchroom		22.08	--	--		OK
4	<input checked="" type="checkbox"/>		Channel 2		22.07	--	--		OK
5	<input checked="" type="checkbox"/>		VALIDATION REQUIRED		-0.02	--	--		OK
6	<input checked="" type="checkbox"/>		This channel was last validated on 7 Jan 2011 15:06:42 NZDT (55 days, 22 hr, 5 min ago)		0.75	--	--		OK
7	<input checked="" type="checkbox"/>		Blast Freezer		-36.96	--	--		OK
8	<input checked="" type="checkbox"/>		Vaccine Fridge (Lab)		3.68	--	--		OK
9	<input checked="" type="checkbox"/>		Channel 9 (not fitted)		--	--	--		

Figure 50: Summary Tab: Channel Validation Info

2.4 Active Column (Summary screen)

This column displays a checkbox (☒) for all Fitted channels. If the Active Column checkbox located next to the channel number is selected (ticked) then the channel is enabled. If the checkbox is clear then the channel is disabled (but considered to be "fitted"). By clicking the channels Active Column checkbox, the channel may be toggled to enabled or disabled state.

When a Channel is Enabled the Status Column will display OK if the Channel was configured correctly.

When a channel is Disabled, the Status column will display the message Channel Not in Service and flash the message in red

Channel Not in Service

TAD channels need to be disabled when maintenance is required within your site area where TAD channels are located.

Also a TAD channel may be disabled when TIL Technicians visit your site to validate or exchange the calibrated data loggers inside the (yellow) TAD data collection boxes installed on your site. Channel Not in Service message as follows will be displayed in red and flashed for any fitted channels that are disabled.

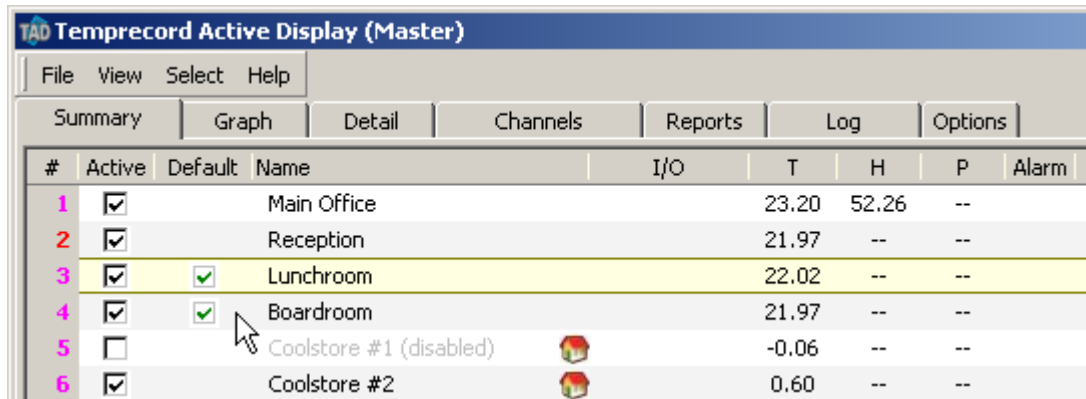
#	Active	Default	Name	I/O	T	H	P	Alarm	Status
1	<input checked="" type="checkbox"/>		Main Office		23.47	52.84	--		OK
2	<input checked="" type="checkbox"/>		Reception		21.92	--	--		OK
3	<input checked="" type="checkbox"/>		Lunchroom		22.03	--	--		OK
4	<input checked="" type="checkbox"/>		Boardroom		22.08	--	--		OK
5	<input type="checkbox"/>		Coolstore #1 (disabled)		-0.06	--	--	✖	Channel not in service
6	<input checked="" type="checkbox"/>		Coolstore #2		0.61	--	--		OK
7	<input checked="" type="checkbox"/>		Blast Freezer		-37.03	--	--		OK
8	<input checked="" type="checkbox"/>		Vaccine Fridge (Lab)		3.63	--	--		OK
9	<input checked="" type="checkbox"/>		Channel 9 (not fitted)		--	--	--		

Figure 51: Summary Tab: Channel Not in Service

2.5 Default Column

The Default column shows all the Channels that are using the Global Default Settings from Defaults tab. A tick in the default column next to the channel number indicates that channel is using the global

Defaults settings from the [Defaults Options tab](#). If no tick is visible in the default column, then that channel is using Local Settings that are setup within the [channel setup dialog](#).





#	Active	Default	Name	I/O	T	H	P	Alarm
1	<input checked="" type="checkbox"/>		Main Office		23.20	52.26	--	
2	<input checked="" type="checkbox"/>		Reception		21.97	--	--	
3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Lunchroom		22.02	--	--	
4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Boardroom		21.97	--	--	
5	<input type="checkbox"/>		Coolstore #1 (disabled)		-0.06	--	--	
6	<input checked="" type="checkbox"/>		Coolstore #2		0.60	--	--	

Figure 52: Summary Tab: Default Column

See Also:

[Defaults Options](#)

[Channel setup dialog](#)

2.6 Name Column

This column displays the descriptive Names of the Fitted TAD Channels. The default names are channel 1 through to channel 255.

To edit any of the Channel names or channel configuration, click the Summary Tab on the main menu. All Fitted (installed) channels are displayed on the Summary screen.

On the summary screen double-click on the channel name you wish to change. The [Channel Setup dialog](#) will open. There are six tabs within the Channel Setup dialog. Refer to the Channel Setup section of this manual for more info.

Next, click on the channel details tab within the channel setup dialog. Enter the new channel name into name field of the channel details tab then click OK. The summary tab will then be displayed with the updated channel name.

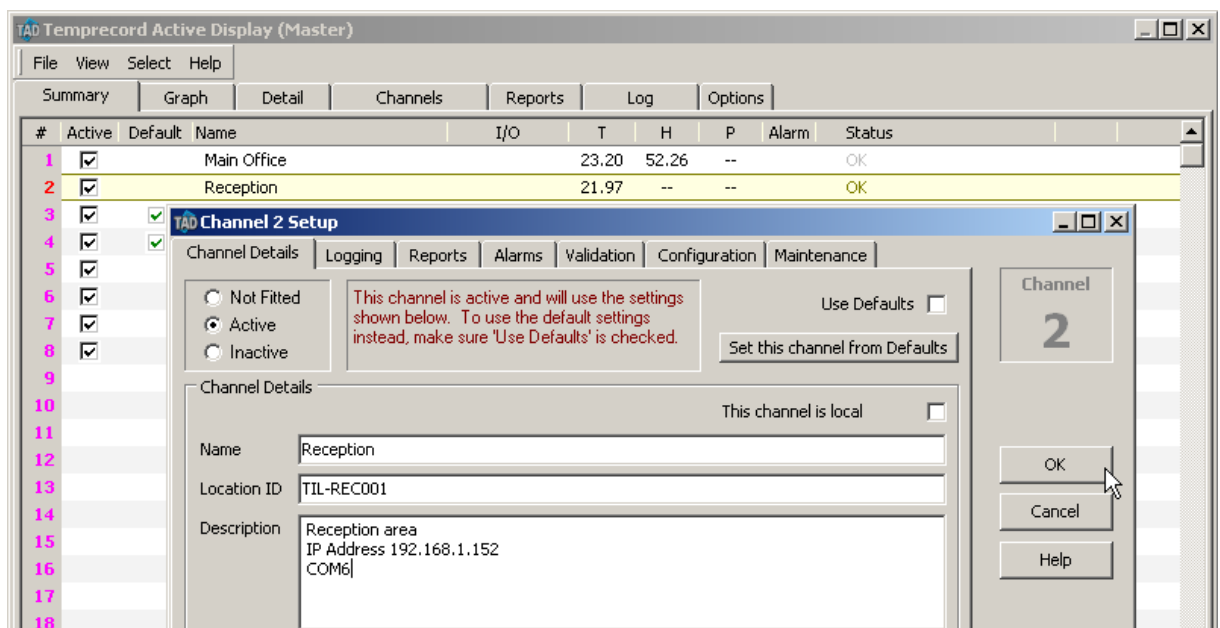


Figure 53: Summary Tab: Name Column

There are three ways to access (open) the channel setup dialog. The user can position the cursor using the mouse anywhere over the channel number that the user wishes to highlight and then single-click the mouse to select the channel. A highlighted yellow bar is displayed extended across all the columns for the currently selected/highlighted channel. By double-clicking the highlighted channel Bar, or pressing the enter button on the keyboard or by right-clicking the mouse button, the Channel Setup dialog can be opened.

There are six tabs within the Channel Setup dialog. Refer to the [Channel Setup](#) section of this manual for more detailed information regards configuration and setup of a TAD system channel.

To exit back to the summary tab without saving your changes on any of the six tabs of the channel setup dialog click the Cancel button or press the Esc key on your keyboard.

2.7 I/O Column

The I/O column displays the status of digital inputs and outputs of all the channels configured to provide digital I/O capability. All TAD system channels are capable of supporting 2 x digital inputs for monitoring opening/closing of door or power fail circuits. Also each channel is capable of supporting 2 x digital outputs for localised alarming such as audible buzzer or a flashing light. The 4 x Digital I/O is represented by 4 x status indicator squares in I/O column. When ON the status indicator colour changes to red and when clicked once on the indicator status squares, a hint dialog is displayed as follows:

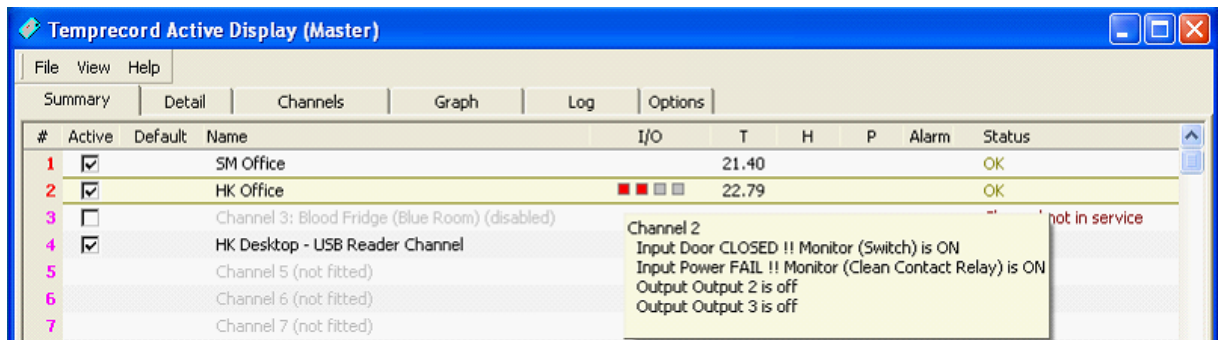
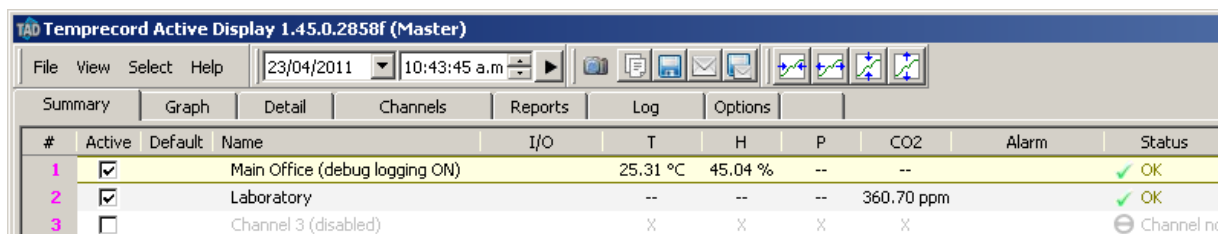


Figure 54: Summary Tab: I/O Column

2.8 Measured Parameters Columns

The measured parameters columns are three numeric columns that display the parameters being logged by that channel, if any.



T (Temperature) Column

The T Column displays the current temperature value for each of the active temperature or temperature/humidity configured channels.

H (Humidity) Column

The H Column displays the current humidity (RH %) value for each of the active humidity channels. The channels configured as humidity are also able to provide temperature data on the same channel. To enable

the humidity option you must have a RH compatible TAD station fitted with a Temprecord humidity (RH) logger.

P (Pressure) Column

The P Column displays the current pressure differential (in Pascal) for each of the active pressure channels. The pressure sensing device has two ports, which are exposed to two environments (e.g. a clean room with plus pressure and outside of clean room). To enable the differential pressure monitoring option, you must have a pressure sensor-compatible TAD station fitted with a precision differential pressure sensor.

CO2 Column

The CO2 Column displays the current CO2 concentration in ppm (parts per million), or in percentage partial pressure for each of the active CO2 channels. TAD expects the CO2 concentration to be measured with a Vaisala sensor type GT221 transmitter, interfaced via a serial port.

2.9 Alarm Column

The Alarm Column displays a siren icon when a channel is in alarm state.

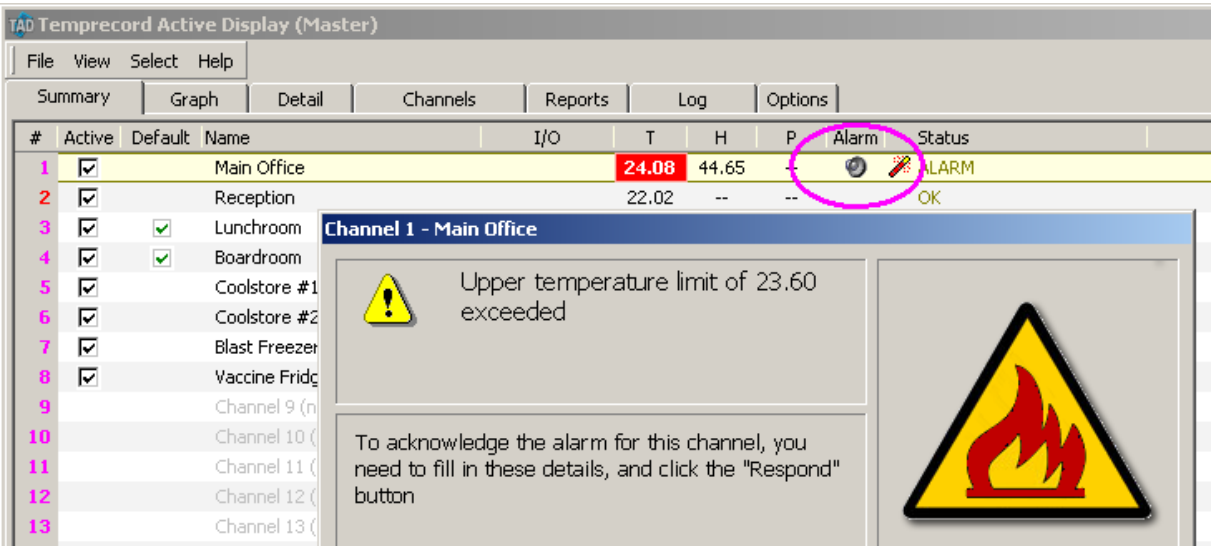


Figure 55: Summary Tab: Alarm Column

2.10 Status Column

The Status column displays the current status message for each of the enabled / active channels configured on the TAD system.

The status Messages are updated in real time to reflect events that are taking place for each active channel.

All status messages are logged with time and date stamps to the TAD log file. All TAD Log file event records are available for printing on TAD Reports.

TAD Temprecord Active Display (Master)

FileViewSelectHelp

SummaryGraphDetailChannelsReportsLogOptions

#	Active	Default	Name	I/O	T	H	P	Alarm	Status
1	<input checked="" type="checkbox"/>		Main Office		24.08	44.65	--		ALARM
2	<input checked="" type="checkbox"/>		Reception		22.04	--	--		OK
3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Lunchroom (disabled)		21.93	--	--		Channel not in service
4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Boardroom (disabled)		22.08	--	--		Channel not in service
5	<input checked="" type="checkbox"/>		Coolstore #1		0.01	--	--		Alert
6	<input checked="" type="checkbox"/>		Coolstore #2		0.70	--	--		OK
7	<input checked="" type="checkbox"/>		Blast Freezer		-37.06	--	--		OK
8	<input checked="" type="checkbox"/>		Vaccine Fridge (Lab)		3.75	--	--		OK
9			Channel 9 (not fitted)		--	--	--		
10			Channel 10 (not fitted)		--	--	--		

Figure 56: Summary Tab: Status Column

3 Channel Setup Dialog

(Configurable at Administrator and Supervisor Levels Only)

Overview

The Summary tab can display all of the 1 to 255 available channels configured on the TAD system. Any TAD system channel can be configured from this screen either by double-clicking anywhere on the channel number line or by right-clicking on a channel number line then selecting Edit this Channel option from the right-click pop-up dialog:

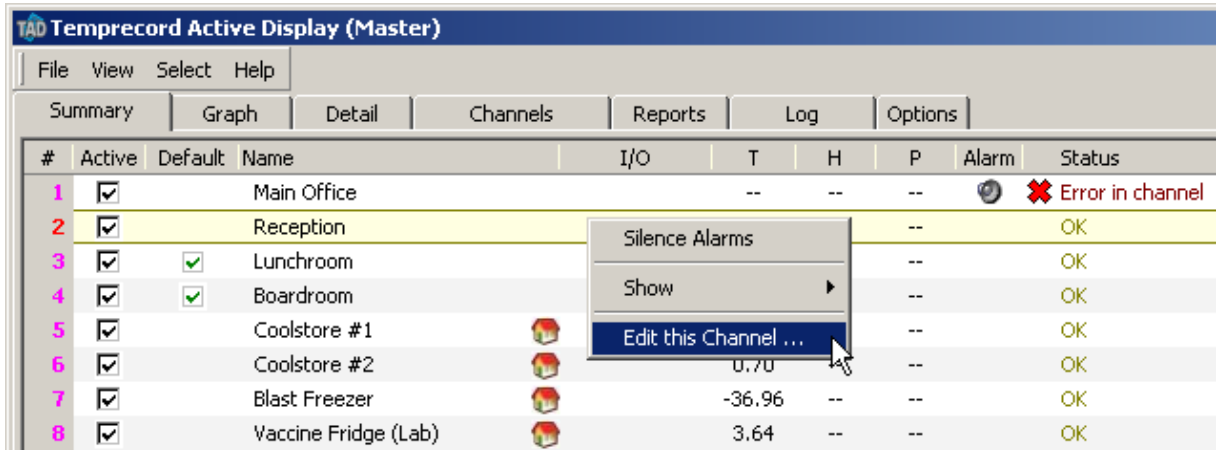


Figure 57: Summary Tab: Channel Setup Dialog Access



You can also open the channel setup dialog by double-clicking the row of that channel in the summary display, or by pressing the **Enter** key when the channel you want to edit is selected.

For every channel fitted to the TAD system, configuration would be necessary for each channel by accessing the Channel Setup dialog as follows:

Figure 58: Summary Tab: Channel Setup Dialog

Channel Setup Dialog

The Channel Setup dialog screen consists of six configuration tabs. The tabs are titled as follows:

[Channel Details](#)
[Logging](#)
[Reports](#)
[Alarms](#)
[Channel Errors and Heartbeats](#)
[Validation](#)
[Configuration](#)
[Export/Spot Check](#)

Each channel can be individually configured or a channel can be selected to use pre-configured settings from the Options tab Defaults screen. Refer to Options/Defaults section of this manual for more detailed information on Defaults settings.

The settings from the Defaults screen only affect those channels that are configured to use the Use Default Settings. Any channel can be configured independently of these settings (if required) by not checking the Use Defaults checkbox located in Channel Setup dialog box.

For each channel, the configuration settings are completely independent unless the channel is selected for the Use Defaults setting.

Channel Calibration

Some TAD channel measurement parameters can be calibrated. Calibration of these channels is carried out through a context menu function from the summary display. See the topic [Calibration](#) for more information.

Common Selectors

The top section of the Channel Setup dialog is common to all the tabs and has the following functionality.

The first group of three radio button selectors are **Not Fitted**, **Active** and **Inactive**.

Any TAD System channel that is not fitted with Temperature, humidity, pressure, CO2, or a digital I/O configured yellow TAD box then the **Not Fitted** radio button option must be selected for that channel number.

If a temperature, humidity, pressure, CO2, or a digital I/O configured yellow TAD box is installed and configured to a **Channel Number** then the channel can be selected for **Active** or **Inactive** radio button options. Only one selection is possible.

For maintenance purposes, a Channel may be selected to be **Inactive** to avoid unnecessary alarms. When the maintenance is complete, the channel is activated back into service by selecting the **Active** radio button. Any selection change here is logged and may require confirmation if the **Require Confirmation of Channel Status Changes** checkbox is selected (ticked) on the **Options/General** screen.

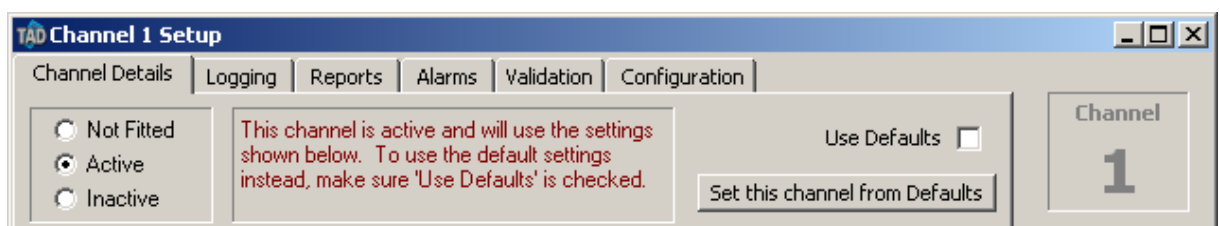


Figure 59: Channel Setup Dialog: Common Selectors

The second group consists of **Use Defaults** select checkbox and **Set this channel from Defaults** button.



If the **Use Defaults** checkbox is checked (ticked) for any channel, then that channel will use all configuration settings from the [Options/Defaults](#) screen. While this checkbox is checked, it is not possible to edit any configuration parameters for that channel.



The **Set this channel from Defaults** button when clicked will copy all configuration settings from the [Options/Defaults](#) screen to the channel that is currently being edited. This feature is helpful when setting up several channels with identical parameters.



The parameters associated with sampling of channels that are in a warning or alarm state with a different sample period, and control of the generation of heartbeats, are unaffected by the **Use defaults** and **Set this channel from Defaults** controls.

Channel Number



The top-right square on the channel setup dialog labeled as **Channel** displays the **Channel Number** of the channel that is currently being edited.

OK

Click the **OK** button to save any changes you have made to the channel configuration. Any changes you have made to the **Logging** parameters will become effective on the next sample taken for that channel.

Cancel

Click the **Cancel** button to exit the **Channel Setup** dialog and abandon any changes you have made.



You can also press the **ESC** key to exit the **Channel Setup** dialog. None of your changes will be saved.

Access

Click the **Access** button to open the [Change Access Level](#) dialog. Depending on what access level you select, controls in the **Channel Setup** dialog may change their availability -i.e. become enabled (so you are able to change them) or grayed out.

See also:

[Channel Details](#)

[Logging](#)

[Reports](#)

[Alarms](#)

[Channel Errors and Heartbeats](#)

[Validation](#)

[Configuration](#)

[Export/Spot Check](#)

3.1 Channel Setup - Details Tab

(Configurable at Administrator and Supervisor Levels Only)

The screenshot shows a 'Channel Details' dialog box. At the top right, there are two checked checkboxes: 'This channel is local' and 'Enable alerts in slave mode'. Below these are several input fields:

- Name:** Reception
- Location ID:** TIL-R01
- Hardware ID:** TAD Moxa unit 137
- Description:** Reception area
IP 192.168.1.52
- Input 0:** Front door closed
- Input 1:** Power fail
- Output 2:** AlarmCo Monitoring
- Output 3:** (empty field)

Figure 60: Channel Setup Dialog: Channel Details Tab

The Channel Details group includes the following items:

Name

The **Name** entry field is used to provide a descriptive name to a channel (including the channel number). The default name assigned to a channel is **Channel** where is the channel number from 1 to 255.

Description

The **Description** entry field is used to enter information such as the type of product that this channel is monitoring and/or a detailed description about the location where this TAD channel is installed etc. Provide as much information as possible about the channel for future reference.

Location ID

The **Location ID** field allows entry of a free-form alphanumeric item that identified the location the logger is in. It will generally be correlated with the same identifier in a building plan. The location ID is shown on channel reports.

Hardware ID

The **Hardware ID** field allows entry of a free-form alphanumeric item that identifies the logger electronics hardware. TAD provides this field for channels that are fitted with sensors that do not permit reading of a unique serial number by electronic means. TAD has the capability to log serial numbers along with the logged data stream, and in the cases of logging devices that cannot provide a serial number electronically, TAD uses the contents of this field instead.

Input 0 and Input 1

The **Input 0** and **Input 1** fields are provided for entering descriptions of digital input circuits connected to this channel. Digital input circuits are assigned on the channel to monitor events such as opening/closing of doors, compressor run, compressor fault, power fail etc.

Output 2 and Output 3

The Output 2 and Output 3 fields are provided for entering descriptions of digital output circuits connected to this channel. Digital output circuits are assigned on the channel to provide localised alerts such as a warning light or an audible buzzer.

Two checkboxes are also provided:

This channel is local

This channel is local can be enabled to indicate that the channel displayed is "local", i.e. the computer running TAD is located in the same general area as the channel sensor. It is often used when the computer is operating as a slave. The option has the following effects:

- The summary display can be set to only display channels that are local. If this display option is set to On, only channels that have this checkbox checked will show in the summary display.
- If TAD is running as a slave, alerts on the master will only display for local channels - i.e. channels that have this checkbox checked.

Enable alerts in slave mode

Enable alerts in slave mode influences whether alarm conditions for this channel will display on this slave. If set, alarm conditions for this channel will display on any slave that also has the channel marked as local. If cleared, the only alarm conditions that will appear on the slave are "global" alarms that do not pertain to any channel.

See also:

[Channel Setup Tab \(Overview\)](#)

[Logging](#)

[Reports](#)

[Alarms](#)

[Channel Errors and Heartbeats](#)

[Validation](#)

[Configuration](#)

[Export/Spot Check](#)

3.2 Channel Setup - Logging Tab

(Configurable at Administrator and Supervisor Levels Only)

Figure 61: Channel Setup Dialog: Logging Tab

The Logging tab screen configurations for the channel is organised in five groups as follows:

- Logging
- Temperature
- Humidity
- Pressure
- CO2
- Sampling

Logging Group

The Logging group includes six options with radio button selector. Only one selection is allowed per channel.

Figure 62: Channel Setup Dialog: Logging Tab / Selections

The Logging selections are:

- Temperature Only: For temperature only channel.
- Humidity Only (requires humidity logger): For humidity only channel.
- Temperature and Humidity (requires humidity logger): for temperature and humidity combined channel.
- Pressure (requires pressure node): for clean room positive pressure monitoring.
- CO2 (requires Vaisala CO2 node): for monitoring of (CO2) gas concentration.

- **Nothing (digital I/O only):** For applications where only the digital input / output circuits are used to monitor doors, power failure etc or for local alarming. When this option is selected, the COM Port assigned to the channel is disabled.

Temperature, Humidity, Pressure & CO₂ Group

This group allows configuration of following options:

- Temperature upper and lower limits (°C) with limit delays
- humidity upper and lower limits (% RH) with limit delays
- pressure upper and lower limits (Pascal) with limit delays
- CO₂ upper and lower limits (ppm) with limit delays

Figure 63: Channel Setup Dialog: Logging Tab / Limits & Limit Delays

Upper Limit: Set the maximum value this channel will accept before an alarm event is triggered and logged by the TAD system. Use the arrows on the spin boxes to change or just type the values in the field.

Limit Delay: Value entered in this field is the number of sample periods the upper limit must be exceeded before an alarm event is triggered and logged by the TAD System.

Lower Limit: Set the minimum value this channel will accept before an alarm event is triggered and logged by the TAD system. Use the arrows on the spin boxes to change or just type the values in the field.

Limit Delay: Value entered in this field is the number of sample periods the lower limit must be exceeded before an alarm event is triggered and logged by the TAD system.

Sampling When Channel is Inside Limits

Figure 64: Channel Setup Dialog: Logging Tab / Sampling Interval

Sample every

The numeric fields allow programming of the sample period for the TAD channel. The sample period is entered as HH:MM:SS (hours, minutes and seconds). The values programmed here determine how often a TAD channel is accessed by the TAD software to retrieve a data sample. The minimum sample period allowed on the TAD System is 20 seconds.

Sampling When Channel is Outside Limits

Sampling when channel outside limits

Sample every: [0] [1] [0]

Sampling when channel outside limits

☐ No change to sample period

☒ Sample every

☐ Use setting from Defaults

CHANGE SAMPLE PERIOD WHEN CHANNEL IS OUTSIDE LIMITS

When this channel is outside the limits, the sample period will change from 20 seconds to the value specified here (1 minute)

Each channel has an additional set of sample period parameters. These can be configured to come into effect if any one of the channel parameters (temperature, humidity, pressure or CO2) is outside the lower and upper limits. The behaviour of the sample period is determined by selecting one of these three options:

Sample Every

When this option is selected, the channel will use the sample period specified in the three associated controls if the channel is outside the limits.

No Change

When this option is selected, the channel's sample period will not change if the channel is outside the limits.

Use Setting from Defaults

When this option is selected, the channel's sample period will be determined by the corresponding parameter in the [default options](#).



At all times, the panel on the right-hand side of the sampling group will provide a textual description of what the sample period will be, and how the various TAD settings have influenced it. Bear in mind that the sample period can ultimately be determined by several parameters - namely the Sample every controls of the Sampling group, the Sample every controls of the Sampling when channel outside limits groups, the corresponding controls on the [Default Options](#) tab, and finally, the actual value of the logged parameter, and whether it is inside or outside the programmed limits.

For a more comprehensive description of how sampling with TAD works, see the topic [How TAD samples channels that are outside the limits](#).

See also:

- [Channel Setup Tab \(Overview\)](#)
- [Channel Details](#)
- [Reports](#)
- [Alarms](#)
- [Channel Errors and Heartbeats](#)
- [How TAD samples channels that are outside the limits](#)
- [Validation](#)
- [Configuration](#)
- [Export/Spot Check](#)

3.3 How TAD samples channels that are outside the limits

TAD sampling is determined by the sample period - the time between each sample. This sample period is determined by several factors however:

- Each channel has controls in the [Channel Setup Dialog/Logging](#) tab for specifying the hours, minutes, and seconds between each sample for the channel.
- Each channel has a checkbox called [Use Defaults](#). If this control is checked, the sample period is instead determined by the corresponding set of controls on the [Default Options](#) tab. The sample period controls on the channel setup dialog will be grayed out to indicate they do not have any effect.
- TAD has the facility to alter the sample period for a channel if that channel should exceed the upper limit or lower limit. This change in sample period (if enabled) applies whenever the channel is outside the limits, based on the most recent sample. The limit delay parameters do not apply, i.e. the sample period changes as soon as the parameter exceeds the limit. Where a channel is logging more than one parameter (e.g. both temperature and humidity), the change in sample period will apply whenever either parameter is outside the limits, and will not revert to the normal sample rate until both parameters are within limits. In order for this change in sample period to occur, the channel parameter [Sampling when outside limits](#) must be set to either [Sample every](#), or [Use setting from default](#).
- If you want a particular channel to have its own sample rate, make sure [Use Defaults](#) is not checked, and enter the sample period into the [Sampling/Sample every ...](#) controls on the [Logging](#) tab of the Channel Setup Dialog.



If you have a number of channels that share the same sample period, you can set that sample period in the Default Options and make sure all those channels have [Use Defaults](#) checked. Bear in mind however:

- If [Use Defaults](#) is checked, the channels will also share most other parameters, such as the upper and lower limits, and reporting.
- If the Default Options are altered, all channels that have [Use Defaults](#) enabled will be affected.

The useful combinations of these options are shown below. The two right-hand columns indicate what the effect on the sample rate will be of the combinations in the three left-hand columns.

Channel Setup Use Defaults	Channel Setup Sampling when channel outside limits	Default Options Sampling when channel outside limits	Sample Period when inside limits is determined by	Sample Period when outside limits is determined by
not checked	No change	(Not relevant)	Channel setup Sample every ... controls	Channel setup Sample every ... controls
not checked	Sample every ...	(Not relevant)	Channel setup Sample every ... controls	Channel setup Sampling when outside channel limits/Sample every ... controls
not checked	Use setting from defaults	No change	Channel setup Sample every ... controls	Channel setup Sample every ... controls
not checked	Use setting from defaults	Sample every ...	Channel setup Sample every ... controls	Default options Sampling when outside channel limits/Sample every ... controls
checked	No change	(Not relevant)	Default options Sample every ... controls	Default options Sample every ... controls

checked	Sample every ...	(Not relevant)	Default options Sample every ... controls	Channel setup Sampling when outside channel limits/Sample every ... controls
checked	Use setting from defaults	No change	Default options Sample every ... controls	Default options Sample every ... controls
checked	Use setting from defaults	Sample every ...	Default options Sample every ... controls	Channel setup Sampling when outside channel limits/Sample every ... controls

See also:[Channel setup - Logging tab](#)[Default Options](#)

3.4 Channel Setup - Reports Tab

(Configurable at Administrator and Supervisor Levels Only)
Figure 65: Channel Setup Dialog: Reports Tab

The Reports tab screen configurations for the channel are organised in one Reports group including Create Reports checkbox, Now button and three sub-groups as follows...

- Frequency
- Plot Scaling and
- Email Reports

Create Reports Checkbox

The Create Reports checkbox must be checked (ticked) to enable regular creation of channel reports for the channel.

If Create Reports checkbox is enabled, then the user can configure Frequency of channel report creation, i.e. select from hourly, daily, weekly or monthly selector. Only one selection is allowed. Fields adjacent to each selector allows more specific settings, e.g. When Weekly is selected, User can select Monday,

Tuesday etc... from the adjacent field/selector to specify the day of the week when the channel report would be generated on a regular basis. It is recommended that Channel Reports are generated and archived on a Weekly basis.

Create Report Now

Click the Create Report Now button to create an instant report for this channel.



The current report configuration settings from this channel will apply to the generated channel report. TAD will automatically save the channel settings before producing the report.

Reports Tab / Plot Scaling Options

This group options include Fit Trace, Fit Limits, Fit Trace and Limits and Fixed Limits with spin boxes selectors. Selections here determine how the data plot (graph) is scaled on the channel reports. The default setting is Fit Trace and Limits.

Fit Trace: Enabling this option will fit the entire logged temperature and/or humidity, pressure or CO2) data file onto the graph trace on the TAD channel report.

Fit Limits: Enabling this option will only show the part of the graph trace on the TAD channel report that falls within the upper and lower limits set in the logging section of the Defaults tab. The parts of the graph trace that are outside the upper and lower Limits will not be included on the graph trace of the TAD channel report.

Fit Trace and Limits: This option is the opposite to the Fit Limits option above as this option will show the entire graph trace. This includes those samples that fall outside of the upper and lower limits. The graph trace on the TAD Report also has the upper and lower limit guide lines overlaid on the graph trace.

Fixed Limits: If the upper and lower limits set in the Logging section of the Defaults tab are not suitable for your TAD reports then you can set your own preferences for upper and lower limits to display on reports by clicking the fixed limits option.

To modify the lower limit use the spin box to the left under the fixed limits label and to modify the upper limit use the spin box to the right under the fixed limits label.

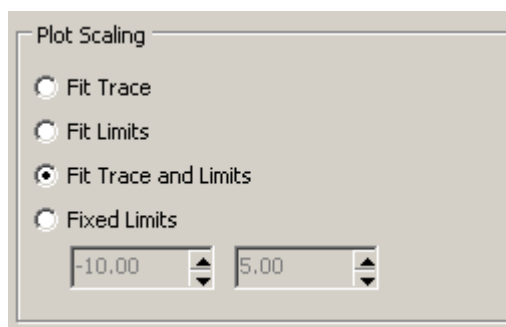


Figure 66: Channel Setup Dialog: Reports Tab / Plot Scaling

Reports Tab / Email Reports Options

Email Reports option is selected by clicking the Yes selector. Also the Create Reports checkbox must be checked for this option to be functional. It is assumed that Mail Server details are already configured on the Options/Email screen. Enter the email address(s) in the Address field provided. If email notification is to be sent to more than one recipient then enter multiple email addresses separated with a comma (,) for example: recipient1@sitename.com, recipient2@sitename.com, recipient3@Site2.com etc.

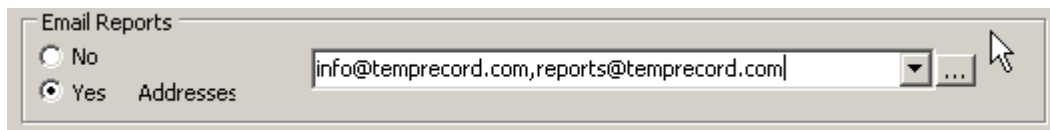


Figure 67: Channel Setup Dialog: Reports Tab / Email Reports Option

TAD Reports are sent as attachments to the email and are in PDF (Portable Document Format) format.

The default PDF reports folder is: C:\Program files\Tad\Reports. The user may specify other folder paths by using the [Use Date Formatted Folder](#) option.

See also:

[Channel Setup Tab \(Overview\)](#)

[Channel Details](#)

[Logging](#)

[Alarms](#)

[Channel Errors and Heartbeats](#)

[Validation](#)

[Configuration](#)

[Export/Spot Check](#)

3.5 Channel Setup - Alarms Tab

(Configurable at Administrator and Supervisor Levels Only)

The Alarms tab screen configurations for the channel are organised in one group including two checkboxes for digital input circuits (Input 0 and Input 1) available for the channel with respective programmable time Delay in minutes fields with spin boxes, Pop-up on Alarm drop-down selector and three Action on Alarm checkboxes with entry fields.

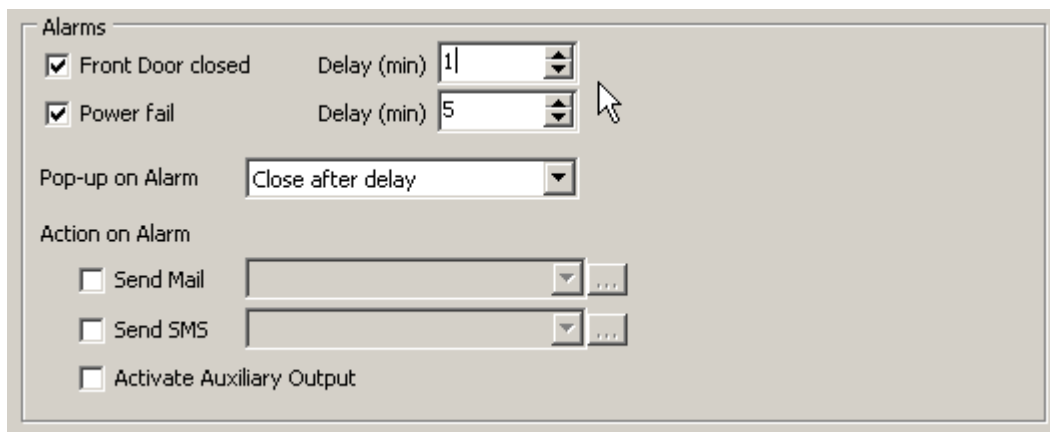
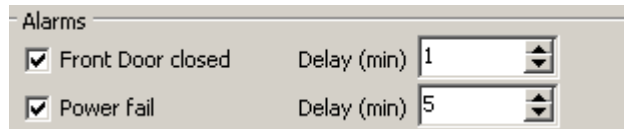


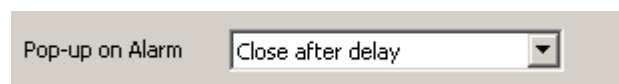
Figure 68: Channel Setup Dialog: Alarms Tab Options

Digital Input Circuits (Input 0 and Input 1)

A screenshot of a software window titled "Alarms". It contains two rows of settings. The first row has a checked checkbox labeled "Front Door closed" followed by a label "Delay (min)" and a spin box containing the number "1". The second row has a checked checkbox labeled "Power fail" followed by a label "Delay (min)" and a spin box containing the number "5".

The functional descriptions of Digital Input 0 and Input 1 are entered and applied on the **Channel Details** tab of the **Channel Setup** dialog. The checkboxes must be checked to enable digital input monitoring. The functionality of the input circuits are designed to be failsafe. These two circuits are mainly used for localised monitoring of events such as door open/close, power failure on the freezer that is monitored by this channel etc. These digital Input circuits must be hard-wired to clean-contact devices such as voltage free magnetic Reed switch or a relay contact. Delay in minutes for each of the Input circuits is programmable on the adjacent fields with spin boxes.

Alarms Tab / Pop-up on Alarm

A screenshot of a software window showing a dropdown menu. The label "Pop-up on Alarm" is on the left. The dropdown menu is open, showing the selected option "Close after delay" and a downward-pointing arrow on the right.

Pop-up on Alarm drop-down list selector. When clicked anywhere on the text field or down arrow, drops down a list with three options.

- No action
- Remain open till acknowledged
- Close after delay

The **Popup on Alarm** setting controls how the Pop-up alarm message that appears on screen when an alarm event occurs is handled by the TAD system.

No Action

When **No action** is selected the alarm pop-up message is not displayed when an alarm event occurs. However, the alarm event is logged in the TAD system.

Remain open till acknowledged

When **Remain open till acknowledged** is selected, the pop-up alarm message will remain displayed on screen until the alarm message details are filled in and acknowledged (by clicking **Respond** button) by someone as per the following example:

This information is logged and is printed under **Events** heading on PDF channel reports.

Close after delay

When **Close after delay** option is selected, then the pop-up alarm message will display for the time (in seconds) set in the **Display For (Sec)** programmable entry field with spin box located under **Screen Alerts** group of the **Options/Alerts** screen. When the time expires, the pop-up message will close without requiring acknowledgement. Event is logged.

Action on Alarm

There are three checkboxes for this option:

- Send Mail
- Send SMS and
- Activate Auxiliary Output

Figure 69: Channel Setup Dialog: Alarms Tab / Action on Alarm

Send Mail

Send Mail option checkbox must be checked to send email notification(s) about the alarm event. To the right of the checkbox is text field where email address(s) can be entered. If email notification is to be sent to more than one recipient then enter multiple email addresses separated with a comma.

Example: recipient1@siteName.com, recipient2@siteName.com, recipient3@Site2.com etc...

Alarms Tab / Action on Alarm

Send SMS

Send SMS option This checkbox must be checked to send a SMS text messages to mobile phones notifying you of an alarm event. To the right of the checkbox is text field where SMS account details (mobile phone ID(s)) can be entered. If SMS messages are to be sent to more than one recipient then enter multiple SMS account details separated with a comma.

The SMS account details format will be similar to: mobile number@SMS Provider

Note: If you want to use the Send SMS option then first check with your SMS account provider that they can process messages sent to your SMS account from a computer (in this case the TAD software). You will need an SMS account for TAD to allow use of this option.

Activate Auxiliary Output

This option has a checkbox that must be checked to activate the auxiliary output. When enabled, the Activate Auxiliary Output feature will activate a Global Alarm Output which in turn would alert a remote alarm monitoring company of the alarm event condition.



The auxiliary output (when enabled) is an output that is asserted whenever the alert dialog is open. The normal usage of this output will be to activate an audible or visible alarm annunciator. When TAD modal dialogs such as the [channel setup dialog](#) and the [logged event viewer](#) are opened, alert popups are suppressed until the dialog has been closed..

To protect against a dialog that has been left open from suppressing alert alarms, TAD has a feature where these two dialogs can be automatically closed after a delay of inactivity from the mouse and cursor. See the [alert options](#) topic for more information.

See also:

[Channel Setup Tab \(Overview\)](#)

[Channel Details](#)

[Logging](#)

[Reports](#)

[Channel Errors and Heartbeats](#)

[Validation](#)

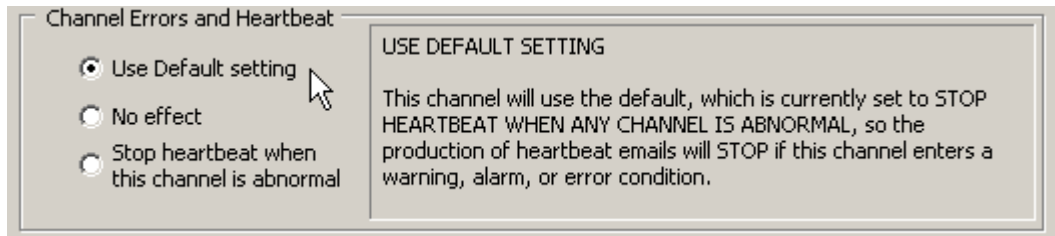
[Configuration](#)

[Export/Spot Check](#)

3.6 Channel Setup - Channel Errors and Heartbeat

TAD has the facility to prevent heartbeat emails being sent if any channel is in error. The intention of this is to raise an alarm if there is a monitoring system configured to detect a failure of TAD to send a regular heartbeat email.

Each channel can be independently configured as to whether this behaviour will apply.



Use Default Setting

When this option is selected, the behaviour of the channel with respect to the way it influences heartbeat emails is determined by the [Default Heartbeat Action](#) option.

No Effect

When this option is selected, the channel does not influence the production of heartbeat emails, even if the channel is outside limits or showing an error.

Stop Heartbeat when Channel is Abnormal

When this option is selected, heartbeat emails will not be generated as long as the channel (or any other channel configured like this) is outside limits or showing an error.



The installation default of this setting is [Use Default Setting](#), and the installation default setting of the [Default Heartbeat Action](#) is [No Effect](#). This means that existing installations who upgrade to this version of TAD will not experience any change to operation of their system as far as the production of heartbeats is concerned. In previous releases of TAD the heartbeats were always generated, regardless of the alarm status of any channel, and this will continue to be the case if the settings are left unchanged.

See also:

[Channel Setup Tab \(Overview\)](#)
[Channel Details](#)
[Logging](#)
[Reports](#)
[Alarms](#)
[Validation](#)
[Configuration](#)
[Export/Spot Check](#)

3.7 Channel Setup - Validation Tab

(Administrator Level Access Only)

Figure 70: Channel Setup Dialog: Validation Tab

Validation

Validation is a process whereby each TAD channel is tested for its ability to log the parameter accurately, the digital I/O and alarms tested. The validation interval can be programmed.

The Validation Tab includes **Last performed on:** field with date and time information regards when the Last Validation on the channel was performed. The read-only information window below this field provides the **Current Status** of validation for the channel. The tab also includes two buttons labeled **Mark as Validated** and **Mark as Not Validated**.

Mark as Validated

Validation of a TAD Channel performance is carried out either by certified Temprecord service personnel or by an independent IANZ accredited calibration laboratory technician as soon as the **Validation Interval** (usually 30 days) has expired. Once the performance checks are completed for the channel and appropriate reports are generated, the channel is marked as validated by clicking the **Mark as Validated** button on this screen. The date and time is logged and countdown begins for the next validation for the channel. Each channel validation is completely independent.

Mark as Not Validated

A channel may be marked as not validated if the validation interval has expired or if a technician chooses to re-validate the channel. A channel can be marked as **Not Validated** by clicking the **Mark as Not Validated** button on this screen.

An information message in **maroon** displays the current status of validation for the channel.

Manual Entry of Validation Date

In instances where a channel has been validated independently and the validation date has not been recorded, you may enter the validation date manually.



Although TAD will display any dates and times in the currently selected [display date format](#), the date and time entered for manual validation must be in the local time accounting for daylight savings time, i.e, whatever your watch is reading.

See also:

- [Performing Validation Tests](#)
- [Channel Setup Tab \(Overview\)](#)
- [Channel Details](#)

[Logging](#)
[Reports](#)
[Alarms](#)
[Configuration](#)
[Export/Spot Check](#)

3.7.1 Performing Validation Tests



This topic is provided as a guide only. The methods used to carry out validation will be determined by your organization's operating procedures.


Validating the alarm detection and reporting functions of TAD is made easier by several functions to speed up the process.

Setting up for validation

The following parameters will need to set or checked before validation of a channel.

- Destination [channel email and SMS addresses](#) or [default email and SMS addresses](#)
- The validation settings [Send Alert Email During Validation](#) and [Send Alert SMS During Validation](#).
- [Channel report](#) options
- [Report file and folder](#) settings
- [Report page setup](#) options

Starting Validation

To start the validation process on a channel, right-click the channel in the Summary View, and select Start Validation Mode. The channel will begin taking samples in validation mode, and the summary display of that channel will show with a Cyan () coloured line .

When a channel is in validation mode there several important changes to the behaviour:

- The channel programmed sample period is ignored. The channel will sample as fast as the hardware allows. In practice, this will be in the order of every few seconds. This is to speed up the validation process, so that you won't have to wait a full normal sample period to get the next sample.
- The channel programmed limit delay is ignored. An alarm condition will be entered as soon as the channel returns a value outside either limit.
- The channel programmed Email and SMS enables are ignored, that is, if they are disabled an email or SMS could still be sent, depending on the validation settings [Send Alert Email During Validation](#) and [Send Alert SMS During Validation](#).
- The channel programmed Email and SMS recipient addresses are still used for any emails or SMS generated during validation, unless the channel is configured to use default settings, in which case the email addresses specified there are used.

Introducing the Error Condition

Once the channel has been placed into validation mode, the error condition can be introduced. In the case of a temperature channel for example, this might consist of subjecting the probe of a logger to a known temperature outside the programmed limits for channel.

Confirming the Error Condition

Once the error condition has been introduced, checks should be made to confirm that all expected responses have occurred, and that the condition is reported accurately. As examples, alert email or SMS messages may be sent, an alarm bell may sound, etc. The nature of the responses and the checks required will be determined by your organization's operating procedures

Removing the Error Condition

Once the channel has entered the error state, and all expected responses have been observed, the error condition can be removed. In the case of a temperature channel for example, this might consist of returning the probe of a logger to the controlled environment.

Stopping Validation

To stop the validation process on a channel, right-click the channel in the Summary View, and select Stop Validation Mode. The channel will resume taking samples at the programmed rate, and the summary display of that channel will revert to normal. A channel validation report will be generated.

Checking the Results

Validation emails and SMS messages are sent to the email addresses specified in the default options or the channel alarm email options. Which of these addresses are used depends on whether the channel is configured to use the default settings or not.

As soon as validation mode is exited, a channel validation report will be generated. This is much like a normal channel report, and will be produced with whatever channel report options are in force. If the current report options include a listing of the recorded events, the report should include the following events:

- validation mode started
- error condition entered
- alert email sent (if [Send Alert Email During Validation](#) is enabled)
- alert SMS sent (if [Send Alert SMS During Validation](#) is enabled)
- error condition recovered
- recovery email sent (if [Send Alert Email During Validation](#) is enabled)
- recovery SMS sent (if [Send Alert SMS During Validation](#) is enabled)
- validation mode stopped

3.8 Channel Setup - Configuration Tab

(Configurable at Administrator Level only)

Channel Configuration

Hardware: Local COM Port IP Address: 192 168 0 112

Use TR6/LCD Logger Support: ☒

COM Port: COM1

Delay after opening port (mS): ☒ 300 Sensor Timeout (mS): 2500

Keep Port Closed Between Samples: ☒

Delay before closing port (mS): ☐ 300

Delay after closing port (mS): ☒ 300

The TAD logger for this channel is accessed via a local COM port on this computer. The COM port specified must correspond to a physical COM port on the computer. You do not need Moxa's Network Enabler software installed to access this channel's COM port.

Specify the COM port number (1..256). It is not possible to have digital I/O with this hardware configuration.

Figure 71: Channel Setup Dialog: Configuration Tab

Hardware

Select the hardware configuration applicable to this channel. The choices available here will reflect the implementation of the logger interface hardware by Temprecord and whether the channel includes digital I/O. When each option in the drop-down is selected, the panel at the bottom of the tab will display an explanation of what the hardware requirements expected are for that option.

Use TR6/LCD Logger

This checkbox must be selected for support of Temprecord "G4" LCD logger. It should also be selected to enable support for the WeyJun 4-20mA module.



