

# WS3500 - Metago<sup>®</sup> Manager WS3500 - Metago<sup>®</sup> Manager LITE

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# **Revision History**

Software Version	Date	Author	Comments
3.0	November 9, 2001	DR	Initial Customer Release
3.1	February 7, 2002	DR	Added changes based on Metago Manager 3.1 some of these items included TBOS, analog remote, backup and restore files, templating of discrete and TBOS inputs.
3.2.38	June 5, 2002	DR	Added changes based on Metago Manager 3.2 38.
3.28.52	August 21, 2002	DR	Updated TBOS and I/O correlation. Added TABS
3.28.53	September 6, 2002	DR	Updated installation steps and TABS. Added INACS.
3.28.53	October 9, 2002	DR	Added configuration of serial PPP port.
3.3.8	December 16, 2002	DR	Added appendix of a pin-out for full handshake Null Modem used for serial PPP. Added DS5PA.
3.3.11	February 5, 2003	DR	Updated DS5PA. Added maximum number of users 15.
3.4	May 16, 2003	DR	Added Application timeout option and application security features
3.5	Sept 3, 2003	DB	Minor update
4.0	Mar 23, 2004	DB	Addition of new features: TL1 updates, TL1 heartbeat, TL1 Routing, RTU Summary, Advanced polling parameters.
4.0.11	June 27, 2004	DB	Addition of new features: TABS Reporting, Access Control (ACL)
4.1.10	November 1, 2004	DB	Added SNMP Nag configuration.
4.1.12	December 8, 2004	DB	TBOS configuration changes, DB Loader
4.1.13	February 1, 2005	DB	WS-ARM / WS-ADM configuration changes. Added SLC sequencer configuration. Added On-the-fly point configuration
4.1.23	June 22, 2005	DB	Address change
4.2.2	September 1, 2006	PH	Minor updates
4.3	March 1, 2007	PH	DST updates
4.3.2	August 28, 2007	PH	Added Analog configuration to DS5PA
4.3.8	September 4, 2008	GB	Added E2A configuration section
4.3.16	April 20, 2010	QD	Added Derived Alarms, Tabs/IP Collection
4.5.1	March 30, 2016	PL	General update for new features added in Manager version 4.5.1 and firmware version 4.03.04

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## About this document

This manual provides detailed information on the Metago<sup>®</sup> Manager and Metago Manager LITE software packages for configuring the WS3500 Metago<sup>®</sup> RTU.

This manual is divided up into the following sections:

Overview — this section describes the function of the Metago<sup>®</sup> Manager software application.

System Requirements — this section describes the minimum requirements needed on your PC in order to run the application.

*Getting Started* — this section describes the basics of using Metago<sup>®</sup> Manager. Some of the topics covered are how to start and exit the application and how to work within the application.

Connecting to the RTU — this section describes how to connect to the RTU.

*Configuring the RTU* — this section describes the various Tab that are used to configure an RTU and how to download the configuration from the PC to the RTU.

*Configuring TBOS Devices* — this section describes how to add and delete TBOS devices, and modify the associated TBOS points.

*Configuring TABS Devices* — this section describes how to add and delete TABS devices, and modify the associated points.

*Configuring TABS Reporting Devices* — this section describes how to add and delete TABS Reporting devices, and modify the associated point mapping.

*Configuring INACS Devices* — this section describes how to add and delete INACS devices, and modify the associated points.

*Configuring DS5000 Devices* — this section describes how to add and delete DS5000 devices, and modify the associated points.

*Configuring E2A Devices* – This section describes how to add and delete E2A devices and modify the associated points.

*Configuring Derived Alarms* – This section describes how to add, edit and delete Derived Alarm points to the WS3500 configuration.

*Options* — this section describes the features listed in the Options menu.

*Using Templates* — this section describes how to create and apply discrete, TBOS, and other templates to various RTUs.

Saving and Restoring RTU Files — this section describes how to save the RTU file to your PC or disk and then how to restore (open) the saved file.

*DB Loader*— This section describes using the DB Loader utility included with Manager to import and export point configurations to .CSV files for easy manipulation.

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**IMPORTANT NOTE:** Depending on the license purchased from Westronic, all fields or options shown in any screenshot within this manual may not be present. Any fields that are not present do not need to be configured and may be ignored.

# Chapter

#### Overview

There are two varieties of Metago Manager that are available; they are referred to as Metago Manager and Metago Manager LITE. Both include all configurable options for the WS3500.

**Metago Manager LITE** is included free of charge with the purchase of a WS3500 RTU. It is the single RTU variation of the application, where only one RTU can be configured at a time. The user may connect to a WS3500, upload the current configuration, make changes, and download the changes back to the RTU.

**Metago Manager** may be purchased from Westronic as an optional software package to be used with WS3500 RTUs. Metago Manager includes all the features of Metago Manager LITE, with the added functionality of a database to store the configuration information of many RTUs. This allows the user to make configuration changes offline, and then connect to the RTU and download the new configuration. Metago Manager also includes several additional features that are not available in Metago Manager LITE.

- Templates Allows the user to export a block of point configurations to a .csv file, and import them so they can be reused in multiple locations.
- DB Loader An optional utility that allows the user to export / import all configured point for an RTU to a .csv file. This allows for importing point configurations from other systems, or bulk point editing.
- Network Database Metago Manager's RTU database can be stored either locally or on a network drive. Metago Manager can be configured with a list of database partitions from which the user can select a database to use.

The Metago Manager and Metago Manager LITE software packages are used to:

- Connect and Upload the configuration on the RTU to the PC.
- Download the configuration from the PC to the RTU.
- Set the date and time on the RTU.
- Enable or disable the InSite features. For more details on the use of InSite, please refer to the Metago InSite manual pn# 994-T066.
- Configure the communications parameters on the RTU. These parameters include the TID, the RTU, router and netmask addresses for a LAN connection and/or a Line Modem connection.
- Configure the WS3500 to report to a Host Management System via Simple Network Management Protocol (SNMP).
- Configure the point definitions for the I/O modules.
- Configure the serial ports on the RTU, their respective communication settings (data bits, parity, stop bits, and baud rate), and the point definitions for the devices connected to these ports.
- Create user accounts.
- Configure I/O correlation for the RTU.
- Upgrade the version of firmware running on the Metago<sup>®</sup> RTU.
- Backup and Restore RTU configuration files.
- View individual RTU Log files.

# Chapter

### System Requirements

To run Metago<sup>®</sup> Manager on your PC, you require:

- Windows XP/Vista/Win7/Win8 operating system
- 500MHz or faster microprocessor
- A minimum of 128MB of RAM
- CD drive (for installation) or use .zip file
- A mouse, or other pointing device

#### Installing the Metago® Manager Application From CD

The Metago<sup>®</sup> Manager application is installed using a standard Windows installation utility.

To install the application,

- 1. Insert the installation CD into the CD-drive.
- 2. If your system is configured to AutoPlay CDs, the installation utility should be launched automatically, and you may skip to step 5.
- 3. Start the Windows Explorer and browse to the root folder of the Metago Manager CD.
- 4. Double-click on the file SETUP.EXE.
- 5. The installation program will guide you through the subsequent steps. Simply follow the instructions as they appear on the screen.
- 6. Select **Finish** when the installation process is completed.

#### Installing the Metago® Manager Application From a .zip file

The Metago<sup>®</sup> Manager application is installed using a standard Windows installation utility.

To install the application,

- 1. Unzip the .zip file.
- 2. Double click on setup.exe.
- 3. The installation program will guide you through the subsequent steps. Simply follow the instructions as they appear on the screen.
- 4. Select **Finish** when the installation process is completed.