If the channel configuration is saved with this option disabled, then the dialog displayed when the channel setup is next opened will be a different "legacy" dialog. In order to see this dialog the Use TR6/LCD Logger must be enabled (the checkbox is also present on the configuration tab of the legacy dialog).

There should be no need to ever disable this option, even with the older Mk3 Temprecord loggers.

COM Port

If the logger is interfaced with a physical COM port on the computer, or an IP-based addressing scheme that provides access via a virtual COM port, then the port number must be specified here.

Delay After Opening Port

When this option is checked, a delay is introduced after each COM port is opened. You can specify the length of the delay (in milliseconds) in the accompanying control. Normally the Temprecord reader interfaces that communicate with the TAD loggers are powered continuously. In installations where the loggers are read via Temprecord Reader Interfaces that are simply plugged in to a computer COM port however, the reader derives it's power from the RS-232 lines. The state of these lines is only set once the port is opened. The reader supply voltage takes a little while to reach operating levels and this delay is to allow for that time.

Continuously powered channels should have this option turned off.

Keep Port Closed Between Samples

This option determines whether the COM ports are opened once only when a channel comes on line, or are opened and closed for every sample.

This means that channels that have a susceptibility to fault when opening (such as Moxa COM ports when running under Windows 7) can be configured so that the port is only opened once when the channel comes on line, and channels that have USB ports, which have a susceptibility to consume large amounts of CPU usage when they are opened, can be configured so that the port is opened for each sample and then closed again immediately.

The installation default for this option is OFF, i.e. it suits Moxa ports. New installations should configure this channel option ON for any channels that have USB COM ports, so that the ports are not left open for the interval between samples.

Delay Before Closing Port

When this option is checked, a delay is introduced before the COM port is closed. You can specify the length of the delay (in milliseconds) in the accompanying control.

A small delay (say 100 mS) may be required before the port is closed to accommodate some serial port hardware types where the last character transmitted is lost if the port is closed immediately after the character is sent. Adding this small delay enabled the final character to be transmitted successfully.

Delay After Closing Port

When this option is checked, a delay is introduced after the COM port is closed. You can specify the length of the delay (in milliseconds) in the accompanying control.

A delay may be needed here if TAD is used with direct-connected loggers that are powered from the serial port. When the port is closed and these loggers are in use, the power for the logger comes from the logger's battery from that point on. This delay is used to ensure the logger has time to enter "sleep" mode before the serial port-supplied power is removed and the logger is once again supplied from its battery.

Continuously powered channels should have this option turned off.

IP Address

The IP Address must be entered in the fields provided for the channel when communication with the logger is implemented with an IP-addressed port, or when the channel includes digital I/O. The IP addresses must be obtained from the site network administrator. This IP Address must match the settings in any hardware module installed within the TAD channel box, e.g. the MOXA NE-4110S.

Sensor Timeout

This delay sets the length of time TAD will wait for a response from a serial sensor such as the WeyJun 4-20 mA converter or the Sensirion ASP1400 pressure sensor.

See also:

[Channel Setup Tab \(Overview\)](#)

[Channel Details](#)

[Logging](#)

[Reports](#)

[Alarms](#)

[Channel Errors and Heartbeats](#)

[Validation](#)

[Export/Spot Check](#)

3.9 Channel Setup - Export and Spot Check

Each channel has individual controls for export of data, offset calibration for the TAD channels, and spot check functions.

Channel Export				
<input type="checkbox"/> Export this channel				
Channel Offset				
	Temperature	Humidity	Pressure	CO2
TAD Channel Offset	-0.10	-0.20	0.00	0.00
<p>The global option to enable offset adjustment of the TAD channel data is enabled. Any reading taken from a device serviced by this channel will be offset by the value shown here.</p> <p>You must be logged in as a TAD administrator to change these settings.</p>				
Channel Spot Check				
<input checked="" type="checkbox"/> Enable				
	Temperature	Humidity	Pressure	CO2
Tolerance	0.50	0.50	0.50	999.99
Primary Offset	0.00	0.00	0.00	0.00

Export this Channel

Check this checkbox to include the channel in any exported data.

Channel Offset

Under some circumstances it might be necessary to add or subtract an offset value from the value returned by the hardware connected to the TAD channel. This should be carried out by specifying the amount to be added here. Only the controls relevant to the currently selected logging mode will be enabled.



All data values displayed, logged, used for spot-checks, compared with limits, and reported on, are the data values after this offset adjustment has been performed.



These offset values cannot be edited unless the global option **Enable TAD Channel Offset Adjustments** is checked. The **Enable TAD Channel Offset Adjustments** option is a configuration option that can only be viewed or changed by Admin TAD users.

if the **Enable TAD Channel Offset Adjustments** option is not set, no adjustment is performed, even if the values shown on this tab are non-zero.



These offset controls make it possible to affect the value returned from Temprecord loggers used as the temperature and humidity measurement devices. Temperature and Humidity loggers used by TAD are normally calibrated and corrected at three temperature points and would not normally require adjustment. Temprecord accepts no responsibility or liability for data logged by TAD channels that have had this parameter altered.

Spot Check this Channel

Check this checkbox to include the channel in any "spot check" reports.

Tolerance

When a spot check is performed, the temperature recorded by TAD is compared with the temperature retrieved from the primary system data CSV file spanning the same time. If the difference between then is greater than the tolerance, the channel is marked as having failed the spot check.

Primary Offset

The primary offset provides a means of compensating for any known error in the primary system data in that particular channel. The offset is added to the temperature retrieved from the primary system CSV file before the comparison is made.

See also:

[Channel Setup Tab \(Overview\)](#)

[Channel Details](#)

[Logging](#)

[Reports](#)

[Alarms](#)

[Channel Errors and Heartbeats](#)

[Validation](#)

[Configuration](#)

3.10 Channel Setup - Calibration

Calibration of TAD channels is not normally necessary for temperature and humidity channels that use Temprecord loggers to implement the measurement functions, as these loggers are normally corrected for small non-linearities in the measurement process.

Similarly the pressure and CO2 sensors used have a digital output and correction or calibration is not normally required.

TAD also supports popular serial devices that have a 4-20mA current input and convert the value to a serial data stream. When combined with an interface that measures any parameter and converts it to a 4-20mA current signal, this gives TAD the ability to log almost anything. It does mean however that the respective channel will require calibration before it can be used to display and record data in the correct measurement units.

Native Units

Native units are the units which TAD uses to represent the measured parameter internally. Every parameter TAD is capable of measuring is assigned a native unit of measurement. As an example, TAD can display and report on temperatures in any of 4 units of measurement - Celsius, Fahrenheit, Kelvin, and Rankine - but TAD always logs temperature data and represents temperatures internally as temperatures in degrees Celsius.

TAD native units are shown below:

Parameter	Native Units
Temperature	C
Humidity	%RH
Pressure	Pa
CO2	ppm
Oxygen	ppm
Weight	Kg
Light Intensity	Lumen
Acidity (pH)	pH
Voltage	Volts
Current	Amps
Resistance	Ohms

Native units need not concern the TAD user unless it is required to calibrate a channel manually.

Automatic Calibration

Calibration requires administrator access to TAD functions and would normally only be carried out by Temprecord personnel.

To access the calibration dialog, ensure the hardware to be calibrated is connected and changing values are visible on the [Summary](#) and [Detail](#) displays. Right click on the row corresponding to the channel you want to calibrate and select [Calibrate](#).

- If you haven't already done so, TAD will alert you to the fact that validation mode will be enabled (this is done simply to have the channel returning samples at a faster rate). The calibration dialog will then open.
- Apply an input to the channel as close as possible to the minimum value expected to be measured. The exact value isn't important - any value less than say, 25 % of full scale will be adequate - but it *is* important that the value is known accurately. This known value needs to be entered in the field beside the [Record Low Value](#) button.
- When the displayed filtered value has stabilised (the value will show in green when it has stabilised) click on the [Record Low Value](#) button.
- Apply an input to the channel as close as possible to the maximum value expected to be measured. As for the low calibration point the exact value isn't important - but it should be an accurately known value of at least 70% of full scale, and must be entered into the corresponding upper calibration point field. When the displayed filtered value has stabilised (shown in green) click on the [Record High Value](#) button.
- At this point, the offset and scale factor parameters for the channel will be calculated and applied to the displayed value, which from this point should closely match the actual applied input to the channel. If you click on the [OK](#) button these calibration values will be saved along with the other channel parameters and the calibration dialog will close. You can click on [Apply](#) instead to update the channel parameters but keep the calibration dialog open.

Manual Calibration



This procedure of manual calibration should only be considered where the value of a parameter being measured is not crucial to a process.

Normal calibration of the channels is carried out by simultaneous solving of the familiar $y = mx + c$ equation for two points. In this equation, x is the output value from the sensor, y is the displayed value in native units. c is the measured offset of the channel (in native units) and m is the gain i.e. the scale factor between a change in the output of the channel transducer and the change in the value as expressed in native units. The procedure outlined above in the section [Automatic Calibration](#) essentially solves this equation for two calibration points.

Where it is not possible to apply known input stimuli values close to the low and high end calibration points of the channel, it may be necessary to determine a "best estimate" of the parameters m and c and apply the gain and offset values manually. Taking a weight channel for example, it might not be practicable to zero and span a load cell because it is part of an existing installation which cannot be disassembled. In this case you can proceed to establish an estimate of the calibration as follows.

Attempt to calculate the gain of the channel - that is the ratio between the parameter TAD will measure (called the "raw" value) and the native unit of measurement, which for the case of weight is the Kilogram. It might be known for example that the load cell and associated electronics outputs a value ranging from 0.000 to 0.800 for a change in load of zero to 100%, and that the load cell is rated at 2 tonnes full scale. We can thus infer that a change of output of $0.800 - 0.000$ (= 0.800) results in a change in load of 0.0 to 2.0 t, or 0.0 to 2000.0 kg. The "gain" of the channel is therefore $2000 / 0.800 = 2500.0$.

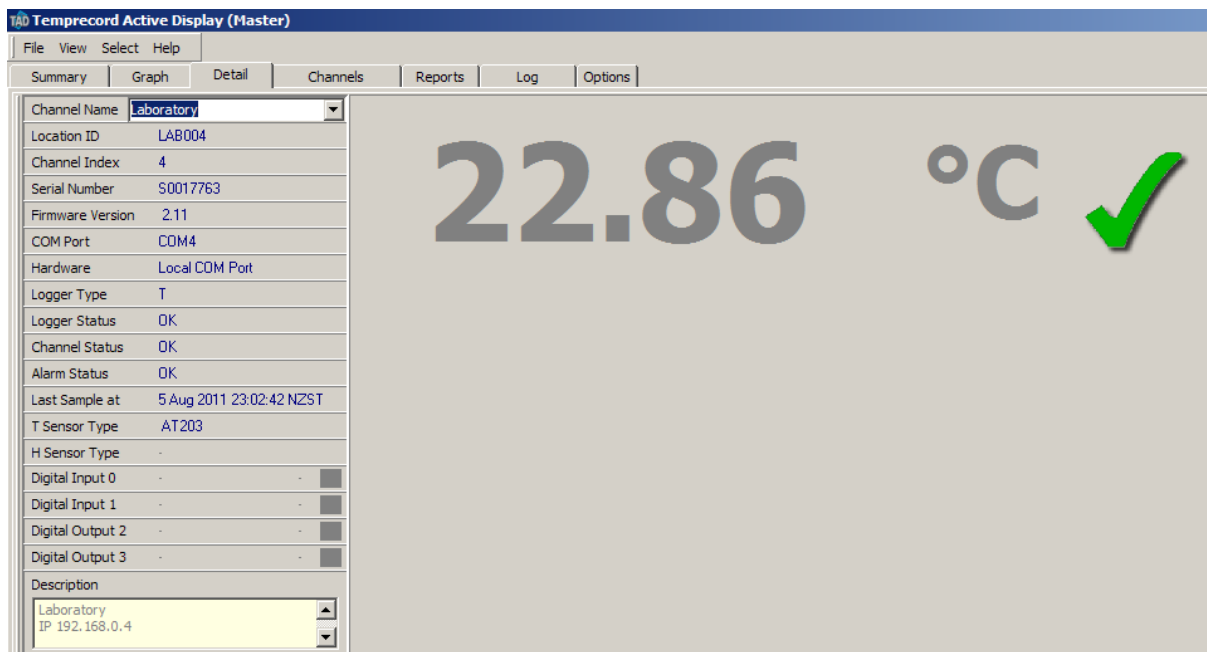
We can therefore enter this value into the [Gain](#) field of the calibration dialog. Once this is done, the offset field will be more or less correct in native units, and it is a matter of entering values for the [offset](#) and seeing what the effect is on the displayed weight. If it is known that the applied load is close to zero (e.g. that the tank is almost empty) then trial [offset](#) values can be entered to make TAD read zero for that channel.



TAD also has the potential ability to read a signal from virtually any device with a serial output. Several existing serial devices are supported, and more can be added on customer request. Contact Temprecord if your installation includes serial devices that TAD doesn't yet cater for.

4 Detail Tab

The Detail Tab provides additional information for a single channel - information that is not normally shown on either the [summary tab](#) or the in channel toolbars.



See Also

[Detail Tab Overview](#)

[Detail Tab description of fields](#)

4.1 Overview

The Detail tab displays information that is specific to the channel that is currently highlighted on the Summary tab screen. It is a read-only tab viewable at all access levels.

If you wish to view information on the Detail tab for a Channel other than the currently selected channel then click on the Summary tab and highlight the channel you wish to view by placing the mouse pointer anywhere on the new channel then single-click to select. The yellow highlight bar should highlight the new selected channel.

When you click Detail tab, the information for the channel selected on the Summary tab will now be displayed on the Detail tab.

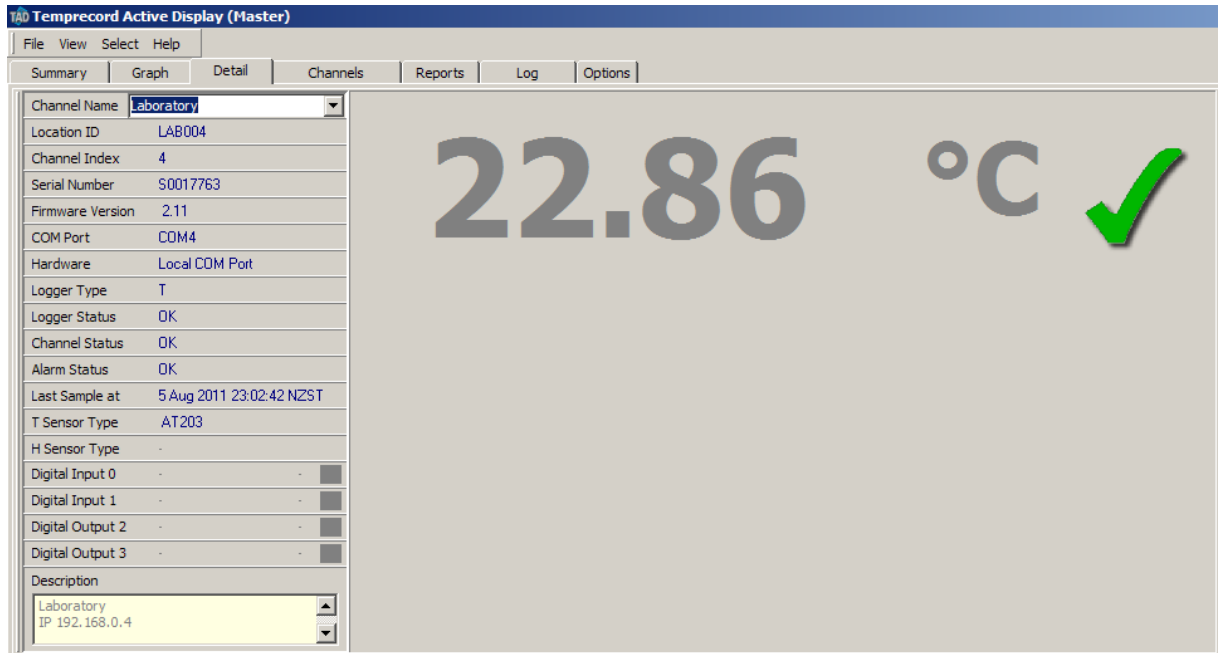


Figure 72: Main Menu: Detail Tab

4.2 Description of Fields

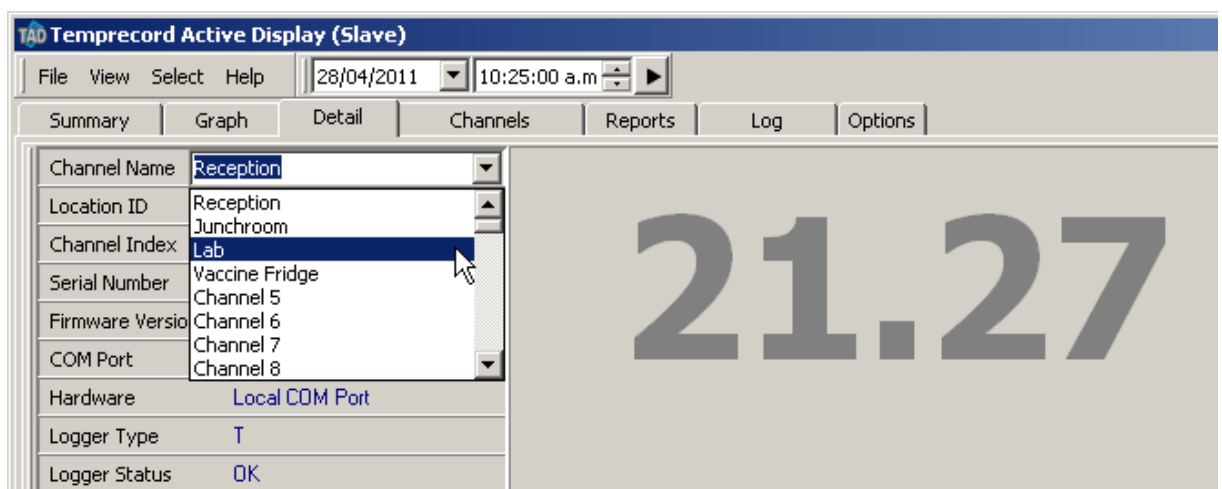
Channel Index

The information that is currently displayed on the **Detail** tab originates from the displayed channel Index.

Channel Name

This field displays the unique identification name for the channel. This is the optional unique Name entered in the channel setup dialog during configuration. If no custom name is entered in the channel setup dialog then the TAD System assigns the default Channel Name as Channel 1 to Channel 255 with respect to the channel numbers.

You can change the channel displayed by selecting the channel from the drop-down on this tab:





Clicking on a channel row on the [Summary tab](#) will also cause the channel displayed on this tab to change to that channel.

Location ID

TAD allows an identifier - called a Location ID - to be stored with the channel data that indicates where the channel's logger is situated. This Location ID can also be optionally displayed in a [channel toolbar](#).

Serial Number

This is the serial number of the Temprecord data logger inside the remote TAD Station assigned/connected to this channel. The serial number information is important for data traceability.

Logger Type

Logger types are defined as T for temperature data logger and T, H for temperature and relative humidity combined data logger.

T Sensor Type

This is the type of temperature sensor fitted to the Temprecord data logger that is installed within yellow TAD box.

Sensor types are denoted by their Temprecord designation, and are: AT203, ET203, Low-Temp YSI, and Cryogenic.

H Sensor Type

This is the humidity sensor fitted to the Temprecord relative humidity (RH) logger.

Last Sample at

This is the date and time that the Last Data Sample was taken from the data logger inside the yellow TAD box that is connected to the currently displayed channel on the Detail tab.

Digital Input 0

This field is user assigned name/description for Digital Input 0 of the selected channel during channel configuration, e.g. 'Door open' or 'Door closed'.

Digital Input 1

This field is User assigned name/description for Digital Input 1 of the selected channel during channel configuration, e.g. 'Power fail'.

To the right of the channel detail information is a rectangular panel with the letters T, H & P.

When the channel is active the last recorded reading will be displayed in large digits. Whenever the channel's upper or lower limits are exceeded, a channel status icon located between the letters T, H and P is displayed. within limits data is displayed in **grey**, limits exceeded warning is displayed in **orange** and out-of-limits alarm is displayed in **red** for data above the upper limit and **blue** for data below the lower limit. Refer to the following examples:

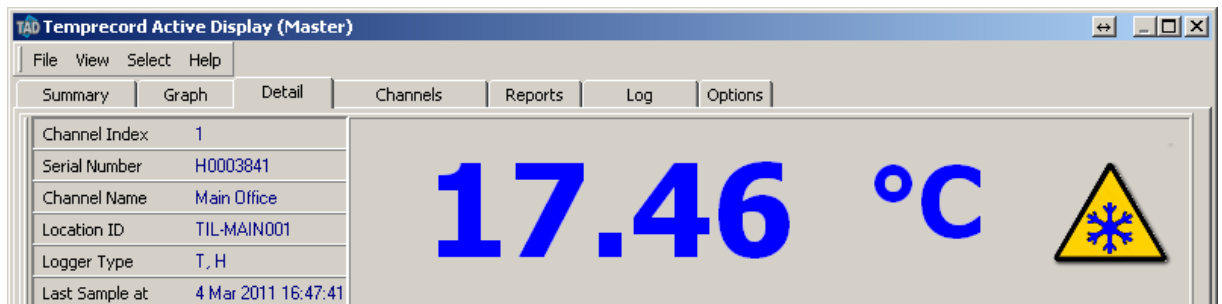
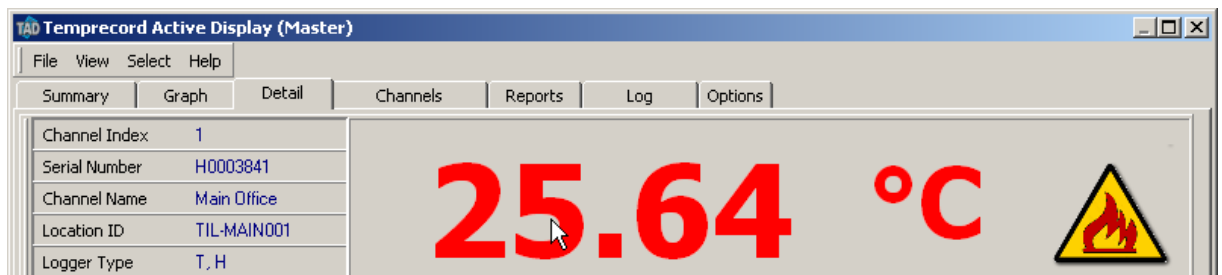
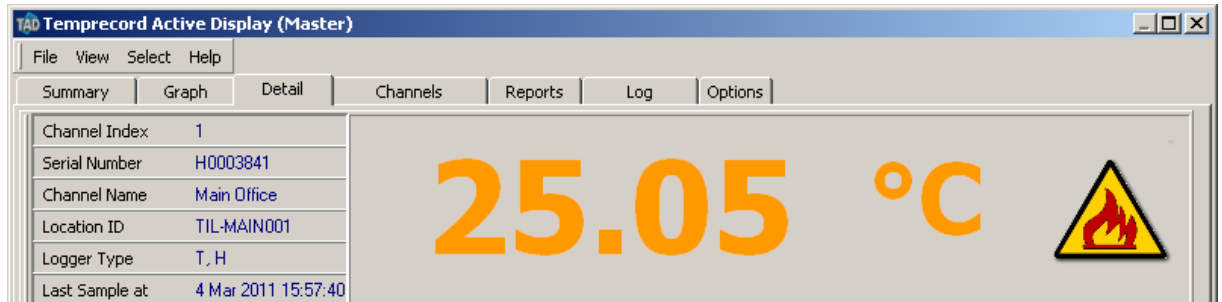
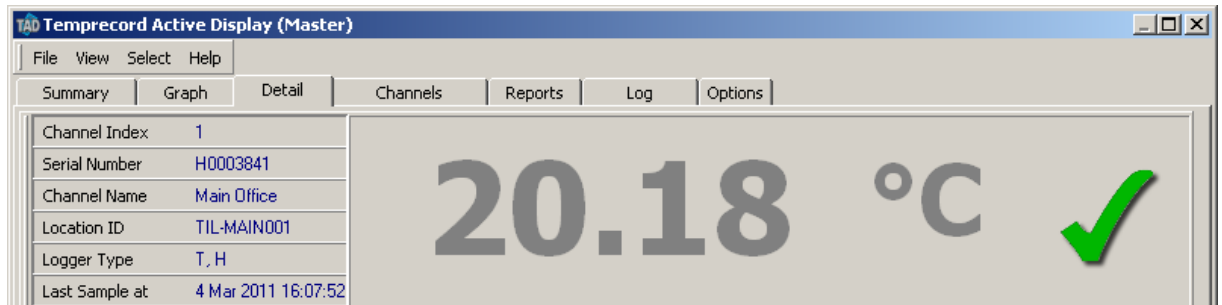


Figure 73: Main Menu: Detail Tab Colours

5 Channels Tab

Overview

The **Channels** tab allows monitoring of any of the 255 channels displayed in numerical (digital) format in large digits. Your monitor screen size and computer specification will be the limiting factors for the number of channels viewed on your computer screen at any one time. Each Channel is displayed on it's own area, called a Channel Toolbar. Like the other toolbars in TAD, these channel toolbars can be docked in various places on the TAD main window. The position of each channel toolbar, and whether is docked or "floating", is remembered when you exit TAD

The channel toolbars are sized according to how many of them can fit across the TAD main window, or across the screen, if the toolbars are floating.

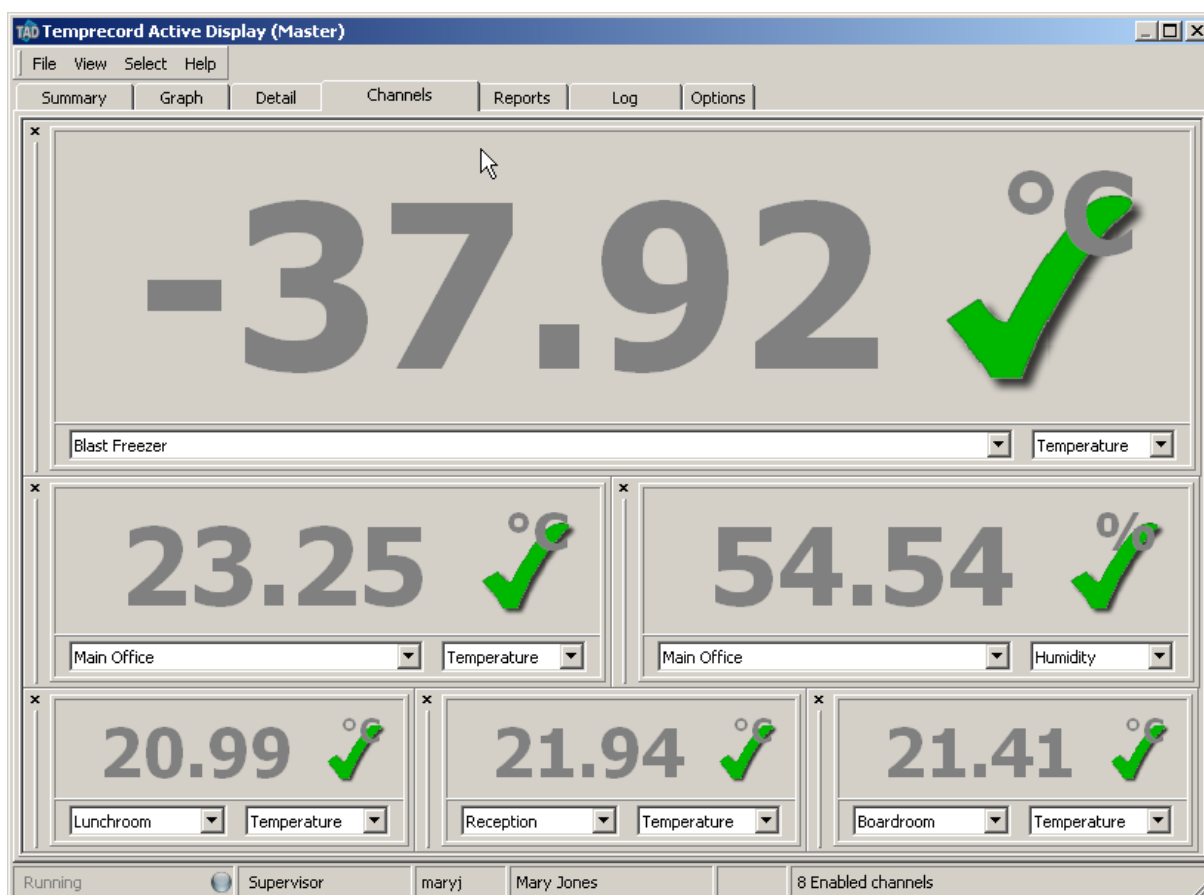


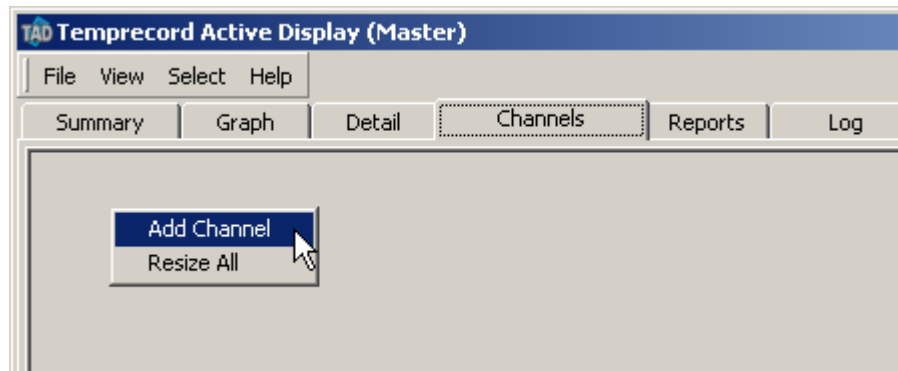
Figure 74: Main Menu: Channels Tab / Digital Display

See Also:

- [Adding a Channel](#)
- [Removing a Channel](#)
- [Moving and Docking Channels](#)
- [Resizing Channels](#)
- [Cloning a Channel](#)
- [Displaying the Channel Location ID](#)
- [Displaying the Channel Name](#)

5.1 Adding a Channel

To add a channel toolbar the Channels tab right click with your mouse anywhere on the Channels tab screen. Then click **Add Channel** from the right click menu dialog.



A new channel toolbar is added at the top left corner of the Channels screen. The channel toolbar includes a text field with drop-down list box at the bottom of the new channel toolbar and three selector radio buttons. The user can either enter the Channel Name on the field box or select from the drop-down list of channels by clicking on the arrow button located at the end of the text field. After you have selected the channel you wish to view on the channel toolbar, click on the drop-down on the bottom right of the toolbar to select the display of temperature, humidity, pressure, or CO2 readings.

You cannot view both temperature and RH data simultaneously on the same channel toolbar when RH Logger is fitted to a channel. Add two channel toolbars with same channel numbers, and then select one channel toolbar for temperature and the other channel toolbar for humidity.

Channel Toolbar Data Colours

The colour of digits displayed on channel toolbars for temperature, humidity, pressure, or CO2 will change to reflect the changing status of the current channel data, i.e. when the monitored channel status changes from normal to warning or alarm status condition.

Grey

The temperature, humidity, pressure, or CO2 data will be displayed as **grey** when the data readings are within the upper and lower limits for that channel.

Magenta

The temperature, humidity, pressure, or CO2 data will be displayed as **magenta** when the data readings are above the upper or below the lower limits but still within the limit delay period.

Red

The temperature, humidity, pressure, or CO2 data will be displayed as **red** when the data readings are above the upper limit and the limit delay has expired.

Blue

the temperature, humidity, pressure, or CO2 data will be displayed as **blue** when the data readings are below the lower limit and the limit delay has expired.

See Also:

[Channels Tab](#)

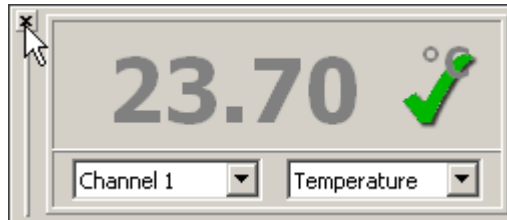
[Removing a Channel](#)

[Moving and Docking Channels](#)

[Resizing Channels](#)

[Cloning a Channel](#)[Displaying the Channel Location ID](#)[Displaying the Channel Name](#)

5.2 Removing a Channel

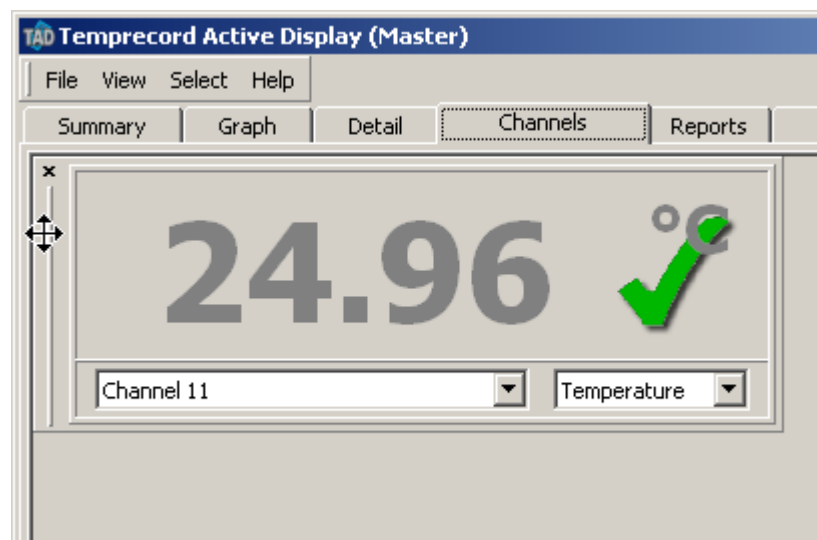



To remove a channel toolbar from the channels tab, click on the X located on the top left corner of each channel toolbar. To view the channels data again you will need to open a new channel toolbar by right button clicking on mouse then clicking **Add Channel** then select the channel number you wish to view.

See Also:

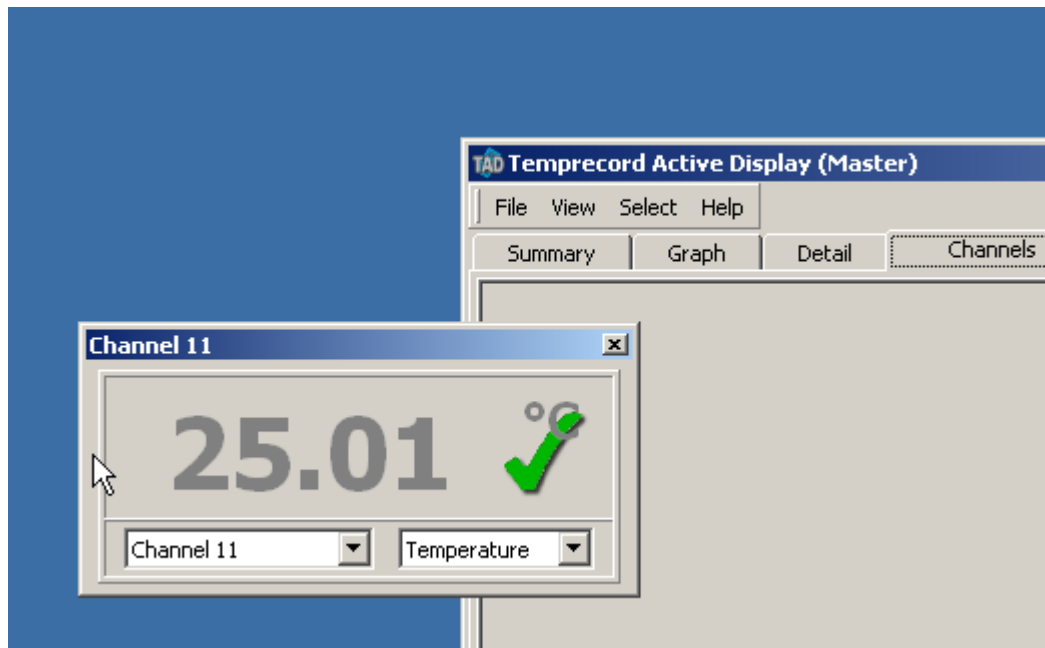
[Channels Tab](#)[Adding a Channel](#)[Moving and Docking Channels](#)[Resizing Channels](#)[Cloning a Channel](#)[Displaying the Channel Location ID](#)[Displaying the Channel Name](#)

5.3 Moving and Docking Channels



Channel toolbars can be repositioned in the channels tab by moving the mouse to the are on the left of the toolbar until the cursor changes to  and then pressing and holding down the mouse button. The toolbar can then be dragged to a new position.

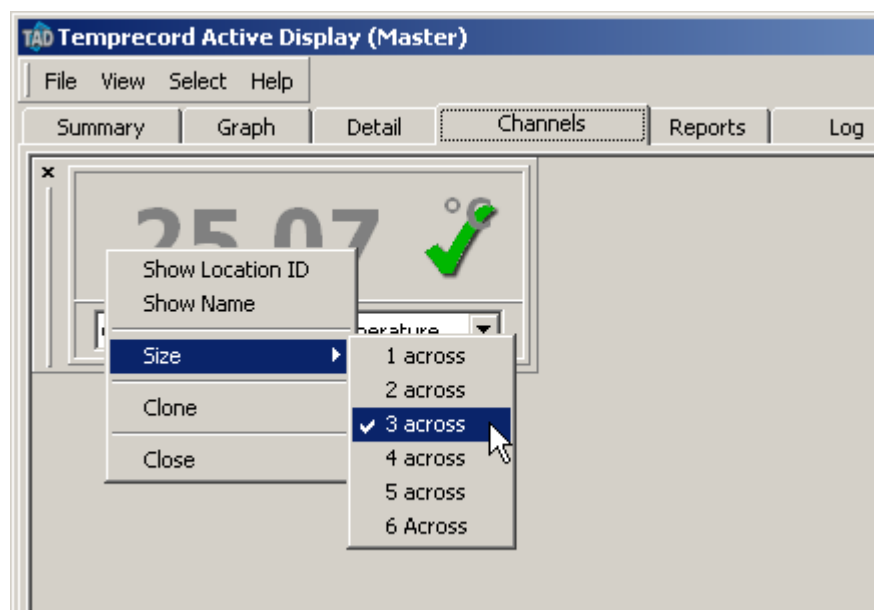
If the toolbar is dragged outside the TAD main window, it will become "floating", i.e. it will have a window of its own

**See Also:**

- [Channels Tab](#)
- [Adding a Channel](#)
- [Removing a Channel](#)
- [Resizing Channels](#)
- [Cloning a Channel](#)
- [Displaying the Channel Location ID](#)
- [Displaying the Channel Name](#)

5.4 Resizing Channels

You can resize channel toolbars by selecting a size from the pop-up menu.



Channel toolbars that are docked are always sized according to the size of the main window. Thus "3 across" causes the size of the toolbar to be changed so that three toolbars of that size will fit across the TAD main window.

Channel toolbars that are floating are always sized according to the size of desktop. Thus "3 across" causes the size of the toolbar to be changed so that three toolbars of that size will fit across the screen.

When you resize a toolbar, the sizes of the fonts and height of the window are adjusted accordingly.

See Also:

[Channels Tab](#)

[Adding a Channel](#)

[Removing a Channel](#)

[Moving and Docking Channels](#)

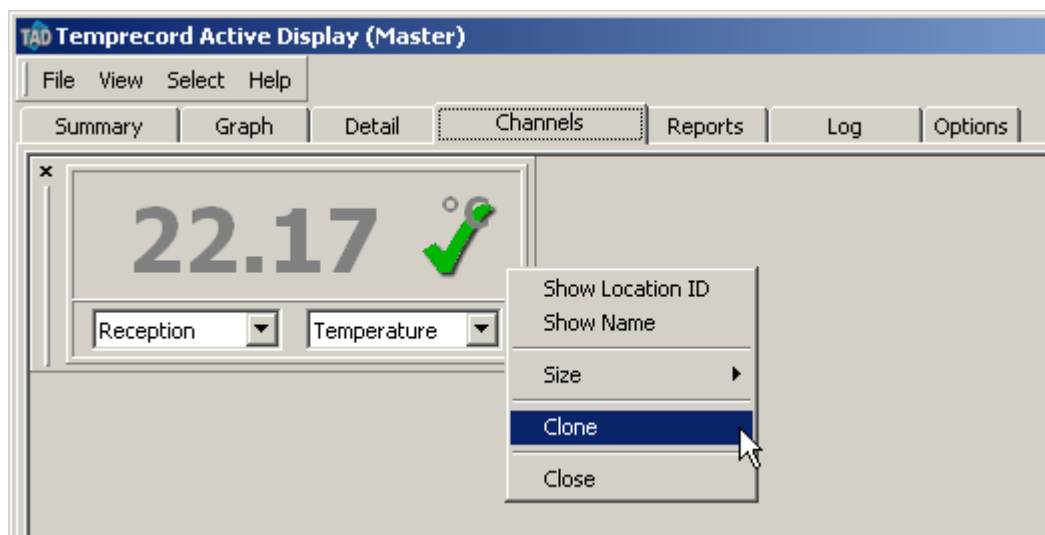
[Cloning a Channel](#)

[Displaying the Channel Location ID](#)

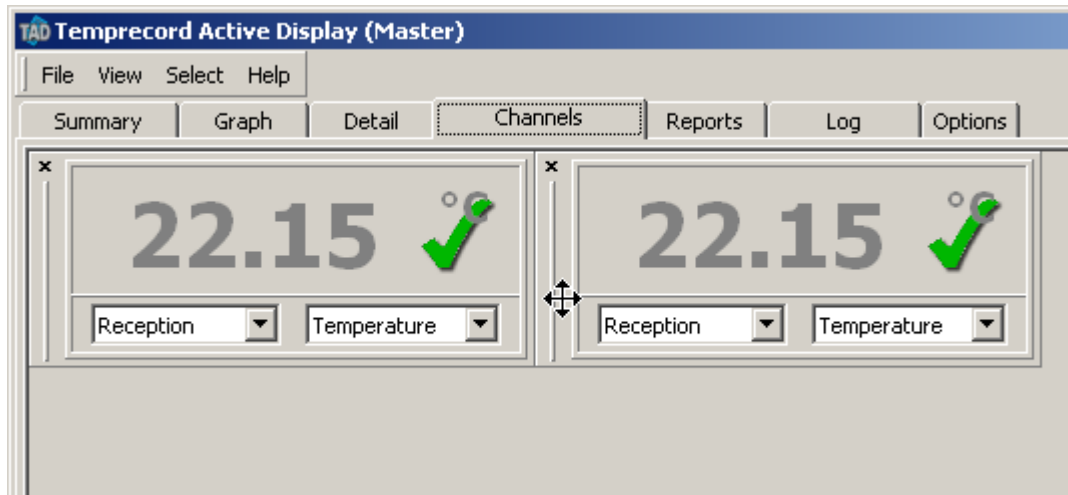
[Displaying the Channel Name](#)

5.5 Cloning a Channel

You can clone (create a duplicate of) a channel toolbar by selecting that item from the pop-up menu.



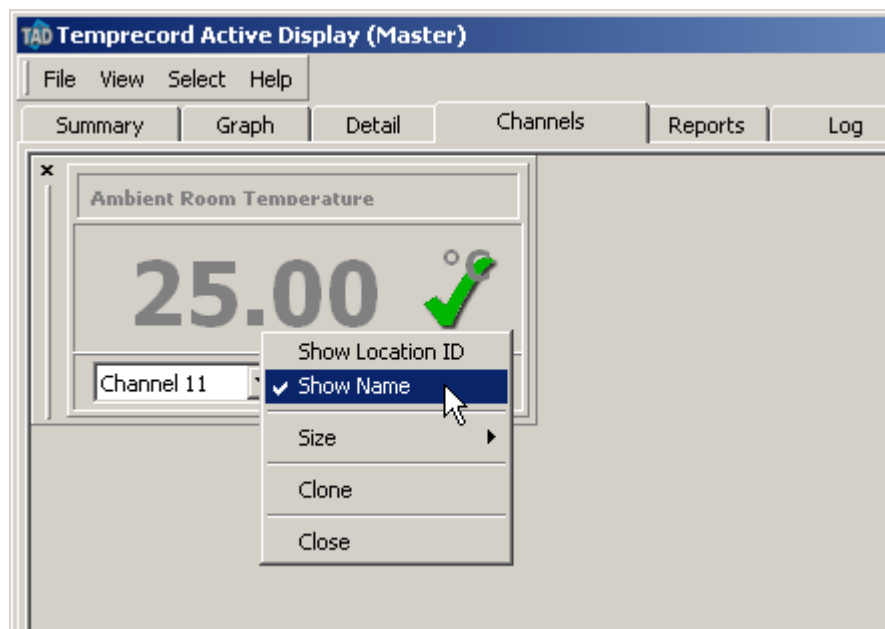
The cloned channel toolbar inherits the size, channel and docking position of it's parent. You are then free to change the channel number of the cloned channel

**See Also:**

[Channels Tab](#)
[Adding a Channel](#)
[Removing a Channel](#)
[Moving and Docking Channels](#)
[Resizing Channels](#)
[Displaying the Channel Location ID](#)
[Displaying the Channel Name](#)

5.6 Displaying the Channel Name

You can display the channel name of a channel in a channel toolbars by selecting that item from the pop-up menu.

**See Also:**

[Channels Tab](#)
[Adding a Channel](#)
[Removing a Channel](#)
[Moving and Docking Channels](#)

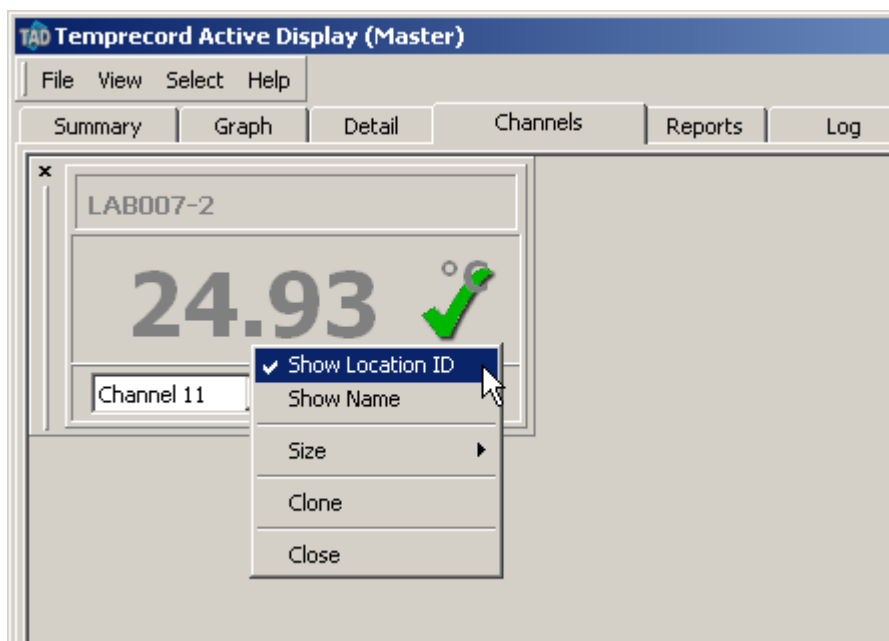
[Resizing Channels](#)

[Cloning a Channel](#)

[Displaying the Channel Location ID](#)

5.7 Displaying the Channel Location ID

You can display the Location ID of a channel in a channel toolbars by selecting that item from the pop-up menu.



See Also:

[Channels Tab](#)

[Adding a Channel](#)

[Removing a Channel](#)

[Moving and Docking Channels](#)

[Resizing Channels](#)

[Cloning a Channel](#)

[Displaying the Channel Name](#)

6 Reports Tab

Overview

Summary | Graph | Detail | Channels | Reports | Log | Options

Recent Reports Clear List

Date	Type	Path	File
7 Jul 2011 13:03:35 NZST	Spot Check	C:\Program Files\TAD\Spot Check Reports\	TAD Spot Check 2011 07 07 13033
6 Jul 2011 17:28:34 NZST	Spot Check	C:\Program Files\TAD\Spot Check Reports\	TAD Spot Check 2011 07 06 17281
5 Jul 2011 16:14:54 NZST	Spot Check	C:\Program Files\TAD\Spot Check Reports\	TAD Spot Check 2011 07 05 16105
5 Jul 2011 15:34:51 NZST	Spot Check	C:\Program Files\TAD\Spot Check Reports\	TAD Spot Check 2011 07 05 15325
5 Jul 2011 15:32:46 NZST	Spot Check	C:\Program Files\TAD\Spot Check Reports\	TAD Spot Check 2011 07 05 15320
5 Jul 2011 15:31:42 NZST	Spot Check	C:\Program Files\TAD\Spot Check Reports\	TAD Spot Check 2011 07 05 15314
5 Jul 2011 15:31:24 NZST	Spot Check	C:\Program Files\TAD\Spot Check Reports\	TAD Spot Check 2011 07 05 15304
5 Jul 2011 15:01:22 NZST	Spot Check	C:\Program Files\TAD\Spot Check Reports\	TAD Spot Check 2011 07 05 15012
5 Jul 2011 14:57:16 NZST	Spot Check	C:\Program Files\TAD\Spot Check Reports\	TAD Spot Check 2011 07 05 14571
5 Jul 2011 09:28:51 NZST	Summary	C:\Program Files\TAD\Reports\	Summary Report 51.pdf
5 Jul 2011 09:26:56 NZST	Spot Check	C:\Program Files\TAD\Spot Check Reports\	TAD Spot Check 2011 07 05 09241
4 Jul 2011 16:24:02 NZST	Spot Check	C:\Program Files\TAD\Spot Check Reports\	TAD Spot Check 2011 07 04 16240
4 Jul 2011 16:23:51 NZST	Spot Check	C:\Program Files\TAD\Spot Check Reports\	TAD Spot Check 2011 07 04 16235
4 Jul 2011 16:23:35 NZST	Summary	C:\Program Files\TAD\Reports\	Summary Report 35.pdf
4 Jul 2011 16:23:21 NZST	Summary	C:\Program Files\TAD\Reports\	Summary Report 21.pdf
4 Jul 2011 16:23:13 NZST	Channel 1	C:\Program Files\TAD\Reports\	Channel 001 Report 2011 Jul 04 16
4 Jul 2011 16:23:09 NZST	Channel 1	C:\Program Files\TAD\Reports\	Channel 001 Report 2011 Jul 04 16
4 Jul 2011 15:59:23 NZST	Spot Check	C:\Program Files\TAD\Spot Check Reports\	TAD Spot Check 2011 07 04 15592
4 Jul 2011 13:32:07 NZST	Spot Check	C:\Program Files\TAD\Spot Check Reports\	TAD Spot Check 2011 07 04 13320
4 Jul 2011 12:01:20 NZST	Channel 1	C:\Program Files\TAD\Reports\	Channel 001 Report 2011 Jul 04 12
28 Jun 2011 15:41:36 NZST	Spot Check	C:\Program Files\TAD\Spot Checks\	TAD Spot Check 2011 06 28 15413
28 Jun 2011 15:20:34 NZST	Spot Check	C:\Program Files\TAD\Spot Checks\	TAD Spot Check 2011 06 28 15203
28 Jun 2011 14:07:18 NZST	Spot Check	C:\Program Files\TAD\Spot Checks\	TAD Spot Check 2011 06 28 14071
28 Jun 2011 14:05:11 NZST	Spot Check	C:\Program Files\TAD\Spot Checks\	TAD Spot Check 2011 06 28 14030
28 Jun 2011 14:03:00 NZST	Spot Check	C:\Program Files\TAD\Spot Checks\	TAD Spot Check 2011 06 28 13582
28 Jun 2011 13:46:29 NZST	Spot Check	C:\Program Files\TAD\Spot Checks\	TAD Spot Check 2011 06 28 13460
28 Jun 2011 13:39:49 NZST	Spot Check	C:\Program Files\TAD\Spot Checks\	TAD Spot Check 2011 06 28 13314
28 Jun 2011 13:31:39 NZST	Spot Check	C:\Program Files\TAD\Spot Checks\	TAD Spot Check 2011 06 28 13302
28 Jun 2011 13:30:22 NZST	Spot Check	C:\Program Files\TAD\Spot Checks\	TAD Spot Check 2011 06 28 13274
28 Jun 2011 13:20:39 NZST	Spot Check	C:\Program Files\TAD\Spot Checks\	TAD Spot Check 2011 06 28 13203
28 Jun 2011 13:18:59 NZST	Spot Check	C:\Program Files\TAD\Spot Checks\	TAD Spot Check 2011 06 28 13185
28 Jun 2011 13:18:20 NZST	Spot Check	C:\Program Files\TAD\Spot Checks\	TAD Spot Check 2011 06 28 13181
28 Jun 2011 12:35:14 NZST	Spot Check	C:\Program Files\TAD\Spot Checks\	TAD Spot Check 2011 06 28 12342

Report On Demand

Start Date (DST) 11/02/2011 6:00:00 a.m.
End Date (DST) 19/02/2011 11:00:00 p.m.