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# **Getting Started**

The user interface for Metago<sup>®</sup> Manager is similar to many other Windows program. If you are familiar with other Windows applications, such as Microsoft Word, you may not have to read this "Getting Started" chapter (or perhaps a quick scan is all you need).

This chapter covers how to:

- Start and exit the Metago<sup>®</sup> Manager application.
- Work in the Metago<sup>®</sup> Manager window.

#### Starting Metago® Manager

To access the Metago<sup>®</sup> Manager utility,

- 1. Click the Start button in the taskbar at the bottom of the screen.
- 2. Move the mouse pointer over the All Programs item. The Programs menu appears.
- 3. Move the mouse pointer over the Westronic folder and click the Metago Manager icon.



4. When accessing Metago Manager for the first time; the user is prompted to enter the license key.

License Key	
Please enter your license key	v as found on the CD envelope .
-	
	<u> </u>

5. Enter the license key found on the outside of the CD envelope and click OK. The Metago Manager window appears (Figure 1).

#### Exiting Metago® Manager

To exit the application, you may choose  $\underline{F}$ ile, and then  $\underline{E}$ xit OR click on the close button in the upper-right hand corner of the main window. A confirmation dialog box appears.

Confirm	1 🛛 🔀
2	Close Metago Manager?
	OK Cancel

Click the OK button to exit the application.

#### Working in the Metago Manager window

Title bar <del></del>	🐨 Metago Manager [local database]
Menu Bar — 🔶	File Options Help
	Select RTU
	TID IP Address New RTU
	Reset RTU on disconnect
	TID: IP Address: Filter RTU List
Tabs	RTU Summary System Communications Discrete Serial Ports 1/0 Correlation Routing Firmware
	System Settings
E 1941	TID Reporting options Level
Ean box-	WS3500 MTC 5
Liet hov	Add User
	Use Daylight Savings Time
Charabbas	Heatbeat Firmware ver.: 3.02.10
Спеск вох-	Lnable Heartbeat
	Heartbeat interval: minutes
B	
Button	Save 20 Lancel
Status bar —	NOT CONNECTED     3/23/2004 10:27 AM

Figure 1 - Metago Manager - Main window

The following lists and describes the parts of the Metago Manager window shown in *Figure 1.* 

- Title bar The title bar contains the Metago<sup>®</sup> Manager icon (Westronic logo) along with the title of the application. Like all Word screens, the minimize, maximize, and close buttons are located in the upper right-hand corner of the title bar.
- Menu bar The menu bar contains the <u>File</u>, <u>Options</u>, and <u>Help</u> drop-down menus. From the <u>File</u> menu, you can choose <u>Backup</u> RTU, <u>Restore</u> RTU, and <u>Exit</u> items. The <u>Options</u> menu contains Enter license key, View log file, and Workgroups. The <u>Help</u> menu contains the <u>About</u> feature which displays the version of Metago<sup>™</sup> Manager and a link to the Westronic web page.
- Edit box A box in which you can type and edit text, dates, or numbers.
- List box A list box contains more than one option from which to select. Most list boxes show only the current selection in what appears to be a text box, for example the Time Zone list in *Figure 1*. To see the entire list of options, click the down arrow to the side of the list. When the list is displayed (*Figure 2*), click the arrowheads in the scroll bar to scroll to the option you want. Then click the option in the list that you want.

	Timezone		٦
	(GMT-07:00) Mountain Time (US & Canada)	~	
	(GMT-12:00) Eniwetok, Kwajalein	^	
	(GMT-11:00) Midway Island, Samoa (GMT-10:00) Hawaii		
_	(GMT-10:00) Hawaii (GMT-09:00) Alaaka		5
	(GMT-08:00) Pacific Time (US & Canada): Tijuana		
	[GMT-07:00] Mountain Time (US & Canada)		
	(GMT-07:00) Arizona		
_	(GMT-06:00) Central Time (US & Canada)		J
	(GMT-06:00) Saskatchewan		
	(GMT-06:00) Mexico City, Tegucigalpa		
	(GMT-05:00) Eastern Time (US & Canada) (GMT-05:00) Indiana (East)	~	
	((almi -00.00) mulana (clast)	÷.,	