Generate Report for Channel 1
Generate Summary Report

☒ Open report PDF

Regular Summary Report

Generate Regular Summary Report

☒ Open report PDF

Last Report was on Tue 5 Jul 2011 09:28:52

Report Options

Channel reports and summary reports generated by the TAD system are in PDF format and are saved under C:\Program Files\TAD\Reports folder (this is the recommended folder and is set during installation. It may have been altered). These reports are generated depending on configurations applied to each channel settings and the Generate Summary Reports settings. Refer to the appropriate section for more information on reports.

See Also

- [Recent Reports](#)
- [Generating Reports](#)
- [Report Layout](#)
- [Vaccine Status in Reports](#)

6.1 Recent Reports

Recent Reports Clear List		
Date	Type	File
18 Feb 2011 11:44:08 NZDT	Summary	TAD Summary Report 2011 02 18 114408 NZDT
18 Feb 2011 11:42:32 NZDT	Channel 1	TAD Channel Report (001) 2011 02 18 114232
18 Feb 2011 11:41:06 NZDT	Channel 1	TAD Channel Report (001) 2011 02 18 114106
18 Feb 2011 11:39:47 NZDT	Channel 7	TAD Channel Report (007) 2011 02 18 113947
8 Feb 2011 14:43:49	Channel 7	TAD Report (Channel 7) 2011 Feb 08 144348.p
8 Feb 2011 14:43:45	Channel 6	TAD Report (Channel 6) 2011 Feb 08 144345.p
8 Feb 2011 14:43:42	Channel 5	TAD Report (Channel 5) 2011 Feb 08 144342.p
8 Feb 2011 14:43:39	Channel 4	TAD Report (Channel 4) 2011 Feb 08 144338.p
8 Feb 2011 14:43:33	Channel 3	TAD Report (Channel 3) 2011 Feb 08 144333.p
8 Feb 2011 14:39:18	Channel 1	TAD Report (Channel 1) 2011 Feb 08 143917.p
8 Feb 2011 14:36:57	Channel 1	TAD Report (Channel 1) 2011 Feb 08 143657.p
8 Feb 2011 14:34:46	Channel 41	TAD Report (Channel 41) 2011 Feb 08 143445.
8 Feb 2011 14:34:45	Channel 39	TAD Report (Channel 39) 2011 Feb 08 143444.
8 Feb 2011 14:34:43	Channel 38	TAD Report (Channel 38) 2011 Feb 08 143443.

The **Recent Reports** list shows the last 100 reports produced by TAD ordered by date with the most recent report at the top. If a report is shown with a line through it like *this*, it means the report file was moved or deleted after the report was created by TAD.

When you right-click the mouse in the list of report files, a pop-up menu displays and provides the following options:

View as PDF

Use the **View as PDF** entry from the pop-up menu to open the report file as a PDF document and display it using Adobe Acrobat reader. Adobe Acrobat Reader must be installed on your PC.

Open Folder

Use the **Open Folder** entry from the pop-up menu to open an Explorer window in the folder containing that report. This is useful when you want to rename, copy, move or delete a report file.

Delete Report

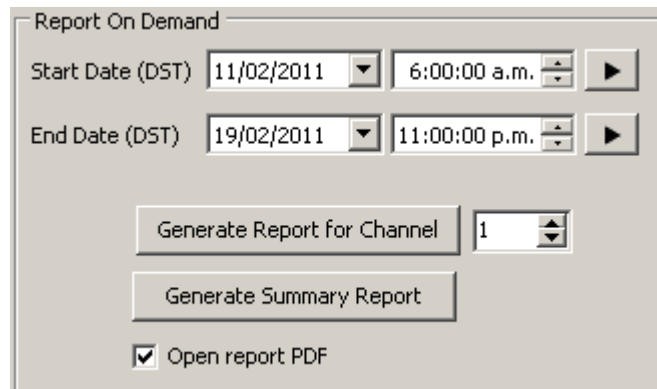
Use the **Delete Report** entry from the pop-up menu to delete the report file.

Clear List

Click the **Clear List** button to remove all the reports from the **Recent Reports** list. Note that this does NOT delete the report PDF files themselves. You can delete report files with the pop-up menu entry described above.

6.2 Generating Reports

Channel Report on Demand



If you click the **Generate Report for Channel** button, you can generate a report for any channel that spans any time period. The report will contain a graph of the samples in that channel (if there were any for the time period), and statistical information for those samples. You can also include the events logged during that period. If you include the events, only the events that pertain to that channel, and events that are independent of a channel are reported.

Open Report PDF

If this checkbox is checked, TAD will open the Channel Report PDF file or the Summary Report PDF file after the report has completed. Adobe Acrobat reader must be installed on the computer.

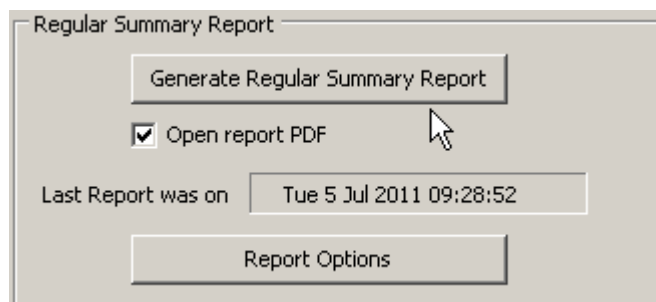


If you have TAD configured so that the report names are generated with a name that incorporates the date and time, the names of successive report PDF files will likely be different. In this event a new Acrobat PDF viewer will open each time. If TAD is configured so that the report name is always the same, when a report is generated with the same name as one that is already open, TAD will close the one that is already open first, to avoid a sharing violation.

Summary Report on Demand

If you click the **Generate Summary Report** button, all channels that are either Active or Inactive will be reported on, with each channel's data being summarised on one line. The period of the report is between the two dates and times as for the channel report.

Regular Summary Report on Demand



If you click the **Generate Regular Summary Report** button, all channels that are either Active or Inactive will be reported on, with each channel's data being summarised on one line. In this case however, the period of the report is not specified by the time period for the reports on demand. Rather, the report time period is a time period of the same duration as is set for the regular reports, but ending at the current time.

For example, if the [reporting options](#) specify that regular summary reports are to be produced daily at hour 8, a summary report will be written at 08:00am (local time) every day, spanning the 24 hour period up until that time. If the **Generate Summary Report** button is clicked however, a report spanning the last 24 hours up until that time will be produced.

Open Report PDF

If this checkbox is checked, TAD will open the Regular Summary Report PDF file after the report has completed. Adobe Acrobat reader must be installed on the computer..



If you have TAD configured so that the report names are generated with a name that incorporates the date and time, the names of successive report PDF files will likely be different. In this event TAD will open a new Acrobat PDF viewer for each report. If TAD is configured so that the report name is always the same, when a report is generated with the same name as one that is already open, TAD will close the one that is already open first, to avoid a sharing violation.

Report Options

There are many options you can specify to determine the frequency and contents of the channel and summary reports. See the topic [Reporting Options](#) for more information.

6.3 Report layout

Start of Period, End of Period

The time interval over which the report was generated.

Duration

The time duration between the start and end dates

Report Generated

The date and time the report was generated.

Site

The site where the TAD data originated. This is taken from the site details that were entered when TAD was installed.

Channel

The channel information, i.e. the channel number, name, and COM port number.

Location ID

TAD allows an identifier - called a Location ID - to be stored with the channel data that indicates where the channel's logger is situated. This Location ID can also be optionally displayed in a [channel toolbar](#).

Settings

Shows the channel settings (sample period, etc) that were in place when the report was generated. Unless the settings for that channel have been changed, the settings shown will be the settings that were in place when the data was logged. The section also indicates whether the settings in use were default settings, or the settings in the channel setup.

Logging

Indicates whether a channel was monitoring temperature only, humidity only, or both temperature and humidity, pressure, or CO₂.

Sample Period

This determines how often the TAD system polls the channel.

Upper T Limit, Lower T Limit

These are the temperature limits that TAD will accept before showing a warning state, or an alarm state (after the limit delay has elapsed). If a colour printer is used to print out TAD reports the Upper T Limit will appear as a red dashed line in the graph section of a TAD report. The Lower T Limit will appear as a blue dashed line. If a channel was also monitoring humidity it would display Upper H Limit and Lower H Limit additional to Upper T Limit and Lower T Limit.

Action on Alarm

Determines the action taken (no action, pop up, etc) if the channel being reported on enters an alarm state.

Statistics

This section reports the mean, minimum and maximum temperature for the report interval, how long the limits were exceeded for, and how many times the limits were exceeded

Samples

A count of the number of data samples between the Start of Period and End of Period dates and times. The statistical data presented is calculated over these samples.

Mean Temperature

The average of all of temperatures between the start of period and end of period date and times.

Min Temperature, Max Temperature

The minimum and maximum of all of temperatures between the start of period and end of period dates and times. If humidity were being monitored there would be mean, min and max humidity data displayed also

Graph

This shows a graph of the samples logged in the interval of the report. The vertical axis on the left side of the graph is scaled according to the parameter being logged in that channel, and the [graph scaling options](#).




Parameter being logged	Y Axis
Temperature	Temperature in degrees C

Humidity	Humidity in %RH
Temperature and Humidity	Temperature in degrees C and Humidity in %RH (the same scale is used for both)
Pressure	Pressure in Pascals
CO2	CO2 concentration in percent, or in parts per million (PPM) depending on the setting of the CO2 units.

The horizontal axis of the graph indicates date and time.

Graph Trace Colours

TAD displays the graph traces in different colours, depending on whether the parameter was within the limits.

-  Red is used for portions of the trace above the limit.
-  Blue used for portions of the trace above the limit.
-  Olive is used for portions of the trace inside the limits.

Where the channel is also monitoring humidity, the same colours are also used for the humidity trace.

Where TAD is unable to plot any points on the graph, the graph area will instead display text indicating the reason for this.

No samples found in report period

The specified period of the report contains no logged samples from that channel.

Plotted trace is below specified Y axis range

Plotted trace is above specified Y axis range

Plotted trace is outside specified Y axis range

The plotted data is out of range of the specified Y axis limits. This is most likely because you have specified fixed limits for the Y axis. Try setting the plot limits to include the plotted points, or include the plotted points and the limits.

Events

The events logged by TAD are presented on the report in three columns..

Type

The "class" of the event logged (information, warning, etc).

Date

The date and time the event was recorded.

Event

The details of the event. Where an event contains additional details other than the one line description, these additional lines are displayed under the event message.

Advisories

As well as graphical and statistical data, TAD provides "advisories" in the report. These are one-line descriptions of conditions which may be important. Advisories are generated for channel reports and for summary reports. In a summary report, each enabled channel can generate an advisory. Examples are:

Warning: Logger serial number changed detected at <date-time> (from SN1 to SN2)

The serial number of a logger changed between one sample and the next. This can occur if a logger is "hot-swapped", i.e. replaced without disabling the channel concerned first.

Warning: Logger serial number not confirmed for any of report period

No serial number information was registered over the period of a report. This would not normally occur with regular reports as the installation default value of the serial number registration period is 15 minutes, and the smallest regular report interval is one hour. The most likely reason is that serial number registration is disabled.

Warning: Logger serial number not confirmed for all of report period

Serial number information was registered at some stage over the period of a report, but not prior to the first sample being used to contribute towards statistical results. This means that the report results cannot be guaranteed to have some from the logger serial number indicated in the report.

Warning: Channel saw multiple loggers (S/N's: SN1, SN2, SN3...)

The channel saw more than one serial number over the report period.. This can occur if a logger is "hot-swapped", i.e. replaced without disabling the channel concerned first.

Warning: Channel MKT calculation: <warning>

The MKT (Mean Kinetic Temperature) value for the indicated channel is unreliable for the reason given. This could be because of any of:

Insufficient samples to calculate MKT;
Largest time gap between samples is <duration>

Error: Channel MKT calculation: <error>



TAD will not generate advisories concerned with serial number changes unless registration of logger serial numbers is enabled. If it is not enabled however, TAD will generate a warning that no serial numbers were seen.

6.4 Vaccine Status

If the Report Vaccine Status checkbox in the Report Options area is checked on the Reporting tab the following vaccine status information will be included on TAD reports (see figure 21 for an example).

Zone

This column indicates the state of the vaccine temperature.

Unknown

The temperature was unknown over this time period, most likely because the TAD application was not running.

Above Room (25C)

The temperature exceeded 25 degrees Celsius (77 Fahrenheit).

Above Upper Limit

The temperature exceeded the upper limit.

Within Limits

The temperature remained within the upper and lower limits set on the Default tab or in the temperature section of the Logging tab on the channel setup Dialog.

Below Lower Limit

The temperature was below the lower limit

Below Freezing (0 C)

The temperature was below 0 degrees Celsius (32 degrees Fahrenheit).

Time in Zone

This column indicates the total cumulative duration the vaccine spent in each of the above six zones

Longest Time

This column indicates the longest duration the vaccine spent continuously in each of the above six zones. If a temperature of the consignment did not enter this particular zone this entry in the table will be blank.

From

This times and dates in this column indicate the time of entry of the longest stay in that zone. If the temperature of the consignment did not enter this particular zone this entry in the table will be blank.

To

This times and dates in this column indicate the time of exit of the longest stay in that zone. If the temperature of the consignment did not enter this particular zone this entry in the table will be blank.

Vaccine Status

Zone	Time in Zone	Longest Time	From	To
Unknown	29:00:58	29:00:58	13 Dec 2004 10:40:49	14 Dec 2004 15:41:47
Above Room (25 C)	0:08:48	0:04:33	14 Dec 2004 15:53:05	14 Dec 2004 15:57:38
Above Upper Limit	20:27:22	19:56:01	14 Dec 2004 15:41:47	15 Dec 2004 11:37:48
Within Limits	118:29:23	117:29:40	15 Dec 2004 13:08:53	20 Dec 2004 10:38:33
Below Lower Limit	0:00:10	0:00:10	20 Dec 2004 10:38:33	20 Dec 2004 10:40:36
Below Freezing (0 C)	0:02:13	0:02:13	20 Dec 2004 10:38:33	20 Dec 2004 10:40:36

Figure 88: Vaccine Status

Vaccine Status Visual Guide

TAD reports have a visual guide to indicate the condition and usability status of the following Vaccines.

Oral Polio, MMR, BCG, DPTH, DT, Td, Hib & Hep B

The guide is separated into three columns labeled Vaccine, Action and Reason.

Vaccine

Lists the nine vaccine types Oral Polio, MMR, BCG, DPTH, DT, Td, Hib and Hep B.

Action

The Action column shows a rectangular coloured indicator bar that displays the appropriate action message for the vaccine, as follows:

Colour	Action
Green	OK to use
Orange	Use within 3 months



Reason

A message explaining the criteria TAD used to determine the action appropriate for each vaccine type.

Vaccine	Action	Reason
Oral Polio	Use within 3 months	above upper limit for less than 24 hours
MMR	Use	above upper limit for less than 24 hours
BCG	Use	above upper limit for less than 3 days
DPTH	Discard	below freezing
DT, Td, Hib & Hep B	Discard	below freezing
End of report		

Figure 89: Vaccine Visual Status

7 Graph Tab

Overview

The Graph tab is a read-only tab viewable at all access levels.

The Graph tab screen is a viewing feature of the TAD software, where up to four channels of data can be viewed in XY graphical format. The X-axis along the bottom of the Graph screen represents the date and time the TAD data was recorded. The Y-axis on the left side of the Graph screen represents the scale for temperature, humidity, pressure, or CO2 data.

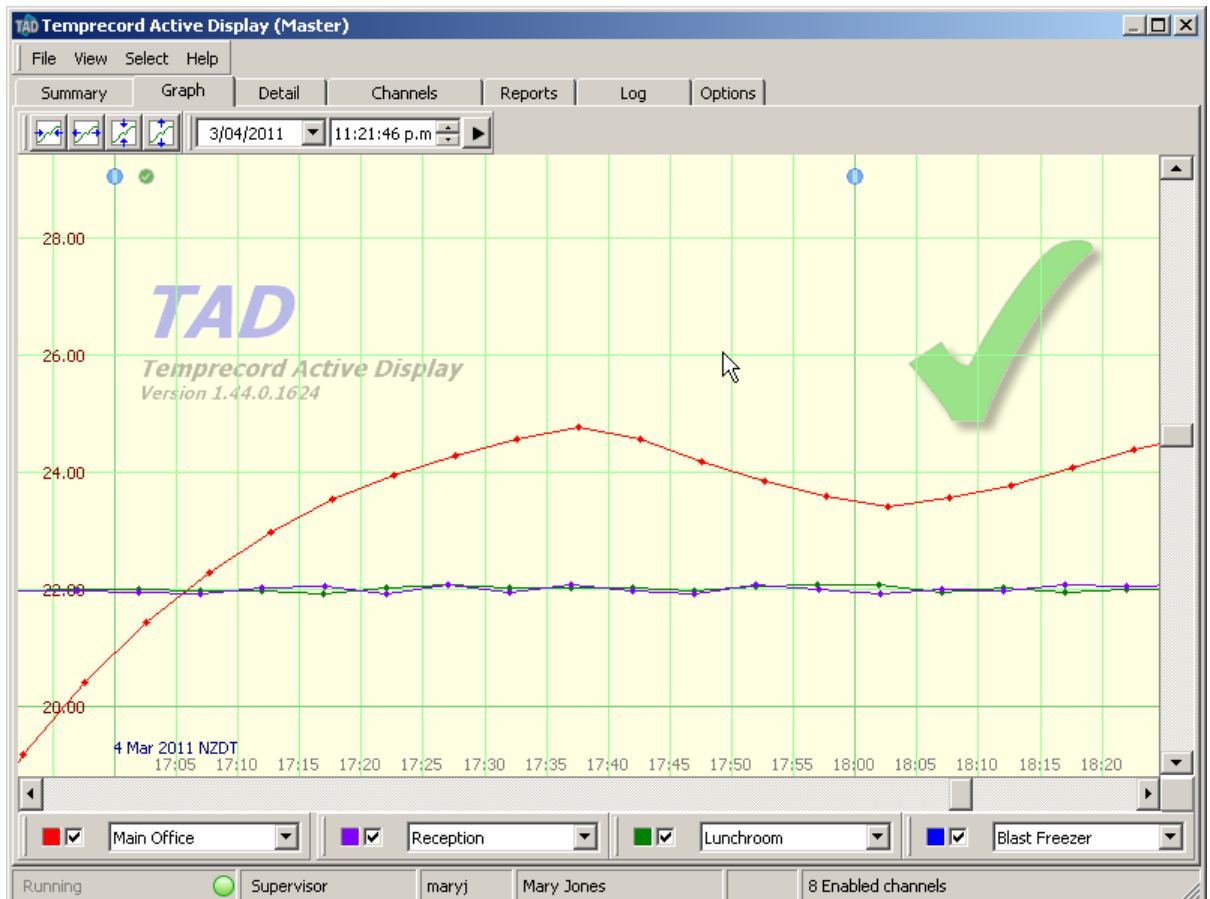


Figure 75: Main Menu: Graph Tab

See Also

- [Adding Channels to the Graph Tab](#)
- [Enabling Traces on the Graph](#)
- [Zooming - Using the Zoom Buttons](#)
- [Zooming - Using the Mouse](#)
- [Graph Hinting](#)
- [Event / Status Markers](#)
- [Graph Alert Indication](#)
- [Moving about the Graph](#)
- [Scaling the Graph when CO2 is displayed](#)

7.1 Adding Channels to the Graph Tab

It is possible to view up to four channels simultaneously on the **Graph** tab. To select a channel you wish to view, click anywhere on any one of the four drop-down list boxes at the bottom of the **Graph** screen, then click on the channel number and/or channel name. The data from the Channel you selected will now be displayed in graphical format on the **Graph** screen.

The four data traces are displayed in four different colours matching the coloured panel in the trace selector boxes.

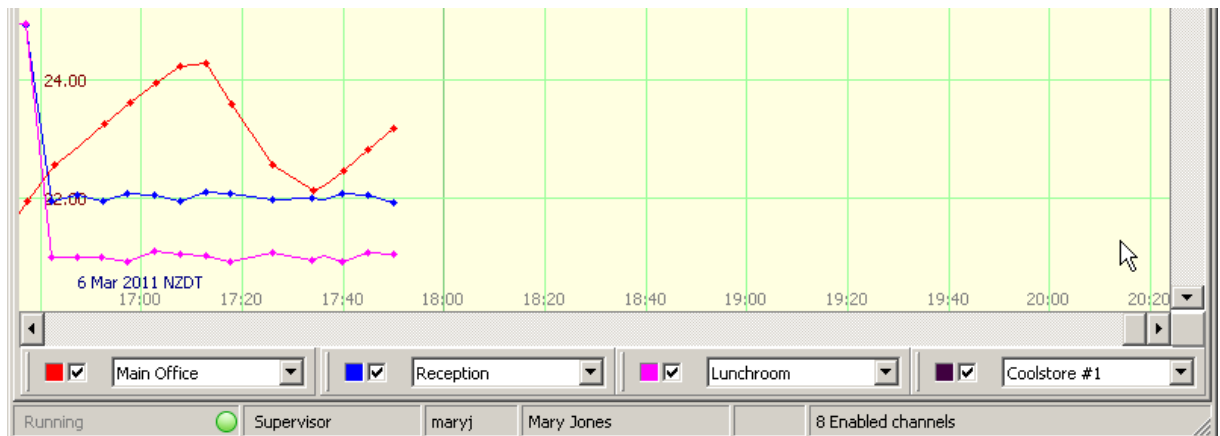


Figure 76: Graph Tab: Channel Selectors

The data trace on the **Graph** screen for the selected channel will match the colour of the channel selector list box it was selected from.

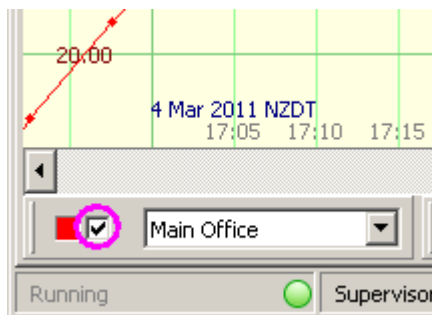
Repeat this procedure using the drop down list boxes for the three remaining channel selectors. Any combination of four channels can be viewed simultaneously on the **Graph** screen.

See Also

- [Enabling Traces on the Graph](#)
- [Zooming - Using the Zoom Buttons](#)
- [Zooming - Using the Mouse](#)
- [Graph Hinting](#)
- [Event / Status Markers](#)
- [Graph Alert Indication](#)
- [Moving about the Graph](#)
- [Scaling the Graph when CO2 is displayed](#)

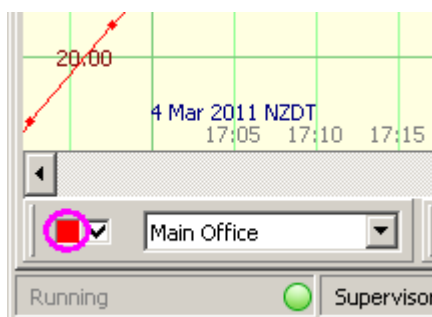
7.2 Enabling Traces on the Graph

Any one of the four graph trace or all four graph traces can be switched **ON** or **OFF** on the **Graph** screen. There is a checkbox on the left of each channel trace selector toolbar.



When the checkbox is clicked, the graph trace for that channel will toggle **ON** and **OFF** from view with each click.

Double clicking the coloured panel beside the checkbox allows you to change the colour of the displayed trace for that channel.



Where a channel is logging both temperature and humidity, both traces display with the same colour. You can differentiate the traces by hovering the mouse cursor above the trace and the parameter it is displaying will be shown in the hint that is displayed.

See Also

- [Adding Channels to the Graph Tab](#)
- [Zooming - Using the Zoom Buttons](#)
- [Zooming - Using the Mouse](#)
- [Graph Hinting](#)
- [Event / Status Markers](#)
- [Graph Alert Indication](#)
- [Moving about the Graph](#)
- [Scaling the Graph when CO2 is displayed](#)

7.3 Zooming - Using the Zoom Buttons

On the **Graph** tab, there are four zoom buttons located on the top left corner of the graph screen. It is possible to zoom to individual data samples for any channel. Individual data samples are represented on the graph trace as small circles when maximum zoom is achieved.

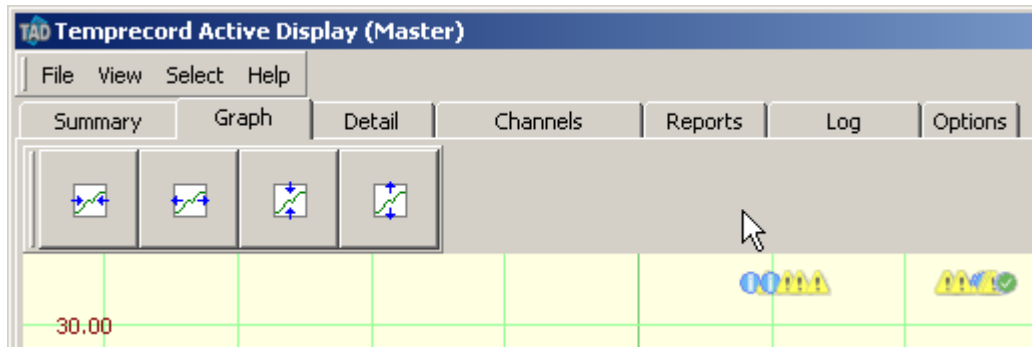


Figure 77: Graph Tab: Zoom Buttons



Zoom In Horizontally

The **Zoom in horizontally** button is clicked with a mouse or pressed on a touch screen to examine individual data samples more closely on the **Graph** tab. The time scale is adjusted on the x-axis.



Zoom Out Horizontally

The **Zoom out horizontally** button is clicked with a mouse or pressed on a touch screen to view as many data samples as possible on the **Graph** tab. The time scale is adjusted on the x-axis.



Zoom In Vertically

The **Zoom in vertically** button is clicked with a mouse or pressed on a touch screen to examine individual data samples more closely on the **Graph** tab. Temperature, humidity, pressure, or CO2 range scale is adjusted on the y-axis.



Zoom Out Vertically

The **Zoom out vertically** button is clicked with a mouse or pressed on a Touch screen to view as many data samples as possible on the **Graph** tab. Temperature, humidity, pressure, or CO2 range scale is adjusted on the y-axis.

Large zoom buttons

Large zoom buttons can be displayed for TAD systems that utilize a touch screen as the operator interface. By selecting the large zoom buttons, it is easier to zoom in and out on a displayed graph with a touch screen system.

To change from small zoom buttons to large zoom buttons while on the **Graph** screen, right click the mouse and select the **Large Buttons** option from the right-click menu. Another way to display large zoom buttons is by selecting **Show Large zoom Buttons** checkbox located on **Options/General** screen with a group heading **Graph**.

See Also

[Adding Channels to the Graph Tab](#)

[Enabling Traces on the Graph](#)

[Zooming - Using the Mouse](#)

[Graph Hinting](#)
[Event / Status Markers](#)
[Graph Alert Indication](#)
[Moving about the Graph](#)
[Scaling the Graph when CO2 is displayed](#)

7.4 Zooming - Using the Mouse

As well as using the [zoom buttons](#) to increase and decrease the graph displayed zoom factor, you can use the mouse where one is fitted, and mouse is of the type that has a mouse wheel:



Normally, turning the mouse wheel causes the graph to pan vertically, but if the **Ctrl** key is held down as the wheel is turned, the graph is zoomed in or out:

- Each upwards click of the mousewheel increases both the horizontal and vertical zoom factors by a factor of 1.50.
- Each downwards click of the mousewheel decreases both the horizontal and vertical zoom factors by a factor of 1.50.
- The point about which the zoom occurs is always the graph position under the mouse cross-hair cursor.

See Also

[Adding Channels to the Graph Tab](#)
[Enabling Traces on the Graph](#)
[Zooming - Using the Zoom Buttons](#)
[Graph Hinting](#)
[Event / Status Markers](#)
[Graph Alert Indication](#)
[Moving about the Graph](#)
[Scaling the Graph when CO2 is displayed](#)

7.5 Graph Hinting

The **Graph** screen is designed to provide status information, events occurrence information and individual data sample information on the graph trace including data retrieved from data loggers. This information is available by holding the mouse cursor steady over the graph trace or on any of the event / status markers appearing on the top part of the graph screen. When the mouse cursor is on a data sample or an event marker then a pop-up hint dialog is displayed for three seconds. To view the pop-up hint dialog again, move the mouse pointer away then back over point of interest. The following figure shows some of the viewable hints on the **Graph** screen.

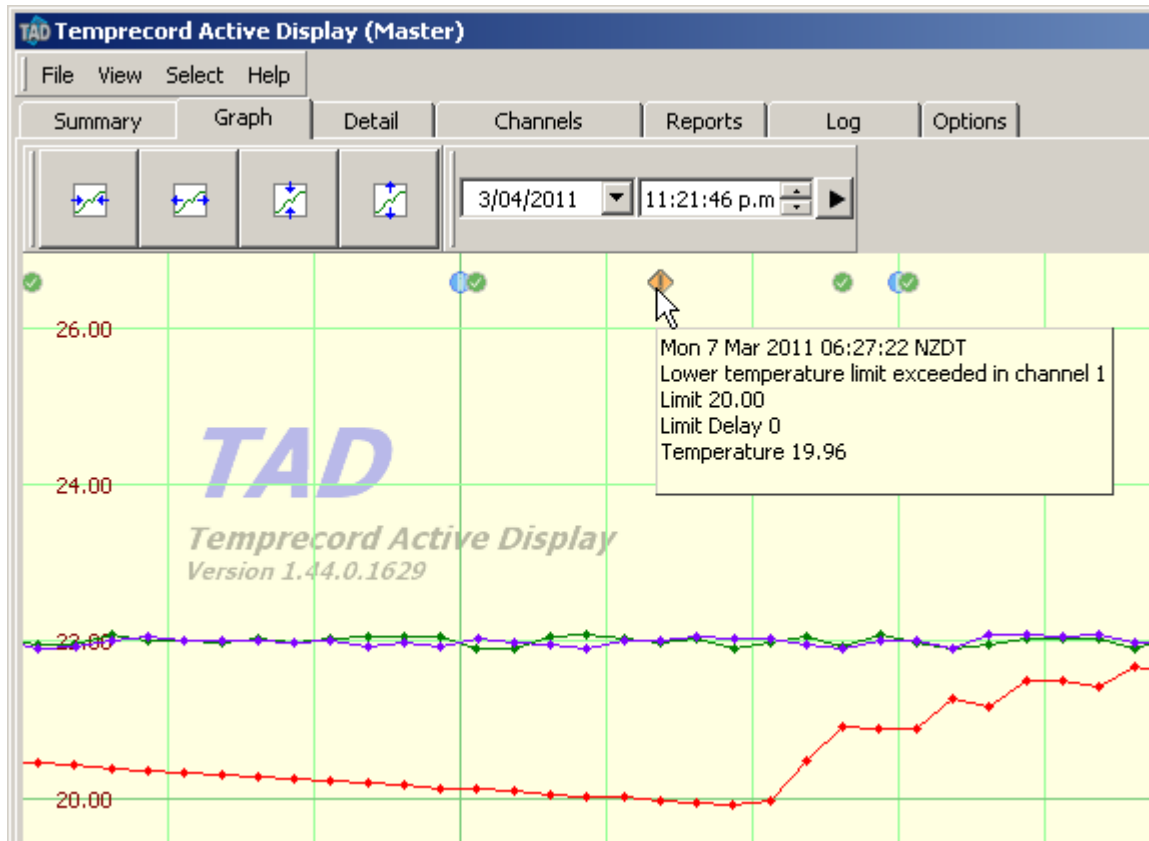


Figure 78: Graph Screen: Hint Pop-up Examples

See Also

- [Adding Channels to the Graph Tab](#)
- [Enabling Traces on the Graph](#)
- [Zooming - Using the Zoom Buttons](#)
- [Zooming - Using the Mouse](#)
- [Event / Status Markers](#)
- [Graph Alert Indication](#)
- [Moving about the Graph](#)
- [Scaling the Graph when CO2 is displayed](#)

7.6 Event / Status Markers

Event / status markers are a visual indication on the graph screen of an event such as freezer door open or an alert warning or an alarm condition or an important information message that has been recorded by the TAD system and entered into the TAD data/log file.

The event / status markers are displayed on the graph screen as small yellow, red, blue or green blocks as follows:

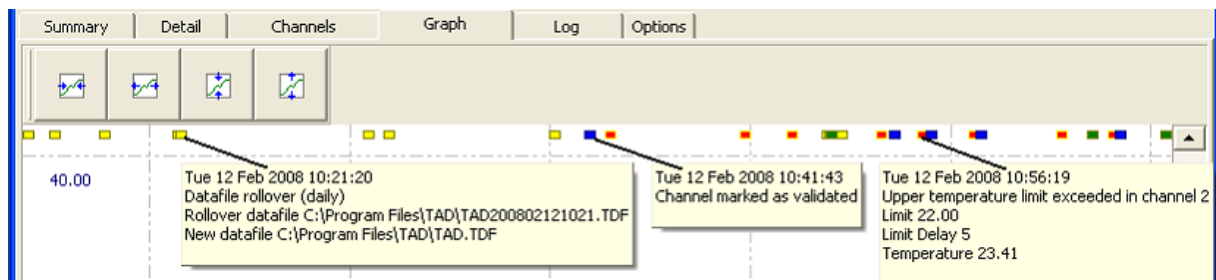


Figure 79: Graph Screen: Event / Status Markers

Event / Status Marker Information (Pop-up dialog)

The event / status marker pop-up dialog includes information such as:

- Date and time of the event or status condition
- Brief description of the event or status condition
- Time in alarm condition
- Individual data sample value recorded including the source channel number
- And many other conditions

Event / Status Marker Colours

- Green indicates warning limits exceeded.
- Yellow indicates that an event (i.e. freezer door open etc.) or a critical warning message was logged by the TAD system.
- red indicates that an event resulted in a critical alarm condition that required immediate remedy.
- Blue indicates that a pop-up alarm was acknowledged and subsequently logged by the TAD system.

See Also

[Adding Channels to the Graph Tab](#)
[Enabling Traces on the Graph](#)
[Zooming - Using the Zoom Buttons](#)
[Zooming - Using the Mouse](#)
[Graph Hinting](#)
[Graph Alert Indication](#)
[Moving about the Graph](#)
[Scaling the Graph when CO2 is displayed](#)

7.7 Graph Alert Indication

The graph alert indication is a graphic displayed at the top right of the graph display. It can be any one of several symbols that provide an indication of the state of the active channels. You can turn off the display of this alert indication from the [graph pop-up menu](#).



All channels free of error, warning or alarm conditions

At least one channel has a warning condition

At least one channel has an error condition

Multiple channels are showing a mixture of alarm or warning conditions



At least one channel has a temperature above upper limits condition



At least one channel has a temperature below lower limits condition



At least one channel has a humidity above upper limits condition



At least one channel has a humidity below lower limits condition



At least one channel has a pressure above upper limits condition



At least one channel has a pressure below lower limits condition



At least one channel has a CO2 concentration above upper limits condition



At least one channel has a CO2 concentration below lower limits condition

See Also

[Adding Channels to the Graph Tab](#)

[Enabling Traces on the Graph](#)

[Zooming - Using the Zoom Buttons](#)

[Zooming - Using the Mouse](#)

[Graph Hinting](#)

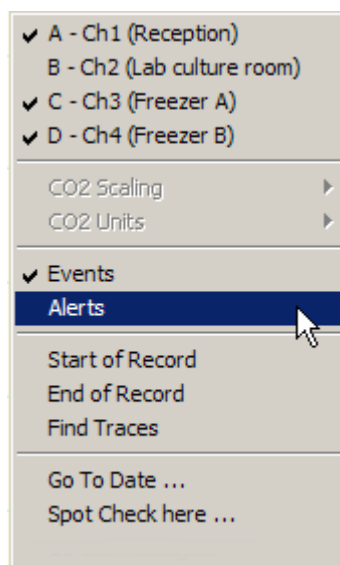
[Event / Status Markers](#)

[Moving about the Graph](#)

[Scaling the Graph when CO2 is displayed](#)

7.8 Moving about the Graph

By right-clicking on the graph tab you can display a pop-up menu with functions for moving about the graph.



Start of Record

Moves the graph position to the date of the oldest entry in the recorded data. Note that there may not be any recorded data visible with the set of channels you have enabled.

End of Record

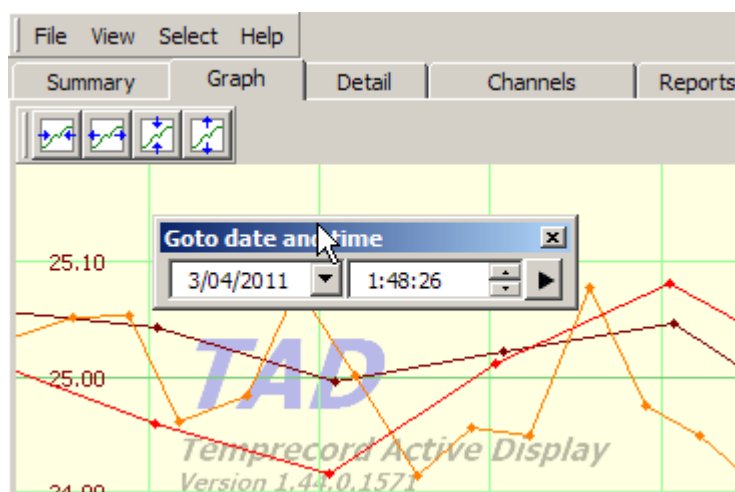
Moves the graph position to the date of the most recent entry in the recorded data. Note that there may not be any recorded data visible with the set of channels you have enabled.

Find Trace

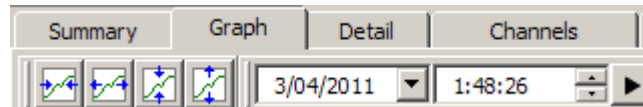
Attempts to find recorded data for any of the enabled trace channels at the current date and time. If none is found TAD will search forward and back a little way from the current position for traces. If any recorded data is found the time position and vertical position of the graph are set so the found data is in the middle of the graph.

Go to Date

Displays the Go to Date dialog as a floating toolbar.



When you alter the date and/or time in this toolbar the graph position is changed so the new time is in the centre. When you close the dialog, it is docked above the graph.



Using the keyboard to move about the graph

Spacebar, Backspace key

Pressing the **spacebar** while the graph is displayed scrolls forward one screen width, i.e. the position at the right-most edge becomes the position at the left-most edge. Pressing the **backspace** key scrolls back one screen width.

Right Arrow, Left Arrow

Pressing the **Right-arrow** key while the graph is displayed scrolls forward one minor horizontal time graduation. Pressing the **Left-arrow** key scrolls back one graduation.

Ctrl-Right Arrow, Ctrl-Left Arrow

Pressing the **Ctrl-Right-arrow** key while the graph is displayed scrolls forward one day. Pressing the **Ctrl-Left-arrow** key scrolls back one day.

Home, End

Pressing the **Home** key while the graph is displayed moves to the start of the datafile, so that the first entry is displayed at the left-hand edge of the graph. Pressing the **End** key moves to the end of the datafile, so that the last entry is displayed at the right-hand edge of the graph.

Using the mouse to move about the graph

If you click on the graph and drag the mouse cursor while the mouse button is pressed, the current horizontal and vertical position of the graph is moved with the mouse cursor.

See Also

[Adding Channels to the Graph Tab](#)

[Enabling Traces on the Graph](#)

[Zooming - Using the Zoom Buttons](#)

[Zooming - Using the Mouse](#)

[Graph Hinting](#)

[Event / Status Markers](#)

[Graph Alert Indication](#)

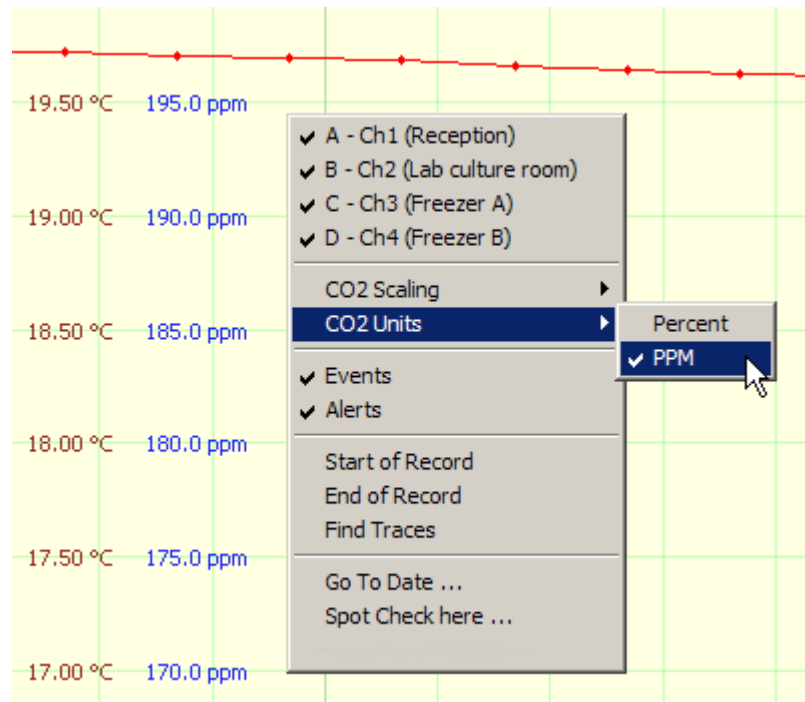
[Scaling the Graph when CO2 is displayed](#)

7.9 Scaling the Graph when CO2 is displayed

Displayed concentrations of CO2 can vary widely, depending on the environment being monitored. For example, a controlled environment for growing cultures might be maintained at around 5% CO2 concentration, whereas a work environment would be expected to have CO2 concentrations well below 0.05%.

For this reason, TAD can display CO2 concentration in either percent of parts per million (ppm), and it is also possible to select the scale factor between the temperature display axis, and the CO2 concentration display axis.

To access the CO2 graph scaling options or change the CO2 display to percent to ppm, right-click on the graph:



Note that the Graph CO2 scaling factor is defined as the value that the temperature axis value is multiplied by to get the corresponding CO2 axis value in PPM. So, if the Graph CO2 scaling factor is set to 100, then a temperature of 20C will also be the graticule for a CO2 concentration of $20 \times 100 = 2000$ PPM (or 0.002% if the CO2 display units are set to percent rather than PPM).



The options to select the CO2 units or display scaling will be grayed out if there are no channels configured for logging of CO2 displayed on the graph.

See Also

- [Adding Channels to the Graph Tab](#)
- [Enabling Traces on the Graph](#)
- [Zooming - Using the Zoom Buttons](#)
- [Zooming - Using the Mouse](#)
- [Graph Hinting](#)
- [Event / Status Markers](#)
- [Graph Alert Indication](#)
- [Moving about the Graph](#)

8 Log Tab

Overview

The Log tab is a read-only tab viewable at all access levels.

The log tab displays all events and information messages recorded as log entries with date and time stamps, coloured icons, description of the event / status and/or info messages. Also where applicable the log entry source channel number is also displayed and recorded. All log entries are recorded in the `tad.tdf` data file.

Each of the logged entries can be viewed in more detail by either double-clicking anywhere on the log entry line or by right-clicking the mouse and selecting **Open this Event** from the drop-down dialog box. Logged Event Detail dialog is displayed and is available for every entry of the log.

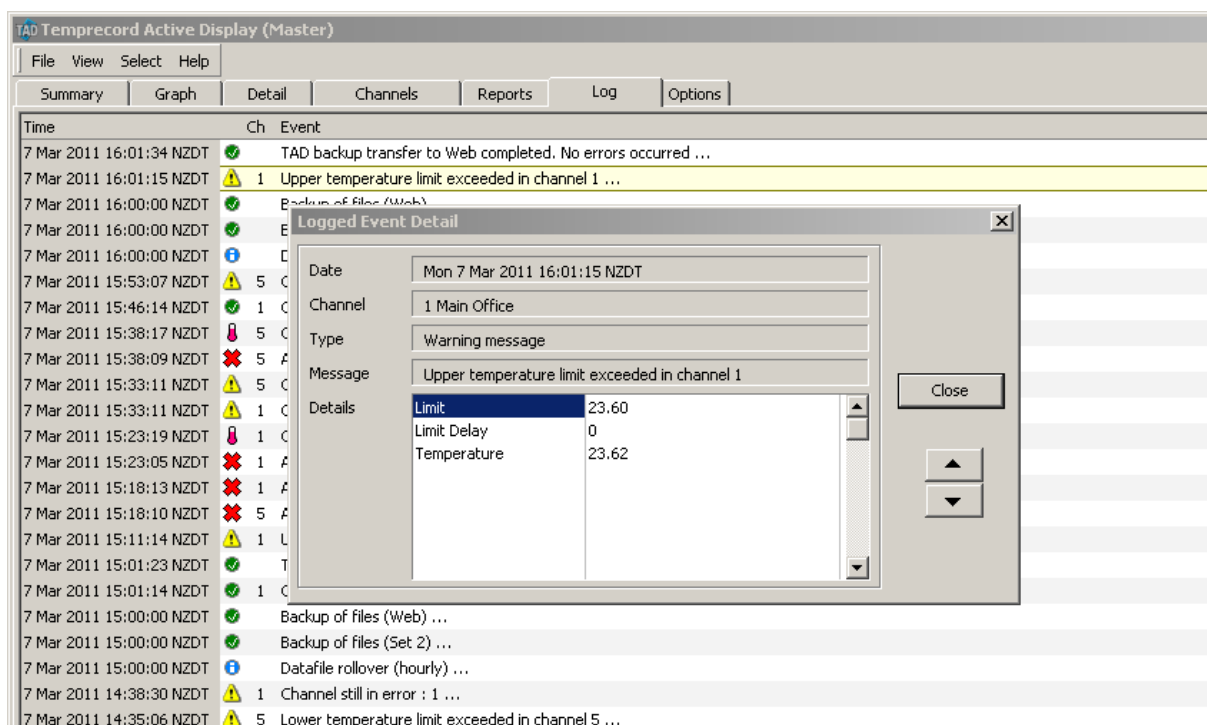


Figure 80: Log Screen: Logged Event Detail

8.1 Log Entry

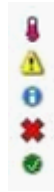
There are four columns of information displayed on the log screen. The columns are combined together on one horizontal line which makes up a log entry recorded by the TAD System.

Time Column

The Time column displays the exact date and time when an event occurred. This is also recorded and added to the TAD system log file.

Logged Event Icons Column (No Title)

This column displays an icon (symbol) beside the date and time stamp, which indicates the status of a channel at the date/time the event occurred and was recorded to the log file by the TAD System. The icons are described as follows:



Alarm message
Warning message
Information message
Error condition detected
Channel recovered message

Ch Column

The Ch column displays the channel number related to the log entry if applicable. Global log entries such as Access Level Changed will display nothing in this column.

Event Column

This column displays the actual event messages that the TAD system wrote to the log file. It is a brief description of the event that occurred at the date and time specified in the Time column.

8.2 Logged Event Detail

To highlight a log entry on the log screen, single-click anywhere on the logged entry line. The selected logged entry is highlighted with a yellow bar across the line. Each of the logged entries can be viewed in more detail by either double-clicking anywhere on the logged entry line or by right-clicking the mouse and selecting **Open this Event** option from the drop-down menu dialog box. The **Logged Event Detail** dialog is displayed and is available for every entry of the log.

There are three buttons on this dialog box: up/down arrow buttons and **Close** button.

When the **Logged Event Detail** dialog box is open, it is possible to view other logged entries in detail by clicking on the up or down arrow buttons. Click **Close** or the small red box with X to close this dialog box.

All logged entries on the **Log** screen have a right-click drop-down list menu dialog. When any of the logged entries are right-clicked, a drop-down list menu dialog displays four options. The first three options are directly linked to the logged event, i.e. selecting the **Open this Event...** option displays the **Logged Event Detail** dialog. Selecting the **Find on Graph** option pin-points the logged entry on the **Graph** screen and selecting the **Refresh** option or pressing **F5** key on the keyboard updates and refreshes the entries and the data displayed on the screens.

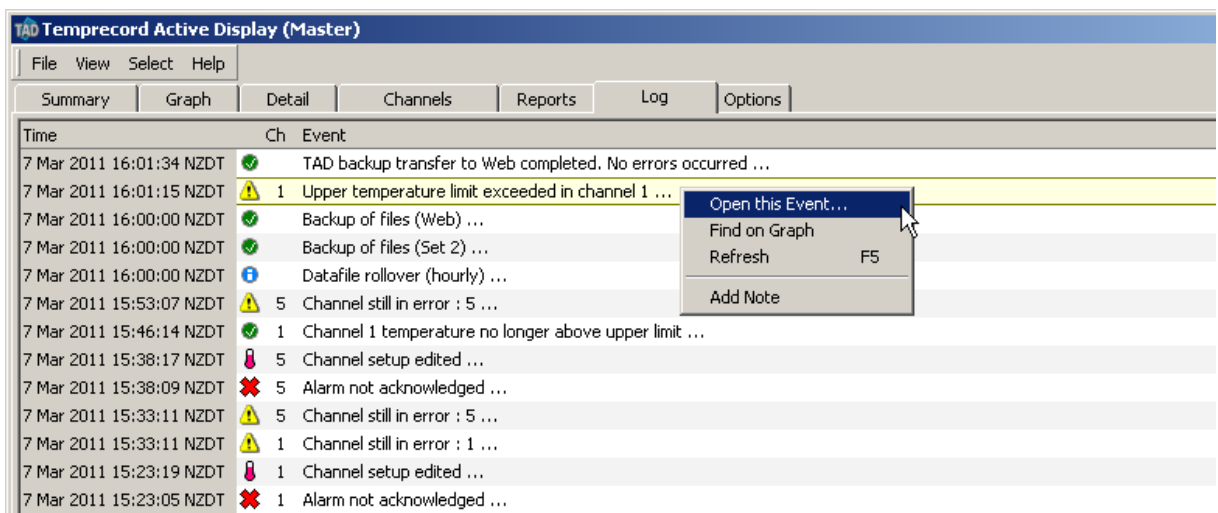


Figure 81: Log Screen: Logged Entry Right-click Menu

8.3 Finding Logged Events on the Graph

The Find on Graph function is available as second option on the right-click menu dialog box for any event record.