Figure 2- Example of a drop-down list box

- Tabs Each Tab contains different options and parameters to be included in the RTU configuration. For example, the RTU Summary tab contains an overview of the RTU configuration, UPLOAD Config, DOWNLOAD Config, and Set RTU Date/Time. The Communications tab contains the Ethernet, line modem, and SNMP Host settings. You can switch between Tab by clicking on the appropriate tab.
- Check box A square box that can be turned on (enabled) or off (disabled). The option linked to the check box is enabled when a ✓ appears in the box.
- Button buttons are used to execute or cancel a command. With the left mouse
  button, you click on the button to execute the command. You can also select a button
  by pressing the Tab key until the button is bordered in bold, and then pressing Enter.
- Status bar the status bar at the bottom of the screen shows connection status, username and permission level of the logged in user, along with the current date and time.

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# Connecting to the RTU with Metago Manager

This section describes how to

- Create a New RTU record.
- Delete an RTU record.
- Filter the Select RTU list to quickly find an RTU in the list.
- Connect to and disconnect from an RTU.

NOTE: Depending on the license purchased from Westronic, all fields shown in the various illustrative screenshots within this manual may not be present in your instance of Manager/Manager Lite. Any fields that are not present do not need to be configured and may be ignored in this document.

All these operations are performed in the Select RTU panel shown in Figure 3.

3	Metago Manager	[local database]	
E	ile <u>O</u> ptions <u>H</u> elp		
ſ	Select RTU		
	TID	IP Address	New RTU
	RTU120	172.16.6.120	
	ENGLAB	172.16.6.121	Delete RTU
	RTU11	172.16.6.11	
	RTU22	172.16.6.22	Reset RTU
			on disconnect
	TID:	IP Address:	Filter RTU List

Figure 3 - Metago Manager - Select RTU panel

#### Creating a New RTU Record

To create a new RTU record,

1. Click on the New RTU button. The New RTU pop-up window appears.

New RTU
TID:
V OK X Cancel

Figure 4 - New RTU pop-up window

2. Enter the Target Identifier (TID) for that RTU.

The TID identifies the RTU and is the first parameter displayed in any autonomous TL-1 message. It is a maximum of 20 characters long, limited to letters, digits, and hyphens. The TID is case sensitive. In most cases, the TID is the RTU's Common Language Location Identifier (CLLI).

New RTU
TID:
RTU33
OK Cancel

3. Click OK to close the New RTU pop-up window. The new RTU is added to the Select RTU list, with a default IP Address.

👿 Metago Manager [local @	database]	1	
File Options Help			
Select RTU			
TID	IP Address 📃 🔺 New RTI		
Westronic_Lab-12-z	10.0.100.12	CONNECT	
Westronic_Lab-12-b	10.0.100.12 Delete RT		Metago
Westronic_Lab-12	10.0.100.12		Марадок
RTU33	192.168.0.120	Reset RTU on disconnect	Wiallager
TID:	IP Address:	Filter RTU List	
RTU Summary System Cor	nmunications Discrete Serial Ports	Firmware SLC Sequencer 1/0 Corr	elation Routing IP Collection
Ethernet IP Address: <u>192,168,0,1</u> ; Netmask: <u>255,255,255</u> Router: <u>192,168,0,2</u> Upgrade Port: <u>24</u> Telnet Port: <u>23</u>	20 CRAFT: Craft COM 1: Console	Discrete 01/0 Modules Options	UPLOAD Config
Modem Mode: <u>Disabled</u>		Edit	
Timozono			
(GMT-07:00) Mountain Time Daylight Savings Enabled	(US_Canada)	0	Set RTU Date/Time
NOT CONNECTED			]

4. Change the IP Address in the RTU Configuration panel and Save the change.

By creating an RTU record that has an IP address and TID, you have enough information to allow you to connect to an RTU and upload the configuration of the RTU to your PC. To create a database for the new RTU record, refer to *Configuring the RTU* on page 16 to define the RTU's ports, devices, and points.

#### Filtering the RTU List

To access an RTU quickly, you can select the Filter RTU List check box and enter part or the TID and/or IP Address of the RTU.

W	Metago Manager [loca	ıl database]	
E	ile Options <u>H</u> elp Select RTU		
	TID	IP Address	New RTU
	RTU120	172.16.6.120	
	RTU22	172.16.6.22	Delete RTU
			Reset RTU on disconnect
	TID: 2	IP Address:	Filter RTU List

The RTUs displayed in the Select RTU list are filtered according to the information entered in the TID and/or IP Address text boxes. In the example above, all RTU records with TIDs that contain the number 2 appear in the list. The TID field is case sensitive.

To remove the filtering, click on the Filter RTU List check box (remove the  $\checkmark$ ). All the RTU records will once again be displayed in the Select RTU list.

#### **Deleting an RTU Record**

Deleting an RTU record, will delete the RTU records and all its ports, devices, and points.

To delete an RTU record,

- 1. Select the RTU in the Select RTU List.
- 2. Click on the Delete RTU button. A Confirmation dialog box appears.



3. Click the OK button to remove the record and all associated ports, devices, and points.

#### Connecting to the RTU

To connect to the RTU,

- 1. Select the RTU in the Select RTU list.
- 2. Click on the CONNECT button to establish a connection with the specified RTU. Once the RTU has been contacted, the RTU Login pop-up window appears.

RTU Login	×
Username:	
Password:	
OK Cancel	

3. Enter your username and password and click OK. An information dialog box appears indicating the status of your login. Each new Westronic WS3500 is shipped with a default Level 5 user of *MTC* with the password *shipping*.



4. Click OK to close the Information dialog box.

*Figure 5* shows the buttons that become activated when you have connected to the RTU and the information that is displayed in the status bar at the bottom of the dialog box.

At this point, the information displayed below the Select RTU panel does not necessarily reflect what is currently configured on the RTU. An UPLOAD Config operation must be performed to ensure the information displayed is what is currently on the RTU

쨄 Metago Manager [local d	atabase]		
File Options Help			
Select H1U           TID           Westronic_Lab-12-z           Westronic_Lab-12-b           Westronic_Lab-12           RTU33	IP Address New RTU 10.0.100.12 10.0.100.12 10.0.100.33	DISCONNECT DISCONNECT RTU: IN SERVICE Reset RTU on disconnect	Metago Manager
TD: RTU Summary System Com Ethernet IP Address: 10.0.100.33 Netmask: 255.255.00 Router: 10.0.100.1 Upgrade Port: 24 Teinet Port: 23 Modem Mode: Disabled	PAddress: munications Discrete Serial Ports RTU33 Serial Ports CRAFT: Craft COM 1: Console Serial 1: TBOS Serial 2: TBOS Serial 3: TBOS Serial 5: TBOS Serial 6: TBOS Serial 7: TBOS Serial 8: TBOS	Filter RTU List Firmware SLC Sequencer 1/0 Corr Discrete 21/0 Modules Options Heartbeat (10 min) InSite FULL	elation Routing IP Collection
<b>Timezone</b> (GMT-07:00) Mountain Time Daylight Savings Enabled	(US Canada)	Edit Total Point Count 794	DOWNLOAD Config Set RTU Date/Time
CONNECTED to 10.0.100.3	33	User: MTC Level: 5	

Figure 5 - Connecting to an RTU with Metago Manager

When you have successfully connected and logged into an RTU, a text message is displayed under the DISCONNECT button. One of two text messages will be displayed, either:

 RTU: IN SERVICE — This message indicates that Metago Manager is connected to the RTU, but the operation of the RTU has not been affected. The RTU is still processing alarms; InSite is still operational, etc.  RTU: OUT OF SERVICE — This message indicates that all RTU processes have been suspended, and no alarms will be reported until the RTU is rebooted. An RTU is taken out of service when a download Config or upgrade firmware operation is performed.