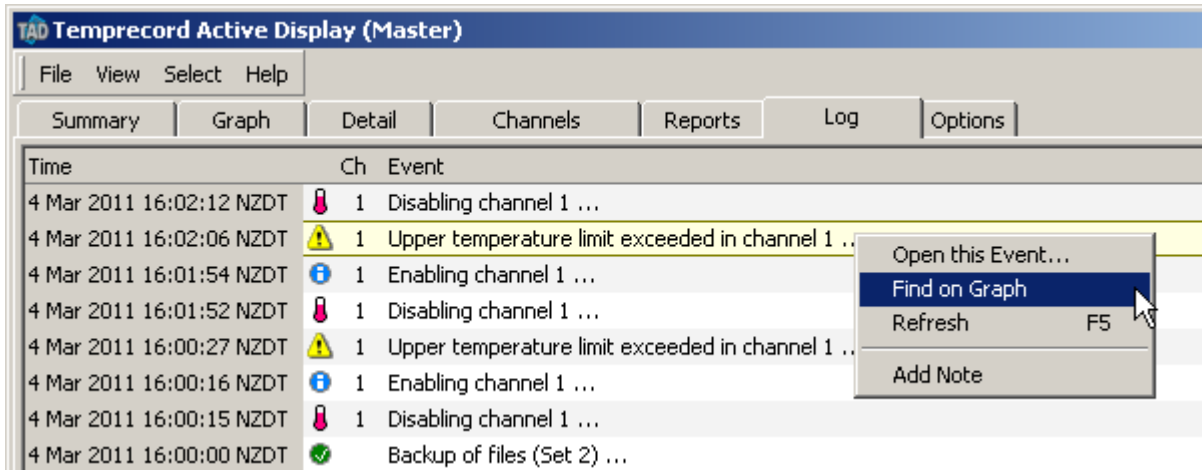
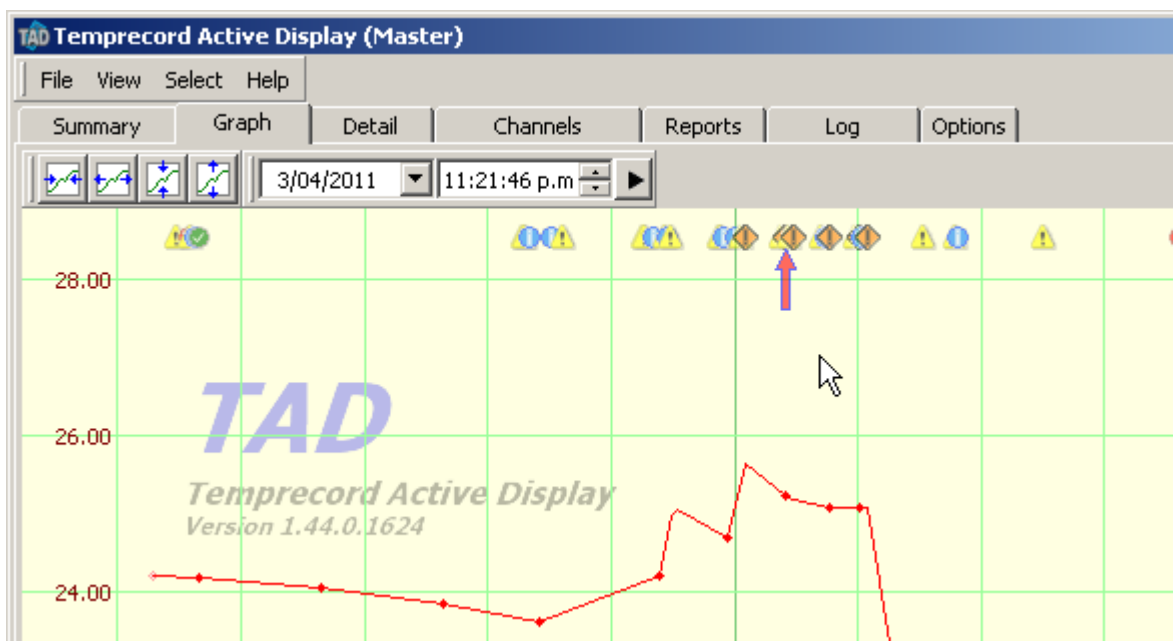
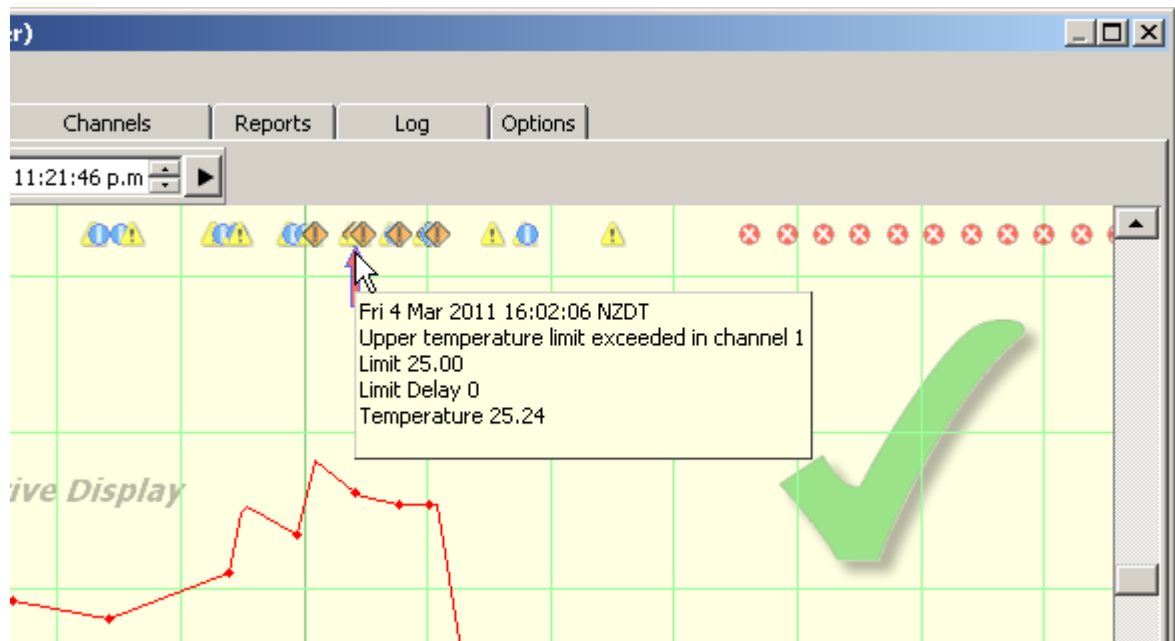


Figure 82: Event Record: Graph Tab / Find on Graph Feature

Clicking Find on Graph option for the highlighted logged event record will direct the user to the Graph screen. The graph screen is positioned so that the record of interest is positioned horizontally in the centre of the screen, with an arrow indicating the position of the event.



This feature is quite useful when locating event records on the graph screen that is displaying a large data file. On the Graph screen, place the mouse pointer over the status/event marker located directly above the arrow to see a hint displayed with the details of the event.



8.4 Adding a Note to the Event Log

The **Add Note** option facilitates adding special notes relating to the event record for future reference. It is helpful if the original event description is also included in the **Detail** section of the **Add User Note** dialog.

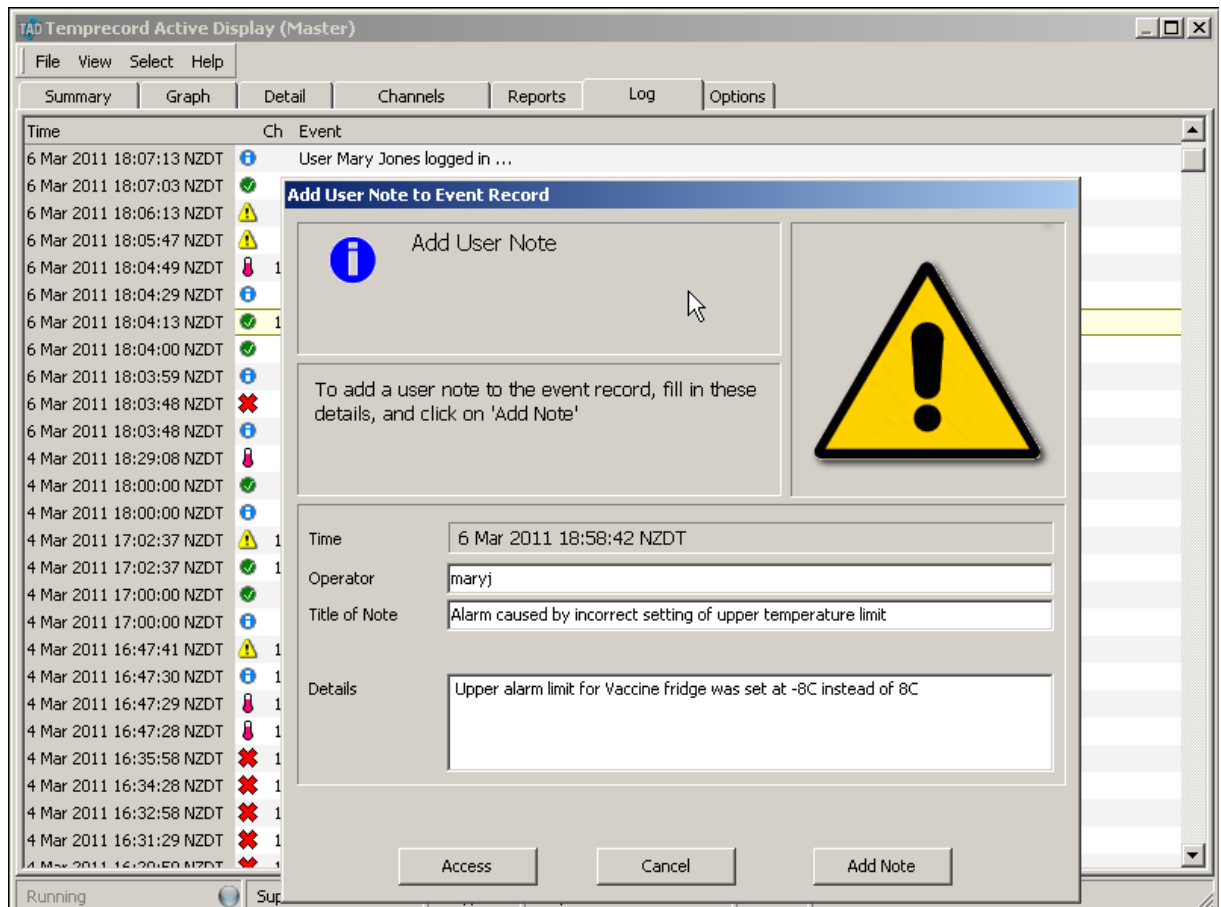


Figure 83: Event Record: Right-click Menu / Add User Note Feature

User Note

The added note is logged as user note: entry on the log screen and the special notes are included in the Logged Event Detail dialog as follows:

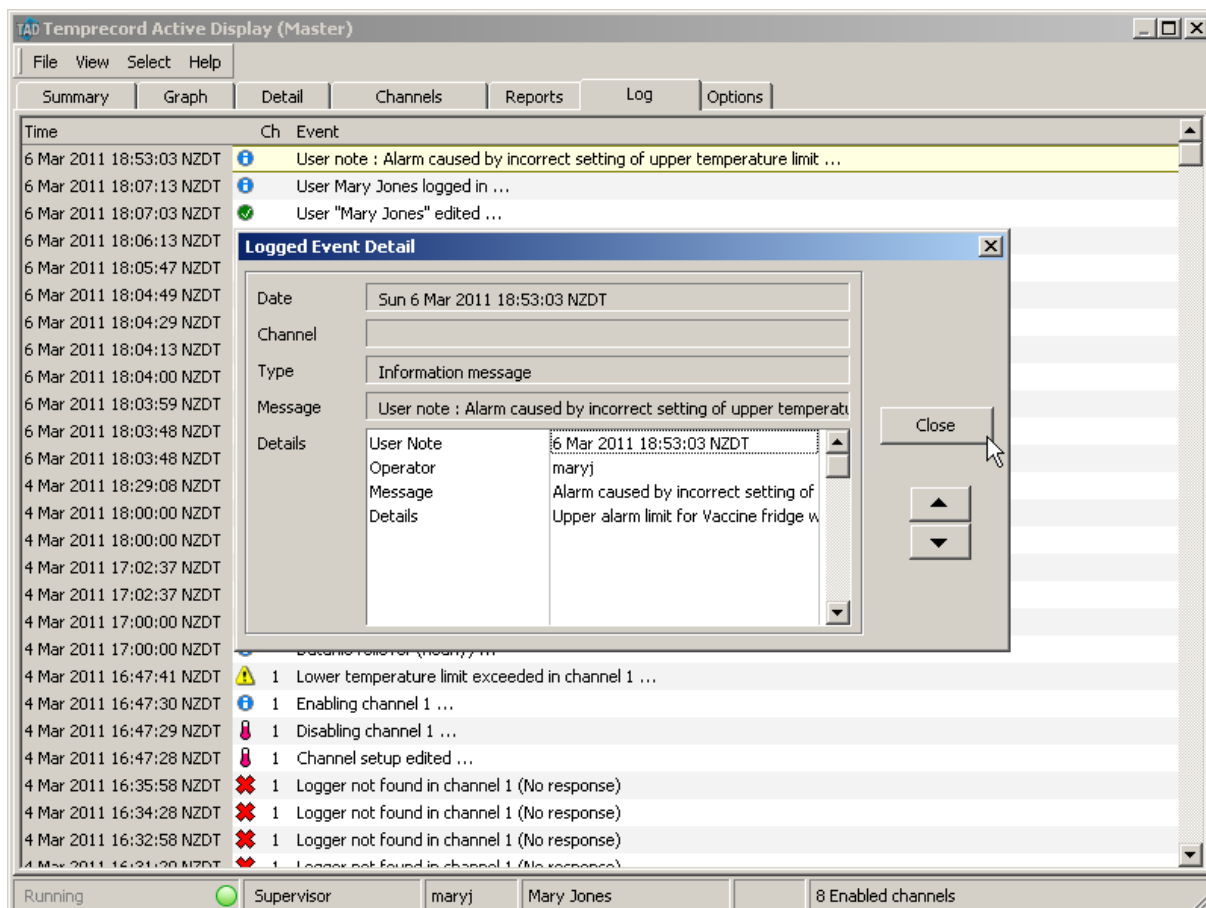


Figure 84: Event Record: User Note / Logged Event Detail

8.5 Pop-up Alarms

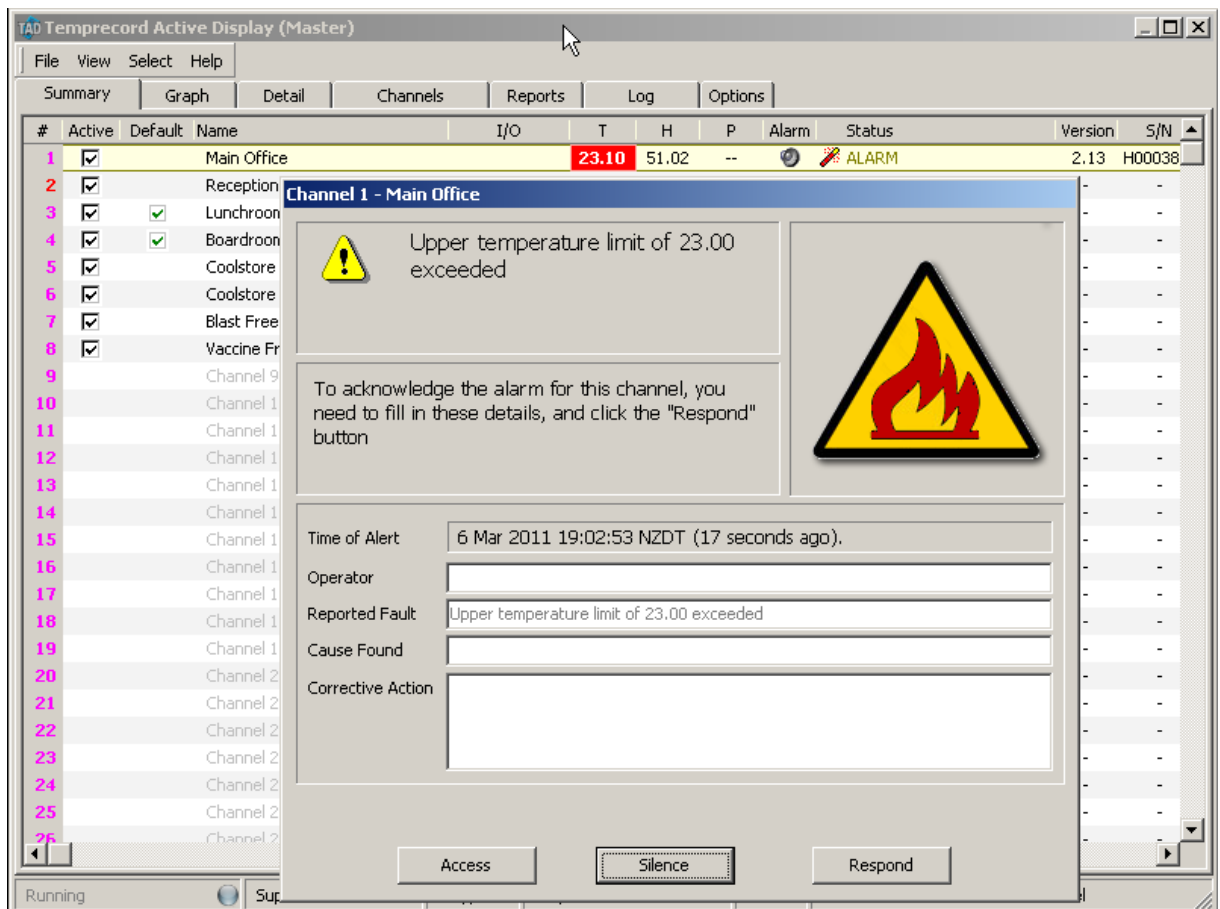


Figure 85: Pop - Up Alarm Message

Overview

The figure above shows a pop-up alarm message dialog that will display for any channel that has goes into an alarm condition.

Click the **Silence** button to turn off the audible siren or the remote alarm.

To acknowledge the alarm message type on the appropriate fields presented on the pop-up message dialog then click on the **Respond** button to clear the pop-up alarm message from screen. The information entered here is logged.

The information required to clear the pop-up alarm message is as follows:

Operator Name - this is the person's name that acknowledged and cleared the popup Alarm message.

Cause Found - A brief description of the reason the Alarm pop up message was activated.

Corrective Action taken - A brief description of what action was taken to correct the temperature and clear the Alarm popup message.

8.6 Expanded Event Detail (PDF Channel Report)

There is also a fourth field called **Reported Fault** that you do not need to enter any information into this field has its contents filled in automatically by TAD describing the reason the pop up alarm was triggered.

Warning message	25 Feb 2008 10:54:53	(warning) Upper temperature limit exceeded in channel 2
	Limit	23.00
	Temperature	23.89
Alarm message	25 Feb 2008 10:55:33	Upper temperature limit exceeded in channel 2
	Limit	23.00
	Limit Delay	2
	Temperature	23.91
Information message	25 Feb 2008 10:59:24	Alarm acknowledged by HarishK
	Alert flagged	25 Feb 2008 10:55:33
	Operator	HarishK
	Fault Reported	Upper temperature limit of 23.00 exceeded
	Cause Found	Door left open...
	Corrective Action	Close Door.
Information message	25 Feb 2008 11:00:13	Channel 2 temperature no longer above upper limit

Figure 86: Expanded Event Detail: PDF Channel Report

If you do not respond to the Reported fault the pop-up alarm will reappear when the next out of range environment sample is processed by the TAD System.

This will continue until the pop-up alarm message has been responded to or the environmental conditions being monitored are between the upper and lower limits for the channel or the fault condition has been remedied.

9 Options Tab

(Configurable at Administrator Level only)

Click **Options** to access configuration of global settings. Please note that trained Temprecord personnel will configure most of the **Options** settings during commissioning.

An access level higher than **Supervisor** is required to change configuration options here.

When you click the **Options** tab, the following screen will display:

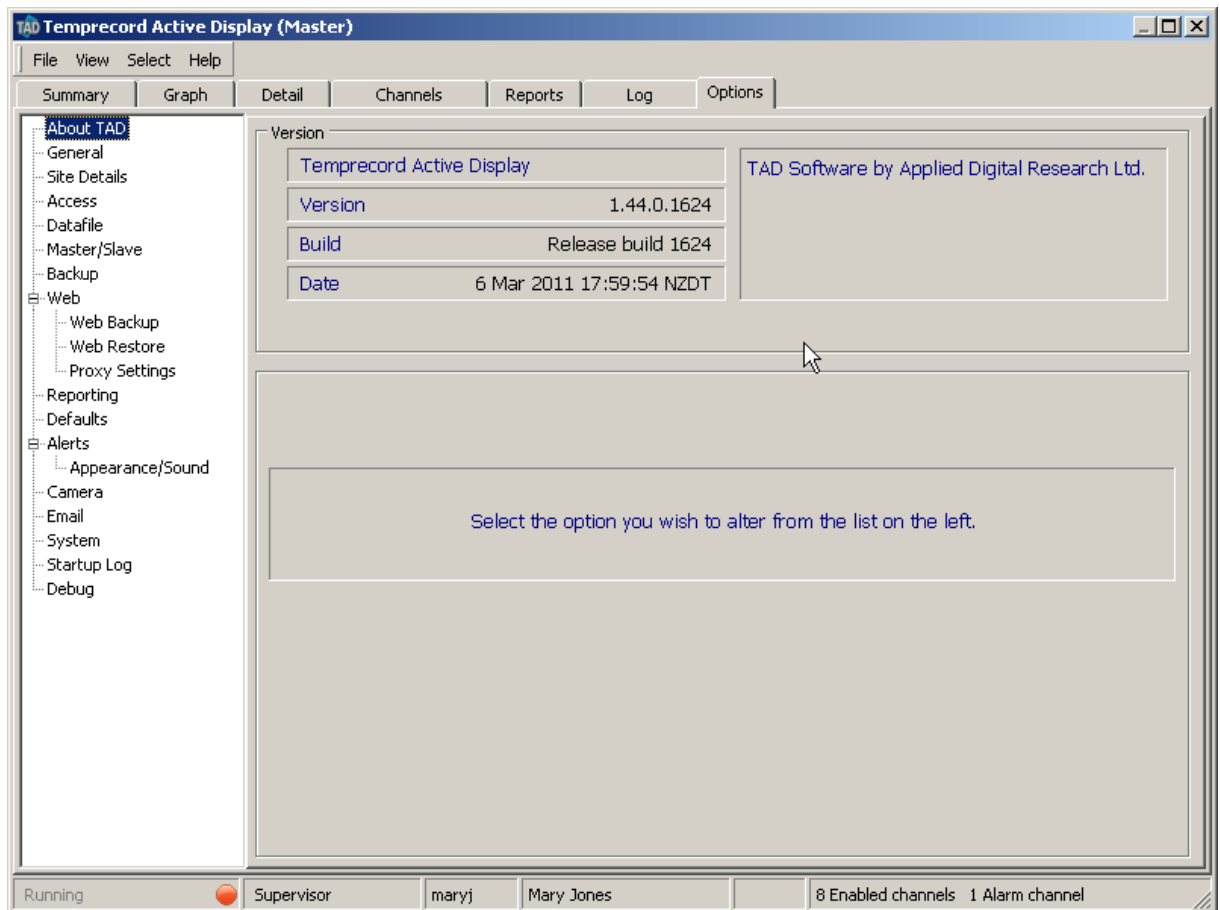


Figure 3: TAD Menu: Options Tab

The left column displays a list of all the configuration pages available within the **Options** tab. Clicking on any one of them will display a screen with a subset of options settings.

See Also:

- [About TAD](#)
- [Access Options](#)
- [General Options](#)
- [Site Detail Options](#)
- [Datafile Options](#)
- [Master/Slave Options](#)
- [Backup Options](#)
- [Web Options](#)
- [Validation Options](#)
- [Reporting Options](#)

[Defaults Options](#)
[Alerts Options](#)
[Sentinel Options](#)
[Camera Options](#)
[Screen Capture Options](#)
[Email Options](#)
[Email "From:" Address Options](#)
[System Options](#)
[Startup Log](#)
[Error Log](#)
[Debug Options](#)
[Meta-strings](#)

[Adminstrator Backup and Restore](#)

9.1 About TAD

When About TAD is clicked, information is displayed about the TAD application:

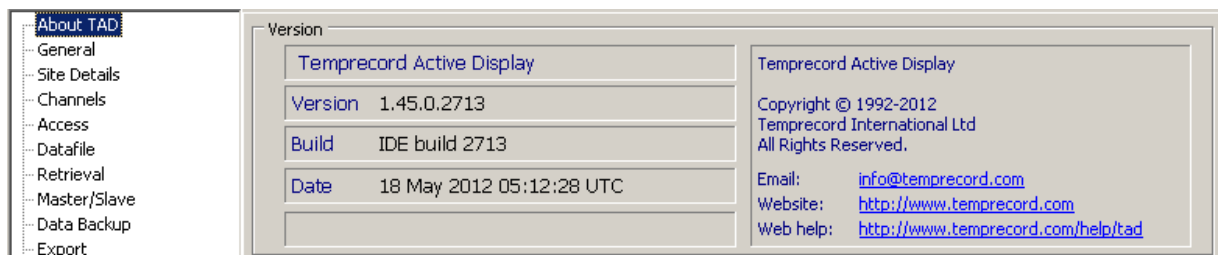


Figure 4: Options Tab: About TAD

Important Note

When communicating with Temprecord technical staff on technical issues, it is important to provide the following information:

- the Version of TAD you have installed (e.g. 1.47).
- the platform (e.g. Windows XP)
- your site details.

9.2 Access Options

(Configurable at Administrator Level only) Overview



The access control system implemented in TAD can be shared amongst other Temprecord applications that also implement it, such as MLV (Multiple Logger Validation). This means that usernames created with TAD will be available when running MLV also. In order for this sharing to work properly, both applications must reference the same Master.acf file. The default installation location of this master file is such that this will be the case, but earlier versions of TAD and MLV did not store the master file in a shared location and it may be necessary to move it. See the topic [Moving the master password file](#) location for the procedure to follow.

A user with TAD Administrator rights will need to configure the TAD users and passwords before any configuration changes can be applied to the TAD application.

When Access is clicked from the Options tab, the following screen is displayed:

Passwords and Access

Current Access Level: Supervisor

You can alter most settings at this access level, and create and edit operator accounts. You can also change your own password.

Buttons: Login, Logout, Change Password, New User, Edit User, Delete User

Users

#	Access Level	User Name	Name
1	Operator	mikes	Michael Smith
2	Operator	maryj	Mary Jones

Master User Information File

C:\Master.acf

Access Timeout (Min): 15

Hide Username: ☒

Figure 5: Options Tab: Access Screen

This screen allows creation, deletion and editing of user accounts, and login and logout of users.

TAD implements its own access system to limit access to certain functions of the program to groups of users. The TAD system of users and access levels is completely independent of the system Windows implements for users.

There are four access levels defined in TAD. In order of increasing ability, they are: No access, Operator, Supervisor and Administrator. Although the access levels have specific names, the assignment of capabilities to each level within the TAD application is arbitrary.

No access (for anyone with physical access to the computer running TAD)

When TAD first starts, the access level is set to the lowest level - i.e. essentially no access. In general it is not possible to carry out any operations from this access level, apart from view the various tabs in TAD. There is access to the "Silence" button on the pop-up screen to the mute siren, but alerts cannot be acknowledged.

There is no access to reports shutdown of the TAD application is not possible.



The TAD application will degrade to the **Lowest** level after a timeout period (normally 15 minutes) where there is no keyboard or mouse activity.

Operator Access (for Authorised site operators)

A minimal set of capabilities is implemented at the **Operator** access level, such as generation of reports. Operators have no access level or user administration capabilities, other than the ability to change their own password. Configuration/setup access is not allowed. Access is allowed to **Options/Alerts/Aux Alarm** outputs buttons, acknowledgement of screen alert pop-up messages and silencing of the alarm.

Access is also possible to **Options/Reporting** screen with access to **Report On Demand** fields (**Start & End Date/Time** fields), **"Generate Report for Channel"** button and **Channel** select, **"Generate Summary Report"** button and **"Generate Regular Summary Report Now"** button. All other access is restricted. Shutdown of the TAD application is not possible.

Supervisor Access (Authorised site supervisors / management)

The **Supervisor** access level allows you to change most settings in TAD concerned with channel logging and reporting setup. Supervisors can create and delete **Operators** and change **Operator** passwords, and change their own passwords. This access level allows access to some of the channel setup fields except as noted below. Supervisor access allows editing of operator user account details, including assignment of a different **Operator** level password for any operator user. Shutdown of the TAD application is permitted.

No access is available to [validation](#) mode, [Site details](#) fields, [Datafile](#) screen options, [Backup](#) screens, [Web](#) screen, [Email options](#) or debug screens. in the [channel setup](#) dialog, the [COM Port](#) selection and the digital I/O enable/disable and the IP Address fields are restricted

Administrator Access (for authorised site personnel and Temprecord administrators only.)

This is the highest access level and provides the capability to alter installation settings and low-level hardware settings. **Administrator** access will not normally be required by Temprecord customers and is usually restricted to Temprecord personnel. Administrators can create and delete **Operators** and **Supervisors** and change **Operator** and **Supervisor** passwords, and change their own passwords. Access to all other TAD parameters and [validation](#) mode is also allowed.



No user can find out the password of another user, regardless of access level. Users of any given access level can change passwords of users of lower access levels, and change their own password, but they cannot inspect passwords (including their own).

If you forget your password, the only option is to have a user with a higher access level reset your password, or create another account for you to use.

Login

Click the **Login** button to enter the user name and password for your **Access Level** in the dialog box as per the following screen:

Figure 6: Options Tab: Access / Change Access Level Screen

Logout

Click the **Logout** button to reset TAD to the lowest access level. TAD will also logout if a period of inactivity expires (see the **Access Timeout** below).



Another way of logging out is to click the OK button with blank username and password fields.

Changing your Password

Click the Change Password button to alter your own password:

The 'Change Password' dialog box contains three text input fields labeled 'Current Password', 'New Password', and 'Confirm'. Each field is filled with asterisks. To the right of the fields are two buttons: 'OK' and 'Cancel'. A mouse cursor is pointing at the 'OK' button.

Figure 7: Options Tab: Access / Change Password Dialog

To alter your own password, you must enter your current password, and enter the new password, and a confirmation of the new password. The password will be changed if you supplied the correct current password, and the new password and confirm fields were the same. Passwords are not case sensitive, and may contain embedded spaces.



When choosing a new password or editing an existing password, there may be restrictions on the form the password may take. Specifically, TAD may enforce:

- a minimum password length
- a minimum number of letters ("A".."Z", "a".."z")
- a minimum number of digits ("0".."9")
- a minimum number of "special" characters ("!"#\$%&*()_+-=")

In addition, passwords containing spaces are not allowed. Any leading or trailing spaces are ignored. The minimum numbers of characters in each of the requirements listed above will be set by your administrator at the time of installation.

New User

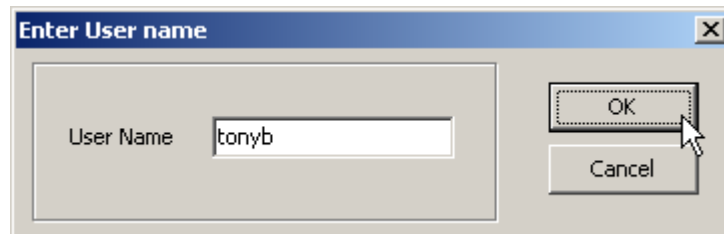
Click the New User button to create another user account.

The 'Create New User' dialog box contains five input fields: 'Name' (text), 'Access Level' (dropdown menu), 'User Name' (text), 'Password' (text), and 'Confirm' (text). The 'Name' field contains 'Tony Blair', 'Access Level' is set to 'Operator', 'User Name' contains 'tonyb', and both 'Password' and 'Confirm' fields are filled with asterisks. To the right of the fields are two buttons: 'OK' and 'Cancel'. A mouse cursor is pointing at the 'OK' button.

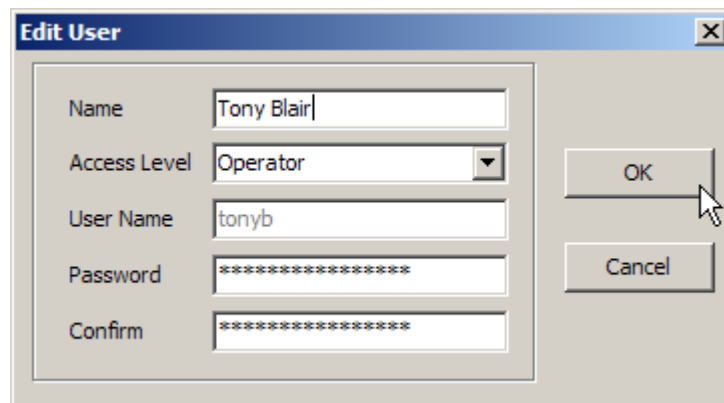
You can only create users at access levels lower than your own access level. For example, Supervisor users can only create Operator users

Edit User

Click the **Edit User** button to change the details of another user account.



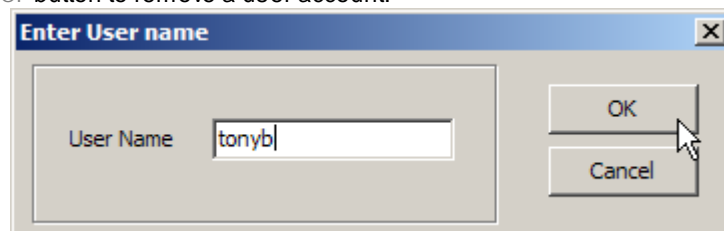
Enter the user name of an existing user and click the **OK** button. Case is not important when specifying usernames. The following dialog will display:



- You can only edit the details of users of a lower access level than yourself. If you need to change your own password you should click on the **Change Password** button.
- Note that you cannot change the username. If you want to change a username, delete the old user and create a new user with the desired name.
- You can change the access level of the user, but you cannot set the access level to any level higher than the level below your own. For example, if you are logged in as a **Supervisor**, you can only edit **Operator** accounts, and you cannot change the access level of those users. **Administrators** can only edit **Operator** and **Supervisor** accounts, and can only change the access level to **Operator** or **Supervisor**.

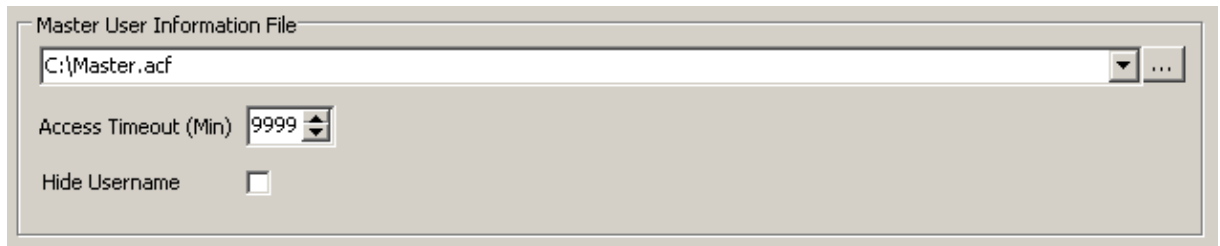
Delete User

Click the **Delete User** button to remove a user account.



You can only delete the accounts of users of a lower access level than yourself.

Master User Information File



The **master information file** is the name and path of the file that contains the user account information for the TAD users. The account information is encrypted and it is not possible to find out user names or passwords by inspecting this file.



Most of the functions that TAD carries out require a user to be logged in to the access control system (note this is independent of the Windows users). If the file **Master.acf** should ever become damaged or unavailable it may not be possible to log in to the MLV access control system. TAD attempts to protect against this by saving a backup copy of the file called **Local.acf**. If the **Master.acf** file is not found, the local copy is used. The local copy is kept "up to date" with the master copy at all times where possible. See [Changing the Location of the Master User Information File](#) for more details.

Access Timeout

The **access timeout** determines how long before TAD relegates the access level to the lowest level after a period of inactivity.

Hide Username

If the **Hide Username** checkbox is checked, then usernames are displayed with '*' characters as you type them, and the currently logged in user is not shown on the status line at the bottom of the TAD main form.

Passwords are never shown as you enter them.

See Also

- [Changing the access level](#)
- [Moving the master password file](#)
- [Recovering from lost or damaged password files](#)

9.3 Moving the master password file

The access control system implemented in TAD can be shared amongst other Temprecord applications that also implement it, such as MLV (Temprecord Multiple Logger Validation). This means that usernames created with MLV will be available when running TAD also. In order for this sharing to work properly, both applications must reference the same **Master.acf** file. The default installation location of this master file is such that this will be the case, but earlier versions of TAD and MLV did not store the master file in a shared location and it may be necessary to move it.

The following procedure assumes you have an existing installation of TAD and the master password file **Master.acf** (containing your existing users and password) is stored in **C:\Documents and Settings\All Users\Documents\Temprecord\Application Data\TAD** (which is where previous versions of TAD stored the file).

- Open Windows Explorer and navigate to the folder where **Master.acf** is currently stored.
- Make a backup copy of the file.
- Start TAD and click on the Access tab

- Note the name of the folder and filename specified in the [Master Password File](#) control. This should show:

```
C:\Documents and Settings\All Users\Application Data\Temprecord\Master.acf
```

after a new installation, but it may also be filled in the location of your current [Master.acf](#) file.

- If the location shown in the [Master Password File](#) control is the location of your current file you need to copy [Master.acf](#) to the folder

```
C:\Documents and Settings\All Users\Application Data\Temprecord\Master.acf
```

and edit the [Master Password File](#) control contents to this file and pathname also.

- Exit TAD.
- Start TAD again. Check that the location shown in the [Master Password File](#) control is now:

```
C:\Documents and Settings\All Users\Application Data\Temprecord\Master.acf
```

and that TAD "knows" about your existing user names and passwords.

The key points to remember about the access control system are:

- TAD checks for the master file first. If this is not found, it checks for the backup copy, normally stored at

```
C:\Documents and Settings\<user>\Local Settings\Application  
Data\Temprecord\Local.acf
```

- If TAD doesn't find a [Master.acf](#) file at:

```
C:\Documents and Settings\All Users\Application Data\Temprecord\Master.acf
```

or a [Local.acf](#) file at:

```
C:\Documents and Settings\<user>\Local Settings\Application  
Data\Temprecord\Local.acf
```

at installation time, it installs a "starter" password file containing one administrator user called "admin" with a password of "admin". The intention here is to provide you with temporary administrator access which is required to change the path of the [Master.acf](#) file.

Once you have changed the path, exited TAD, started TAD again and finally, exited TAD again, this "start" file should have been overwritten with your existing user set details.

- If you make any changes to the user set (adding or deleting users, changing passwords, etc) TAD always saves the changes back to the location it read the [Master.acf](#) file from. If you change the location of the [Master.acf](#) file, the new location will not be used until you exit TAD and start it again. For this reason, you should exit TAD and restart TAD as soon as you have altered the path to the [Master.acf](#) file.

See also:

[Access Control System](#)

[Changing the Access Level](#)

[Recovering from lost or damaged password files](#)

9.4 Recovering from lost or damaged password files

It may be that you need to recover from a lost or damaged password file. Once TAD "loses" the path to a password file and is unable to read the backup copy you will be unable to gain the administrator access needed to reset the path to the Master Password Information file.

The following steps should get you going again. You will most likely require Windows administrator access to perform this task.

- Using Windows explorer to search for files, locate all copies of the files [Master.acf](#) and [Local.acf](#) on your computer.
- If you can't find any, you will need to start afresh and use the procedure headed Installing a Clean Password File below.
- If you do find a copy of [Master.acf](#), and it is in the folder specified by the [Master Password File](#) control, but you can't log in with any of the users and passwords you thought existed, the file may be damaged. Try recovering the file from a backup. If you still can't login, you will need to start afresh and use the procedure headed Installing a Clean Password File below.
- If you do find a copy of [Master.acf](#), and it is not in the folder specified by the [Master Password File](#) control, then copy it to that folder. TAD should then start up and work normally from then on.

Installing a Clean Password File

If nothing seems to work, you may need to re-install TAD and reset your users and passwords. A default "clean" installation of TAD creates a single [Administrator](#) user named "admin" with a password of "admin".



The following procedure will delete all your existing Temprecord MLV and TAD users. You will need to re-create them "from scratch". Note that [Windows](#) users are unaffected.

- Using Windows Explorer, ensure there are no copies of [Master.acf](#) or [Local.acf](#) in the folders:

```
C:\Documents and Settings\All Users\Application Data\Temprecord\  
C:\Documents and Settings\<user>\Local Settings\Application Data\Temprecord
```

and ensure there are no other [.acf](#) files in old locations from previous MLV or TAD installations. If you don't want to delete any files that you think might be useful, rename them to something other than [Master.acf](#) or [Local.acf](#).

- Install TAD again. You existing data, reports and program settings should be unaffected.
- Start TAD. Click on the access tab. Click on the Login button and log in with the username "admin", password "admin".
- If you can't login with this username and password, TAD has most likely "found" another password file. It will either be in the folder

```
C:\Documents and Settings\<user>\Local Settings\Application Data\Temprecord
```

or in the folder specified by the [Master Password File](#) control on the [Access](#) tab. You will need to find it and rename or delete it, and then repeat the installation.



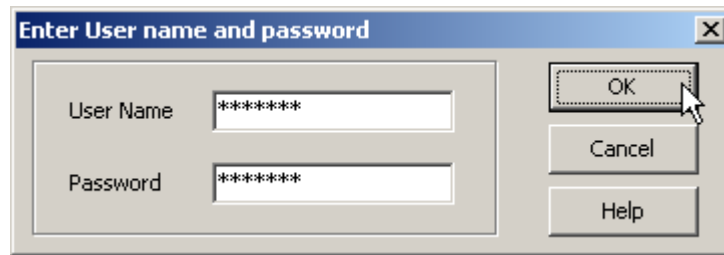
TAD will not install the "starter" password files if it finds any existing password files.

- When you have TAD starting and allowing access with the default "starter" user name and password, Create the users, access levels ([Supervisor](#) or [Operator](#)) and passwords you require.

See also:

[Access Control System](#)
[Changing the Access Level](#)
[Moving the master password file.](#)

9.5 Changing the Access Level



TAD implements its own access system to limit access to certain functions of the program to groups of users. The TAD system of users and access levels is completely independent of the system Windows implements for users.

There are four access levels defined in TAD. In order of increasing ability, they are: **No access**, **Operator**, **Supervisor** and **Administrator**. Although the access levels have specific names, the assignment of capabilities to each level is arbitrary.

No access

When TAD first starts, the access level is set to the lowest level - i.e. no access. In general it is not possible to carry out any operations from this access level, apart from view the various tabs in TAD

Operator Access

A minimal set of capabilities is implemented at the **Operator** access level, such as generation of reports. Operators have no access level or user administration capabilities, other than the ability to change their own password.

Supervisor Access

The **Supervisor** access level allows you to change most settings in TAD concerned with channel logging and reporting setup. **Supervisors** can create and delete **Operators** and change **Operator** passwords, and change their own passwords.

Administrator Access

This is the highest access level and provides the capability to alter installation settings and low-level hardware settings. **Administrator** access will not normally be required by Temprecord customers and is usually restricted to Temprecord personnel. **Administrators** can create and delete **Operators** and **Supervisors** and change **Operator** and **Supervisor** passwords, and change their own passwords.



No user can find out the password of another user, regardless of access level. Users of any given access level can change passwords of users of lower access levels, but they cannot see them.

User Name

Enter the username assigned to you by your administrator. Usernames are case-insensitive, i.e. you can enter Fred, fred, FRED, fRED, etc. Usernames may display as you type, depending on the setting of the [Hide Username](#) access option.

Password

Enter the password assigned to you by your administrator. Passwords are case-insensitive and will not display as you type.

OK

Click the **OK** button to submit the username and password to the access control system. If the username and password match any user in the access control file, the access level will be changed to the access level of that user. If the username and/or password do not match, an error message is displayed and the access level is not changed.



If the **OK** button is clicked with blank username and password fields, the access level is changed to the lowest level. If you open the **Change Access Level** dialog by mistake, make sure you press **ESC** or click the **Cancel** button to exit if you want to preserve your current logged in access level.

Cancel

Click the **Cancel** button to exit the **Change Access Level** dialog without doing anything. Any access level that was in effect will remain.



You can also press the **ESC** key to exit the **Access Level** dialog without doing anything.

See Also

[Access Options](#)

9.6 General Options

(Configurable at Administrator and Supervisor Level only)

Click **General** to access this screen. There are two groups with checkboxes on this screen as per the following screen...

The screenshot displays the 'General Options' window with the following sections:

- Date Options:**
 - Display dates and times in:
 - ☒ Local Time (account for DST)
 - ☐ Local Time (ignore DST)
 - ☐ UTC
 - Sample: Sun 6 Mar 2011 18:03:44 NZDT
- Date and Time:**

Current time (DST)	6 Mar 2011 19:09:19
Current time (LST)	6 Mar 2011 18:09:19
Current time (UTC)	6 Mar 2011 06:09:19
Timezone	New Zealand Daylight Time
Offset from UTC	+1300
Bias when DST in effect	60 minutes
Bias when DST not in effect	0 minutes
Current DST Bias	60 minutes
In DST?	Yes
- Confirm:**
 - ☐ Require Confirmation of Channel Status Changes
- Graph:**
 - ☐ Show Large Zoom Buttons
 - ☐ Always join points
- Startup Page:**
 - ☒ Last page selected
 - ☐ This page: Summary
- System Tray:**
 - ☒ Show Balloon Hints
- Event Log:**
 - Past Days to Show: 365

Figure 8: Options / General Screen

Date Options

Date Options

Display dates and times in ☒ Local Time (account for DST)

☐ Local Time (ignore DST)

☐ UTC

Sample Fri 18 Feb 2011 16:57:26 NZDT

This option sets the format of displayed dates within TAD. TAD has the facility to display date and times in one of three formats:

- Local daylight time (local time with daylight savings accounted for, if inside a daylight savings period)
- Local standard time (local time with daylight savings ignored, even if inside a daylight savings period)
- Universal time or UTC (also known as GMT, or Greenwich Mean Time)

TAD never displays a date and time without a clear indication of which of these three formats is in use. Normally, the date and time is followed by an abbreviation for the timezone in use, for example:

1 Jan 2011 15:33:22 AUSEDT

If the display format is set to local daylight time, the date and time will be displayed with the abbreviation for the daylight savings timezone if the daylight savings is in effect (e.g. "AUSEDT"), and with the abbreviation for the standard savings timezone if the daylight savings is not in effect (e.g. "AUSEST").

If the display format is set to local standard time, the date and time will be displayed with the abbreviation for the standard savings timezone regardless of whether daylight savings is in effect (e.g. "AUSEST").

If the display format is set to UTC, the date and time will be displayed with the abbreviation "UTC", regardless of the local timezone and regardless of whether daylight savings is in effect.

Confirmation of Channel Status Changes

(Configurable at Administrator and Supervisor Level only)

This option has the checkbox *Require Confirmation of Channel Status Changes*. When this is checked, the *Confirm Change in Channel Status* dialog box is required to be filled in and confirmed whenever any *Channel Status* (enable or disable) is changed. A change in the status of a channel is logged.

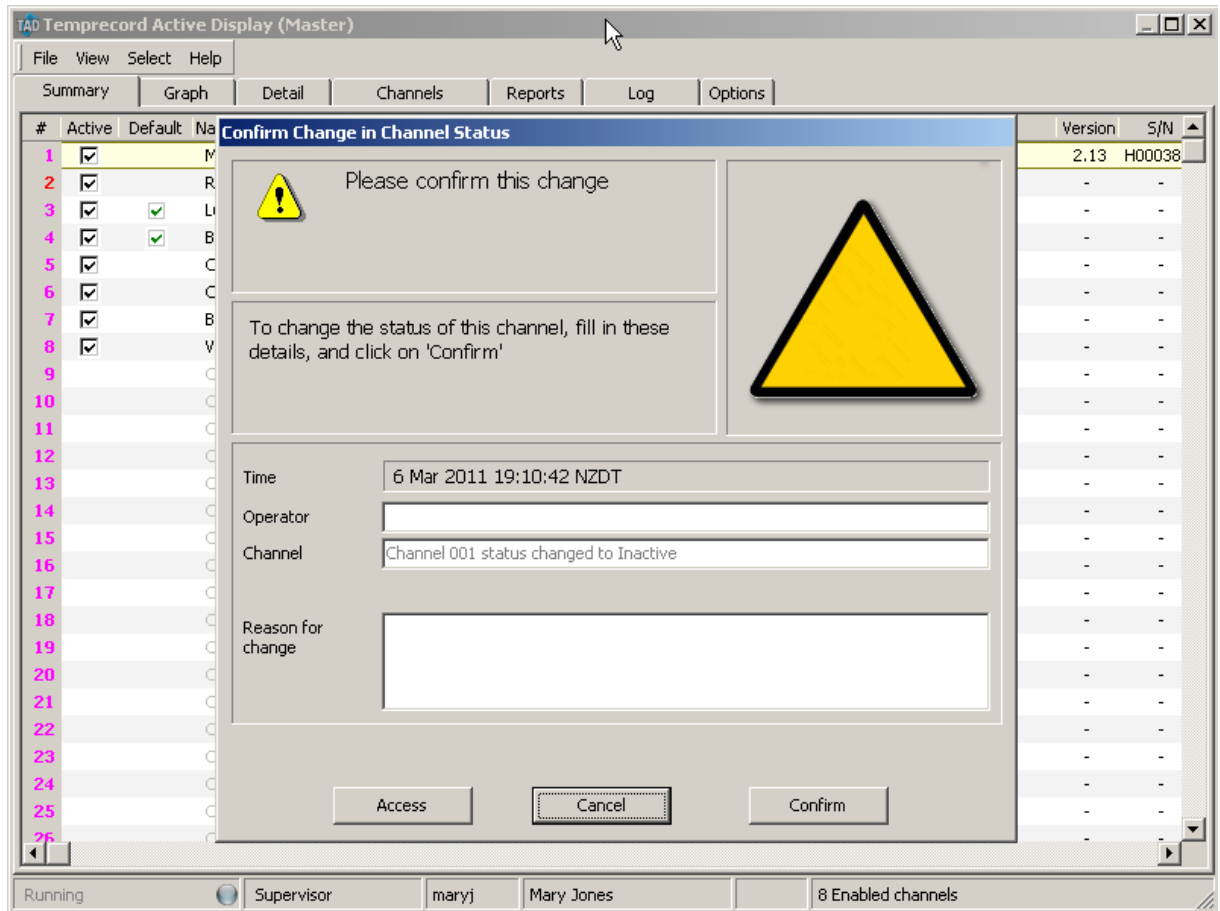


Figure 10: Options Tab: General / Confirm

Options / General: Confirmation Log

A channel status change event is logged as per the following example:

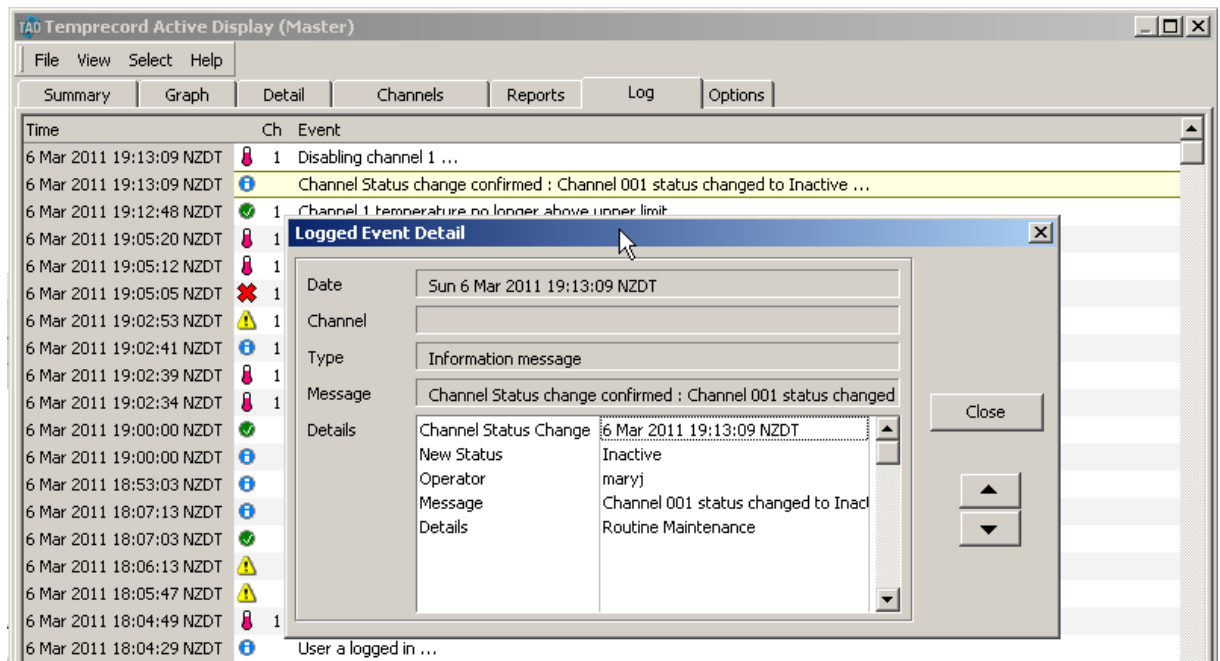


Figure 11: Options / General / Confirm Log

Show Large Zoom Buttons

The Graph group has a checkbox **Show Large Zoom Buttons**. When checked, (ticked) this will display larger zoom buttons on the Graph screen. This is useful when a 'touch-sensitive' flat panel display screen is used.

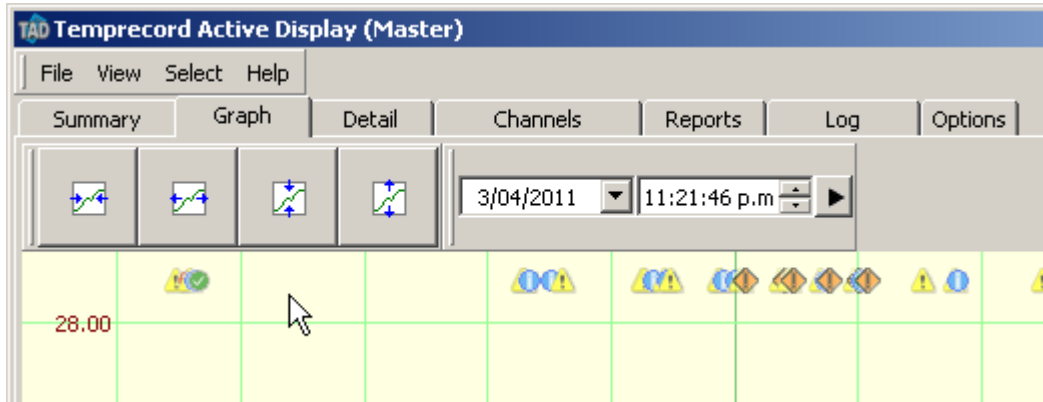
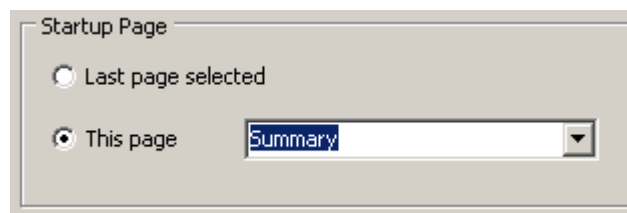


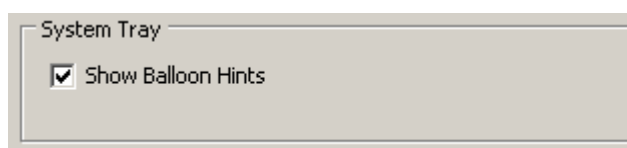
Figure 9: Options / General: Graph Option (Zoom Buttons)

Startup Page



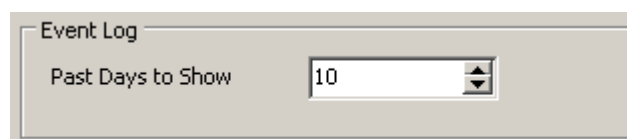
This option determines which tab is displayed when TAD first starts.

System Tray - Show Balloon Hints



If this option is checked, TAD will display any alert messages as a "balloon hint" in the system tray.

Event Log - Past Days to Show



When TAD starts, it initialises the event log display by reading back through the datafile and extracting the alert, alarm, warning and information messages. This option determines how far back the datafile is scanned.

9.7 Site Detail Options

(Configurable at Administrator Level only)

Enter your Site Detail Information here.

This information is useful for identifying reports/alarms for users with TAD installations at multiple sites with remote alarm monitoring by alarm companies.

Enter the site details as follows:

Installation: Enter the name of your organisation and location in this field.

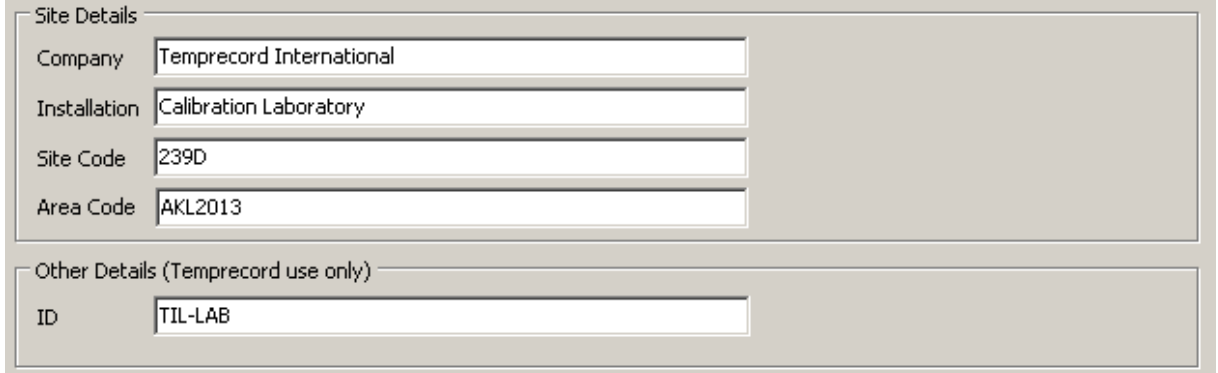
Site Code: Enter your organisation's site code in this field. The site code is used to identify your site where more than one TAD system has been installed within your organisation. Usually an external alarm monitoring company that monitors your general site alarms uses this feature.

Area Code: Enter your organisation area code in this field. The area code is used to identify your site location where more than one TAD system has been installed within your organisation. Usually an external alarm monitoring company that monitors your general site alarms uses this feature.

The information entered in the Site Details fields will appear on TAD reports and TAD alert email and SMS messages, and can be configured to appear in the subject and message body of any [heartbeat emails](#) TAD sends.

Other Details (Temprecord use only)

This field will be filled in by Temprecord at installation time. It is normally initialised on new installations to a composite of the computer's Windows workgroup name and the computer name.



Site Details	
Company	Temprecord International
Installation	Calibration Laboratory
Site Code	239D
Area Code	AKL2013
Other Details (Temprecord use only)	
ID	TIL-LAB

Figure 12: Options Tab: Site Details

9.8 Datafile Options

Datafile Folder

This is the folder where the TAD datafiles are stored. It is normally set by Temprecord at installation and should not be altered. Files present in this folder include:

TAD.CFG

The TAD channel configuration file. This file must always be in the same folder as the TAD*.TDF data files.

TAD.TDF

The current TAD datafile. Under normal operation this file will be written to by TAD.

TADnnnnnnnnnnnnnnnn.TDF

A "rolled over" datafile. This will contain (for example) a day's worth of data if the rollover interval is set to "daily". The section shown as "nnnnnnnnnnnnnnnn" in the file identifier is the UTC date the file was created in the format YYYYMMDDHHMMSS.

TADnnnnnnnnnnnnnnnn-mmmmmmmmmmmmmmm-Reconstruction.BDF

A backup file created when the file TADnnnnnnnnnnnnnnnn.TDF was "reconstructed with samples retrieved from loggers. The section shown as "nnnnnnnnnnnnnnnn" in the file identifier is the UTC date the file was created as before. The section shown as "mmmmmmmmmmmmmmmm" in the file identifier is the UTC date the file construction was carried out.

TADnnnnnnnnnnnnnnnn-mmmmmmmmmmmmmmm-Repair.BDF

A backup file created when the file TADnnnnnnnnnnnnnnnn.TDF was "repaired" using the diagnostic Scan and Repair function of TAD. The naming is as for reconstruction backup datafiles.



When a [backup](#) operation is carried out, the *.BDF backup files are included in the file set copied.



TAD obtains crucial information from the numbers and names of files in this folder and improper operation can result if these conditions are not met. In particular:

- Do not delete any files in this folder.
- Do not rename any files in this folder.
- Do not add any files to this folder.
- Do not alter the file datestamp of any files in this folder.

The Datafile Folder option has an entry field for the folder name and a Browse for Folder button. It is recommended you use the installation default datafile folder path C:\Documents and Settings\All Users\Application Data\Temprecord\TAD\Datafiles.

The Last write, Next/Last Rollover, File Size/Span are read-only fields and are updated in real time.

Check Now This is a diagnostics button for carrying out a check for datafile rollover.



Datafile "rollover" is the operation of starting a new datafile when the current datafile has grown to a certain size, or contains a certain time span of recorded data. Datafile rollover keeps the size of individual datafiles small, which makes emailing and backing up the files easier.

Rollover Now This is a diagnostics button for forcing a datafile rollover.



Datafile rollover will take place even if the conditions for it have not been satisfied. If other operations dependent on rollover, such as [backup](#) or [export](#), they will be started as well.

Datafile Size

The user can configure how TAD manages the datafile size by altering the conditions under which rollover occurs. File size limitations can be specified in terms of kilobytes (kB), or maximum time span.

Datafile Rollover and Backup		
Datafile Folder	C:\Documents and Settings\jrm\Desktop\TAD Datafiles\1.44 Tests ...	
Last Write	Sun 6 Mar 2011 19:19:08 NZDT	(1 min, 20 sec ago)
Next Rollover	Sun 6 Mar 2011 20:00:00 NZDT	(in 39 min, 30 sec)
Last Rollover	Sun 6 Mar 2011 19:00:00 NZDT	(20 min, 28 sec ago)
Composite File Size	315,784 bytes	(308 kB)
Composite File Span	13 days, 45 min, 52 sec	
Current Time	Sun 6 Mar 2011 19:20:28 NZDT	
		<input type="button" value="Check Now"/> <input type="button" value="Roll Over Now"/>

Data File Rollover and Backup Frequency		Retrieval
<input type="radio"/> Don't rollover or backup <input type="radio"/> Limit file size to: 100000 kB <input type="radio"/> Limit timespan to: 28 Months <input checked="" type="radio"/> Roll file over:		<input checked="" type="checkbox"/> Retrieve samples from logger if possible Maximum gap 30 min Time after last recovery before reconstruction 1 min <input checked="" type="checkbox"/> Restart logger after retrieval Sample period 10 min Keep logger below 1024 samples
<input type="radio"/> Yearly on month January <input type="radio"/> Monthly on day 1 <input type="radio"/> Weekly on Sunday <input type="radio"/> Daily at hour 0 <input checked="" type="radio"/> Hourly at minute 0		

Figure 13: Options Tab: Datafile Configuration

Retrieval Group

Retrieve Samples from Logger if possible checkbox

Re-Start Logger after Retrieval checkbox

Sample Period selector (in minutes)

This feature is useful when the TAD System is shutdown due to power failure or for maintenance in which case the data recorded by TAD will contain "gaps". When this option is checked, the TAD System will attempt to retrieve samples after the power is restored and TAD is restarted. Note that the logger must be logging at the time TAD was inadvertently shut down for samples to be retrieved, and also note that the retrieved samples may be at a different sample rate.

Once TAD has retrieved samples, it can be configured to set the sample rate and restart the logger.

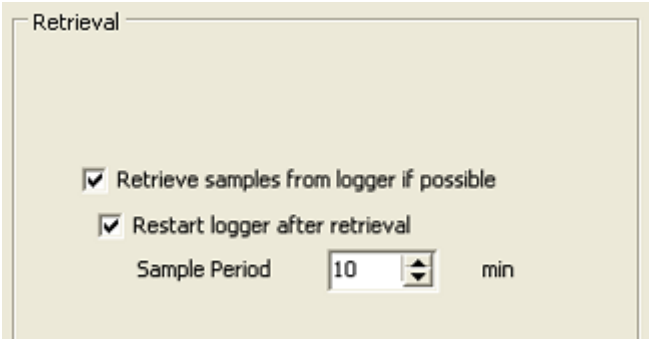


Figure 14: Options Tab: Datafile / Retrieval Configuration

The retrieved samples i.e. the samples recovered from the logger are hinted on Graph View screen as shown in Figure 15. Whenever a block of sampled data is recovered from the loggers, an event is logged as follows:

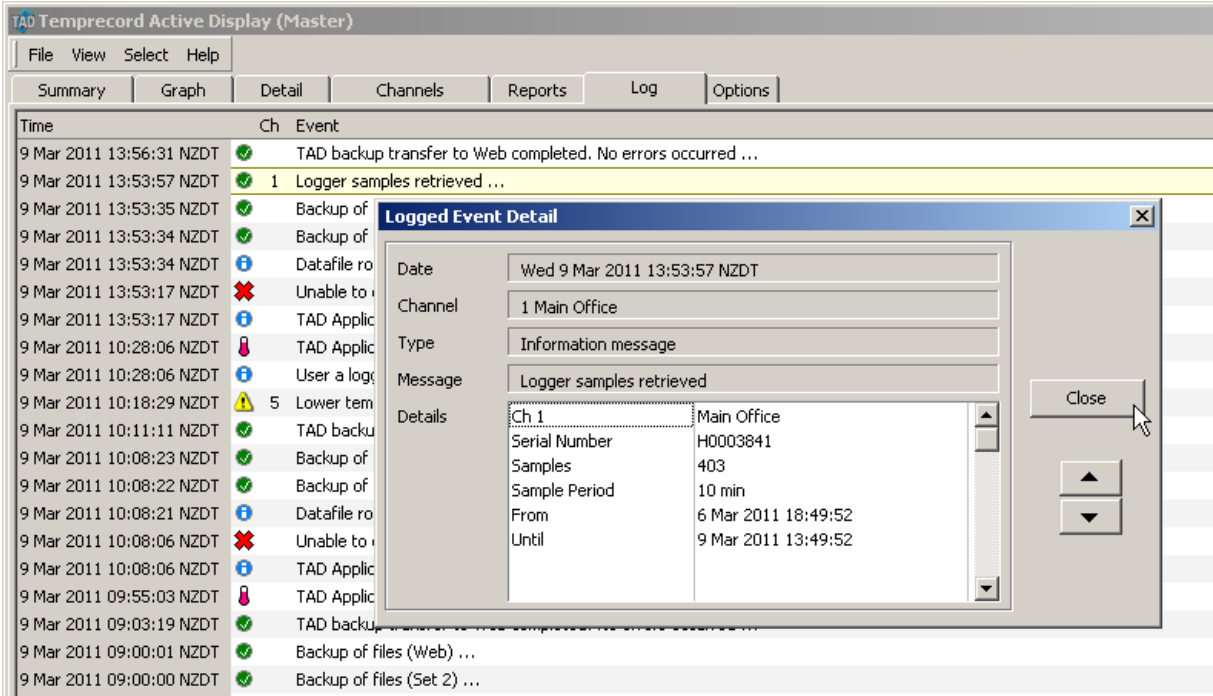


Figure 15: Options / Datafile: Retrieval Logged Event/Detail

Retrieval: Samples Recovered from Logger

The following view of the graph tab shows samples logged by TAD along with samples recovered from a logger, which appear in a lighter shade of red, and have the text added "(sample recovered from Logger)" in the pop-up hint that displays when the cursor is hovered over the sample.:

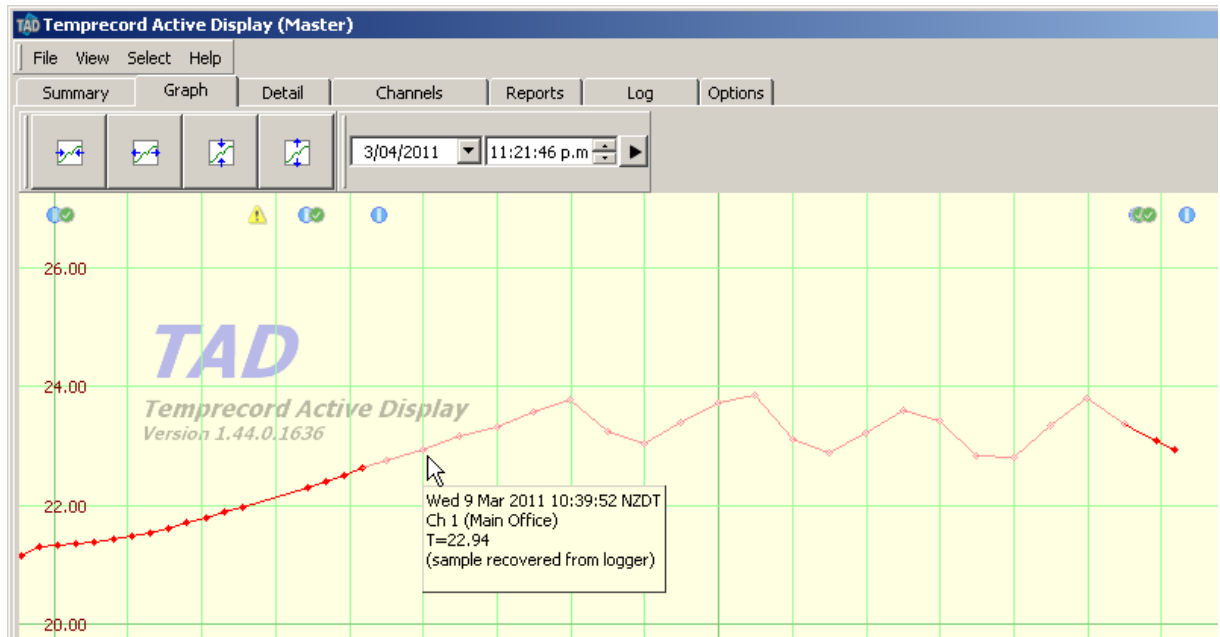


Figure 16: Options / Datafile: Retrieval: Samples Recovered from Logger

9.9 Master/Slave Options

(Configurable at Administrator and Supervisor Level only)

These settings only take effect after the Temprecord Active Display application is re-started. If you make changes here, you must exit and re-start the application.

Configuration

These options configure TAD to run as either a master or a slave system in installations where one or more PCs (the "slaves") are used to remotely monitor the computer running TAD and logging data (the "Master"). When the TAD software is clean installed on a machine, the configuration default is always set to *Master*.

Master-Slave Configuration

☒ Master
☒ Send data to slaves
☐ Slave
☐ Receive data from master
☐ Auto-refresh when a slave
☒ Allow slave to edit channels configuration

These settings only take effect after Temprecord Active Display is restarted. If you make changes here, you should exit and restart the Application.

Master-Slave Transfers

Master Datafile Size	398,888 bytes	(14,246 records)
Master Datafile DateTime	Mon 21 Nov 2011 16:54:09 NZDT	(2 minutes, 8 seconds ago)
Message DateTime	Mon 21 Nov 2011 16:56:18 NZDT	(0 seconds ago)
Master-Slave Time Difference	--	
Last Rebuild (Master)	Mon 21 Nov 2011 16:54:01 NZDT	(2 minutes, 16 seconds ago)
Last Rebuild (Slave)	--	--
Last check by slave was at	--	--
Last transfer fetched at	--	--
Total Transfers	134	

Master Mode Setup: Make sure the Master mode selection is checked. The primary TAD system PC must be configured as a Master system. If TAD data is to be sent to any Slave configured machines then the Send data to slaves checkbox must be checked.

Master-Slave Configuration

☒ Master
☒ Send data to slaves
☐ Slave
☐ Receive data from master
☐ Auto-refresh when a slave
☒ Allow slave to edit channels configuration

These settings only take effect after Temprecord Active Display is restarted. If you make changes here, you should exit and restart the Application.

Slave Mode Setup: Make sure the Slave mode selection and Receive data from master are both checked. There must be another primary TAD system configured as a Master system. The [Datafile options](#) need to be set to refer to the datafile of the desired master system. This can be on a different drive or a network drive if required.

Allow Slave to Edit Channels Configuration (Administrator access required)

Check this box to allow TAD to make changes to the channel configuration when running in slave mode. Normally TAD cannot make any changes to configuration files when it is running in slave mode, but in some circumstances this is necessary.

For example, you may have received a set of TAD datafiles from another site and want to run reports on the data. This option allows you to alter the channel reporting options.

Master-Slave Transfers (Master Mode)

Master-Slave Transfers		
Master Datafile Size	398,888 bytes	(14,246 records)
Master Datafile DateTime	Mon 21 Nov 2011 16:54:09 NZDT	(2 minutes, 8 seconds ago)
Message DateStamp	Mon 21 Nov 2011 16:56:18 NZDT	(0 seconds ago)
Master-Slave Time Difference	--	
Last Rebuild (Master)	Mon 21 Nov 2011 16:54:01 NZDT	(2 minutes, 16 seconds ago)
Last Rebuild (Slave)	--	--
Last check by slave was at	--	--
Last transfer fetched at	--	--
Total Transfers	134	

The Master-slave transfers panel provides information about the data being made available to any slaves correctly configured. The Master Datafile Size indicates the number of bytes used by the TAD datafiles and should increase periodically as new data is written to the master. The Master Datafile DateTime should likewise change each time the file is written to. The Message Datestamp is sent with each packet of data from the master and should change once per second. The Last Rebuild (Master) field indicates the last time that TAD scanned all of its datafiles. The Last Rebuild (Slave) field is not used in a TAD system running as a master. Rebuilds only occur at TAD startup, when TAD rolls over the datafile (usually weekly or daily), and after any data is recovered from loggers. The Last check by slave was at field is not used in a TAD system running as a master. The Last transfer arrived at field is not used in a TAD system running as a master. The Total transfers field indicates the number of times the TAD master system had made data available to the slaves. It should increase at the rate of one count per second.

Master-Slave Transfers (Slave Mode)

Master-Slave Transfers		
Master Datafile Size	41,346,732 bytes	(1,476,669 records)
Master Datafile DateTime	Sat 19 Feb 2011 16:31:38 NZDT	(in None)
Message DateStamp	Sat 19 Feb 2011 16:31:37 NZDT	(93 msec ago)
Last Rebuild (Master)	Sat 19 Feb 2011 16:00:22 NZDT	(31 min, 14 sec ago)
Last Rebuild (Slave)	Sat 19 Feb 2011 16:28:53 NZDT	(2 min, 44 sec ago)
Last check by slave was at	Sat 19 Feb 2011 16:31:37 NZDT	(15 msec ago)
Last transfer arrived at	Sat 19 Feb 2011 16:31:37 NZDT	(15 msec ago)
Total Transfers	67	

When running as a slave, the Master-slave transfers panel provides slightly different information. The Master Datafile Size indicates the number of bytes used by the TAD datafiles on the remote master TAD system and should increase periodically as new data is written to the master. The Master Datafile DateTime should likewise change each time the master TAD datafile file is written to. The Message Datestamp is sent with each packet of data from the master and should change once per second. The Last Rebuild (Master) field indicates the last time that the master TAD system scanned all of its datafiles.

The Last Rebuild (Slave) field indicates the last time that this (slave) TAD system scanned all of its datafiles, which should be within a minute or so of the last time the master rebuilt its file. The Last check by slave was at field is the last time this slave checked for data from the master. It should never be more than a few seconds ago. If it is not changing then you probably haven't checked the Receive data from master checkbox. The Last transfer arrived at field is the last time this slave checked for data from the master and found fresh data. If it is not changing then the slave PC cannot see the master TAD datafile, or the master TAD system is not running. The Total transfers field indicates the number of times the TAD slave

system has received fresh data from the remote master TAD system. It should increase at the rate of one count per second.

Local Channels

TAD allows you to specify a set of channels as 'local'. This is mainly intended for use by slave TAD systems but can be used by either master or slave systems. If TAD is installed as a single master with many channels monitored over a large area, there might be PCs in each area configured as slaves. By making the TAD channels that are in the same area 'local', you can quickly exclude any channels that are not local by selecting [Show local channels only](#) in the [summary view](#).

Local channels can be configured either from the [channel setup dialog](#) or from the [channel options](#) tab.

9.10 Channel Options

(Configurable at Administrator and Supervisor Levels Only)

This tab provides an alternative way of entering some of the more commonly accessed channel configuration data items.



You can also edit the details of a particular channel with the [Channel Setup](#) dialog. You can open the channel setup dialog by double-clicking the relevant row in the [Summary Display](#). The channel setup dialog allows you to access all the configuration items associated with a channel, whereas the channel configuration tab only provides access to a subset.

Default: Check the boxes in this column for the channels where you require the channel logging parameters to be taken from the [Default Options](#).

Local: Check the boxes in this column for the channels where you require the channel to be considered as a local channel. This option is used when TAD is running as a slave, and you may only require to see channels that are in your immediate vicinity.

Alert: Check the boxes in this column for the channels where you want [alert](#) messages that are displayed on the master to also appear on the slave. This option is used when TAD is running as a slave. When TAD is running as a master, this column will be disabled, and has no effect.

Export: Check the boxes in this column for the channels where you require the channel to be included when [CSV Export files](#) are generated.

Spot: Check the boxes in this column for the channels where you require the channel to be included when a [Spot Check](#) is performed and report generated.

Tolerance: Enter the tolerance required when a spot check is performed. A channel will be reported as having failed the [spot check](#) if the difference between the spot check temperature on the TAD system and the spot check temperature read from the primary monitoring system exceeds this value.



If the checkbox for a channel in the **Default** column is checked, the tolerance specified in the [default options](#) will be used. This field will then always show as disabled and will contain the value for the spot check tolerance specified in the [default options](#). If you want to have a separate independent value of temperature

tolerance for any channel you will need to make sure that the **Default** checkbox is not checked

Location ID: You can alter the displayed location ID of the channel by clicking in this field and typing in a new string.

Name: You can alter the displayed name of the channel by clicking in this field and typing in a new name.



To alter items on this tab you will need the appropriate [access level](#). When editing a field, click twice in the field to enter "edit" mode. The text inside the field should become highlighted and you can overwrite the contents:

Channel Options							
Ch	Default	Local	Export	Spot	Tolerance	Location ID	Name
001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.50	TIL-R01	Main Office
002	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.50	REC-001	Reception
003	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.50		Lunchroom
004	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.50		Boardroom
005	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.50	TT-GR.1.061-02	Coolstore #1
006	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0.50		Coolstore #2

9.11 Backup Options

(Configurable at Administrator Level only)

TAD includes a comprehensive datafile backup facility as shown below:

☒ Enable Backups when Datafile rolls over

Backup Now

Ignore files older than days

☒ Enable Backup File 1

Destination Folder
 Also Create CSV File ☒

Sample
 Use Date-formatted Folder ☒

Last Backup at:

Backup folder name
 Format folder name using:
 ☒ Local Time (account for DST)
 ☐ Local Time (ignore DST)
 ☐ UTC

☒ Enable Backup to Web

Destination Folder
 Also Create CSV File ☐

Sample
 Use Date-formatted Folder ☒

Last Backup at:

☐ Enable Backup File 2

Destination Folder
 Also Create CSV File ☐

Sample
 Use Date-formatted Folder ☐

Last Backup at:

☐ Enable Email Backup

Email Addresses
 Also Create CSV File ☒

Last Backup at:

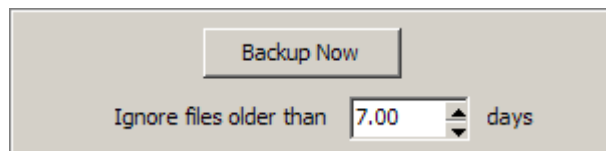
© 2019 Temprecord International Ltd.

Figure 19: Options Tab: Backup / Setup Options

Enable Regular Backups when Datafile Rolls Over.

When this checkbox is selected it allows regular backups of the TAD data files to be initiated whenever the datafile is rolled over. It is recommended that backups are done on a weekly basis; however other settings may be configured depending on individual site requirements.

Backup now

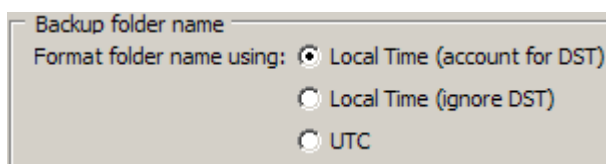


Click the **Backup Now** button to force TAD to perform a backup according to the other options set in this tab. Performing this backup on demand does not affect any subsequent backups performed on datafile rollover. These will take place as normal.

Ignore files older than

Use the **Ignore Files Older Than** control to set the number of days back that TAD checks for files that need to be backed up. This option is useful for suppressing the backup of older unwanted files.

Backup folder date format



Where a TAD backup is configured to use date-formatted folder names, this option determines whether the date used is the current local daylight time, the current local time without accounting for daylight savings time, or universal time.

Backup file Destinations

The TAD datafiles can be backed up in two formats and saved in multiple locations: TDF files (files with the filetype *.TDF) are database files which are only readable by the TAD application. The other format available for backup files is CSV (comma-separated values) format. If this option is checked then the backup datafile will be saved as a *.CSV file, which can be opened and viewed using a spreadsheet program such as Microsoft Excel.



TAD uses particular rules when interpreting the backup folder specification. See the topic [How destination folder specifications are interpreted](#) for more information. An example of how the folder name that is generated from your folder specification will look is always displayed in the panel below the folder specification.

The **Sample** fields in each case display the actual path that will be used to save the file. If the **Use Date formatted Folder** option is not checked, this field will display whatever is entered into the **Destination Folder** field.

The **Last Backup at** fields display the date and time of the last backup.

There are four backup destination options - Backup file 1, Backup file 2, Web, and Email. All 4 backup destinations have the option to back up CSV files as well as the TDF files.

The screenshot shows a dialog box titled 'Enable Backup File 1'. It has several sections:

- Enable Backup File 1:** A checked checkbox.
- Destination Folder:** A text box containing '"C:\Program Files\TAD\Backup"\yyyy\mmm' with a dropdown arrow.
- Also Create CSV File:** A checked checkbox.
- Sample:** A text box containing 'C:\Program Files\TAD\Backup\2011\February\'.
- Use Date-formatted Folder:** A checked checkbox.
- Last Backup at:** A text box containing 'Wed 23 Feb 2011 08:00:00 NZDT (1 min, 6 sec ago)'.

Also Create CSV File

Check this option if you want TAD to create a CSV (Comma Separated Values) backup file also. The contents of the CSV file mirror those of the TDF file with the same filename part:

```
19/07/2009,"7:12:00 p.m.,"Temperature reading",204," 17.588"
19/07/2009,"7:16:00 p.m.,"Temperature reading",202," 17.521"
19/07/2009,"7:17:00 p.m.,"Temperature reading",204," 17.552"
19/07/2009,"7:21:00 p.m.,"Temperature reading",202," 17.484"
19/07/2009,"7:22:00 p.m.,"Temperature reading",204," 17.526"
19/07/2009,"7:26:00 p.m.,"Temperature reading",202," 17.466"
19/07/2009,"7:27:00 p.m.,"Temperature reading",204," 17.517"
19/07/2009,"7:31:00 p.m.,"Temperature reading",202," 17.484"
19/07/2009,"7:32:00 p.m.,"Temperature reading",204," 17.472"
19/07/2009,"7:36:00 p.m.,"Temperature reading",202," 17.430"
```

These CSV files can be imported directly into spreadsheet programs such as Microsoft Excel.



TAD can also export data in a CSV format where selected channels are output in columns with the sample date in the first column. See the topic [Exporting data](#) for more information.



TAD formats the date and time in the CSV file according to the Windows "short date" and "long time" date formats. These formats will depend on the regional settings of the computer system TAD is installed on. If you are accessing the data in the CSV files on a different computer system then you need to bear this in mind. The most likely possibility of conflict is where dates have been written in the form d/m/y, and the application reading the CSV file assumes it is m/d/y.

Use Date-formatted Folder

If the **Use Date formatted Folder** option is checked, the contents of the **Destination Folder** field are used as a template to generate the folder name. Certain characters in the template affect the destination folder according to the time and date, for example, mmm is converted to the three-character abbreviation of the current month.



Be careful when using the **Use Date formatted Folder** option. Always inspect the **Sample** field to make sure the generated folder name is what you expect it to be. If the generated folder name appears to be filled with random extraneous characters, it is almost

certainly because you have checked **Use Date formatted Folder** and forgotten to enclose part of the folder specification in double quotes. The following shows some common errors when entering the backup folder specifications:

What you entered	Sample field shows	Reason	Remedy
C:\Program Files\TAD\Backup \	23_02+ 2011 8_20_54 a.m. ... 02_2011 8_20_54 a.m.kup	Use Date formatted Folder checked	Either uncheck Use Date formatted Folder or enter the folder specification in double quotes.
"C:\Program Files\TAD\Backup \"	"C:\Program Files\TAD\Backup \"	Use Date formatted Folder not checked	Either check Use Date formatted Folder or remove the double quotes.
D:\Backup\yyyy\mm	D:\Backup\yyyy\mm	Use Date formatted Folder not checked	Check Use Date formatted Folder



TAD follows certain rules when interpreting the folder specifications. These rules are described in the topic [How destination folder specifications are interpreted](#).

Enable Backup File 1 and 2

Both the Backup file 1 and Backup file 2 destinations allow the user to specify the destination folder, which must be on an accessible disk. If the folder does not exist, TAD will attempt to create it.

If the checkbox labeled **Use Date-formatted Folder** is checked, the folder specification is not used literally, but is used as a format specifier. In this case, certain characters in the folder specification have defined meanings and are converted at the time of the backup. For example, if the characters **mmm** appear in the folder specification, the three letter abbreviation of the current month is inserted instead. The panel labeled **Sample** is updated at all times to show the folder name that will actually be generated. See [Formatting file and folder names with date-times](#) for more information.

Enable Backup to Web

Backup of TAD datafiles to the web is carried out in two stages. Files are first copied to a local directory and they are then copied to the web in a background thread, as this process takes a while and we do not want TAD to cease operation while it the transfer to the web is underway.

The local destination folder for web backups is automatically assumed to be relative to the folder:

<Common Application Data>\Temprecord\TAD\Web Backup\

which under Windows XP is normally:

C:\Documents and Settings\All Users\Application Data>\Temprecord\TAD\Web Backup\

The destination "folder" on the web for web backups however is always the root folder of the file area specified in the [Web options](#) in the Customer ID field. The TAD data files are not stored in a date-formatted folder tree

on the web however, but are all stored in the one folder, which mirrors how they are stored on the local machine.



When the web backup folder names are formatted with a date and time, the date and time used is not the current date and time, but is the date and time that the TDF file was created.

Enable Email Backup

There is no destination folder specification for backup of TDF and CSV files via email. The files are attached to an email message, which is then queued for sending in a background thread.

Backup Filenames

When TAD backs up a file, it assigns the same name to the backup file. TAD datafiles have the extension .TDF, and the backed up copies of these files have the same name and extension. When CSV backups are enabled, the CSV file has the same name as the corresponding TDF file, but with an extension of .CSV.



An exception to this rule is made in the case of the files TAD.INI (the global settings file) and TAD.CFG (the channels configuration file). When a backup takes place, the files TAD.INI (the global settings file) and TAD.CFG (the channel configuration file) are now also copied to date-named versions (e.g. TAD.INI is copied to TAD20120725103600.CFG) before each backup, and these files are backed up also to whichever destinations (File set 1, File set 2, email, or web) are enabled.

This change provides date-named generational backups of these files, for use when the originals TAD.INI and TAD.CFG are corrupted for some reason, and the good copies on the backup destination are overwritten by the corrupted version. Now these date-named copies of these two files are created and backed up along with the copies with the original names. Because the date-named files will always have unique names, they cannot be overwritten.

See also:

[How destination folder specifications are interpreted](#)
[Formatting file and folder names with date-times](#)

9.12 Export Options

(Configurable at Administrator and Supervisor Levels Only)



WARNING! This help topic describes a feature of TAD that is currently under development. The functionality implemented in TAD is not necessarily as described in here.

TAD has the ability to produce files at regular intervals containing the logged data in the industry-standard CSV (Comma Separated Values) format. The interval exported is determined by the export interval, for example, if TAD is configured to export a CSV file weekly every Monday at 7:00 am, the data exported will be for the preceding week up until that time.

TAD can also produce a CSV file corresponding to an arbitrary period on request, for all channels which have export enabled, or for a single channel.



Whether any channel participates in the channels exported to file is determined by the Export this channel checkbox in the [channel setup dialog](#), or by the Export column in the [Channel Options](#) tab.



The behaviour of TAD export functions differs depending on whether "all enabled channels" or "single channel" is selected. Make sure you understand the difference between these two as relates to the sample period of exported data..

Regular export disabled

If this option is selected no regular export of data will occur.

Export when datafile rolls over

If this option is selected data will be exported when the data file rolls over, provided TAD is configured to roll over at regular intervals.

Export every...

If this option is selected data will be exported at regular intervals as specified by the associated controls on this tab.

Month on day

Data will be exported every month on the day of the month specified in the control alongside, and the hour and minute specified on those two controls. The day of the week control has no effect when monthly intervals are specified.



If the day of the month is specified as 29 through 31, and the month concerned does not have a day of the month of that value, then the last day of that month is used instead, e.g. if TAD is configured to export data on the 31st of each month, export will occur on 31st January, 28th (or 29th in a leap-year) of February, 31st March, 30th April, etc.

Week on day

Data will be exported every week on the day of the week specified in the control alongside, and at the hour and minute specified on those two controls.

Day at hour

Data will be exported every day at the hour and minute specified on those two controls.

Hour at minute

Data will be exported once per hour on the minute specified on the minute control.

Export on demand - Export all Enabled Channels

Data for all channels that have the export function enabled will be exported when the **Export** button is clicked. The interval of data exported will be between the start date and end date specified on the associated controls.

- If the start date is set to a date prior to the first record in the TAD datafile, the export will start from the beginning of the recorded data.
- If the end date is set to a date past the last record in the TAD datafile, the export will stop at the most recent record.
- If the start date is set to a date that is after the end date the exported file will have no data.
- The sample period for the exported data will be the longest sample period of any of the channels that have export enabled. Those channels that have sample periods shorter than this (i.e. are sampling more often) will have the most recent sample logged exported.

Export on demand - Export this channel

Data will be exported for the channel selected when the **Export** button is clicked. All samples found from that channel in the interval between the start date and end date specified on the associated controls will be

exported. The export enable for the channel is ignored - i.e. if export is not enabled for the channel, an export of single channel on demand is still actioned.

- If the start date is set to a date prior to the first record in the TAD datafile, the export will start from the beginning of the recorded data.
- If the end date is set to a date past the last record in the TAD datafile, the export will stop at the most recent record.
- If the start date is set to a date that is after the end date the exported file will have no data.
- For export of a single channel, TAD makes no attempt to export the data at a fixed sample period. The export enable is also ignored. All samples for that channel, along with the time they occurred will be exported.

The `Export this channel` function is intended to be used when data needs to be exported from TAD after an excursion out of range is detected. If TAD is configured to decrease the sample interval when a channel is outside limits, the samples taken at the faster rate will all be exported.

Export Folder

Specify the name of the folder where the exported CSV file will be written. The folder need not exist and will be created if it is not found. If the `Use date format` checkbox is checked, then the name specified is interpreted as a date-formatted folder name according to the [file and folder formatting rules](#).



TAD uses particular rules when interpreting the export folder specification. See the topic [How destination folder specifications are interpreted](#) for more information. An example of how the folder name that is generated from your folder specification will look is always displayed in the panel below the folder specification.

Export Filename

Specify the name of the exported CSV data file to be written. If the file exists it will be overwritten. If the `Use date format` checkbox is checked, then the name specified is interpreted as a date-formatted filename according to the [file and folder formatting rules](#).

9.13 Spot Check Options

(Configurable at Administrator and Supervisor Levels Only)



WARNING! This help topic describes a feature of TAD that is currently under development. The functionality described here is not necessarily implemented in full in TAD at this time.

Regular Spot Check <input type="radio"/> Regular spot check disabled <input checked="" type="radio"/> Check every <div> <input type="radio"/> month on day 1 <input type="radio"/> week on day Monday <input checked="" type="radio"/> day at hour 0 <input type="radio"/> hour at minute 0 </div> Wait for this period of time before generating the report 00:30:00		Timing TAD Time Latitude 01:00:00 Primary System Time Latitude 01:00:00 Max Primary-TAD Time difference 00:10:00	Spot Check On Demand <input type="button" value="Spot Check Now"/> <input type="button" value="Spot Check At ..."/> 4/07/2011 1:20:00 p.m. <input checked="" type="checkbox"/> Open report PDF
Primary System Details CSV Files Location C:\CSV Description Column Heading PEMS			
Spot Check Report File and Folder Names Spot Check Folder C:\Program Files\TAD\Spot Check Reports\ <input type="checkbox"/> Use Date Format C:\Program Files\TAD\Spot Check Reports\ Spot Check Filename "TAD Spot Check" yyyy mm dd HHMMSS ZO <input checked="" type="checkbox"/> Use Date Format TAD Spot Check 2011 07 07 130324 NZST+1200.pdf			
Spot Check Stats Next sampling at 8 Jul 2011 00:00:00 NZST (in 10 hr, 55 min, 1 sec) Last sampling at 7 Jul 2011 13:04:41 NZST (16 sec ago) Next report at 8 Jul 2011 00:30:00 NZST (in 11 hr, 25 min, 1 sec) Last report at 7 Jul 2011 13:03:35 NZST (1 min, 23 sec ago) Last file C:\Program Files\TAD\Spot Check Reports\TAD Spot Check 2011 07 07 130334 NZST+1200.pdf			

TAD has the ability to perform a check at regular intervals between the data is logging and data logged by another system. For each contributing channel it will produce a report containing the temperature at the time of the check from both systems, the difference between them, and whether the difference has exceeded a temperature tolerance.



Whether any channel participates in the channels spot-checked is determined by the **Spot check this channel** checkbox in the [channel setup dialog](#), or by the **Spot** column in the [Channel Options](#) tab.

Regular spot check disabled

No regular spot check will be performed.

Check every...

A spot check will be performed at regular intervals as specified by the associated controls on this tab.

Month on day

A spot check will be performed every month on the day of the month specified in the control alongside, and the hour and minute specified on those two controls. The day of the week control has no effect when monthly intervals are specified.



If the day of the month is specified as 29 through 31, and the month concerned does not have a day of the month of that value, then the last day of that month is used instead, e.g. if TAD is configured to carry out a spot check on the 31st of each month, a check will occur on 31st January, 28th of February (or 29th in a leap-year), 31st March, 30th April, etc.

Week on day

A spot check will be performed every week on the day of the week specified in the control alongside, and at the hour and minute specified on those two controls.

Day at hour

A spot check will be performed every day at the hour and minute specified on those two controls.

Hour at minute

A spot check will be performed every hour on the minute specified on the minute control.

Wait for this period of time before generating the report

The spot check will be performed on data measured as close as possible to the programmed time, but the actual check for the data will not be done until this duration has elapsed after the spot check time. This is to allow time for the Primary System data files to become available. If the spot check was performed at exactly the time specified, the Primary System data file may not have been generated yet. This delay is only used when the spot check is configured to occur every hour, every day, etc. It is not used for spot checks on demand.

Spot Check Timing

The characteristics of the spot checks can be modified by the following three timing parameters.

TAD Time Latitude

This parameter specifies how much the actual sample value read from the TAD channel can lead or lag the time specified for the spot check to be performed. For example, if this parameter is set to one hour and a spot check is requested for 7 a.m. on Monday Mornings, the sample read from TAD must have occurred between 6 a.m. and 8 a.m. or that channel will report an error.

Primary System Time Latitude

This parameter serves the same purpose as the TAD Time Latitude above, but applies to the sample read from the Primary System.

Max TAD-Primary System Time Difference

This parameter specifies the maximum time permitted between the time the TAD sample was taken and the time the Primary System sample was taken. If the time between the two samples exceeds this duration, that channel will report an error.

Spot Check on Demand

As well as performing spot checks at regular intervals, TAD can also generate a spot check report on demand at any time.



When spot checks on demand are carried out, there is no delay before the request and the spot check (as there can be for regular spot checks). The parameters TAD Time Latitude, Primary System Time Latitude and Max TAD-Primary System Time Difference still apply and are checked for however.

Spot Check Now

The spot check is carried out at the instant the button is clicked.

Spot Check At...

The spot check is carried out at the time specified on the associated controls. Note that this time must be in the past. It is not possible to "book" a spot check at a later date by specifying a time in the future.

Open Report PDF

If this checkbox is checked, TAD will open the Spot Report PDF file after the report has completed. Adobe Acrobat reader must be installed on the computer.



.If you have TAD configured so that the report names are generated with a name that incorporates the date and time, the names of successive report PDF files will likely be different. In this event a new Acrobat PDF viewer will open each time. If TAD is configured so that the report name is always the same, when a report is generated with the same name as one that is already open, TAD will close the one that is already open first, to avoid a sharing violation.

Primary System Details

These settings determine the characteristics of the Primary System, being the monitoring system the TAD spot checks are being compared against.

CSV Files Location

Specify the path to the folder where the Primary System CSV data files will be written. The spot check will fail if TAD cannot locate a CSV file at this location containing sample records that span the time the spot check has been requested for.

Description

This is a free form field to record any details of the Primary System setup. It is purely a documentation aid and plays no part in the generation of reports.

Column Heading

Specify the abbreviated name to be used to annotate the readings from the Primary System in the spot check report. TAD will attempt to choose a report header font appropriate for the number of characters this abbreviated name contains.

Spot Check Folder

Specify the name of the folder where the spot check report PDF file will be written. The folder need not exist and will be created if it is not found. If the [Use date format](#) checkbox is checked, then the name specified is interpreted as a date-formatted folder name according to the [file and folder formatting rules](#).



TAD uses particular rules when interpreting the spot check report folder specification. See the topic [How destination folder specifications are interpreted](#) for more information. An example of how the folder name that is generated from your folder specification will look is always displayed in the panel below the folder specification.

Spot Check Filename

Specify the name of the spot check report PDF file to be written. If the file exists it will be overwritten. If the [Use date format](#) checkbox is checked, then the name specified is interpreted as a date-formatted filename according to the [file and folder formatting rules](#).

Spot Check Statistics

Next Sample At

Displays the nominal time of the next spot check sampling. The actual sample time will depend on the availability of samples for each channel on or about this time

Last Sample At

Displays the nominal time of the most recent spot check sampling.


Next Report At

Displays the time of the generation of the next spot check sampling report. This time will be equal to the nominal time of the next spot check sampling if the *Wait for this period of time before generating the report* control is set to zero.

Last Report At

Displays the time the last spot check report was generated. Any spot checks that were generated on demand will also have their time recorded here.

Last Report Filename

Displays the file path and name of the most recent spot check PDF report file to be generated. Clicking on the button to the right of the displayed filename () will open the PDF file in Acrobat Reader



Spot check reports are also added to the [Recent Reports](#) display on the [Reports tab](#).

9.14 How destination folder specifications are interpreted

When you enter a destination folder for backups, summary reports, channel reports, exports, or spot checks, TAD follows certain rules when it interprets what is entered into the field.

If nothing is entered, the destination folder is assumed to be the default folder for that operation.

If an absolute pathname is entered (one that starts with "\" or a drive letter followed by a colon, such as "D:."), TAD takes no special interpretation of the folder.

If a relative pathname is entered (one that doesn't start with "\" or a drive letter followed by a colon, such as "D:."), TAD takes the specification as being relative to the default folder for that operation.

The default folders are:

Summary Reports	C:\Documents and Settings\All Users\Documents\Temprecord\TAD\Summary Reports\
Channel Reports	C:\Documents and Settings\All Users\Documents\Temprecord\TAD\Channel Reports\
Spot Check Reports	C:\Documents and Settings\All Users\Documents\Temprecord\TAD\Spot Check\
Exported CSV Files	C:\Documents and Settings\All Users\Documents\Temprecord\TAD\Export\
Backup	C:\Documents and Settings\All Users\Application Data\Temprecord\TAD\Backup\
Local web backup	C:\Documents and Settings\All Users\Application Data\Temprecord\TAD\Web Backup\

So using summary reports as an example:

Specification	Folder Used
(null)	C:\Documents and Settings\All Users\Documents\Temprecord\TAD\Summary Reports\
Lab	C:\Documents and Settings\All Users\Documents\Temprecord\TAD\Summary Reports\Lab\
Lab\2011	C:\Documents and Settings\All Users\Documents\Temprecord\TAD\Summary Reports\Lab\2011\
D:\Reports\Lab	D:\Reports\Lab

If the checkbox labeled **Use Date Format** is checked, the folder name is then interpreted according to the rules described in the topic [formatting file and folder names](#).

See also

[Backup](#)

[Reports](#)

[Export](#)

[Spot Checks](#)

[Formatting file and folder names with date-times](#)

9.15 Formatting file and folder names with date-times

Under some circumstances TAD creates its own name for files and/or folders, based on the current date and time. These circumstances are:

- when TAD backs up TDF and CSV files to the backup destinations **Backup file 1**, **Backup file 2**, and **Web**, the destination folder name can be formatted according to the current date and time.
- when TAD creates a summary or channel PDF report, the destination folder name and the filename can be formatted according to the current date and time, and also a unique serial number which is incremented by 1 for each report file or folder name created.

r

The format of these file and folder names is determined by templates which you can specify and alter. When TAD is installed, these are set to sensible defaults, but your situation may call for a different file and folder naming convention, in which case you can modify them

The following table shows how each of the special characters is used. Any other character or character group not shown in the table below is currently used unchanged in the file or folder name, i.e it is not converted into some other collection of characters.



Don't assume that a character not mentioned in the table below will never be used as a formatting character. Temprecord reserves the right to define additional formatting characters in the future. If you don't intend characters to be interpreted as formatting characters, it is good practice to always include them in double quotes ("like this").

Format characters	What is Displayed
c	Displays the date using the format given by the Windows short date format, followed by the time using the format given by the Windows long time format, as specified for that computer in Windows Control Panel. The time is not displayed if the date-time value indicates midnight precisely.

Format characters	What is Displayed
d	Displays the day as a number without a leading zero (1-31).
dd	Displays the day as a number with a leading zero (01-31).
ddd	Displays the day as an abbreviation (Sun-Sat).
dddd	Displays the day as a full name (Sunday-Saturday).
dddddd	Displays the date using the format given by the Windows short date format (nominally M/d/yyyy in the US locale).
ddddddd	Displays the date using the format given by the Windows long date format (nominally dddd, MMMM dd, yyyy in the US locale)
e	Displays the year in the current period/era as a number without a leading zero (Japanese, Korean and Taiwanese locales only).
ee	Displays the year in the current period/era as a number with a leading zero (Japanese, Korean and Taiwanese locales only).
g	Displays the period/era as an abbreviation (Japanese and Taiwanese locales only).
gg	Displays the period/era as a full name. (Japanese and Taiwanese locales only).
h	Displays the hour without a leading zero (0-23).
hh	Displays the hour with a leading zero (00-23).
m	Displays the month as a number without a leading zero (1-12). If the m specifier immediately follows an h or hh specifier, the minute rather than the month is displayed.
mm	Displays the month as a number with a leading zero (01-12). If the mm specifier immediately follows an h or hh specifier, the minute rather than the month is displayed.
mmm	Displays the month as an abbreviation (Jan-Dec).
mmmm	Displays the month as a full name (January-December).
n	Displays the minute without a leading zero (0-59). Note that this the 'n' character, not the 'm' character.
nn	Displays the minute with a leading zero (00-59). Note that this the character string 'nn', not 'mm'.
o	Displays the current timezone offset, in the format SNNNN, where "S" is either "+" or "-", and "NNNN" is the timezone offset expressed relative to GMT in HHMM, for example in Rome during daylight savings (2 hours ahead of GMT), this character formats as "+0200". The exact result of using this formatting character is dependent on the date formatting options. If UTC time is selected this formatting character will always cause "+0000" to be displayed.
s	Displays the second without a leading zero (0-59).
ss	Displays the second with a leading zero (00-59).
t	Displays the time using the format given by the Windows short time format (nominally h:nn in the US locale).

Format characters	What is Displayed
tt	Displays the time using the format given by the Windows long time format (nominally h:nn:ss in the US locale).
U	Displays the currently logged in Windows user
w	Displays the week number without a leading zero (1-53).
ww	Displays the week number with a leading zero (01-53).
yy	Displays the year as a two-digit number (00-99).
yyyy	Displays the year as a four-digit number (0000-9999).
z	Displays the current timezone name. The exact result of using this formatting character is dependent on the date formatting options. Temprecord attempts to make an abbreviation of the timezone name, for example in Rome during daylight savings (2 hours ahead of GMT), this character formats as "CEST" (Central European Summer Time). If UTC time is selected this formatting character will always cause "UTC" to be displayed.
#	(Channel report file and folder names only) Displays the channel number. It thus provides a convenient way of automatically generating file or folder names that identify the channel concerned.
+	Displays an incrementing sequence number. This provide a means of generating a series of unique file or folder names. The sequence number used is saved between TAD sessions. It is incremented anytime a channel or summary report, exported CSV file, or spot check report is produced.



If you don't want TAD to use these date formatting rules on the file or folder name you specify, enclose the entire template in double quotes ("..."). If you want TAD to use these date formatting rules only in some parts of the file or folder name you specify, enclose the parts of the file or folder name that you don't want to be formatted in double quotes ("...").



If you specify characters in your date formatting rules that Windows does not allow in a file or folder name (for example, the "/" or ":" characters), TAD will substitute an underscore (" _ ")



Note that the specifier for "minutes" is "n" (not "m", which means "months").

Examples

Here are some examples of the filenames generated when date-formatted filenames are used for summary, channel, or spot check PDF reports, or exported CSV files:

Filename Format Specified	Filename Generated	Feature Demonstrated
"Report"	Report.PDF	No formatting (entire format specification in double-quotes)
mmm dd yyyy hh-mm	Jan 31 2007 12-34.PDF	Date and time in filename

yyyy-mm-dd hh-mm z	2007-Jan-31 12-34 CST.PDF	date and time, timezone in filename.
"Report for channel" # dd mmm yy	Report for channel 027 31 Jan 11.PDF	Date and channel number in filename (channel reports only)

The same rules apply to the folder specifiers, and you can include path delimiters ("backslashes") in the specifier. Some examples:

Folder Format Specified	Folder Name Generated	Feature Demonstrated
"D:\Backup\"	Backup\	No formatting
"D: \Backup\"yyyy\mmm\"	Backup\2013\Jun\	Folder tree organized by year, then month
"D: \Backup\"yyyy\ww\"	Backup\2013\26\	Folder tree organized by year, then week
"D:\Reports\Channel" #\	D:\Reports\Channel 027\	Channel-numbered report folders (channel reports only)

Once again, note the use of double quotes around any part of the file or folder name that you don't want to be interpreted as a formatting character.

See also:

[Meta-strings](#)

[Backup options](#)

9.16 Web Options

(Configurable at Administrator Level only)

Web: The user specifies the web server information here. If the **Enable Backup to Web** checkbox is checked on the **Options / Backup** tab, then the **Datafile Backup Destination Folder** would be used to determine the path to use on the server, and if necessary the path will be created on the server

The site network administrator must provide the following information for configuration:

Customer ID

Use these account details

This should be left unchecked. The fields **Receptacle** and the **Authentication Keys** are not currently used.

Encrypt files

This facility is not currently implemented. Contact Tembrecore for information on this.

There may be individual site security issues (firewalls, [proxy servers](#)) to deal with before the web options are configured and enabled. Please check with your site network administrator.

Web

Customer ID

☐ Use these account details

Receptacle

Authentication Key 1

Authentication Key 2

☐ Encrypt Files

☐ Use this key

Confirm Key

Figure 23: Options Tab: Web / Web Server Setup

See Also

[Web Backup](#)

[Web Restore](#)

[Proxy Settings](#)

9.17 Web Backup

The **Web Backup** tab provides information about the currently running backup of TAD data files to the Temprecord Web-based storage repository.



When TAD backs up to the web (see [web backup destination](#) for more details), the TAD datafiles are copied first to a local holding area - a folder on the local PC. This occurs relatively quickly. File are then transferred from the holding area to the web. As this can take some time to complete the transfer of the files to the web takes place in a background thread,. This thread compares the datestamp of the files currently stored on the web with those files stored in the local holding area. Any files that have changed locally, or do not currently exist on the web, are then copied to the web.



This local holding area for the web files also serves as a local backup of the files. The files are placed in the folder:

```
C:\Documents and Settings\All Users\Application
Data>\Temprecord\TAD\Web Backup\
```

You can determine how the files are organised within this folder with the web backup [destination folder specification](#). This destination can include paths and date-formatted folder names, so the files can be organised in a date-structured "tree" like:

```
C:\Documents and Settings\All Users\Application
Data>\Temprecord\TAD\Web Backup\2011\August\
```

This organisation can be arbitrary and only serves as a convenient way for the user to locate files at a later date. TAD searches the whole folder tree when it backs them up, and does not preserve the folder structure on the web. This is because if you should ever need to restore the files from the web, TAD will expect them to all be placed in one folder for correct operation.

The screenshot shows the 'Web Backup' window. It contains several input fields for tracking backup progress: Files Found (0), Files to Check (0), Files Checked (0), Files Skipped (0), Files Created (0), Files Updated (0), and Send Errors (0). On the right, there are fields for Last Backup (0), This Backup (0), and Backup State (Ready). Three buttons are located on the right: 'Force Backup Check', 'Cancel Backup', and 'Retry Failed Files'. Below these fields are two larger text boxes labeled 'Status' and 'Last Result'. At the bottom, there is a log window with a scroll bar showing three lines of text: '21-02-11 13:32:45 Web listing started (startup)', '21-02-11 13:33:29 Authentication successful. folder "ADR/Test/" found', and '21-02-11 13:33:45 Web Listing completed. Files found: 262'. At the very bottom, there is a 'Web Backup' label, an 'Enable' checkbox (checked), a '3 lines' dropdown, and a 'Clear' button.

Files Found

Total files found in the local holding area.

Files to Check

Total files that TAD will check to see if their date is newer than the version stored on the web. This will generally be less than the total files found due to the setting of the backup option *Ignore files older than control*.

Files Checked

A running total of the number of files that TAD has checked on the web to see if the local copy is newer. This number should count upwards from zero at the start of the backup, to the *Files to check* value at the end of the backup.

Files Skipped

The total number of files that were not backed up because the local version was not newer than the version on the web.

Files Created

The total number of files that were not found on the web, i.e. that had been created since the last backup.

Files Updated

The total number of files that were found on the web, but were older than the local version.

Send Errors

The total number of errors that have occurred during the backup.

Last Backup

The time taken for the backup completed prior to the current one to complete.

This Backup

The time taken so far for the currently running backup.

Backup State

This field will cycle through the following states as the backup progresses:

Ready
Starting
Authenticating
Backing up
Finishing
Finished
Error authenticating
Error backing up

Status	This field displays the current web HTTP operation.
Last Result	The result of the last HTTP operation.
Force Backup Check	Clicking this button will force TAD to carry out the same steps it carries out when a backup as a result of datafile rollover occurs, i.e. to list the current TAD datafiles and compare then against the ones stored on the web, updating and creating them as necessary.
Cancel Backup	Click this button to abort the current backup operation. If the backup operation is restarted, it should carry on from where it left off.
Retry Failed Files	Click this button to make TAD retry all of the files that failed to back up.

Web Log

This log displays status messages as the backup or restore operation proceeds. It can be useful to review this log if you are having difficulties with backup or restore operations.

See Also

[Web Options](#)

[Web Restore](#)

[Web Proxy Settings](#)

9.18 Web Restore

The **Web Restore** tab provides information about the currently running restore of TAD data files from the Temprecord Web-based storage repository, and also displays a list of files currently backed up.



When TAD restores datafiles from the web, the TAD datafiles are copied only if the file is not already present locally. In order to replace a file with a copy on the web, you must delete the local file first.



The web log on the [Web Backup](#) tab displays status messages as the restore operation proceeds. It can be useful to review this log if you are having difficulties with restore operations.

Web Restore

Files Found	262	Last Restore	0	<input type="button" value="Refresh Listing"/> <input type="button" value="Restore Files"/> <input type="button" value="Cancel Restore"/>
Files to Check	0	This Restore	0	
Files Checked	0	Restore State	Finished	
Files Skipped	0			
Files Restored	0			
Files Not Found	0	Status	Finished	
Restore Errors	0	Last Result	200 OK	

Destination Folder for Restore

☒ Use TAD Datafile folder
 ☐ Use this folder

C:\Documents and Settings\jrm\Desktop\TAD Datafiles\Small file

	File	Size	Date Last Modified	Local ?
1	ADR/Test/TAD.CFG	21898	2011-02-20 12:56:39	Yes
2	ADR/Test/TAD.CSV	276	2011-02-21 00:00:13	No
3	ADR/Test/TAD.INI	21935	2011-02-20 12:56:29	No
4	ADR/Test/TAD.TDF	448	2011-02-21 00:00:05	Yes
5	ADR/Test/TAD20100927135558.TDF	1771588	2010-11-16 00:25:57	Yes
6	ADR/Test/TAD20100927135951.TDF	4564	2010-11-16 00:25:53	Yes
7	ADR/Test/TAD20101003000000.TDF	4135992	2010-11-16 00:21:27	Yes
8	ADR/Test/TAD20101011085903.TDF	2197440	2010-11-16 00:20:43	Yes
9	ADR/Test/TAD20101017145724.TDF	307748	2010-11-13 20:53:18	No

Files Found

Total files found in the Web repository. The files in the web repository are read when TAD starts, and then read again when a restore operation is started. If the file listing was not obtained for some reason (the [web authentication settings](#) were incorrect for example) then this field may read zero. You can perform a [Refresh Listing](#) before you start the restore to verify that TAD can read the web repository file list.

Files to Check

Total files that TAD will check to see if the file does not exist locally. This should be the same as the total files found.

Files Checked

A running total of the number of files that TAD has checked to see if there is no local copy. This number should count upwards from zero at the start of the backup, to the [Files to check](#) value at the end of the restore operation.

Files Skipped

The total number of files that were not restored because there was a local version already present. Note that unlike backup operations, restore operations do not check the file date. TAD will never restore a file where a file of the same name exists in the restore folder.

Files Restored

The total number of files that were retrieved from the web and copied to the restore destination folder.

Files Not Found

The total number of files that were not found on the web when TAD tried to restore them. This number should always be zero.

Restore Errors	The total number of errors that have occurred during the restore operation.
Last Restore	The time taken for the restore operation completed prior to the current one to complete.
This Restore	The time taken so far for the currently running restore operation.
Restore State	<p>This field will cycle through the following states as the restore operation progresses:</p> <ul style="list-style-type: none">ReadyStartingAuthenticatingRestoringFinishingStartingAuthenticatingListing filesFinishingFinishedCanceledError authenticatingError restoringError listing
Status	This field displays the current web HTTP operation.
Last Result	The result of the last HTTP operation.
Refresh Listing	When clicked causes the list of web files to be refreshed
Restore Files	Clicking this button will force TAD to start a restore operation.
Cancel Restore	Click this button to abort the current restore operation. If the restore operation is restarted, it should carry on from where it left off.
Destination Folder	<p>This control determines where TAD will put the restored files. If the option Use TAD Datafile Folder is selected, the files will be copied into the same folder as the current TAD datafile. Note that TAD will never restore a datafile into a folder when a file of the same name exists, even if the incoming file is newer. If the option Use this folder is selected, the files will be copied into the folder specified in the field.</p>

See Also[Web Options](#)[Web Backup](#)[Web Proxy Settings](#)

9.19 Proxy Settings

Proxy Settings

☒ No proxy
☐ Auto-detect proxy
☐ Manual proxy

☒ HTTP
☐ SOCKS5

☐ Proxy server requires password
 Username
 Password

Auto-detected Proxy

Detected	Yes
Enabled	No
Host	internetgateway
Port	8080

No Proxy

Select this option if the computer running TAD does not communicate with the Internet via a proxy server.

Auto-detect proxy

Select this option if the computer running TAD communicates with the Internet via a proxy server, and the proxy supports auto-detection. TAD attempts to auto-detect a proxy server on startup regardless, and the results are shown in the panel on the lower part of this tab.

Manual proxy

Select this option if the computer running TAD communicates with the Internet via a proxy server, but the proxy does not support auto-detection. You will need to find out the name of the proxy server and its port number from your IT support person.

Proxy requires password

Check this option if the proxy requires authentication and enter the username and password.

See Also

[Web Options](#)

[Web Backup](#)

[Web Restore](#)

[\[****\]](#)

9.20 Validation Options

Validation Options

(Configurable at Administrator Level only)

These fields are configured by a Temprecord administrator during commissioning.

Validation Interval

The value entered here is the *Validation Interval* in days. If any of the validated channels expire this period then an alert message is generated and logged. Also the channel concerned is marked as *VALIDATION REQUIRED*.

The programmable range is 1 to 999 days. It is recommended that the TAD system is validated every two months (60 days). Default value is 30 days for most installations and site requirements.

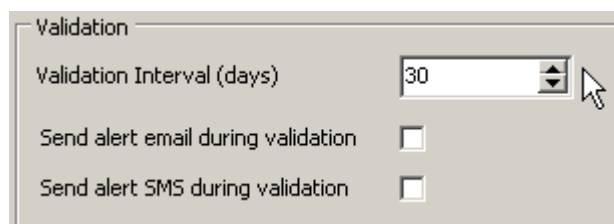


Figure 44: Options / Validation Configuration

Send Alert Email During Validation

Check this if you require email alerts to be generated when a channel enters an alarm condition and that channel is in validation mode. If this option is checked, emails will be sent regardless of the corresponding channel or default settings.

Send Alert SMS During Validation

Check this if you require SMS alerts to be generated when a channel enters an alarm condition and that channel is in validation mode. If this option is checked, SMS messages will be sent regardless of the corresponding channel or default settings.

9.21 Reporting Options

(Configurable at Administrator and Supervisor Level only)

TAD features a rich set of reporting options, enabling you to have control over the frequency and content of reports, as well as the automatic generation of file and folder names.

[General Report Options](#) set parameters that are common to all the report types, such as the paper size and orientation.

[Summary Report Options](#) are used to control how regular and on-demand summary reports are produced.

[Channel Report Options](#) are used to control how individual regular and on-demand channel reports are produced. Any channel can be individually configured to produce a report.

[Validation Report Options](#) control the generation of validation reports. These are a special form of channel report produced when a [validation](#) process is completed.

See Also

[General Report Options](#)

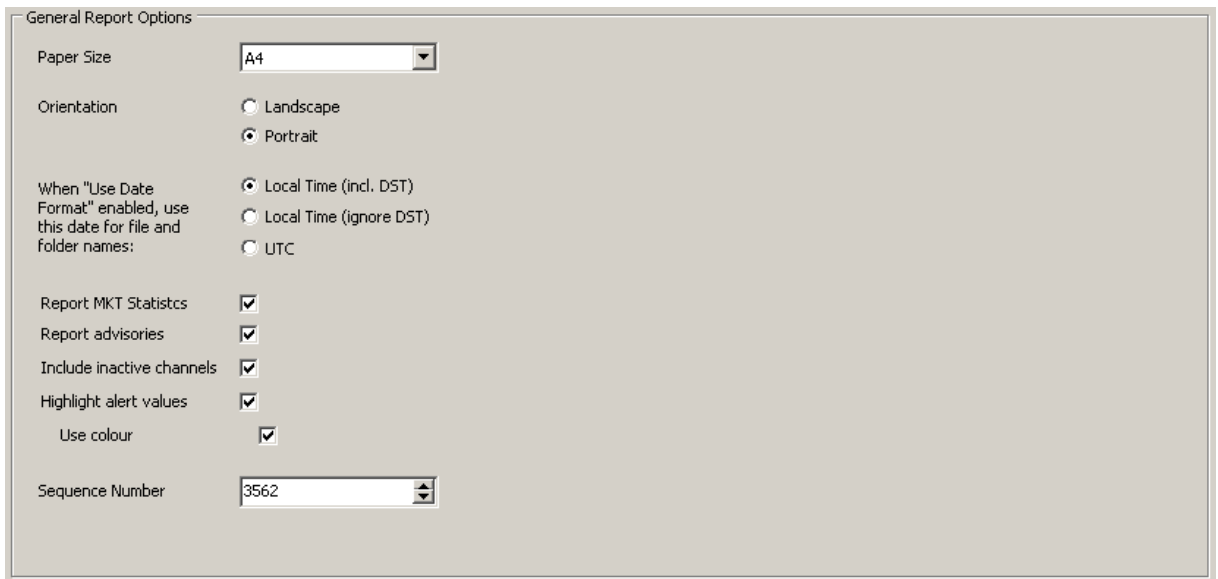
[Summary Report Options](#)

[Channel Report Options](#)

[Validation Report Options](#)

9.21.1 General Report Options

The general reporting options tab contains options that affect all reports, whether summary, channel, or validation.

A screenshot of the 'General Report Options' dialog box. It contains several settings: 'Paper Size' is set to 'A4' in a dropdown menu; 'Orientation' has two radio buttons, 'Landscape' and 'Portrait', with 'Portrait' selected; 'When "Use Date Format" enabled, use this date for file and folder names:' has three radio buttons, 'Local Time (incl. DST)' selected, 'Local Time (ignore DST)', and 'UTC'; 'Report MKT Statistics' is checked; 'Report advisories' is checked; 'Include inactive channels' is checked; 'Highlight alert values' is checked; 'Use colour' is checked; and 'Sequence Number' is set to '3562' in a text field with up/down arrows.

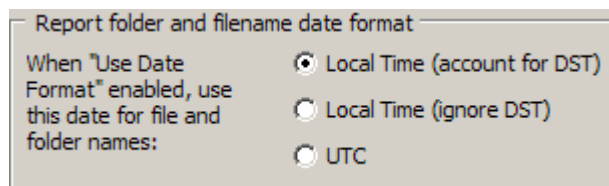
Paper Size

The Page Format group sets the paper size and orientation for any generated report PDF files. TAD will try to format the reports to display clearly on the paper size selected, but this may not be possible with some reports and the smaller paper sizes such as A5.

Orientation

All reports ([Channel reports](#), Summary reports, and [Spot Check](#) reports) use these paper size and orientation settings.

Report folder and filename date format

A screenshot of the 'Report folder and filename date format' dialog box. It contains a label 'When "Use Date Format" enabled, use this date for file and folder names:' and three radio buttons: 'Local Time (account for DST)' selected, 'Local Time (ignore DST)', and 'UTC'.

When TAD generates a folder or filename with date formatting enabled, the date used is the date and time of the report generation. This option determines whether the date is formatted as:

- local time, with daylight savings taken into account

- local time, with daylight savings ignored, even if it is in effect
- universal (UTC) time

Report MKT Statistics

If this option is checked TAD will include a column of statistics for the MKT (Mean Kinetic Value) statistics.

Mean Kinetic Temperature (MKT) is a way of expressing the overall effect of temperature fluctuations during storage or transit of perishable goods with a single temperature value, the Mean Kinetic Temperature.

MKT is a calculated, single temperature that is better represents the effects of temperature variations over a period of time than a simple averaging of the temperatures.

TAD calculates the MKT value for the samples over the time span of the particular report being generated.

Technically speaking, MKT is an expression of cumulative thermal stress experienced by a product at varying temperatures during storage and distribution. In other words, MKT is a calculated, single temperature that is analogous to the effects of temperature variations over a period of time.

MKT is not a simple weighted average. The calculation of MKT gives the higher temperatures a greater weight when computing the average than would a simple numerical average or an arithmetic mean. This weighting is determined by a geometric transformation--the natural logarithm of the absolute temperature.

Report Advisories

As TAD collates the data for the report, it might find circumstances that it feels the user needs to be advised of. These advisories are not necessarily errors, but they should be noted and confirmed as not having any negative effect on your report results.

Advisories

- 1 Warning: Logger serial number changed detected at 9 Aug 2012 16:19:41 NZST (from M0000011 to M0000000)
- 2 Warning: Channel saw multiple loggers (S/N's: M0000000, M0000011)

Include Inactive Channels

By default, TAD doesn't generate channel reports or include the channel summary data in a summary report for any channels that are inactive - i.e. channels which have at one time been configured, but which are currently disabled. If you want reports from all channels that are active or disabled, check this option. You might require this if a channel has been active for a report period but is currently disabled (e.g. for maintenance).

TAD never generates reports for any channels that have a status of "not fitted".

Highlight Alert Values

Check this option if you require channels parameters that are outside the lower and upper limits to be highlighted by printing them with a shaded background.

Use Colour

Check this option if you want the highlighting of out-of-limit channels to use colours. If this option is not checked then out-of-limit channels are indicated by gray shading in the background. If this option is checked, out-of-limits channels are shown in red (high) or blue (low) and channels inside their limits are shown in green.

Statistics

Samples	14,425
Min Temperature	14.62
Max Temperature	25.15
Mean Temperature	19.310
Mean Kinetic Temp.	20.729
Mean Sample Period	40s
Maximum Sample Gap	2d 16h 26m 1s

Sequence Number

You can include a sequence number in folder or filenames by including the + character in the [filename or folder name specification](#). Each time a file or folder name is produced, this sequence number is increased by 1. You can use this option to re-initialize the sequence number.

See Also

[Reporting Options](#)
[Summary Report Options](#)
[Channel Report Options](#)
[Validation Report Options](#)

9.21.2 Summary Report Options

Summary Report Options

☒ Create Regular Summary Reports

☐ Monthly on day: 1
☐ Weekly on: Monday
☐ Daily at hour: 0
☒ Hourly at minute: 0

☒ Show channel name
☒ Show channel LocID
☒ Don't report empty groups

Report Folder: yyyy\mmm

☒ Use Date Format: C:\Documents and Settings\All Users\Documents\Temprecord\TAD\Summary Reports\2012\Aug\

Report Filename: "TAD Summary Report" mmm dd hh-nn-ss "#"+

☒ Use Date Format: TAD Summary Report Aug 10 09-06-47 #4329.pdf

☒ Email Summary Reports: null@temprecord.com

Next report: Never

Last report: 10 Aug 2012 09:00:32 NZST (14 minutes, 19 seconds ago)

Last file: none

Create Regular Summary Reports

The Regular Summary Report group can be configured to generate regular summary reports automatically. The reports are only generated if the Create Summary Reports checkbox is checked.

Regular Summary Report Frequency

Regular Summary Report

☒ Create Summary Reports

☐ Monthly on day

☐ Weekly on

☒ Daily at hour

☐ Hourly at minute

Monthly, weekly, daily and hourly reports are possible, and the actual time of the report generation is influenced by one or some of the controls depending on the frequency selected, i.e.:

Frequency	Report time set by	Example
Monthly	Day of month, hour, and minute	Every month, on the 20th of the month at 5:00pm.
Weekly	Day of week, hour and minute	Every Monday, at 7:30 am
Daily	Hour and minute	Every day at 12:00 pm
Hourly	Minute	Every hour, at 5 minutes past the hour

Show Channel Name

Check this box if you want a column for the channel name to appear in the summary report.

Show Channel LocID

Check this box if you want a column for the channel Location ID to appear in the summary report.



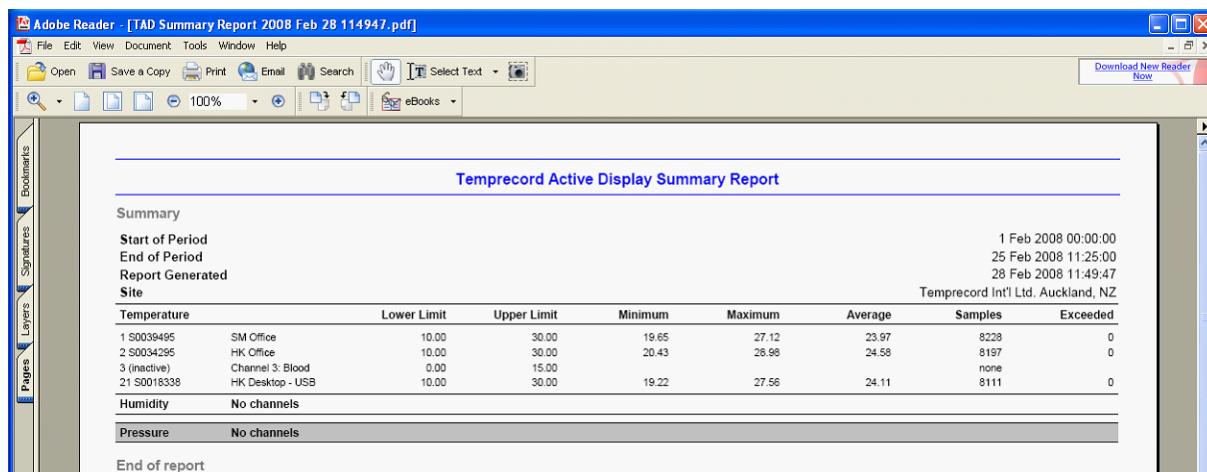
TAD requires one or other of these to be selected, i.e. you can't produce a summary report without one or other of the channel name or location ID appearing.

Don't Report Empty Groups

Check this box if you don't want TAD to show empty groups in the summary report. A group is defined as a collection of Temperature, Humidity, Pressure, or CO2 channels. A group is treated as empty if there are no channels of that type defined, or, if the [Include Inactive Channels](#) checkbox is enabled, if there are no channels of that type active.

Report Folder and Filenames

TAD allows you to specify the folder and file names for both summary and channel reports. There are separate fields for summary report folder, the summary report filename, the channel report folder, and the channel report filename. All four fields have a checkbox *Use date format* to determine whether the specification is to be interpreted as a [date-formatted specification](#) or is to be used directly. All four fields also display a *Sample* panel which show what the file or folder name will look like given the date format specifier that you have entered.



The screenshot shows a PDF document titled "Temprecord Active Display Summary Report" generated on 28 Feb 2008 at 11:49:47. The report is displayed within the Adobe Reader application window. The report content includes a summary section with the following details:

Temperature	Lower Limit	Upper Limit	Minimum	Maximum	Average	Samples	Exceeded
1 S0039495 SM Office	10.00	30.00	19.65	27.12	23.97	8228	0
2 S0034295 HK Office	10.00	30.00	20.43	28.98	24.58	8197	0
3 (inactive) Channel 3: Blood	0.00	15.00				none	
21 S0018338 HK Desktop - USB	10.00	30.00	19.22	27.56	24.11	8111	0

Humidity: No channels
Pressure: No channels

End of report

Figure 27: Options / Reporting: Sample Summary Report (PDF)

Summary Report Folder

The summary report folder specifies the folder used when PDF summary reports are generated, whether as regular reports or on demand. See the topic [Formatting file and folder names with date-times](#) for details of how folder names are generated when the `Use date format` option is checked.

Summary Report Filename

The summary report filename specifies the filename used when PDF summary reports are generated, whether as regular reports or on demand. See the topic [Formatting file and folder names with date-times](#) for details of how file names are generated when the `Use date format` option is checked. If no filetype is specified, PDF is assumed. Note that PDF files are generated regardless of what file extension you might specify -i.e. if you specify a report name of `My Report.rep`, TAD will produce a file called that, but it will still be a PDF format file, and you will require Acrobat Reader or similar software to view it.

Email Summary Reports

The Email Summary Reports group located on the Options / Reporting screen enables emails to be sent with an attached PDF summary report to the email address(s) entered in the Address field. You may enter multiple email addresses separated by a comma (,).



The screenshot shows a checkbox labeled "Email Summary Reports" which is checked. Next to it is a text field containing the email address "null@temprecord.com". To the right of the text field is a small ellipsis button (three dots) used to open a dialog for entering multiple email addresses.

Figure 30: Options / Reporting: Email Summary Reports



You can click on the ellipsis button to enter the addresses each on a line by themselves.



See Also

- [Reporting Options](#)
- [General Report Options](#)
- [Channel Report Options](#)
- [Validation Report Options](#)

9.21.3 Channel Report Options

Channel Report Options

Report Folder: yyyy\mmm

☒ Use Date Format: C:\Documents and Settings\All Users\Documents\Temprecord\TAD\Channel Reports\2012\Dec\

Report Filename: "TAD Channel "#" Report" yyyy-mm-dd hh-nn-ss "#"+

☒ Use Date Format: TAD Channel 123 Report 2012-12-07 13-38-10 #5053.pdf

☒ Include Channel Summary

☒ Include Channel Settings

☒ Include Channel Statistics

☒ Include Channel Graph Height: 50 percent

☒ Plot all graph points (can result in large PDF's)

☒ Include Events

☒ Include routine events

☒ Expand Events in Report Limit to: 8 lines

☒ Report Vaccine Status

Adobe Reader - [TAD Report (Channel 2) 2008 Feb 28 115851.pdf]

File Edit View Document Tools Window Help

Open Save a Copy Print Email Search Select Text eBooks

71%

Options

Bookmarks Signatures Layers Pages

1 2 3 4 5 6 7 8 9 10

Temprecord Active Display Report

Summary

Start of Period: 1 Feb 2008 00:00:00

End of Period: 25 Feb 2008 11:25:00

Report Generated: 28 Feb 2008 11:58:51

Site: Temprecord Int'l Ltd, Auckland, NZ

Channel: HK Office (Ch 2 using COM6)

Settings

Serial Number: S0034295

Logging: Temperature only

Sample Period: 00:00:20 (180.00 per hour)

Upper T Limit: 30.00 (limit delay 2)

Lower T Limit: 10.00 (limit delay 2)

Action on Alarm: Pop-up and remain open, send email

Statistics

Samples: 8,197

Mean Temperature: 24.584

Min Temperature: 20.435

Max Temperature: 28.982

Time Above: 0:00:00

Time Below: 0:00:00

Time Outside: 0:00:00

Occurrences: 0

Graph

Events

Type	Date	Event
Information message	12 Feb 2008 10:13:42	New TAD Datatile created
Information message	12 Feb 2008 10:13:42	Filename: C:\Program Files\TAD\TAD.TDF
Information message	12 Feb 2008 10:13:42	TAD Application started as Master

Figure 26: Options / Reporting: Sample Channel Report (PDF)

Report Folder and Filenames

TAD allows you to specify the folder and file names for both summary and channel reports. There are separate fields for summary report folder, the summary report filename, the channel report folder, and the channel report filename. All four fields have a checkbox **Use date format** to determine whether the specification is to be interpreted as a [date-formatted specification](#) or is to be used directly. All four fields also display a **Sample** panel which show what the file or folder name will look like given the date format specifier that you have entered.

Channel Report Folder

The channel report folder specifies the folder used when PDF channel reports are generated, whether as regular reports or on demand. See the topic [Formatting file and folder names with date-times](#) for details of how folder names are generated when the **Use date format** option is checked. As well as the date-formatting options permitted with summary folders and filenames, channel reports can use the "#" character to include the channel number in the report folder.

Channel Report Filename

The summary report filename specifies the filename used when PDF summary reports are generated, whether as regular reports or on demand. See the topic [Formatting file and folder names with date-times](#) for details of how file names are generated when the **Use date format** option is checked. As well as the date-formatting options permitted with summary folders and filenames, channel reports can use the "#" character to include the channel number in the report filename. If no filetype is specified, PDF is assumed. Note that PDF files are generated regardless of what file extension you might specify.

Include Channel Summary

If checked this option causes the following summary of the logger to be included in the channel report:

Summary

Start of Period	Sat 1 Dec 2012 13:59:13 NZDT
End of Period	Fri 7 Dec 2012 02:12:12 NZDT
Duration	5d 12h 12m 58s
Report Generated	Fri 7 Dec 2012 02:13:04 NZDT
Report Filename	TAD Channel 005 Report 2012-12-07 02-13-04 #5041.pdf
Site	New installation
Channel	Channel 5 (using COM1)
Location ID	

Include Channel Settings

If checked this option causes the following group describing the logger settings to be included in the channel report:

Settings

Serial Numbers	H0033025, S1234567
Logging	Temperature only
Sample Period	00:01:00 (60.00 per hour)
Upper T Limit	4.00 °C (limit delay 5)
Lower T Limit	-4.00 °C (limit delay 5)
Action on Alarm	No pop-up

Include Channel Statistics

If checked this option causes the following group detailing the statistical data for the period of the report to be included in the channel report:

Statistics

Temperature Samples	2,577
Min Temperature	21.47
Max Temperature	26.67
Mean Temperature	23.272
Mean Kinetic Temp.	24.172
Mean Sample Period	3m 4s
Maximum Sample Gap	3d 16h 53m 32s
WARNING	Largest time gap between samples is 3d 16h 53m 32s
Time Above	5d 12h 12m 32s
Time Below	0s
Time Outside	5d 12h 12m 32s
Occurrences	1

Include Events

Check this box if you want events logged by TAD to be included in the channel reports. Only events pertaining to the report channel are included, and also events for which there is no channel associated.

Include Routine Events

If this option is checked, all events for the channel will be included. If it is left cleared, only error, warning, and alert events are included.

Expand Events in Report

If the **Expand Events in Report** checkbox is checked, each event will be expanded to include the event details in the report. If it is not checked, only the first line of the event will be listed.

Limit to N Lines

The **Limit to N Lines** field will limit the number of lines the event detail can expand to. The default value is 10 lines.

Include Channel Graph

Check this option if you want a graph of the channel data over the report period.

Graph Height

Use this option to set the height of the graph on the page. If you set it to 100% the graph will be printed on a page by itself

Plot all Graph Points

Normally TAD does not plot the graph points that are too close together to cause a shift in the X-axis position. Where the data is varying quickly and over a wide range, this can result in data excursions not being seen on the printed graph. If this option is checked, TAD will print all the graph points to ensure all data value excursions are seen on the plot.



Use of this option can result in large PDF file sizes.

Report Vaccine Status

When the Report Vaccine Status checkbox is checked the report will include a vaccine status report for the Channel:

Vaccine Status				
Zone	Time in Zone	Longest Time	From	To
Unknown	0:00:10	0:00:10	3 Mar 2008 17:20:47	3 Mar 2008 17:20:57
Above Room (25 C)	0:00:00			
Above Upper Limit	0:00:00			
Within Limits	2:00:39	2:00:39	3 Mar 2008 17:20:57	3 Mar 2008 19:21:16
Below Lower Limit	0:00:00			
Below Freezing (0 C)	0:00:00			

Vaccine	Action	Reason
Oral Polio	Use	below upper limit
MMR	Use	below upper limit
BCG	Use	below upper limit
DPTH	Use	above freezing and below upper limit
DT, Td, Hib & Hep B	Use	above freezing and below upper limit

End of report

Figure 25: Options / Reporting: Vaccine Status Reporting

See Also

[Reporting Options](#)
[General Report Options](#)
[Summary Report Options](#)
[Validation Report Options](#)

9.21.4 Validation Report Options

Validation Report Options

☒ Include sign-off footer in validation report
☒ Only print on first page
☒ Use current logged in TAD username
☐ Use this name

These settings apply to the channel reports produced when a validation is completed. All other report settings are taken from the channel report options.

A TAD Validation Report is a special channel report that is produced when a channel exits [Validation Mode](#). The validation report is like a report-on-demand for the period that the channel was in validation mode. The report also includes extra footer material for the purposes of signing the report.

Include Sign-off Footer in Validation Report

Check this option to include the extra sign-off area in the footer.

Only Print on First Page

If this option is checked, the extra sign-off footer is only printed on the first page of the report.

User Current Logged in TAD Username

If this option is selected the current TAD username is printed at the bottom of the sign-off footer.

Use this name

If this option is selected the contents of this field is printed at the bottom of the sign-off footer.

See Also

[Reporting Options](#)

[General Report Options](#)

[Summary Report Options](#)

[Channel Report Options](#)

9.22 Defaults Options

(Configurable at Administrator and Supervisor Level only) Overview

The Settings on the Defaults screen only affect those channels where [Use Defaults](#) is enabled. Any channel can be configured independently of these settings (if required) by leaving the Use Defaults checkbox unchecked in the channel setup dialog.

The Options/Defaults screen is organised into seven groups: alarms, logging, sampling, temperature, humidity, pressure, or CO2 and default report configuration. Settings saved in the defaults screen apply to all channels that are set up to use the default settings.

These settings only affect those channels that are configured to use the default settings. Any channel can be configured independently of these settings if required.

Alarms <input type="checkbox"/> Input 0 Delay (min) 0 <input type="checkbox"/> Input 1 Delay (min) 0 Pop-up on Alarm No action Action on Alarm <input type="checkbox"/> Email <input type="checkbox"/> SMS <input type="checkbox"/> Activate Auxiliary Output	Sampling Sample every 0 5 0 Temperature Temperature Limit Delay Upper Limit 25.00 3 Lower Limit 20.00 3 Humidity Humidity Limit Delay Upper Limit 60.00 3 Lower Limit 10.00 3 Pressure Pressure Limit Delay Upper Limit 100.00 5 Lower Limit -100.00 5	Default Report Configuration <input type="checkbox"/> Create Reports Frequency <input type="radio"/> Monthly on day 1 <input checked="" type="radio"/> Weekly on Monday <input type="radio"/> Daily at 0 <input type="radio"/> Hourly at 0 Plot Scaling <input type="radio"/> Fit Trace <input type="radio"/> Fit Limits <input checked="" type="radio"/> Fit Trace and Limits <input type="radio"/> Fixed Limits -10.00 5.00 Email Reports <input checked="" type="radio"/> No <input type="radio"/> Yes
---	---	---

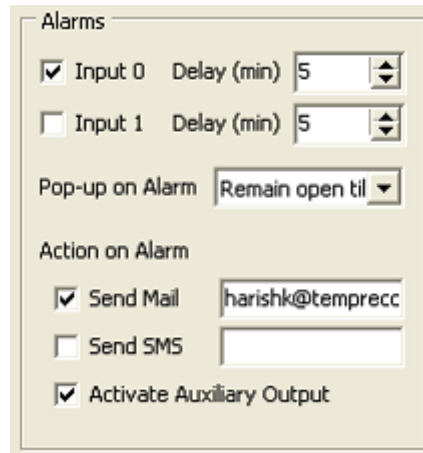
Figure 32: Options / Defaults (Global)

Alarms Group Configuration

Input 0 and Input 1 checkboxes

When checked enables the digital inputs for the channel for monitoring events like door open, power failure to the monitored device etc...

The Delay (min) fields allow programming of event delay in minutes before alarm is triggered. This delay prevents nuisance alarms, e.g. when retrieving goods from freezer.



The screenshot shows a configuration window titled 'Alarms'. It contains the following elements:

- Input 0**: Checked checkbox, Delay (min) set to 5.
- Input 1**: Unchecked checkbox, Delay (min) set to 5.
- Pop-up on Alarm**: A dropdown menu currently showing 'Remain open til'.
- Action on Alarm**:
 - Send Mail**: Checked checkbox, with an email address field containing 'harishk@temprecc'.
 - Send SMS**: Unchecked checkbox, with an empty text field.
 - Activate Auxiliary Output**: Checked checkbox.

Figure 33: Options / Defaults: Alarms Group

Pop-up on Alarm This allows you to select from three options which determine how TAD behaves when an alarm event occurs.

No Action

When **No action** is selected the Alarm Pop-up message is not displayed when an alarm event occurs. However, the alarm event is logged in the TAD system.


Remain open till acknowledged

When **Remain open till acknowledged** is selected, the pop-up alarm message will remain displayed on screen until the alarm message details are filled in and acknowledged (by clicking **Respond** button) by the user. This information is logged and is printed under the **Events** heading on PDF channel reports.

Close after delay

When the **Close after delay** option is selected, then the pop-up alarm message will display for the time (in seconds) set in the **Display For (Sec)** field located under the **Screen Alerts** group of the **Options/Alerts** screen. When the time expires, the pop-up message will close without requiring acknowledgement. The event is still logged.

Alert - Ch1 (Main Office) - Temperature lower limit exceeded


 Temperature: 20.67 °C
 lower limit: 23.00 °C
 Limit delay: 3 samples

To acknowledge this alarm, you need to fill in these details, and click the "Respond" button

There is one other alert pending.

Time of Alert: 5 Sep 2012 10:22:50 NZST (1 minute, 18 seconds ago)
 Operator:
 Reported Fault: Ch1 (Main Office) - Temperature lower limit exceeded
 Cause Found:
 Corrective Action:

Figure 34: Pop-up Alarm Message Detail: Acknowledgement

The Reported Fault field information is automatically filled in by the TAD System describing the reason the pop-up alarm message was triggered.

Action on Alarm

These checkboxes determine how the alarm condition is handled by TAD.

Send Mail This checkbox must be checked to send email notification(s) about the alarm event. To the right of the checkbox is text field where email Address(s) can be entered. If email notification is to be sent to more than one recipient then enter multiple email addresses separated by commas:

recipient1@sitename.com, recipient2@sitename.com, recipient3@Site2.com etc...

Send SMS option checkbox must be checked to send a SMS text Messages to mobile devices notifying you of an alarm event. To the right of the checkbox is text field where SMS account details (mobile phone ids) can be entered. If SMS messages are to be sent to more than one recipient then enter multiple SMS account details separated with commas.

Note: If you want to use the Send SMS option then first check with your SMS account provider that they can process messages sent to your SMS account from a computer (in this case the TAD software). You will need an SMS account for TAD to allow use of this option.

Activate Auxiliary Output

This option has a checkbox that must be checked to activate the auxiliary output. When enabled, the **Activate Auxiliary Output** will activate a **Global Alarm Output** which in turn would alert a remote alarm monitoring company of the alarm event condition.

Logging

This group determines what parameters are logged in each channel. A TAD Channel can be fitted and configured to provide data from any of:

- a Temprecord temperature logger,
- a Temprecord temperature and relative humidity logger,
- a pressure transducer,
- a CO2 Sensor,
- digital I/O functionality only.

This results in the following logging options:

Figure 35: Options / Defaults: Logging Selector

Sampling

Sample every

These fields allow programming of the sampling period of the channel. The fields are set as HH:MM:SS (hours, minutes and seconds). The minimum sampling period is 20 seconds. Note that this parameter bears no relationship to the logger sampling period. The logger can be logging at any sampling period, or not logging at all.

Simulate checkbox. This option (if displayed) is for use by TIL Administrators only.

Figure 36: Options / Defaults: Sampling

Sampling when Channel Outside Limits

This parameter determines how those channels that have the channel parameter [Sampling when channel outside limits](#) set to Use setting in Default Options

No Change

If this option is selected, then any channels that have their [Sampling when channel outside limits](#) option set to Use setting in Default Options will not change the sample period when those channels are outside their limits.

Sample Every

If this option is selected, then any channels that have their [Sampling when channel outside limits](#) option set to Use setting in Default Options will change the sample period to the value set in these controls when those channels are outside their limits.

Temperature, Humidity, Pressure, CO2

Upper Limit: This field sets the maximum value this channel will accept before an alarm event is triggered and logged by the tad system. Use the arrows on the spin boxes to change or just type the values in the field.

Limit Delay: The value entered in this field is the number of sample periods the upper limit must be exceeded before an alarm event is triggered and logged by the TAD system.

Lower limit: This field sets the minimum value this channel will accept before an alarm event is triggered and logged by the tad system. Use the arrows on the spin boxes to change or just type the values in the field.

Limit Delay: The value entered in this field is the number of sample periods the lower limit must be exceeded before an alarm event is triggered and logged by the TAD system.

Temperature		
	Temperature	Limit Delay
Upper Limit	25.50	0
Lower Limit	24.50	0

Humidity		
	Humidity	Limit Delay
Upper Limit	80.00	5
Lower Limit	40.00	5

Pressure		
	Pressure	Limit Delay
Upper Limit	100.00	5
Lower Limit	30.00	5

CO2		
	CO2	Limit Delay
Upper Limit (ppm)	9999.00	5
Lower Limit (ppm)	0.00	5

Figure 37: Options / Defaults: Temperature, Humidity & Pressure

Default Report Configuration

Default Report Configuration

☒ Create Reports

Frequency

☐ Monthly on day 1

☒ Weekly on Monday

☐ Daily at 0

☐ Hourly at 0

Plot Scaling

☐ Fit Trace

☐ Fit Limits

☒ Fit Trace and Limits

☐ Fixed Limits

-10.00 5.00

Email Reports

☐ No Address

☒ Yes info@temprecord.com

Figure 38: Options / Defaults: Default Report Configuration

When the **Create Reports** checkbox is selected, then the user can configure the frequency of report generation, i.e. hourly, daily, weekly or monthly. Only one selection is possible but fields adjacent to each selector allows more specific settings, e.g. When **Weekly** is selected, the user can select Monday, Tuesday etc. If **Daily** is selected, the hour and minute can also be selected.

The **Plot Scaling** options allow you to control how the graph data is plotted in the report.

Fit Trace: Enabling this option will scale the vertical axis of the graph so that the entire logged temperature and/or humidity, pressure, or CO2 traces will fit onto the graph trace on the TAD Channel Report.

Fit Limits: Enabling this option will scale the vertical axis of the graph so that the entire temperature, humidity, pressure, or CO2 range between the limits will fit on onto the graph trace on the TAD channel report..If any of the logged parameters have exceeded their limits, part of the trace may not be displayed.

Fit Trace and Limits: Enabling this option will scale the vertical axis of the graph so that the entire temperature, humidity, pressure, or CO2 range between the limits and also the logged values will fit on onto the graph trace on the TAD Channel Report..This option is guaranteed to show all the data and the associated limits

Fixed Limits: Enabling this option will scale the vertical axis of the graph between the limits set in the two fields provided.

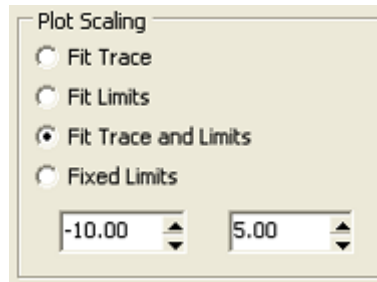


Figure 39: Options / Defaults: Default Report Configuration / Plot Scaling

Email Reports: When selected, reports are emailed to the address(es) provided, e.g. recipient1@sitename.com, recipient2@sitename.com, recipient3@Site2.com... etc.

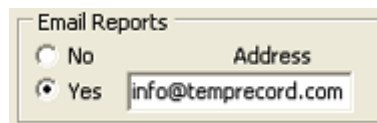


Figure 40: Options / Defaults: Default Report Configuration / Email Reports

When emailed, the TAD Reports are sent as attachments in PDF (Portable Document Format) format. The default PDF reports folder is: C:\Program files\Tad\Reports. Other folder paths may be specified, and these can be formatted by date.

9.23 Alerts Options

(Configurable at Administrator and Supervisor Level only) Overview

The Alerts tab is organised into four groups that configure TAD functions such as:

Display time (duration) and Snooze Time of the pop-up alerts displayed on screen.

The number of Past Days logged Events that are displayed on the Log screen.

Logging of Momentary error condition checkboxes

Configuration of Auxiliary Alarm Outputs and alarm module and

Validation Interval in days for channel validation expiry warnings

A Temprecord administrator will configure the Alerts tab options, when the TAD System is installed and commissioned on Site.

Pop-up Screen Alerts Display For (Sec) <input type="text" value="60"/> Snooze Time (hh:mm:ss) <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="0"/> Display Respite Delay (Sec) <input type="text" value="5"/> <input checked="" type="checkbox"/> Close modal dialogs after delay Delay (minutes) <input type="text" value="1.00"/> <input checked="" type="checkbox"/> Alert Pop-up Override Delay (minutes) <input type="text" value="5.00"/> <input checked="" type="checkbox"/> Acknowledge duplicate alerts	Auxiliary Inputs <input checked="" type="checkbox"/> Enabled Input D00 <input type="text" value="Input 00"/> Input D01 <input type="text" value="Input 01"/> Auxiliary Outputs <input checked="" type="checkbox"/> Enabled Output D02 <input type="text" value="External"/> Force ON <input type="button" value="OFF"/> <input type="button" value="Silence"/> Output D03 <input type="text" value="External"/> Force ON <input type="button" value="OFF"/>
Momentary Errors Enable the options below if you want TAD to log momentary error conditions. If an option is not enabled, then an event for that condition (or its recovery) will only be logged when the delay time has elapsed. <input type="checkbox"/> Log Momentary Digital Input 0 Warnings <input type="checkbox"/> Log Momentary Digital Input 1 Warnings <input checked="" type="checkbox"/> Log Momentary Temperature Warnings <input checked="" type="checkbox"/> Log Momentary Humidity Warnings <input checked="" type="checkbox"/> Log Momentary Pressure Warnings <input checked="" type="checkbox"/> Log Momentary CO2 Warnings	I/O Port I/O Port Model <input type="text" value="Moxa NE 4110-5"/> IP Address <input type="text" value="192"/> <input type="text" value="168"/> <input type="text" value="0"/> <input type="text" value="1"/>
	Initialisation Errors Errors during TAD startup will be logged, but will not cause TAD to pause. No SMS or email will be sent. The auxiliary output will not be asserted. Regardless of these settings, all initialisation errors will be recorded in the event log. <input checked="" type="radio"/> No action <input type="radio"/> Error dialog <input type="radio"/> Alert dialog Pop-up <input type="text" value="Close after delay"/> <input type="checkbox"/> Send email <input type="text" value=""/> <input type="checkbox"/> Send SMS <input type="text" value=""/> <input type="checkbox"/> Auxiliary Alarm
	Graph Alerts Layer Transparency <div style="text-align: center;">50</div> <div style="text-align: center;"> <input type="range"/> </div> Transparent Opaque

Figure 41: Options / Alerts Configuration

Pop-up Screen Alerts

Pop-up Screen Alerts	
Display For (Sec)	<input type="text" value="60"/>
Snooze Time (hh:mm:ss)	<input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="0"/>
Display Respite Delay (Sec)	<input type="text" value="5"/>
<input checked="" type="checkbox"/> Close modal dialogs after delay	
Delay (minutes)	<input type="text" value="1.00"/>
<input checked="" type="checkbox"/> Acknowledge duplicate alerts	
Delay (minutes)	<input type="text" value="5.00"/>
<input type="checkbox"/> Acknowledge duplicate alerts	

Display For (Sec): Sets the time in seconds for the pop-up alert message to remain open. This option only applies if either the **Remain open till acknowledged** or **Close after Delay** is selected on the **Defaults** tab or on the individual **Channel Setup** dialog: **Alarms** tab/ **Pop-up** on **Alarm** option drop-down list.

Snooze Time (hh:mm:ss): Sets the snooze time in hours, minutes and/or seconds.. When an alarm pop-up message is triggered on the TAD System and not acknowledged, then the TAD System will wait for the programmed snooze time to elapse . If no action has been taken to remedy the cause of the original alarm alert condition or if the original alarm alert pop-up dialog was not acknowledged by entering the required information, the pop-up window will close and the fact that it was not acknowledged will be logged. This condition will persist until the alarm (channel) condition is restored to normal working conditions.

Display Respite Delay

If there are many alerts queued it can be difficult to regain control of TAD and access the main menu, because a new alert pops up as soon as an existing displayed alert is dealt with. The **Display Respite Delay** ensures there is a minimum time between alerts, giving the operator time to access other TAD functions.

Close Modal Dialogs after Delay

TAD can be configured so that two of the commonly used modal dialogs (a modal dialog is one that prevents access to any other part of the user interface while it is open) - the [channel setup dialog](#) and the [logged event viewer](#) will close after a delay if there has been no user input (i.e. mouse or keyboard activity). If these modal dialogs were left opened, this would prevent alerts (and therefore alarm output signals) from being signalled until the dialog was closed again.

To enable the closing of the channel setup and event viewer dialogs after a delay without any user activity, make sure this checkbox is checked and the appropriate delay entered.



If this checkbox is cleared the channel setup dialog and event viewer will remain open indefinitely, and the auxiliary alarm output will not activate should an alert condition be detected until the dialog is closed.

Close Modal Dialogs Delay (minutes)

If the preceding checkbox **Close Modal Dialogs after Delay** is checked TAD will not pop up an alert while the modal [channel setup dialog](#) or the [logged event viewer](#) is open (a modal dialog is one that prevents access to any other part of the user interface while it is open - examples in TAD are). If a modal dialog was left opened, this would result in alerts (and therefore alarm output signals) from being signalled until the dialog was closed again. For this reason it is possible to configure TAD so that either of these modal dialogs will close after a delay if there has been no user input (i.e. mouse or keyboard activity). The delay in minutes is set with this control. Any value up to 60 minutes can be entered.

The dialog is closed in a manner such that it is as if the **Cancel** button had been clicked.

Popup Override

It is still possible to suppress alerts for a lengthy period if a long session of editing a channel's settings is underway. For this reason, you can set a maximum length of time that an alert popup can be suppressed. If this option is checked, alert popups will be allowed to display after a delay regardless of what modal dialogs are open. A popup will never be suppressed for longer than this length of time, regardless of user activity. The delay is set by the control following.

Popup Override Delay (minutes)

This control sets the maximum length of time that an alert popup can be suppressed, provided the **Popup Override** checkbox is checked. A popup will never be suppressed for longer than this length of time, regardless of user activity. The delay in minutes is set with this control. Any value up to 60 minutes can be entered.

This delay has no effect unless the **Popup Override** checkbox is checked.

Acknowledge Duplicates:

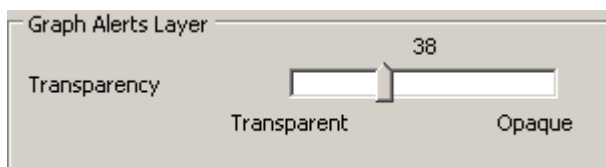
If this option is checked, acknowledging an alert will also remove any further alerts reporting the same condition for the same channel. The event logged when TAD removes an alert from the queue will note the fact that additional duplicates have also been removed, and will list up to 100 of these duplicates and the time they occurred.

This option is useful when a channel has been reporting an error continuously overnight and there are many alerts queued.

The Settings on the [Alerts](#) screen are global, i.e. the options and setting configured on this screen applies to all active (enabled) channels on the TAD system.

Graph Alerts Layer

Transparency



This option sets the transparency (or more correctly, the *opacity*) of the [large icon](#) displayed at the top right corner of the TAD graph view. The opacity can be controlled over a range 5 to 100%. At 100% the graphic is completely opaque and highly visible. At 5% it is barely visible. If you want to turn off the display of the graph alert altogether, you should use the [graph right-click menu](#).

Event Log

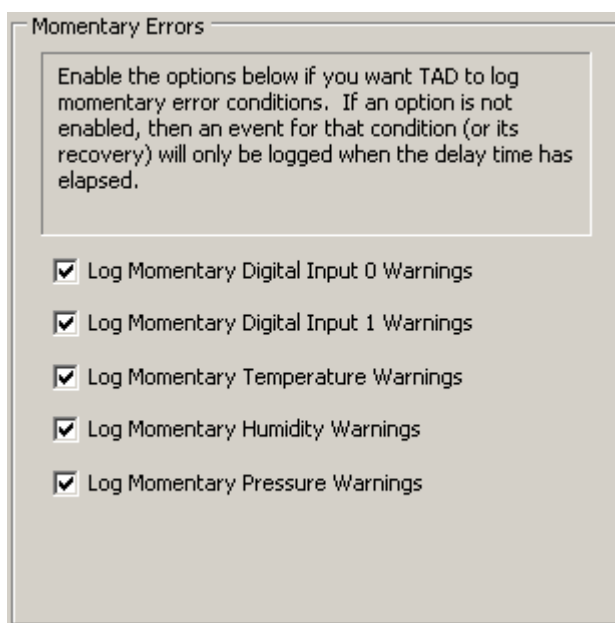


Figure 42: Options / Alerts: Event Log Configuration

Log Momentary Digital Input (0, 1) Warnings

If these checkboxes are checked, momentary closures of the digital inputs will be logged and will appear in the event log, and in the graph display if the channel is one of the 4 selected for display. If they are not checked, no event is logged unless the inputs are asserted for at least the [time specified](#) in the [channel setup dialog](#) for that channel.

Log Momentary (Temperature, Humidity, Pressure, CO2) Warnings

If these checkboxes are checked, momentary excursions of the logged parameters outside the upper and lower limits will be logged and will appear in the event log, and in the graph display if the channel is one of the

4 selected for display. If they are not checked, no event is logged unless the limit is transgressed for at least the [limit delay](#) specified in the [channel setup dialog](#) for that channel. Similarly, unless this checkbox is checked no event is logged when a channel returns to normal and the limit was transgressed for less than the [limit delay](#) number of samples.

Auxiliary Alarm Outputs

(Configurable at Administrator and Supervisor Level only)

The Auxiliary Alarm Inputs group on the Options/Alerts screen is for configuring the digital inputs on the auxiliary I/O port.

Enabled checkbox – When selected enables this option

Figure 43a: Options / Alerts: Auxiliary Alarm Inputs Configuration

Auxiliary Alarm Outputs

(Configurable at Administrator and Supervisor Level only)

The Auxiliary Alarm Outputs group on the Options/Alerts screen is for configuring an alarm station on the TAD system. There are two digital outputs configured in this group. One of these (Digital Output -D02) is intended to drive an audible siren for a localised alert and the other (Digital Output -D03) is intended to drive a remote external alarm monitored by a third party such as a security or alarm monitoring company.

Enabled checkbox – When selected enables this option

Force ON and OFF buttons for Output D02 (Siren) and Output D03 (External) : When enabled, allows forcing of the two Outputs for testing and Validations

Silence button. A triggered alarm can be silenced with this button

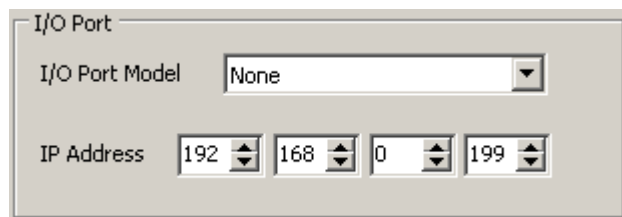
Figure 43b: Options / Alerts: Auxiliary Alarm Outputs Configuration

Auxiliary Alarm I/O Port

(Configurable at Administrator and Supervisor Level only)

I/O Port Model selector box: When clicked on the drop-down menu arrow, allows selection of three options: Moxa NE4110-S is for a Temprecord auxiliary alarm outputs module option. Advantech ADAM 6060 is a third party auxiliary alarm outputs module and the third option is None for when no auxiliary alarm outputs option is fitted to the TAD system.

IP Address This is the field where the IP Address for the Auxiliary Alarm Outputs Module is entered for the TAD system. Please refer to the product manufacturer's documentation for configuring these modules.



The I/O Port configuration dialog box contains the following elements:

- I/O Port Model:** A dropdown menu currently set to "None".
- IP Address:** Four numeric input fields for the IP address, currently showing 192, 168, 0, and 199.

Figure 43c: Options / Alerts: Auxiliary Alarm I/O Port Configuration

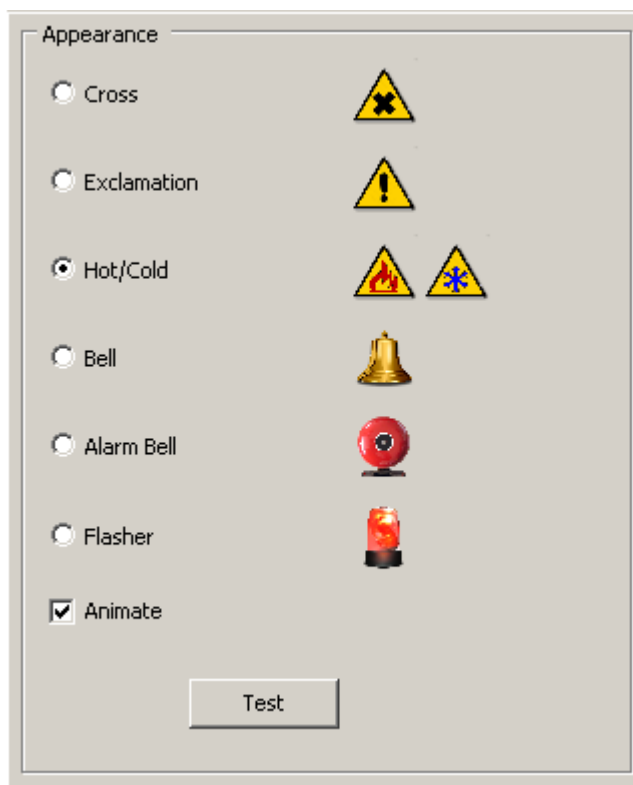
See Also

[Alert appearance](#)

[Alert Sounds](#)

[Appendices](#)

9.24 Alert appearance



The Alert Appearance configuration dialog box contains the following elements:

- Appearance:** A section containing several radio button options and their corresponding icons:
 - ☐ Cross: A yellow triangle with a black 'X'.
 - ☐ Exclamation: A yellow triangle with a black exclamation mark.
 - ☒ Hot/Cold: Two yellow triangles, one with a red flame and one with a blue snowflake.
 - ☐ Bell: A golden bell.
 - ☐ Alarm Bell: A red bell with a black base.
 - ☐ Flasher: A red flashing light.
- ☒ Animate: A checkbox that is currently checked.
- Test:** A button at the bottom of the dialog.

Use this option to select the graphic that is displayed when an alert pop-up is displayed.

If the **Animate** checkbox is checked, the icon is flashed or animated in some other way, depending on which icon has been selected.

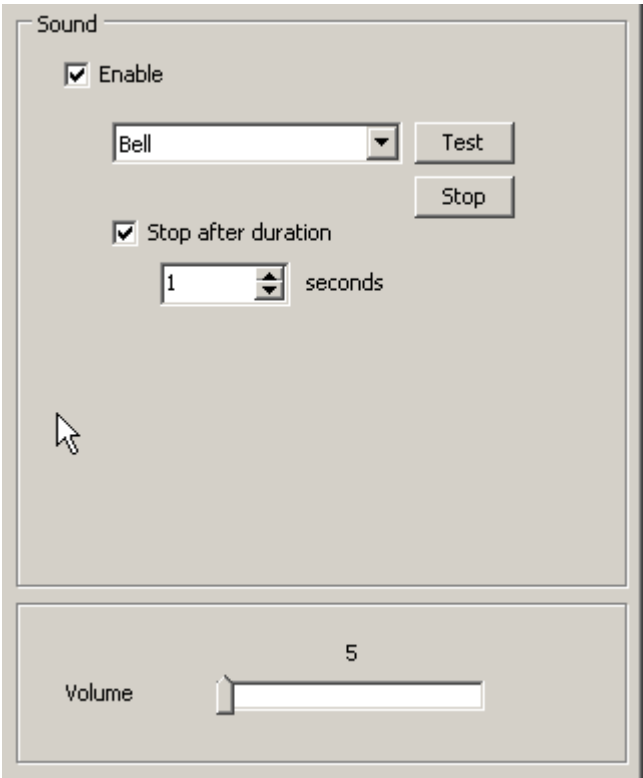
Click on the **Test** button to display an alert dialog which uses the graphic selected.

See Also

[Alerts Options](#)

[Alert Sounds](#)

9.25 Alert Sounds



Use this option to select the sound that is played when an alert pop-up message is displayed.

If the **Enable** checkbox is not checked, no sound is made when the pop-up displays.

The sound actually played while the alert dialog is open can be selected from the drop-down control. There are several options available. You should choose one that is guaranteed to get attention in the environment TAD is installed in, yet is still tolerable:

Name	Characteristic
Beep	Continuous sinewave tone
Bell	"school bell" mechanical bell sound
Whoop	Rapidly changing pitch used on some emergency vehicles
Siren 1	Classic slow rise and fall siren
Siren 2	Modern siren
Klaxon	Older European-style siren
Dive	Submarine "Dive" siren
Bark	Similar to "Dive" but shorter in duration

Click on the **Test** button to play the sound. Click on the **Stop** button to stop playing the sound

If the **Stop after duration** checkbox is checked, the sound will cease after the number of seconds specified. If the checkbox is not checked, the sound will play for as long as the alert is displayed, or until the alert is silenced.

The **Volume** control determines how loud that sound will play. The Windows sound volume and this TAD volume should be independent.

At the time of TAD installation, the default value of this volume slider is set equal to the current setting of the Windows **Control Panel/Sounds/Wave** setting. The alert sound volume setting can then be changed after installation, and then affects the Control Panel setting.

TAD does not control the **Master** volume and this should be set to 50%.

See Also

[Alerts Options](#)

[Alert Appearance](#)

9.26 Sentinel Options

TAD has the ability of monitor it's own operation - specifically, it can raise an alarm condition if it detects that the data file has not been written to for a specific duration, or that a channel has not been samples for a specific duration.

Channel Sample Time Checks

☒ Enable

Threshold duration: 10 minutes.

Initial Holdoff: 5.00 minutes.

Statistics

Total channels in error	0
Last channel in error	none
Minimum time between samples	0s
Maximum time between samples	0s

TDF Datestamp Checks

☒ Enable

Threshold duration: 0.50 minutes.

Statistics

Last datestamp transition	Fri 2 Mar 2012 13:09:16 NZDT
Time since last transition	3s
Minimum time between writes	0s
Maximum time between writes	11s

Reset

Sentinel Monitor Errors

Sentinel monitoring errors detected by TAD will display an alert dialog which will close after 2 seconds. An SMS will be sent. The auxiliary output will not be asserted.

☐ No action

☐ Error dialog

☒ Alert dialog

Pop-up: Close after delay

☐ Send email: recipient@yourcompany.com

☒ Send SMS: recipient@yourcompany.com

☐ Auxiliary Alarm

Sentinel monitoring can be used in two ways:

TAD can monitor itself (self-monitoring). The options described here are to be configured on the copy of TAD that you wish to monitor.

TAD can be monitored by another copy of TAD running on another computer in [Slave](#) mode. The options described here are to be configured on the TAD slave. The copy of TAD that you wish to monitor does not need to have sentinel monitoring enabled, though it can do so.

The second configuration is more dependable. When using this configuration, it is recommended that the Slave computer be running with a UPS.



The sentinel monitoring facility of TAD is not foolproof. There are scenarios where TAD could stop operating and the condition would not be detected by the sentinel monitoring, particularly in installations where TAD is self-monitoring. In "mission critical" applications, other methods of monitoring can be used as well, for example [heartbeat](#) emails.

TAD monitors operation in two ways:

Channel Sample Time Checks

Channel sampling sentinel monitoring is carried out by monitoring the time since the last sample was received for each enabled channel. If the time since the last sample for any enabled channel exceeds a period of time given by the value of the threshold control plus twice the sample period of the logger, a sentinel error is raised.

Enable

Check this box if you want TAD to monitor all the enabled channels for sampling activity. Sampling activity is defined as a response of any sort from a channel logging analogue data. Sentinel checking does not inspect the returned data for validity.

Threshold Duration

Enter the threshold duration in minutes. Each channel is checked against this value and if no sampling activity is seen for more than this value plus the sample period of that channel times, an error is raised.

Threshold Initial Duration

This parameter sets the duration threshold before a channel triggers a sentinel error the before the first sample is taken when a channel comes online. Because there is the potential for data to be downloaded from the loggers when they first come online, it can be a little while before the channel takes a sample, so it is necessary to relax the channel sampling sentinel check, to allow for the case of TAD having to download the data from a full 32,000 sample logger.



When using the channel sentinel monitoring in slave mode the **Threshold Duration** and **Threshold Initial Duration** values are read from the **Master** system, not the **Slave**. In installations where a slave copy of TAD is performing channel sampling sentinel monitoring, you must make sure that the **Threshold Duration** and **Threshold Initial Duration** parameters are set to the desired values on the *master* system. The channel sentinel monitoring should then be *disabled* at the master system and *enabled* on the slave system.

TDF Datestamp Checks

This is carried out by monitoring the file datestamp of the disk file TAD.TDF (which is always the file that TAD is currently writing data to). If the datestamp has not changed for a period of time given by the value of the threshold control, a sentinel error is raised.

Enable

Check this box if you want TAD to monitor the disk file for evidence of writing.

Threshold Duration

Enter the threshold duration in minutes. If no update of the file TAD.TDF datestamp is seen for longer than this period, an error is raised.

Action on Sentinel Errors

The action TAD takes when a sentinel error is detected can take several forms. These actions mirror the options available when an initialization error occurs. The are:

No Action

No action is taken when a sentinel error occurs

Error Dialog

An Error dialog is displayed when a sentinel error occurs.

Alert Dialog

An Alert Message is displayed when a sentinel error occurs. The behaviour of TAD when alert messages occur is determined by the [Alerts Options](#).

Pop-up

Select the behaviour of the popup that displays when an alert message is displayed.

Send Email, Send SMS

An email or SMS is sent whenever a sentinel error occurs. If the status of the sentinel error changes, and the new status involves an error condition that did not exist, another message will be sent.

Auxiliary Alarm

When this checkbox is checked, the auxiliary output is asserted whenever there is a sentinel error.



Error dialogs do not automatically close after a delay. If this option is selected, the error message will require operator intervention or it will display indefinitely. This will prevent regular reports from being generated.

See also

[Master/Slave Options](#)

[Heartbeat Email Options](#)

9.27 Camera Options

Camera

☒ Enable Video Operator Detection

Timeout (sec) 300 0

Detection Delay 2 0

Logout user ☐

Record operator detection ☐

Detection Threshold 5000 0 0 0 0 0

Enable Video Operator Detection

Check this option if the TAD PC is fitted with a camera (a "WebCam") and you want the screen to blank or enter the screensaver when there is nobody in front of it.

If this option is checked, the computer will enter the screensaver after a delay, but will exit screensave when the camera detects motion in its field of view as well as when keys are pressed or the mouse is moved.

If this option is not checked, the computer will enter the screensaver after a delay, and will only exit the screensaver when keys are pressed or the mouse is moved.

Timeout

This option determines how long after motion has no longer been detected before the computer enters the screensaver again.

Detection Delay

This option determines how many continuous video frames where motion is detected in the field of vision are required before the computer will exit the screensaver.

Logout User

If this option is checked, the current TAD computer user will be logged out when the conditions for entering the screensaver are met. The TAD operating access level then drops to the lowest level. Note that this option does not affect the current logged in Windows user, only the TAD user.

Record Operator Detection

If this option is checked, an event is logged when an operator's presence is detected by the camera.

Detection Threshold

This parameter determines the sensitivity of the detection process. It should be determined at the time of installation and should not require alteration. A higher value means that a greater degree of movement in the field of view of the camera is required to trigger operator detection.

9.28 Screen Capture Options

TAD has the ability to "capture" an image of the currently displayed tab. The captured image can be copied to the Windows clipboard, to a disk file, and the disk file can be optionally emailed. The image file can be one of a number of common image formats. The name of the file and the folder it is stored in use the powerful file and folder naming features common to most of TAD's file-based functions.

Screen Capture

Screen Capture Folder:

☐ Use Date Format

Screen Capture Filename:

☒ Use Date Format

Email Recipients:

Email Subject:

File Format:

Prompt for filename: ☒

Screen Capture Region:

- Entire main form: ☐
- Main form client area: ☐
- Active tab: ☐
- Active tab client area: ☒

Screen captures can be useful when preparing documentation for operating procedures, and for recording the settings from particular sites.

Screen Capture Toolbar

Screen captures are carried out by clicking the buttons on the screen capture toolbar



When the channel setup dialog is displayed, you will see a duplicate of the toolbar. When this is used, the captured images are confined to the dialog - i.e. "Entire main form: becomes "Entire dialog form", etc). Also, the %Tab% [meta-string](#) expands to the name of the active tab in the channel setup dialog.



Save Screen Capture to Clipboard

The image is copied to the Windows clipboard. This can often be the most convenient method, as the image can then be pasted into a Word document, or the body of an email, without having to go through an intermediate file.



Save Screen Capture to File

The image is saved to a disk file.



Save Screen Capture to Email

The image is saved as an attachment to an email.



Save Screen Capture to File and Email

The image is both saved locally as a file, and also as an email attachment.

Screen Capture Folder

Specify the folder you want the screen capture images to be placed in when a screen save to file, or screen save to email and file is carried out. If no folder is specified, or the folder specified is not an absolute pathname, then the folder is assumed to be relative to the default screen capture folder, which is at:

C:\Documents and Settings\All Users\Documents\Temprecord\TAD\Screen Captures

If the **Use Date Format** checkbox is checked, then the folder specifier is interpreted according to the [formatted destination folder rules](#).

Screen Capture Filename

Specify the filename of the screen capture file. If no filetype is specified, or a filetype that is not one of the supported image filetype (any of BMP, JPG, or PNG) the filetype set by the Image File Format control is used. If a supported filetype (any of BMP, JPG, or PNG) is specified, the image file will be in that format and the Image File Format control setting is ignored.

If the **Use Date Format** checkbox is checked, then the file specifier is interpreted according to the [formatted file rules](#).



You can use the [meta-string](#) %Tab% to refer to the tab currently displayed in TAD. Thus if the graph tab is displayed and the file specifier is "Image of %Tab% Tab", the filename will be Image of Graph Tab.PNG

Remember when using meta-strings in formatted file and folder names, the meta-string must be inside double-quotes.

Email Recipients

Enter the intended recipients of the screen capture image files. Email addresses can be entered in the format name@company.com or Name <name@company.com>. Multiple addresses must be separated by commas.

Email Subject

Enter the subject you want the email to have. You can use [meta-strings](#) in the subject, so the email subject could include the name of the tab that was captured to the image file, or the name of the **TAD** installation [Site](#) for example.

File Format

Select the default format (used when no filetype is specified in the file specifier above) for the image files. This can be any of PNG, BMP or JPG. It is recommended that you stick with the installation default of PNG (Portable Network Graphics) format. PNG files are "lossless" (no information is lost - the file is a faithful reproduction of the original image) but the files are still compact.

Prompt for Filename

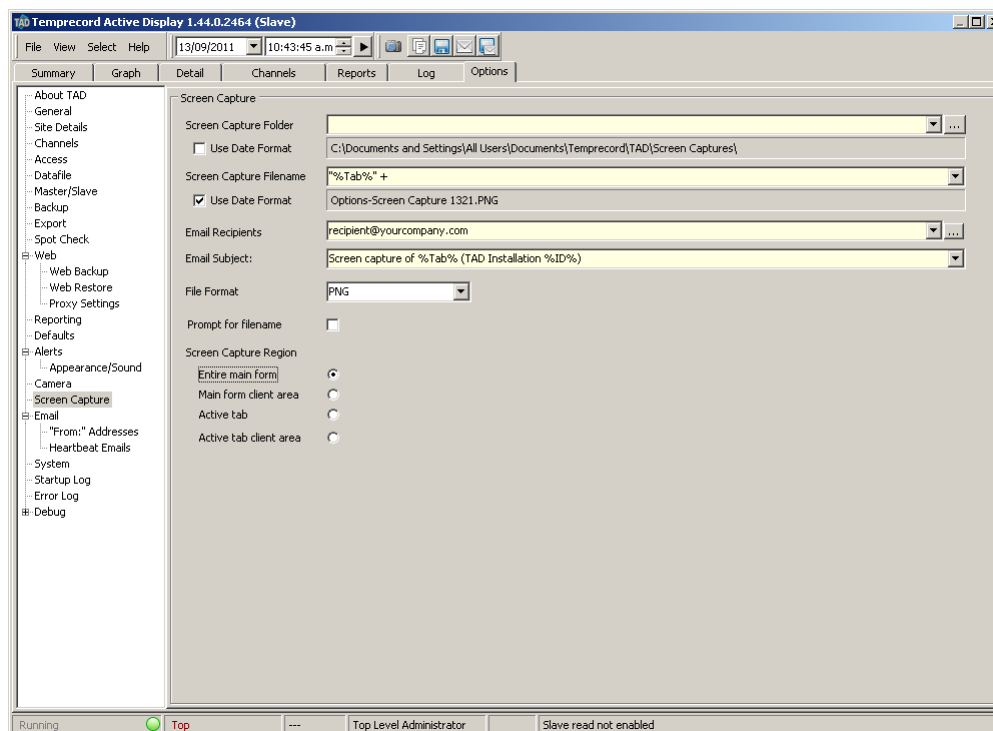
Check this option if you want TAD to prompt you for the filename whenever a save to file or Save to file and email operation is carried out. Otherwise the default file specifier is used to construct the filename.

Screen Capture Region

This option determines what area is captured. These options, and example screen captures of each, are shown below:

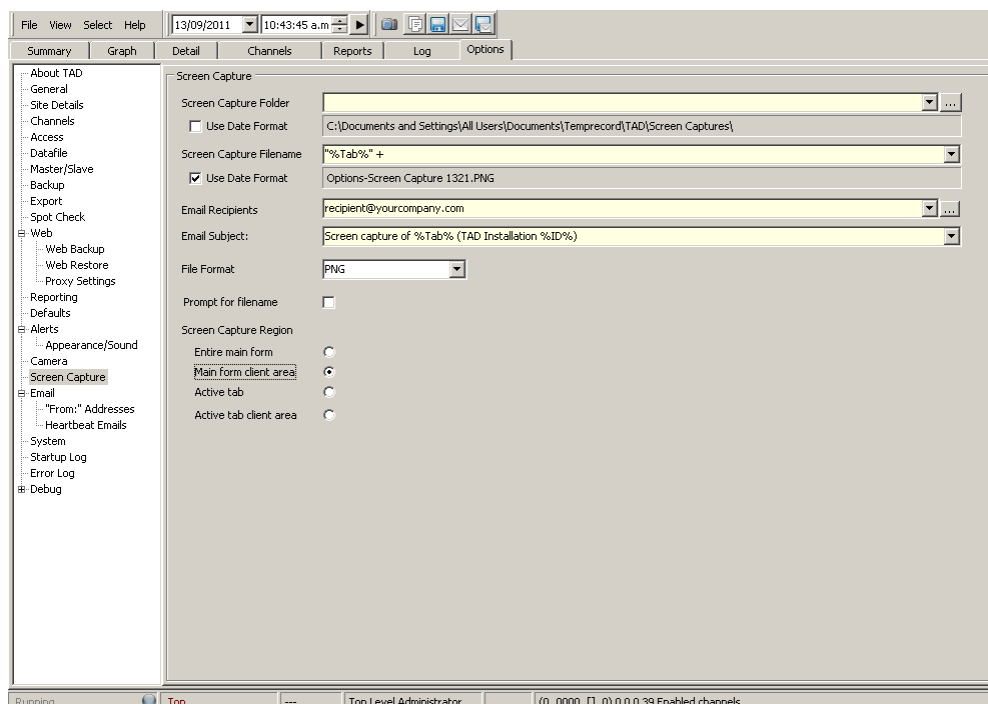
Entire Main Form

The whole of the TAD main form, including the Windows title bar, is captured.



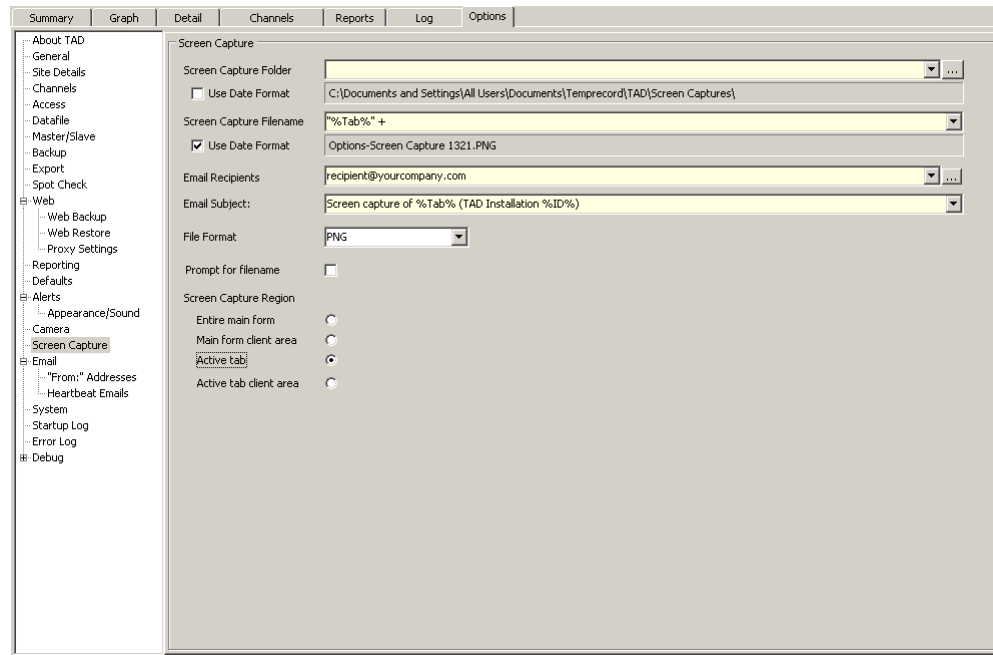
Main Form Client Area

The whole of the TAD main form, excepting the Windows title bar, is captured.



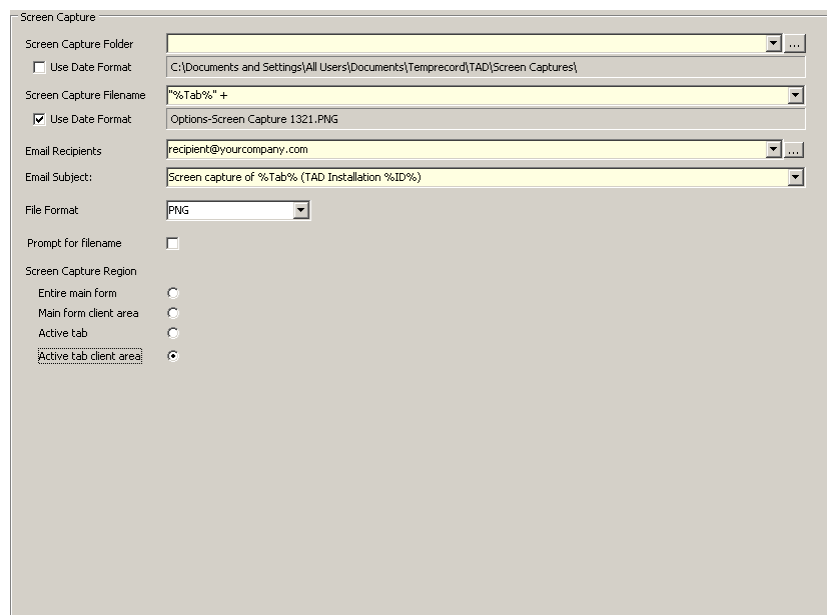
Active Tab

The currently displayed tab, including the row of tabs along the top.



Active Tab Client Area

The currently displayed tab, excepting the row of tabs along the top.



See also:

[Meta-strings](#)

9.29 Email Options

(Configurable at Administrator and Supervisor Level only)

Please obtain information and permissions from your Site Network Administrator to configure the Email and SMS Alerts options on this screen.



TAD also allows you to configure the "From:" addresses used when an email is sent. See the topic [Email "From:" Address Options](#) for more information.

Email Alerts: This group has two selectors, **Use MAPI** and **SMTP**. When **SMTP** is selected, then the adjacent field must have an outgoing SMTP server address (e.g. `smtp.xtra.co.nz`) to enable the TAD system to send email messages. Most sites will support SMTP servers. Your Site Network Administrator will provide the **User ID** and **Password** information if required.

Coded Subject Header When this option is checked, then the alert email sent will include information provided in **Options / Site Details** screen. The email coded subject header is specifically formatted for alarm companies. If the option is enabled the subject line of the email consists of:

`<site code>-<area code>Znnn[A |R]`

where:

`<site code>` is the contents of the **Options/Site Details/Site Code** control.

`<area code>` is the contents of the **Options/Site Details/Area Code** control.

`nnn` is the three-digit channel number with included leading zeroes.

`[A |R]` is either 'A' (alarm) or 'R' (recovery)

Abbreviate 1st Line

Some alarm companies require the nature of the alert to be conveyed in the first line of the body of the email. If this option is checked the first line is limited to 32 characters and includes the channel number and alarm condition. Also, some mobile devices will show the first line of an incoming email (a "snippet") when the inbox is displayed.

Include Location ID in Message

If this option is checked the location ID (as specified in [channel setup dialog](#)) will be included in the SMS

SMS Alerts: The options and setup for this group is similar to email alerts setup, except the alert messages are sent to mobile devices. The SMS alert messages are also formatted so as to be more compact.

Compact SMS Messages

When this option is enabled, TAD tries to keep the size of the SMS message below the Size limit (bytes). It does this by trimming non-essential content from the message until the message size is below this figure. This option may be required for carriers who have a size limit on the SMS messages that can be sent via SMTP.


Also, when this option is enabled, the first line of the SMS message body is compacted so that the full meaning of the alert or recovery is conveyed within 32 characters. If validation mode is active, the first line is abbreviated even more to account for the presence of the word "validation" in the line.

Test Buttons

The buttons labeled **Test** can be used to test your email and SMS settings. An email will be generated and queued using the current settings and you should be able to watch it's progress on the email queue display.

Test Email Recipients

Any test emails or SMS messages generated by clicking on the Test buttons are sent to the address(es) specified in this field. a list of email addresses, separated by commas.

If you click the small button  to the right of the field, you can enter the email addresses each on a line by themselves in a small memo control.

Email Options: This group includes two programmable fields for **Connect Timeout (sec)** and **Max Send Attempts**. The TAD System will timeout if it fails to connect to the outgoing SMTP server. The timeout value entered in this field is in seconds. The installation default is 20 seconds.

The value entered in the **Max Send Attempts** field is the number of times the TAD system will try to send the email alert message. The default is 5 attempts.

You can enter a list of email addresses in the **Email Recipients** field. These addressees should receive any emails sent via the **Test** buttons.

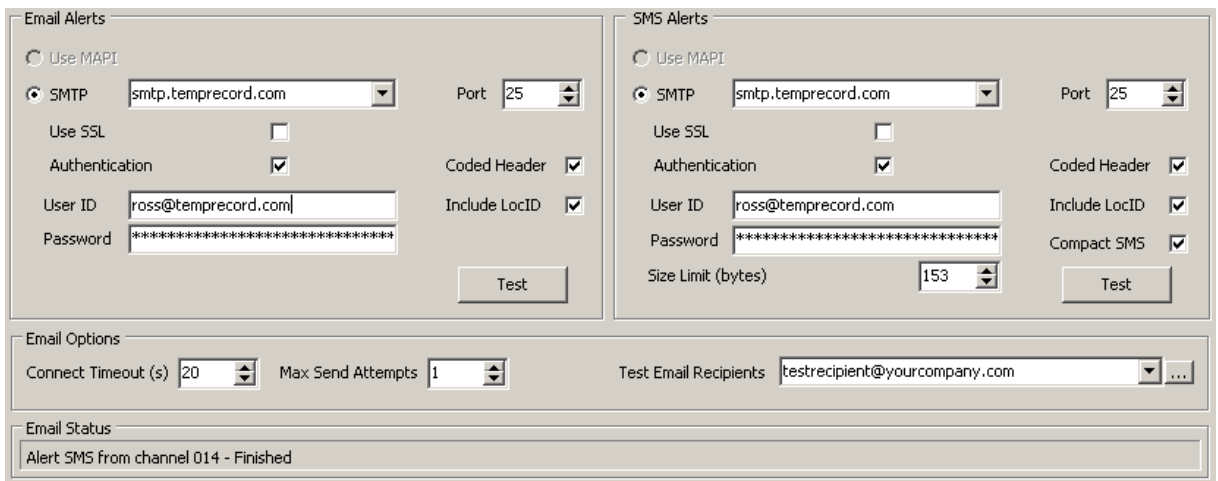


Figure 45: Options / Email Configuration

Example of a Coded Subject Header Email Message

Below is shown an example email alert message as would be received by the remote alarm monitoring company:

From	Subject	Received
TAD Alert Manager	239D-2013Z002A	15/04/2008 5:19 p.m.
TAD Alert Manager	239D-2013Z002A	15/04/2008 5:19 p.m.
TAD Alert Manager	239D-2013Z002A	15/04/2008 5:15 p.m.
TAD Alert Manager	239D-2013Z002A	15/04/2008 5:15 p.m.
Trend Micro New Zealand	Reminder: Your Free Upgrade to Trend Micro PC-cillin Internet Security 2008	15/04/2008 4:58 p.m.

From: TAD Alert Manager **To:** harishk@temprecord.com; harishk@xtra.co.nz
Subject: 239D-2013Z002A

Ch 002 upper limits exceeded

Installation : Temprecord Int'l Ltd. Auckland, NZ
 Channel : 2
 Description : HK Office
 Date : 15 Apr 2008 17:19:10
 Condition : Upper temperature limit of 22.00 exceeded

This is an automated message from the Temprecord Active Display Alert Manager. Please do not reply to this message.

Figure 46: Options / Email: Sample Coded Subject Header Email

Coded Email Message Format for Remote Monitoring

Most alarm monitoring companies like Alarm New Zealand have systems that can only handle email messages as follows:

Outlook Express / Inbox

From	Subject	Received
TAD Alert Manager AM	1811-A005Z014A	11/18/2004 11:42

The message body:

Channel 14 Upper Limits Exceeded (32 characters total which can be read by the alarm company). The rest of the message text will be omitted. However, the rest of the text is left as is.

Installation: Site Name and Location
Channel: 14
Description: Channel 14
Date: 18 Nov 2004 11:42:56
Condition: Upper limits (T, H) of 24.50, 71.00 still exceeded
Action Taken:

This is an automated message from the Temprecord Active Display Alert Manager.
Please do not reply to this message.

The "Subject" field is selectable as either default (in which case the "TAD Alert on channel xx" would be sent) or user definable, with last four characters added by the TAD system.

In this case the Subject Code: 1811-A005Z014A for Alarm NZ means 1811 is Site Detail, A005 is the Area Code, and Z014 represents Zone 14 or Channel 14 as recognised by the TAD system. The last character A represents an alarm condition.

When the alarm condition is restored to normal working condition, an email message will be sent in the following format

Outlook Express / Inbox

From	Subject	Received
TAD Alert Manager AM	1811-A005Z014R	11/18/2004 11:42

The message body:

Channel 14 No longer in Alarm conditions (32 characters in total, which can be read by the Alarm Company). The rest of the message text will be omitted. However, the rest of the text is left as is.

Installation: Site Name and Location
Channel: 14
Description: Channel 14
Date: 18 Nov 2004 11:42:56
Condition: Upper limits (T, H) of 24.50, 71.00 still exceeded
Action Taken:

This is an automated message from the Temprecord Active Display Alert Manager. Please do not reply to this message.

In this case the subject code: 1811-A005Z014R for Alarm NZ means 1811 is Site Detail, A005 is the Area Code, and Z014 stands for Zone 14 or Channel 14 as recognised by the TAD system. The last character R represents an alarm restored condition.

See also

[Email "From:" Address Options](#)

[Email Heartbeat Options](#)

[Default Heartbeat Action on Abnormal Logger Channels](#)

9.29.1 Email "From:" Address Options

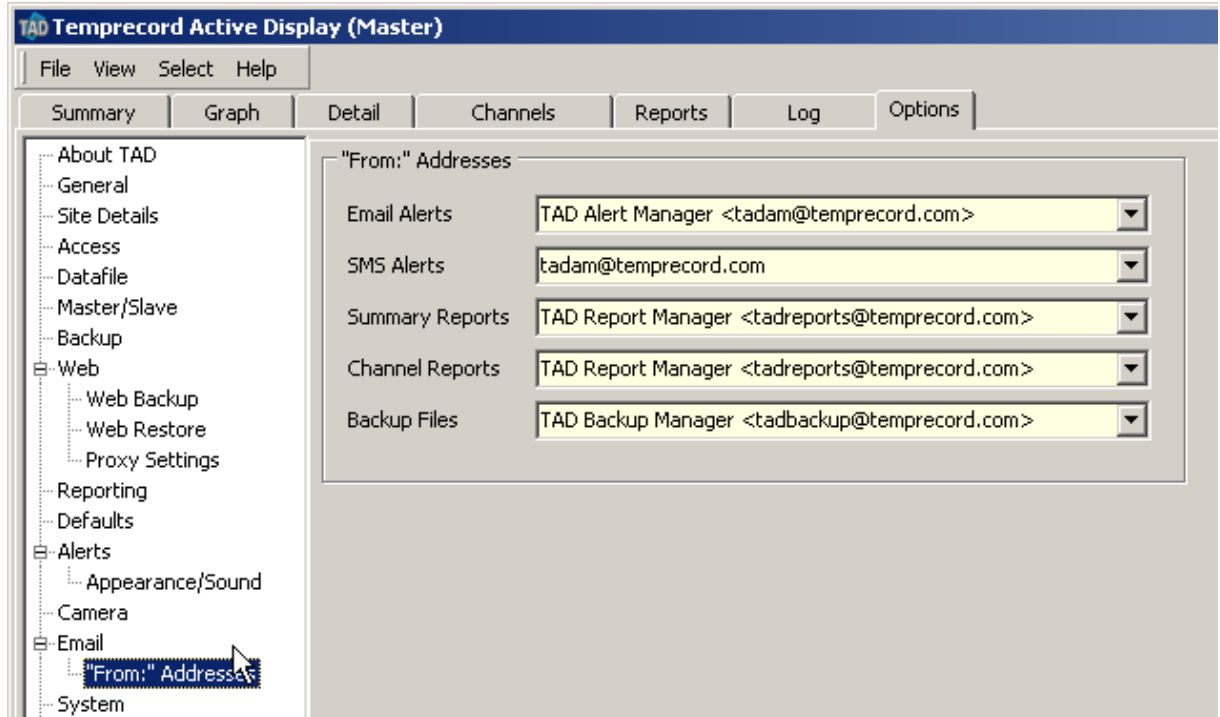
(Configurable at Administrator and Supervisor Level only)

When an email is sent, as well as the destination address (the "To:" address), TAD provides for a "From:" address. The "From:" address can be quite important, for two reasons:

- Some SMTP mail servers will not accept email messages unless the "From:" address is an address within the domain of the SMTP server, or within a list of allowed domains.
- Some clients may find it is important to be able to set the "From:" address when they send SMS messages via their email to SMS gateway. It may be necessary to send from a particular account to permit the relay of these messages within the SMS gateway.
- Most email clients provide the ability to carry out certain actions on the basis of the contents of fields of incoming emails. For example, it is usually possible to route an email message into a particular folder if the "From:" address contains a certain character string.

TAD allows the "From:" address to be set to different values for each 5 distinct classes of email message:

1. Alert messages sent by email
2. Alert messages sent via SMS messaging systems
3. Summary reports emailed as attachments
4. Channel reports emailed as attachments
5. Backup files emailed as attachments
6. "[Heartbeat](#)" emails



The addresses you enter do not need to be unique. Clicking the chevron symbol (▼) to the right of the entry field will display a list of the recently used addresses to choose from. The allowable syntax will depend on the email server, but most will accept addresses in either of the following forms:

jbloggs@mycompany.com
 Joe Bloggs <jbloggs@mycompany.com>

Most email servers require a valid email address in the "From:" field before they will accept the message.

See also

[Email Options](#)
[Email heartbeat options](#)
[Default Heartbeat Action on Abnormal Logger Channels](#)

9.29.2 Email Heartbeat Options

TAD provides for the sending of "heartbeat" emails. These are regular email messages that are sent from TAD to a remote monitoring service. The remote monitoring service will generally be configured to expect these emails, and to raise an alarm if none are received for longer than a specified duration. While this is the main intended use of the heartbeat emails, they can also be used as a way of sending regular status emails, particularly when [meta-strings](#) are used.



- These heartbeat emails are queued and sent in a separate thread and so do not affect the operation of TAD while they are being sent. Also, the emails are queued as the first operation whenever regular events are processed. This is so that if heartbeats are configured to occur "on the hour", any heartbeat email is queued before any other regular event, such as backup or datafile rollover. However it can still be some time before they are actually received by the recipient, particularly if the connection to the Internet is slow.
- The emails are sent using the currently configured [email server options](#). These must be correctly set up.

- Heartbeat emails are never retried. The number of retries and time between retries email settings are ignored.
- TAD can be configured to prevent heartbeats being sent in the event of there being channels with any sort of abnormal condition. See the topic [Default Heartbeat Action on Abnormal Logger Channels](#) for more information.

Regular Heartbeat Emails

☒ Enable

Send every minutes. ☒ Align

From: ...

To: ...

Subject:

Body:

Samples

Last email sent: 6 Oct 2011 14:30:54 NZDT (3m 7s ago)

Next email due: 6 Oct 2011 14:40:00 NZDT (in 5m 57s)

Send Result: OK

Enable

Check this box if you want TAD to send regular heartbeat emails.

Every N Minutes

This control sets the number of minutes between each heartbeat email. The effect of this control is also dependent on the state of the **Align** checkbox, described below.

Align

Check this box if you want TAD to align the time the next heartbeat is sent with the next nearest multiple of the **Every N Minutes** control. For example, if the last heartbeat email was sent at 10:08:42, and the **Every N Minutes** control is set to 15, and this checkbox is not checked, the next heartbeat email will be sent at 10:23:42, i.e. 15 minutes after the last one was sent. If the **Align** checkbox is checked, the next heartbeat email will be sent at 10:15:00, i.e. at the next multiple of 15 minutes after the last one was sent.

If the **Every N Minutes** control is set to a value greater than one hour and the **Align** checkbox is checked, the time of the next heartbeat email is set to the time of the last email plus the setting, and then aligned to the nearest multiple of the minutes part of the setting. For example, if the **Every N Minutes** control is set to a value of 150 minutes (2h 30m) and the **Align** checkbox is checked, the time of the next heartbeat email will be the nearest multiple of 30 minutes to the time 2h 30m after the last email.

If the **Every N Minutes** control is set to a value that does not have the minutes portion evenly divisible into 60 minutes, the **Align** checkbox has no effect, and will be disabled.

From: Address

This field simply displays the setting of the configured [From address](#) for heartbeat emails. If you wish to change this parameter you can click the button to the right of the field.

To: Addresses

Enter the intended recipients of the heartbeat emails. Email addresses can be entered in the format `name@company.com` or `Name <name@company.com>`. Multiple addresses must be separated by commas.

Subject

Enter the subject line of the email. A subject line is not necessary, though your email monitoring arrangement may require it. If any [meta-strings](#) are present in the subject line they are expanded. This enables you to convey information about TAD's status (e.g. the number channels in error) in the subject line. Allowable meta-strings are described in the topic [meta-strings](#).

Body

Enter the text you wish to send in the body of the email message. The body text is not necessary, though your email monitoring arrangement may require it. If any meta-strings are present in the body they are expanded. This enables you to convey additional information about TAD's status that there may not be room for in the subject line.

Sample Subject and Body

To the right of the Heartbeat Email controls are two fields that display what the subject line and message body will look like after any meta-strings have been expanded. If you have not used any valid meta-strings then these will show text that is identical to the fields on the left-hand side. The sample fields are updated as you enter text into the [Subject](#) or [Body](#) fields.

Last Email Sent

The date and time the most recent heartbeat email was generated and queued for sending.

Next Email Due

The date and time the next heartbeat email will be generated and queued for sending. This date and time display will change according to the settings on this tab.

Send Result

The result of the last email sent. If the email was sent without problems, this field will show **OK**, otherwise the contents of this field should give an indication of what went wrong.



There is no indication provided of whether an email has reached the intended destination. A display of **OK** in this field merely indicates that the email was generated, queued, and finally sent. It is still possible (for example) for an incorrect destination address to be specified.

Send Heartbeat Email Now

Click this button to force TAD to generate and queue a heartbeat email immediately. The time that the next heartbeat email is sent will be recalculated based on the current time and according to the settings of the controls.

See also:

[Email Options](#)

[Email "From:" Address Options](#)

[Default Heartbeat Action on Abnormal Logger Channels](#)

9.29.3 Default Heartbeat Action on Abnormal Logger Channels

TAD's "heartbeat" facility can be configured in any ways, but the most common use is to provide a gross "go/no go" indication of whether or not TAD is running. This is normally achieved by having a separate monitoring service that expects a regular heartbeat email and takes the appropriate action if one is not received after a certain timespan. TAD also provides the additional flexibility of returning "live" data in the subject and/or body of the email to supply additional information, such as the number of channels showing an alarm condition.

Some sites require the heartbeat to provide an indication of the presence of any channel with a warning/alarm or error condition, but to do so by stopping the production of heartbeats altogether. So when all is well, TAD sends the heartbeats regularly, but the heartbeats will stop if:

- The computer running TAD stops functioning.
- TAD itself stops running.
- Network (Internet) connectivity is lost.
- TAD is running and any channel is in an abnormal condition.

The **Default Heartbeat Action on Abnormal Logger Channels** determines what the default action to be taken with the heartbeat is.

Effect of Channel Errors on Heartbeat

☐ No effect
☒ Stop heartbeat when any channel is abnormal

STOP HEARTBEAT WHEN CHANNEL IS ABNORMAL

Any channel that has "Use default heartbeat setting" checked will cause the generation of heartbeat emails to STOP whenever that channel is in a warning, alarm or error condition

No Effect

If this option is selected, then any channel that has the channel setup [Use default heartbeat action](#) option enabled will be ignored and have no effect on the production of heartbeat emails.

Stop Heartbeat when any channel is abnormal

If this option is selected, then any channel that has the channel setup [Use default heartbeat action](#) option enabled will cause the production of heartbeat emails to stop.



In order for this action to be taken, the corresponding channel setup parameter [Use default heartbeat action](#) needs to be enabled. If it is not enabled, the action specified by that channel's **Action on abnormal logger channel** is taken instead.

The default action for the generation of heartbeat emails is independent of the other channel [Use Defaults](#) parameter.

See also:

[Channel Setup - Alarms \(Use default heartbeat option\)](#)
[Email Options](#)
[Email "From:" Address Options](#)
[Email Heartbeat Options](#)

9.30 System Options

(Read Only Information for Administrators)

The **Options / System** screen includes information about the hardware executing the TAD program, and the locations of files used by TAD.

There are no programmable options available on this screen.

System Info	
OS	Windows XP Service Pack 3 build 2600
Memory	559/2047 MB (free/total)
CPU	Intel(R) Pentium(R) M processor 1.73GHz (1)
Display	1440x900, 32 bit

Times	
Windows booted at	Thu 17 Feb 2011 02:26:24 NZDT
Time Windows running	3 days, 8 hr, 16 min
TAD started at	Sat 19 Feb 2011 21:45:50 NZDT
Time TAD running	12 hr, 56 min, 55 sec

Files	
TAD Executable	C:\Program Files\TAD Current Build\tad.exe
TAD Datafile	C:\Documents and Settings\Ross McMillan\Desktop\TAD Datafiles\UTC Tests\TAD.TDF
Web backup image	C:\Documents and Settings\All Users\Application Data\Temprecord\TAD\Web Backup\
TAD INI File	C:\Documents and Settings\All Users\Application Data\Temprecord\TAD\TAD.INI
Channel Config File	C:\Documents and Settings\Ross McMillan\Desktop\TAD Datafiles\UTC Tests\TAD.CFG
Startup Log File	C:\Documents and Settings\All Users\Application Data\Temprecord\TAD\startup.log
Email Debug Log	C:\DOCUME~1\ROSSMC~1\LOCALS~1\Temp\Temprecord\TAD\Email\EmailDebug.txt

Last Handled Exception	
IndyOpenSocketOK Connect timed out.	
Sun 20 Feb 2011 09:51:35 NZDT	
Count	2

Diagnostics Report

Figure 47: Options / System Tab (Read Only)

See Also

Sending a diagnostics report

9.31 Startup Log

The startup log is a record of events that occur as TAD starts up. IT administrators should consult the startup log when installation problems occur.

9.32 Error Log

The error log is updated as TAD program execution progresses. Serious errors are reported directly to the user. Less serious errors are logged here. Some entries will be seen in this log under normal operation and should not necessarily be seen as indicative of a fault in the system.

9.33 Debug Options

(Configurable at Administrator Level only)

The Options / Debug screens are included Temprecord Installation and support engineers for advanced diagnostic purposes:

Please ensure that Use Indy Digital I/O checkbox is selected and Max Threads value is set to 10 during TAD system commissioning. Refer to the following screen...

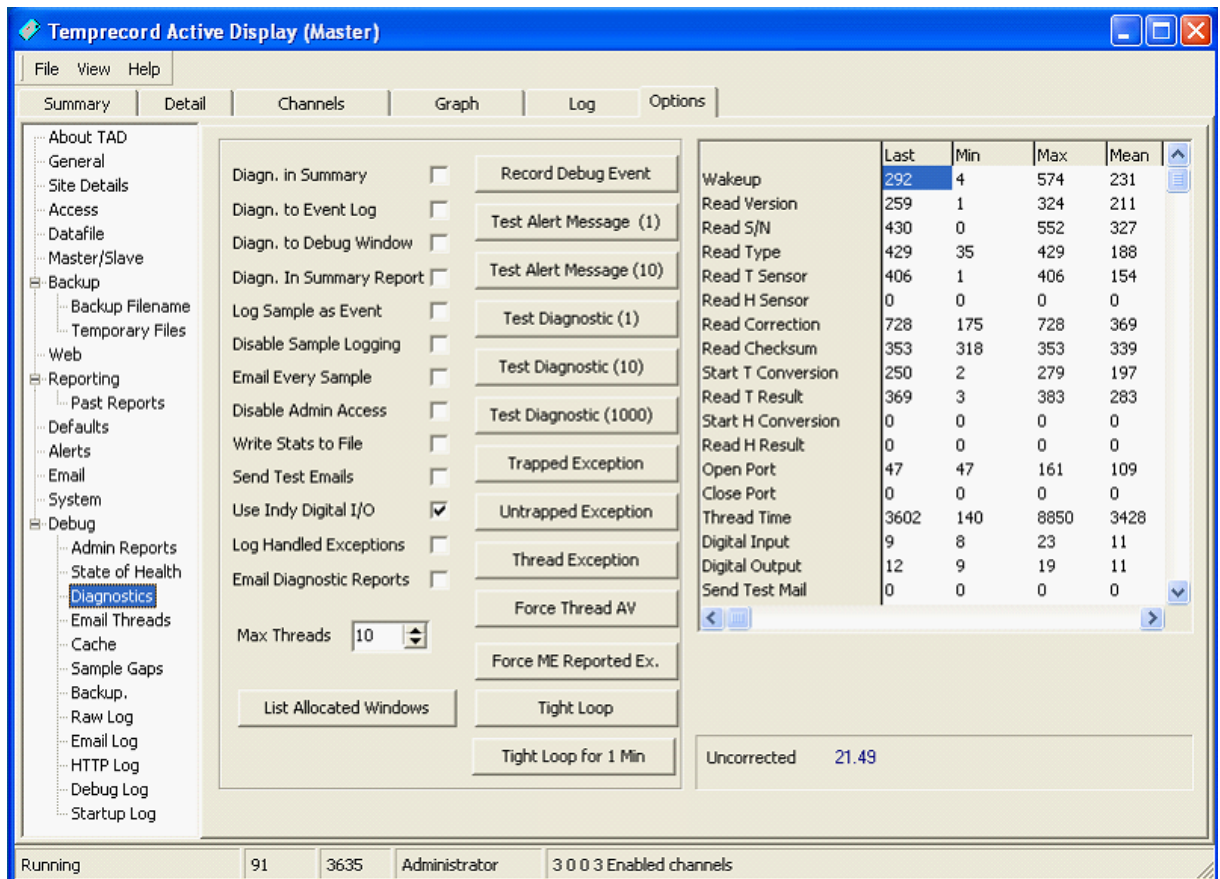


Figure 48: Options / Debug/Diagnostics Screen

9.34 Meta-strings

Meta-strings are special character and string formatting items that are replaced by other text by TAD under certain situations. They provide a means of including dynamic (changing) information (such as the time and date) or system-relevant information (such as the current username) into file and folder names, or emails.

Meta-strings start and end with a percent (%) delimiter character. As an example, you could specify the following for the **Subject** field of your [heartbeat email](#):

Report on TAD Installation at %Company% %Site% Site

and the email would arrive at the destination with a subject of:

Report on TAD Installation at Smith Pharmaceuticals Mangere Site

A special type of meta-string can be used to include the value of a Windows environment variable.

Meta-strings are recognised in these places:

- In folder specifications, where the **Use Date Formatting** option is selected. In this instance, [date-formatting characters](#) are also recognised.
- In filename specifications, where the **Use Date Formatting** option is selected. In this instance, [date-formatting characters](#) are also recognised.
- In [heartbeat](#) and [screen capture](#) email subject lines.
- In [heartbeat](#) email body text.



When meta-strings are included in file and folder name specifiers, the meta-string must be inside double quotes, so it will not be interpreted as a date formatting string.

Be careful when using environment meta-strings in file and folder name specifiers, as the contents of an environment variable is not necessarily predictable. Before TAD uses any file or folder name derived from a file specifier using date-formatting character or meta-strings, any illegal characters are replaced by underscores (" _ ")

The supported meta-strings are listed below. The string returned is the value of the corresponding parameter at the time the email for file/folder name is generated.

Meta-strings are not case-sensitive, but may not contain any spaces inside the percent delimiters.

If the meta-string is improperly formatted or does not contain one of the identifiers shown below, no attempt is made to expand it, and the improperly formatted meta-string is inserted unchanged into the subject line or message body.

Meta-string	Expands to
%Date%	The current date in the format specified by the Windows long date format.
%Time%	The current time in the format specified by the Windows long time format.
%DateTime%	The current date and time in the format specified by the Windows long date format followed by the long time format.
%FileSize%	The current size in bytes of the composite TAD data file. This parameter can be monitored by the remote monitoring service to ensure that the value is increasing over time.
%LastWrite%	The date and time the TAD datafile was last written to. This parameter can be monitored by the remote monitoring service to ensure that TAD is logging data.
%TDFFolder%	The name of the current TAD TDF datafiles folder. The name is returned without the preceding path, and without any trailing path delimiter. In a default installation, this meta-string will expand to Datafiles.
%UpdatePeriod%	The length of time between heartbeat emails.
%WindowsUpTime%	The length of time that Windows has been running since the last reboot.
%TADUpTime%	The length of time that TAD has been running since it was last started.
%WindowsVersion%	The version of Windows running, expressed as a string, e.g. Windows XP Service Pack 3 Build 2600.
%TADVersion%	The version of TAD running, expressed as a string, e.g. 1.44.0.2011 (please also see the note below

Meta-string	Expands to
	concerning filename formatting when the expanded string contains the period character).
%ID%	The contents of the ID field in the TAD Options Site Details tab.
%Company%	The contents of the Company field in the TAD Options Site Details tab.
%Installation%	The contents of the Installation field in the TAD Options Site Details tab.
%Site%	The contents of the Site Code field in the TAD Options Site Details tab.
%Area%	The contents of the Area Code field in the TAD Options Site Details tab.
%WorkGroup%	The Windows workgroup the computer running TAD belongs to.
%Computer%	The name of the computer running TAD
%User%	The name of the currently logged in Windows user.
%Mode%	The current operating mode of TAD. Expands to Master or Slave as appropriate.
%FittedChannels%	The number of fitted channels in the TAD installation.
%DisabledChannels%	The number of fitted, but disabled channels in the TAD installation.
%EnabledChannels%	The number of fitted and enabled channels in the TAD installation.
%OKChannels%	The number of enabled channels in the TAD installation that are showing no error condition.
%WarningChannels%	The number of enabled channels in the TAD installation that are showing a warning condition (e.g. temperature out of range, but with the limit delay not yet exceeded).
%AlarmChannels%	The number of enabled channels in the TAD installation that are showing an alarm condition (e.g. temperature out of range, with the limit delay exceeded).
%ErrorChannels%	The number of enabled channels in the TAD installation that are showing an error condition (e.g. failure of TAD to communicate with a logger).
%Tab%	The currently displayed tab on the TAD main form. It can be one of the following strings <ul style="list-style-type: none"> “Summary” “Graph” “Detail” “Channels” “Reports” “Log”

Meta-string	Expands to
	<p>"Options-<name of options sub-tab>"</p> <p>When the current tab is the options tab the meta-string returned is the concatenation of the string "Options" and the name of the options sub-tab, separated with a hyphen, for example:</p> <p>"Options-Datafile"</p> <p>The %Tab% meta-string is mainly intended for use with the file specifiers for the screen capture function of TAD.</p>
%%<env_var>%%	<p>The value of the windows environment variable env_var. For example %%temp%% would be replaced by the name of the Windows temporary files folder. The environment variable meta-strings are intended for returning system information in the body text of heartbeat emails. Their use in file and folder specifiers will be limited.</p>



Care needs to be taken when a file formatting meta-string expands to a result that contains the period character. If you specify a filename picture that expands to a string with periods (e.g. %TADVersion%) then TAD takes this as an explicit specification of a file extension and won't add a file extension automatically - in this case the extension needs to be added explicitly.

e.g. the string "Summary Report" MMM DD will expand to Summary Report Dec 19.pdf
 but the string "Summary Report: %TADVersion% will expand to Summary Report 1.46.15.3080 (i.e. no extension, because .3080 is treated as an extension)
 so you need to specify "Summary Report: %TADVersion%.pdf .

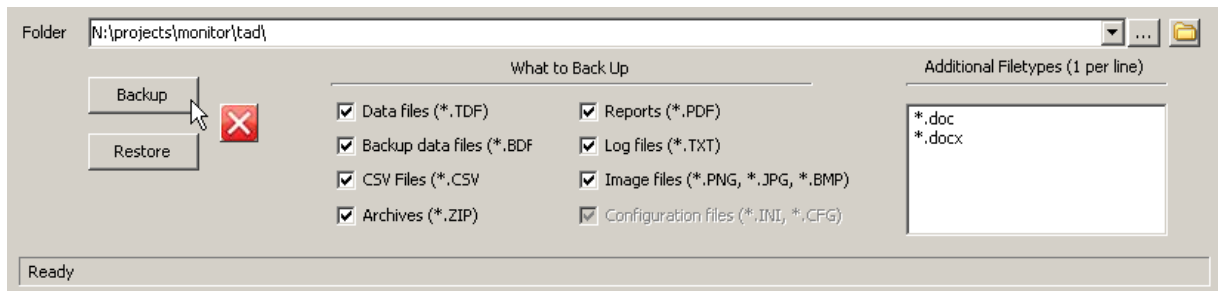
9.35 Administrator Backup and Restore

The intention of the administrator backup and restore facility of TAD is to make reinstatement of a TAD system after a computer hardware crash (or other cataclysmic event) as painless as possible. The obligation on the TAD user is to make regular use of the administrator backup function, and to keep the backup media in a safe place, preferably at a different address.



TAD administrator backup and restore depends on files being in the locations specified by the default folders presented when installation takes place.

Administrator Backup and Restore Controls



Backup Button

Click this button to start the backup process. TAD starts by gathering all the files that meet your specification and then will present a summary of what will be backed up, and how much disk space will be used on the backup media.

Restore Button

Click this button to start the restore process. TAD starts by gathering all the files that meet your specification and then will present a summary of what will be backed up, and how much disk space will be used on the destination drive.



If there is insufficient space on the destination media, you will be warned, but you can still start the backup or restore operation, if you can be deleting files to make more room while the backup or restore is underway.

Backup/Restore Folder

Enter the folder name where the backup image is to be stored.

What to Back Up

Check the boxes to indicate which filetypes you want to be backed up or restored.

The checkbox labeled **Configuration files (*.INI, *.CFG)** is always checked and cannot be unchecked. It merely serves as a reminder that TAD will always back up or restore these settings files. Remember, when files are restored, the date-stamp of any existing destination file is ignored and the file will always be overwritten.

Additional Filetypes

If you have additional files, or filetypes that you want TAD to back up, specify them here as masks (e.g. *.doc), or folder specifications and masks. There must be only one specification per line.

The "rules" for these additional filetype specifications are as follows:

- Any filename or filename mask specified by itself (i.e. without a pathname) will cause any file matching the mask in the TAD common documents folder tree or the TAD common application data folder tree to be backed up.
- Any absolute folder specified by itself will cause any file in that folder (but not subfolders) to be backed up.
- Any absolute folder followed by a file mask will cause any file in that folder (but not subfolders) that matches that mask to be backed up.
- Any absolute folder followed by a filename will cause that file only be backed up.

All of the above assumes that the file in the source folder is newer than any corresponding file in the destination folder, or that there is no destination file.

Specification

What TAD searches for to back up

Report.doc	Any file called Report.doc in the TAD common documents folder tree or the TAD common application data folder tree
*.doc	Any file matching *.doc in the TAD common documents folder tree or the TAD common application data folder tree
C:\Reports\	Any file in the folder C:\Reports. Subfolders are not searched.
C:\Reports*.doc	Any file with a filetype of .doc in the folder C:\Reports. Subfolders are not searched.
C:\Reports\Report.doc	The single file C:\Reports\Report.doc

The TAD common documents folder tree is nominally:

C:\Documents and Settings\All Users\Documents\Temprecord\TAD\

and all folders within that folder. The TAD common application data folder tree is nominally:

C:\Documents and Settings\All Users\Application Data\Temprecord\TAD\

and all folders within that folder.

The additional filetypes specifiers are ignored when restoring files.

Backup Media

This can be any storage media accessible from the TAD hardware. The most convenient form is a USB drive or flash drive, but any remote or removable storage accessible from the target hardware can be used.

What is Backed Up?

This table sets out the file types that are backed up :

File Type	Mask	Datafile folder	Local AppData	Common AppData	Common Docs
Data files	*.TDF	◆			
Repair and Reconstruction backup data files	*.BDF	◆			
Report Files	*.PDF			◆	◆
Log files	*.TXT			◆	◆
CSV Files	*.CSV			◆	◆
Zip archives	*.ZIP			◆	◆
Global configuration files	TAD*.INI			◆	
Channel configuration files	*.CFG	◆			

Screen capture image files	*.PNG, *.BMP, *.JPG				◆
Access control files	*.ACF		◆		
User-specified masks (if no path specified)				◆	◆

but only if the corresponding checkbox is enabled. These are all copied to the backup media in a form such that they can be retrieved and placed back in the correct folders when the data is restored.



- Any files that you create in addition to these files will also be backed up if they match the folders and masks specified above.

What isn't Backed Up?

Administrator Backup doesn't copy the program (EXE) files or help files to the backup media, although it does make a copy of the original setup files that were used to install TAD originally. This is so that the backup media contains everything needed to recover the TAD installation.

Administrator Backup doesn't copy the program shortcuts, quick launch icons, or start menu entries to the backup media, as these are recreated when TAD is re-installed. If you have created additional shortcuts manually, you should make separate arrangements to back these up.

Administrator backup doesn't copy files that are not located on a fixed local drive (usually C:\). This means, for example, that running the backup from a computer with TAD configured as a slave, where the datafiles are on a remote network drive, will not back up the datafiles or reports, which are under the control of the master TAD installation. If TAD administrator backup finds any of these remotely located files, it will warn you that folders have been ignored before starting the backup.

Incremental Backups

Administrator Backup can be run at any time, and should be run as often as is practicable. When Administrator Backup is run with an existing backup already present on the backup media, only files that have been created since the last backup, or changed since the last backup are copied. Thus, backups that are run after the initial backup only copy the files needed to refresh the file set on the backup media.

Multiple Backups on the Same Media

TAD allows you to specify the folder name that will serve as a root folder for the backup files. By specifying a different folder name for different computer systems with TAD installed on them, it is possible to use one backup media for many TAD system backups.

Obviously, care must be taken not to confuse the folders.



The structure and naming of the files and folders in a TAD Administrator Backup image is crucial to the correct operation of the backup and restore process. Don't rename, delete, copy, or move any of these files on the backup media.

Backup/Restore Messages

No files need to be backed up

No files on the source drive for the backup/restore need to be copied, either because they did not match the file masks, or existing copies on the destination media were up to date.

Backup folder not found

The folder name specified for the contents of the backed up files could not be found. Check the spelling of the name. If the backup is to be placed on a USB drive, check that the drive is properly inserted into the USB connector.

Check that you can see the USB drive using Windows Explorer.

Backup/restore folder is within a source folder

The folder you have specified as the destination of the backup or restore operation is contained within one of the folders that the files will be copied from. The destination of the backup or restore must not be within the folders that the files are copied from.

Insufficient space on destination folder

TAD has determined that the remaining space on the destination of the backup or restore is insufficient to contain the files to be copied (when calculating the space required, TAD takes into account the space already occupied by a destination file when that file already exists). You can still elect to continue with the backup or restore, assuming you will be able to make some space available during the operation.

Restoring a Backup

This description assumes that the target system (the computer that is about to have a backed up image of a TAD installation restored onto it) is a "clean" system, i.e. has no TAD-related files present. In particular, there must be no existing TAD datafiles (*.TDF). TAD will behave unpredictably if datafiles from different systems or backups are mixed. Any channel or global configuration files will be overwritten by the restore process, as will any report or log files with the same name.



IMPORTANT. To reiterate, it is strongly recommended that the target of an Administrator Restore operation is a "clean" system. Unlike backing up, the restore process does not check the dates of any destination files that might already exist. Existing files with the same name on the destination will be overwritten without warning.

Steps for recovery.

These steps assume you are re-installing TAD because an existing installation has been lost, and you are starting with a "clean" computer system.

1. Place the backup media into a drive accessible to the target computer. Start Windows Explorer and find the folder containing the backup for the TAD installation you want to recover.
2. Inside this folder you will see the file `tad-setup.exe`, possibly some other files called `External.ini`, `External.cfg` and `External.acf`, and a single folder named `~~ Image ~~ \`. Run the file `tad-setup.exe`.

Make sure you install TAD using the same folders and program group names as the backed up installation had. Temprecord strongly recommends that you accept the default values whenever Temprecord is installed.

3. After you have installed TAD, start the program. You should see a clean "empty" installation. Don't bother changing any settings, as these will be overwritten by the restore process.
4. Log into TAD as a TAD administrator user. Click on the **Options** tab, and select the **Admin Backup/Restore** page from the left-hand list.
5. Change the contents of the **Folder** field to show the folder where the TAD files were backed up to (the folder you ran the setup program from). You can check you have the correct folder by clicking the button with the folder icon and verifying you can see the `tad-setup.exe` and the `~~ Image ~~ \`

folder.

6. Click on the **Restore** button. After the files have been restored, TAD should exit automatically.
7. Start TAD again, and all data and settings that were previously backed up should be restored.

Testing the Recovery Media

- Backups that are untested are little better than no backup at all. Temprecord recommends that you regularly check your backups to ensure that a system recovery can be achieved. This has several benefits:
- It serves as a check that the previous backups have been properly carried out, and that the backup media has no faults.
- It verifies that the restore process is understood by those who may need to carry it out.
- It serves as regular practice for staff who may need to carry out a recovery later "in anger".

The simplest way to check the integrity of your backup media and procedures is to "pretend" that you have suffered a total loss of the platform you normally run TAD on. We recommend the use of a virtual machine for this, as this is a convenient way of simulating a new computer system. VirtualBox (<https://www.virtualbox.org>) and VMWare (<http://www.vmware.com/products/workstation/index.html>) are two of the more common virtual machine software products.



Whether you use a virtual machine, or a "real" computer system, the steps are the same (see the above heading "Steps for Recovery"). Even if you are testing your recovery media on a computer, you can still check the integrity of the recovered data. If you start TAD in "slave" mode (specify the `/slave` command line option when you start `tad.exe`. You can do this either from a command prompt - a "DOS prompt" - or by creating another shortcut to the TAD program) TAD will not attempt to communicate with any hardware, but will still display and allow you to inspect the datafiles.

10 Appendices

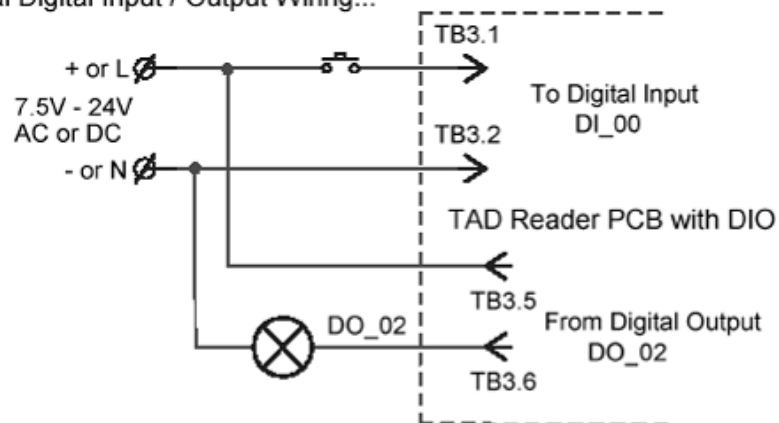
[Digital I/O Connections](#)
[TAD Product Specifications](#)

10.1 Digital I/O Connections

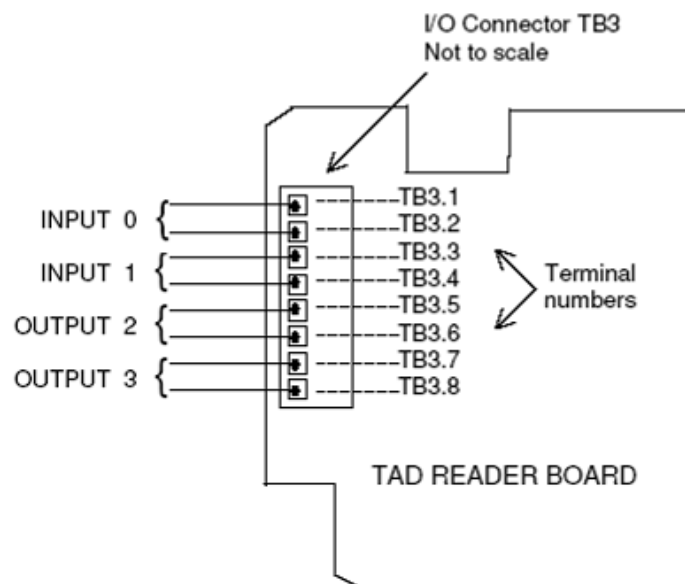
Typical Digital Input / Output Wiring

The two diagrams below show the typical method used to connect a digital input to one of the yellow TAD reader boxes located around your building.

Typical Digital Input / Output Wiring...



I/O connector terminal identification numbers



10.2 TAD Product Specifications

Compatibility

- User application: Temprecord Active Display (TAD) Software V1.44.0 or later.
- Operating system: Windows XP (SP2) for MASTER Station Configuration.
- Operating system: Windows XP (SP2) for SLAVE Station Configuration.

Connectivity

- Available COM ports 1 - 256
- Serial RS232 (RxD, TxD, GND, DTR & RTS) standard
- Ethernet 10 base-T / 100 Base-TX connection option
- USB to serial converter option

Scientific / Medical Temprecord Logger Temperature Range:

- Standard probe: -50°C to +110°C (-58°F to +230°F)
- Low-temp probe: -80°C to +110°C (-112°F to +230°F)

Temperature Accuracy

- $\pm 0.2^{\circ}\text{C}$ ($\pm 0.36^{\circ}\text{F}$) over the range -20°C to +50°C (-4°F to +122°F) otherwise $\pm 0.5^{\circ}\text{C}$ (0.9°F)

Temperature Display Resolution

- 0.01°C

Humidity Logger Range

- 0.00% to 100%

Humidity Logger Accuracy

- $\pm 3\%$ RH from 12% to 85% RH
- Otherwise $\pm 4\%$ RH from 0.00% to 12% RH and 85% to 100% RH

Humidity Display Resolution

- 0.01%RH

CO2 Logger Range

- 0.00% to 100% or 0 ppm to 1000000 ppm

CO2 Logger Accuracy

- The Vaisala unit will have an accompanying calibration certificate. The Vaisala CO2 transmitter unit also makes compensation based on the temperature and pressure of the gas being sensed. If the sensed environments are at atmospheric pressure the reading will be directly proportional to atmospheric pressure, and the nominal atmospheric pressure at the altitude above seal level of the installation should be entered into the Pressure setting of the unit using the MF_PRESSURE serial command.
- Accuracy (including repeatability, non-linearity and calibration uncertainty) at 25 °C and 1013 hPa
- GMT221 $\pm(1.5\%$ of range + 2 % of reading) (applies for concentrations above 2 % of full scale)
- Temperature dependence, typical -0.3 % of reading / °C
- Pressure dependence, typical +0.15 % of reading/hPa
- Long-term stability $<\pm 5\%$ FS/2 years
- Response time (63 %) 20 seconds

- Warm-up time 30 seconds to usable display, 15 minutes to full specifications

CO2 Display Resolution

- .001% or 1 ppm

Dimensions

- L150 x W120 X D45mm

Case

- Yellow plastic, protection rating IP64, -20°C to 85°C (-4°F to 185°F)

Warranty Period

- 12 months from date of purchase

Index

- " -

"From:" Address 177

- % -

%%<env_var>%% 183
 %AlarmChannels% 178, 183
 %Area% 178, 183
 %Company% 183
 %Computer% 183
 %Date% 178, 183
 %DateTime% 178, 183
 %DisabledChannels% 178, 183
 %EnabledChannels% 178, 183
 %ErrorChannels% 178, 183
 %FileSize% 178, 183
 %FittedChannels% 178, 183
 %ID% 178, 183
 %Installation% 178, 183
 %LastWrite% 178, 183
 %Mode% 183
 %OKChannels% 178, 183
 %Site% 178, 183
 %Tab% 183
 %TADUpTime% 183
 %TADVersion% 183
 %TDFFolder% 183
 %Time% 178, 183
 %UpdatePeriod% 183
 %User% 183
 %WarningChannels% 178, 183
 %WindowsUpTime% 183
 %WindowsVersion% 183
 %WorkGroup% 183

- / -

/NoMoxalInstall command-line installation option 12
 /NoStartUpMenu command-line installation option 12

- ~ -

~~Image~~ (administrator backup folder) 186

- 1 -

1st Line - Abbreviate 174

- 2 -

2.14 Firmware 55

- A -

Abbreviate 1st Line 174
 Abnormal Logger Channels - Default Heartbeat Action on 181
 About TAD 101
 About TAD Help 28
 Above Room (25C) 79
 Above Upper Limit 79
 Access Level - Changing 109
 Access Options 101
 Access Timeout 101
 Accuracy - Temperature 193
 ACF File - Installing an external 16
 Action on Alarm 49, 76
 Action on Sentinel Errors 166
 Activate Auxiliary Output 49, 153
 Active Channels - View 24
 Active Column 32
 Active Tab - Screen Capture 169
 Active Tab Client Area - Screen Capture 169
 Adding a Channel 67
 Adding a Note to the Event Log 96
 Adding Channels to the Graph Tab 83
 Administrator 101
 Administrator Access 109
 Administrator rights 9
 Adminstrator Backup and Restore 186
 Alarm channels 178
 Alarm Channels - View 24
 Alarm Column 35
 Alarms - Pop-up 98
 Alarms Group Configuration 153
 Alarms Tab - Channel Setup 49
 Alert appearance 164
 Alert Channels - View 24
 Alert Display Respite Delay 159
 Alert Email - Send during validation 159
 Alert Indication - Graph 88
 Alert SMS - Send during validation 159
 Alert Sounds 165
 Alerts - SMS 174
 Alerts Options 159
 Align 178
 All Channels - View 24
 Animate - Alert 164
 Appearance - Alert 164

Appendices 192
 Area code 114, 178
 Authentication - proxy 142
 Authorisations 9
 Auto-detect proxy 142
 Automatic Calibration 59
 Auxiliary Alarm Outputs 159
 Auxiliary Alarm Outputs - Alerts Options 159
 Auxiliary Output - Activate 153

- B -

Backed Up - What is 186
 Backed up - What isn't 186
 Backspace 89
 Backup - Global settings file (TAD.INI) 122
 Backup - Administrator 186
 Backup - Channel configuration file (TAD.CFG) 122
 Backup - Web 137
 Backup file - reconstruction 114
 Backup file - repair 114
 Backup file Destinations 122
 Backup Filename 122
 Backup folder date format 122
 Backup now 122
 Backup Options 122
 Backups - Incremental 186
 Backups - Multiple on the same media 186
 batch file - example 12
 BDF file 114
 Below Freezing (0 C) 79
 Below Lower Limit 79
 Between Samples - Keep Port Closed 55
 Body 178
 Build number - TAD 101
 Button - Test email 174

- C -

Calibration - Automatic 59
 Calibration - Channel Setup 59
 Calibration - Manual 59
 Camera Options 168
 Capture - Screen 169
 Case 193
 CFG File - Installing an external 16
 Change Access Level 101
 Changing the Access Level 109
 Changing your Password 101
 Channel 76
 Channel - Cloning 70
 Channel configuration file (TAD.CFG) backup. 122

Channel Description 40
 Channel Graph - include 149
 Channel Hardware ID 40
 Channel Input 0 40
 Channel Input 1 40
 Channel Location ID 40
 Channel Location ID - Displaying 72
 Channel Name 40
 Channel Name - Displaying 71
 Channel number - Formatting file and folder names with 133
 Channel Number Column 31
 Channel Output 2 40
 Channel Output 3 40
 Channel Report - Expanded Event Detail 98
 Channel Report Filename 143, 149
 Channel Report Folder 143, 149
 Channel Report on Demand 75
 Channel Sampling Sentinel Monitoring 166
 Channel Settings - including in channel report 149
 Channel Setup 42
 Channel Setup - Alarms Tab 49
 Channel Setup - Calibration 59
 Channel Setup - Channel Errors and Heartbeat 52
 Channel Setup - Details Tab 40
 Channel Setup - Digital I/O Tab 55
 Channel Setup - Logging Tab 42
 Channel Setup - Reports Tab 47
 Channel Setup - Sampling when channel outside limits 45
 Channel Setup - Use Defaults 45
 Channel Setup - Validation Tab 52
 Channel Setup Dialog 37
 Channel Statistics - including in channel report 149
 Channel Summary - including in channel report 149
 Channel toolbar 67
 Channels - Adding 67
 Channels - Alarm 178
 Channels - Disabled 178
 Channels - Docking 68
 Channels - Enabled 178
 Channels - Error 178
 Channels - Fitted 178
 Channels - Moving 68
 Channels - OK 178
 Channels - Removing 68
 Channels - Resizing 69
 Channels - Showing and Hiding 30
 Channels - Warning 178
 Channels Tab 66
 Channels Tab (Alt-C) - Select 25

- channels that are outside the limits - How TAD determines the sample period 45
- Check every... 128
- Check Now 114
- Clipboard - Screen Capture 169
- Cloning a Channel 70
- Close 26
- Close after delay 49, 153
- Close Modal Dialogs After 159
- Closing Port - Delay After 55
- Closing Port - Delay Before 55
- Closing TAD 22
- Closing Temprecord Active Display 26
- Colours - Channel Toolbar Data 67
- Colours - Graph Report Trace 76
- Column Heading - Spot check Primary System Details 128
- Columns - measured parameters 34
- Command-line Installation 12
- command-line parameter 23
- Compact SMS Messages 174
- Compatibility 193
- Computer Requirements 9
- Configuration - Hardware 55
- Confirmation of Channel Status Changes 110
- Connect Timeout - Email Options 174
- Connectivity 193
- Contents 8
- Copyrights 9
- CPU Usage - high when using USB serial ports 55
- Create Reports 47
- CSV File - exporting data to 126
- CSV files - date format 122
- CSV Files Location - Spot check Primary System Details 128
- Ctrl-Left Arrow 89
- Ctrl-Right Arrow 89
- Customer ID 136
- D -**
- damaged password files - Recovering from 107
- Datafile Options 114
- Datafile Size 114
- Date 178
- date - Formatting file and folder names with 133
- Date format - Report folder and filename 143
- Date format in CSV files 122
- Date Options 110
- DateTime 178
- day - Formatting file and folder names with 133
- Day at hour - Check every 128
- Debug Options 182
- Declarations 9
- Default Column 32
- Default Heartbeat Action on Abnormal Logger Channels 181
- Default Options - Sampling when channel outside limits 45
- Default Report Configuration 153
- Default Setting - Channel Errors and Heartbeat 52
- Defaults Options 153
- Definitions 9
- Definitions used in this Manual 9
- Delay - Alert Display Respite 159
- Delay - Limit 153
- Delay - Popup Override 159
- Delay After Closing Port 55
- Delay After Opening Port 55
- Delay Before Closing Port 55
- Delete Report 74
- Delete User 101
- Description 40
- Description - Channel 40
- Description - Spot check Primary System Details 128
- Description of Fields in the Detail Tab 63
- Destinations - Backup 122
- Detail - Logged Event 94
- Detail Tab 62
- Detail Tab (Alt-D) - Select 25
- Detail Tab - Description of Fields 63
- Detail Tab - Overview 62
- Details Tab - Channel Setup 40
- Detection Delay - Camera Options 168
- Detection Threshold - Camera Options 168
- Diagnostics Options 182
- Dialog - Channel Setup 37
- Digital I/O Connections 192
- Digital I/O Enable 55
- Digital I/O Tab - Channel Setup 55
- Digital Input / Output Wiring 192
- Digital Input Circuits (Input 0 and Input 1) 49
- Dimensions 193
- Disabled channels 178
- Display Resolution 193
- Display time - Alerts Options 159
- Displaying the Channel Location ID 72
- Displaying the Channel Name 71
- Docking Channels 68
- drag 89
- Duration 76

- E -

Edit Passwords 101
 Edit User 101
 Email - Screen Capture 169
 Email - Send during validation 143, 159
 Email "From:" Address Options 177
 Email Heartbeat Options 178
 Email Options 174
 Email Recipients 174
 Email Recipients - Screen Capture 169
 Email Reports 153
 Email Reports Options 47
 Email Subject - Screen Capture 169
 Email Summary Reports 143
 Enable 178
 Enable - Digital I/O 55
 Enable alerts in slave mode 40
 Enable Backup to Web 122
 Enable Email Backup 122
 Enable Regular Backups when Datafile Rolls Over. 122
 Enabled channels 178
 Enabling Traces on the Graph 83
 End 89
 End of Period 76
 End of Record - go to 89
 Entire Main Form - Screen Capture 169
 Entry - Log 93
 environment variable - windows - in meta strings 133
 Error Channels 178
 Error Channels - View 24
 Error Messages - Startup 20
 Errors and Heartbeat 52
 Event / Status Markers 87
 Event Detail - Expanded 98
 Event Log 159
 Event Log - Adding a Note 96
 Event Log - Past Days to Show 110
 Events 76
 Events - Include 149
 Events - Including routine 149
 Every N Minutes 178
 example batch file 12
 Examples - Command-line Installation 12
 Examples - Formatting file and folder names 133
 Excel 122
 Exiting 22
 Exiting TAD 22
 Expand Events in Report 143, 149
 Expanded Event Detail (PDF Channel Report) 98

Export on demand - Export all Enabled Channels 126
 Export on demand - Export this channel 126
 External Files - Installation with 16
 External Installation Files - Preparing 16
 External.acf 186
 External.cfg 186
 External.ini 186

- F -

File - Save Screen Capture to 169
 File and Email - Screen Capture 169
 File and folder names - Formatting with date-times 133
 File Format - Screen Capture 169
 file identifier - TAD datafile 114
 File Menu 22
 Filename - backup 122
 Filename - Channel Report 149
 Filename - Screen Capture 169
 Filename - Spot check 128
 Filenames - backup 122
 Filenames - Report 143
 Files - Options 23
 FileSize 178
 Find Trace 89
 Finding Logged Events on the Graph 95
 Firmware - 2.14 55
 First Line - Abbreviate 174
 Fit Limits 47, 153
 Fit Trace 47, 153
 Fit Trace and Limits 47, 153
 Fitted channels 178
 Fitted Channels - View 24
 Fixed Limits 47, 153
 Folder - Channel Report 149
 Folder - Screen Capture 169
 Folder - Spot check 128
 Format - Page 143
 Formatting file and folder names with date-times 133
 From: Address 178

- G -

General Options 110
 Generating Reports 75
 Global settings file (TAD.INI) backup 122
 Go to End of Record 89
 Go to Start of Record 89
 Graph 76
 Graph - Enabling Traces 83

Graph - Event / Status Markers 87
 Graph - Finding Logged Events on 95
 Graph - include channel 149
 Graph - Moving about 89
 Graph Alert Indication 88
 Graph Height 149
 Graph Hinting 86
 Graph Points - plot all 149
 Graph Report Trace Colours 76
 Graph Tab 82
 Graph Tab (Alt-T) - Select 25
 Graph Tab - Adding Channels 83
 Graph tab - Zoom Buttons 84

- H -

Hardware 55
 hardware configuration 55
 Hardware ID 40
 Hardware ID - Channel 40
 Hardware Requirements (TAD) 9
 Heartbeat 178
 Heartbeat - Channel Errors and 52
 Heartbeat Action - Default 181
 Height - Graph 149
 Hide Username 101
 High CPU usage when using USB serial ports 55
 Hinting - Graph 86
 Home 89
 hour - Formatting file and folder names with 133
 Hour at minute - Check every 128
 How TAD samples channels that are outside the limits 45
 Humidity 34, 42, 153
 Humidity Logger Range 193

- I -

I/O Column 34
 Icon - Tray 26
 ID 178
 ID - Channel Hardware 40
 ID - Channel Location 40
 Ignore files older than 122
 Inactive Channels - View 24
 Include Channel Graph 149
 Include Channel Settings 149
 Include Channel Statistics 149
 Include Channel Summary 149
 Include Events 149
 Include Location ID in Message 174
 Include Routine Events 149

Incremental Backups 186
 INI File - Installing an external 16
 Input / Output Wiring 192
 Input 0 - Channel 40
 Input 0 and Input 1 40
 Input 1 - Channel 40
 Installation 10, 178
 Installation - Command-line 12
 Installation with External Files 16
 Interval - Validation 143, 159
 Introduction 8
 IP Address 55

- K -

Keep Closed Between Samples - Port 55
 Keep Port Closed Between Samples 55

- L -

Large zoom buttons 84
 Last Report At - Spot check 128
 Last Report Filename - Spot check 128
 Last Sample At - Spot check 128
 LastWrite 178
 Latitude - Spot check 128
 layout - Report 76
 LCD Logger - Use 55
 Left Arrow 89
 Limit - Lower 153
 Limit - Upper 153
 Limit Delay 153
 Limit to N Lines 143, 149
 Limits - How TAD determines the sample period of channels that are outside 45
 Local Channels 118
 local channels -Showing 31
 Location ID 40, 76, 174
 Location ID - Channel 40
 Location ID - displaying 72
 Log 93
 Log - Startup 182
 Log Entry 93
 Log Momentary (Temperature, Humidity, Pressure) Warnings 159
 Log Momentary Digital Input (0, 1) Warnings 159
 Log Tab 93
 Log Tab (Alt-L) - Select 25
 Logged Event Detail 94
 Logged Events - Finding on the Graph 95
 Logged in Windows user - Formatting file and folder names with 133
 Logger - Use TR6/LCD 55

Logging 76, 153
 Logging Tab - 42
 Login 101
 Logout 101
 Logout User - Camera Options 168
 Longest Time 79
 lost or damaged password files - Recovering from 107
 Lower limit 153
 Lower T Limit 76

- M -

Mail - Send 153
 Main Form Client Area - Screen Capture 169
 Main Menu - TAD 22
 Manual Calibration 59
 Manual Declarations 9
 Manual proxy 142
 Mark as Not Validated 52
 Mark as Validated 52
 master password file 106
 Master User Information File 101
 Master/Slave Options 118
 Max Send Attempts - Email Options 174
 Max TAD-Primary System Time Difference - Spot check 128
 Max Temperature 76
 Mean Temperature 76
 Measured parameters columns 34
 Menu - File 22
 Menu - Select 25
 Menu - View 24
 Messages - Tray Icon 26
 Meta-strings 178, 183
 Min Temperature 76
 Minimize to Tray 22
 Modal Dialogs
 - Close After 159
 Momentary error condition - Alerts Options 159
 month - Formatting file and folder names with 133
 Month on day - Check every 128
 mousewheel 86
 Moving 106
 Moving about the Graph 89
 Moving and Docking Channels 68
 Moving the master password file 106
 Moxa serial ports 55
 Multiple Backups on the Same Media 186

- N -

Name 40
 Name - Channel 40
 Name Column 33
 Native Units 59
 New User 101
 Next Report At - Spot check 128
 Next Sample At - Spot check 128
 No access 109
 No Action 49
 No Effect - Channel Errors and Heartbeat 52
 No Effect - Default Heartbeat Action on Abnormal
 Logger Channels 181
 No Proxy 142
 Not Validated - Mark as 52
 Note - Adding to the Event Log 96
 Now - Spot check 128
 Now Button 47

- O -

OK channels 178
 OK Channels - View 24
 on Demand - Spot check 128
 on the Same Media - Multiple Backups 186
 Open Folder - Reports 74
 Opening Port 55
 Operating System 9
 Operator 101
 Operator Access 109
 Options - Access 101
 Options - Alerts 159
 Options - Backup 122
 Options - Camera 168
 Options - command-line installation 12
 Options - Datafile 114
 Options - Date 110
 Options - Debug 182
 Options - Defaults 153
 Options - Diagnostics 182
 Options - Email 174
 Options - Email "From:" Address 177
 Options - Email Reports 47
 Options - General 110
 Options - Master/Slave 118
 Options - Plot Scaling 47
 Options - Reporting 143
 Options - Screen Capture 169
 Options - Sentinel 166
 Options - Site Detail 114

Options - Spot Check 128
 Options - System 181
 Options - Validation 143
 Options - Web 136
 Options Files 23
 Options Tab 100
 Options Tab (Alt-O) - Select 25
 Output 2 - Channel 40
 Output 2 and Output 3 40
 Output 3 - Channel 40
 Outside limits - How TAD determines the sample period of channels 45
 Override Delay - Popup 159
 Overview of the Detail Tab 62

- P -

Page Format - Report 143
 paper 143
 paper size 143
 Password 109
 Password - Changing 101
 Password - proxy 142
 password file 106
 password files - Recovering from lost or damaged 107
 Past Days to Show 159
 Past Days to Show - Event Log 110
 PDF files 143
 Pentium 9
 Period - Warranty 193
 Plot all Graph Points 149
 Plot Scaling Options 47
 Points - plot all graph 149
 Pop-up Alarms 98
 pop-up menu 89
 Pop-up on Alarm 49, 153
 Popup Override Delay 159
 Port - Delay After Opening 55
 Port - Opening 55
 Preparing External Installation Files 16
 Pressure 34, 42, 153
 Primary System Details - Spot check 128
 Primary System Time - Spot check 128
 Primary System Time Latitude - Spot check 128
 Prompt for Filename - Screen Capture 169
 Proxy 142
 Proxy requires password 142
 Proxy Settings 142

- R -

Range - Humidity Logger 193
 Recent Reports 74
 Reconstruction backup file 114
 Record Operator Detection - Camera Options 168
 Recovering from lost or damaged password files 107
 Recovery - steps 186
 Recovery Media - testing 186
 Region - Screen Capture 169
 Regular spot check disabled 128
 Regular Summary Report 143
 Regular Summary Report on Demand 75
 Remain open till acknowledged 49, 153
 Removing a Channel 68
 Repair backup file 114
 Report - Expand Events in 149
 Report - Regular Summary 143
 Report Configuration - Default 153
 Report Events 143
 Report Filename 143
 Report Folder - Channel 143
 Report Folder - Summary 143
 Report folder and filename date format 143
 Report Folder and Filenames 143, 149
 Report Generated 76
 Report layout 76
 Report on Demand - Channel 75
 Report on Demand - Regular Summary 75
 Report on Demand - Summary 75
 Report Page Format 143
 report PDF files 143
 Report Vaccine Status 143, 149
 Reporting Options 143
 Reports - Clear List 74
 Reports - Delete 74
 Reports - Generating 75
 Reports - Open Folder 74
 Reports - Recent 74
 Reports - View as PDF 74
 Reports Tab 73
 Reports Tab - Channel Setup 47
 Requirements - System 9
 Resizing Channels 69
 Resolution - Display 193
 Respite - Alert Display 159
 Re-Start Logger after Retrieval 114
 Restore - Administrator 186
 Restore - Web 139
 Restoring TAD 22
 Retrieval Group 114

Retrieve Samples from Logger if possible 114
 Right Arrow 89
 Rollover Now 114
 Routine Events - Including 149

- S -

Sample every 42, 153
 Sample Period 76, 114
 Sample Subject and Body 178
 Sampling 153
 Sampling when channel outside limits - Channel setup 45
 Sampling when channel outside limits - Default Options 45
 Save Settings 22
 Scientific / Medical Temprecord Logger Temperature Range 193
 Screen Alerts - Alerts Options 159
 Screen Capture Filename 169
 Screen Capture Folder 169
 Screen Capture Options 169
 Screen Capture Region 169
 Screen Capture Toolbar 169
 second - Formatting file and folder names with 133
 Select Menu 25
 Send Alert Email During Validation 143, 159
 Send Alert SMS During Validation 143, 159
 Send Mail 49, 153
 Send SMS 49, 153
 Send to Tray 26
 Sensirion ASP1400 55
 Sensor Timeout 55
 Sentinel Options 166
 Sequence number - Formatting file and folder names with 133
 Serial ports - Moxa 55
 Serial ports - USB 55
 Settings 76
 Settings - including in channel report 149
 Settings - proxy 142
 Setup Dialog - Channel 37
 Show Balloon Hints 110
 Show Large Zoom Buttons 110
 Showing and Hiding Channels 30
 Showing local channels only 31
 Site 76, 178
 Site Code 114
 Site Detail Options 114
 Site Requirements 9
 size 143
 Slave mode - Enable alerts in 40
 Slave Options 118
 SMS - Send 153
 SMS - Send during validation 143, 159
 SMS Alerts 174
 SMS Messages 174
 Snooze Time - Alerts Options 159
 Software Installation 10
 Sounds - Alert 165
 Spacebar 89
 Specifications - TAD 193
 Spot Check At... 128
 Spot Check Filename 128
 Spot Check Folder 128
 Spot Check Now 128
 Spot Check on Demand 128
 Spot Check Options 128
 Spot Check Statistics 128
 Spot Check Timing 128
 Start of Period 76
 Start of Record - go to 89
 Starting TAD 18
 Startup Error Messages 20
 Startup Log 182
 Startup Page 110
 Statistics 76
 Statistics - including in channel report 149
 Statistics - Spot check 128
 Status - report vaccine 149
 Status - Vaccine 79
 Status Column 35
 Steps for recovery 186
 Stop - Alert sound 165
 Stop after duration - Alert 165
 Stop Heartbeat when any channel is abnormal - Default Heartbeat Action on Abnormal Logger Channels 181
 Stop Heartbeat when Channel is Abnormal - Channel Errors and Heartbeat 52
 Subject 178
 Summary - including in channel report 149
 Summary Report - Regular 143
 Summary Report Filename 143
 Summary Report Folder 143
 Summary Report on Demand 75
 Summary Reports - Email 143
 Summary tab 29
 Summary Tab (Alt-S) - Select 25
 Supervisor 101
 Supervisor Access 109
 System Options 181
 System Requirements 9
 System Tray - Show Balloon Hints 110

- T -

Tab 93
 Tab - Channels 66
 Tab - Detail 62
 Tab - Graph 82
 Tab - Options 100
 Tab - Reports 73
 Tab - summary 29
 TAD - About 101
 TAD - Restoring 22
 TAD - Starting 18
 TAD Build number 101
 TAD Datafile 114
 TAD Default Setup.bat (file) 12
 TAD Help - About 28
 TAD Main Menu 22
 TAD Options Files 23
 TAD Product Specifications 193
 TAD System Tray Icon Messages 26
 TAD Time Latitude - Spot check 128
 TAD Version 101
 TAD.ACF - Installing an external file 16
 TAD.CFG 122
 TAD.CFG - Installing an external file 16
 TAD.INI 122
 TAD.INI - Installing an external file 16
 tad-setup.zip 10
 TDF file 114
 TDF File Writes Sentinel Monitoring 166
 Temperature 34, 42
 Temperature Accuracy 193
 Temperature, Humidity & Pressure 153
 Temprecord Active Display - Closing 26
 Test - Alert appearance 164
 Test - Alert sound 165
 Test Button - email 174
 Test Email Recipients 174
 Testing the Recovery Media 186
 This channel is local 40
 Time 178
 time - Formatting file and folder names with 133
 Time Difference - Spot check 128
 Time in Zone 79
 Timeout - Camera Options 168
 Timeout - Sensor 55
 Timezone name - Formatting file and folder names with 133
 Timezone offset - Formatting file and folder names with 133
 Timing - Spot check 128

To: Addresses 178
 Toolbar - channel 67
 Toolbar - Screen Capture 169
 TR6/LCD Logger - Use 55
 Trace Colours - Graph report 76
 Tray Icon Messages 26
 Typical Digital Input / Output Wiring 192

- U -

Units - Native 59
 Upper Limit 153
 Upper T Limit 76
 USB serial ports 55
 Use Default Setting 52
 Use Defaults - Channel Setup 45
 Use TR6/LCD Logger 55
 User Name 109
 User Note 96
 Username - proxy 142
 Users - creating new 101
 Users - deleting 101
 Users - Editing 101
 Using the keyboard to move about the graph 89
 Using the mouse to move about the graph 89
 Using the Zoom Buttons 84

- V -

Vaccine Status 79
 Vaccine Status - report 143, 149
 Vaccine Status Visual Guide 79
 Validated - Mark as 52
 Validation 52, 159
 Validation - Send Alert Email During 143, 159
 Validation - Send Alert SMS During 143, 159
 Validation Interval 143, 159
 Validation Options 143
 Validation Tab - Channel Setup 52
 variable - environment - in meta-strings 183
 Version - TAD 101
 View as PDF - Reports 74
 View Menu 24
 virtual machine 186
 VirtualBox 186
 Visual Guide - Vaccine status 79
 VMWare 186
 Volume - Alert 165

- W -

Wait for this period of time before generating the report 128

Warning channels 178
Warning Channels - View 24
Warranty Period 193
Web Backup 137
Web Customer ID 136
Web Options 136
Web Restore 139
week - Formatting file and folder names with 133
Week on day - Check every 128
WeyJun 4-20 mA 55
What is Backed Up 186
What isn't Backed Up 186
windows environment variable in meta-strings 183
Within Limits 79

- Y -

year - Formatting file and folder names with 133

- Z -

Zone 79
Zoom Buttons - Show Large 110
Zoom Buttons - Using 84
Zoom In Horizontally 84
Zoom In Vertically 84
Zoom Out Horizontally 84
Zoom Out Vertically 84
Zooming - Using the Mouse 86
Zooming - Using the Zoom Buttons 84