On a successful connection, the *Reset RTU on disconnect* check box is activated. If this option is selected, the RTU will reset on disconnection, regardless of whether the RTU is IN SERVICE or OUT OF SERVICE. If the *Reset RTU on disconnect* option is not selected, and the RTU is in service, the RTU *will not* reset on disconnection.

#### Disconnecting from the RTU

To disconnect from the RTU, click on the DISCONNECT button.



# **Connecting to the RTU with Metago Manager LITE**

This section describes how to connect to and disconnect from an RTU in Metago Manager LITE.

All these operations are performed in the Select RTU panel shown in Figure 6

😿 Metago Manager LITE		
<u>File Options H</u> elp		
Select RTU IP Address 172.16.6.120	Upgrade Port 24	CONNECT

Figure 6 - Metago Manager LITE - Select RTU panel

#### Connecting to the RTU

To connect to the RTU,

- 1. Enter the IP Address of the RTU in the IP Address field.
- 2. Enter the Upgrade Port number. (The default upgrade port number is 24)
- 3. Click on the CONNECT button to establish a connection with the specified RTU. Once the RTU has been contacted, the RTU Login pop-up window appears.

RTU Login	×
Username:	
Password:	
OK Cancel	

4. Enter your username and password and click OK. An information dialog box appears indicating the status of your login. Each new Westronic WS3500 is shipped with a default Level 5 user of *MTC* with the password *shipping*.

Informa	ation 🛛 🚺	3
(į)	User "MTC" logged in at level 5	
	ОК	

5. Click OK to close the Information dialog box.

*Figure 7* shows the buttons that become activated when you have connected to the RTU and the information that is displayed in the status bar at the bottom of the dialog box.

At this point, the information displayed below the Select RTU panel does not necessarily reflect what is currently configured on the RTU. An UPLOAD Config operation must be performed to ensure the information displayed is what is currently on the RTU

ile Options Help Select RTU IP Address Upgrade Port 172.16.6.122 24	DISCONNECT RTU: IN SERVICE C Reset RTU on disconnect	Metago Manager LITE
RTU Summary System Communications Discrete Serial Ethernet IP Address: 172.16.6.122 Netmask: 255.255.0 Router: 0.0.0 Upgrade Port: 24 Teinet Port: 23 Modem Mode: Disabled	Ports 1/0 Correlation Routing Firmware U122 Discrete O1/0 Modules Options Options	UPLOAD Config
Timezone (GMT-07:00) Mountain Time (US Canada) Davlight Savings Enabled	Edit Total Point Count 0	DOWNLOAD Config Set RTU Date/Time

Figure 7- Connecting to an RTU with Metago Manager LITE

When you have successfully connected and logged into an RTU, a text message is displayed under the DISCONNECT button. One of two text messages will be displayed, either:

- RTU: IN SERVICE This message indicates that Metago Manager is connected to the RTU, but the operation of the RTU has not been affected. The RTU is still processing alarms; InSite is still operational, etc.
- RTU: OUT OF SERVICE This message indicates that all RTU processes have been suspended, and no alarms will be reported until the RTU is rebooted. An RTU is taken out of service when a download Config or upgrade firmware operation is performed.

On a successful connection, the *Reset RTU on disconnect* check box is activated. If this option is selected, the RTU will reset on disconnection, regardless of whether the RTU is IN SERVICE or OUT OF SERVICE. If the *Reset RTU on disconnect* option is not selected, and the RTU is in service, the RTU *will not* reset on disconnection.



## Configuring the RTU

This section describes

- The contents of the tabs used to configure the RTU.
- Uploading the configuration from the RTU to your PC
- Downloading the configuration from your PC to the RTU
- Setting the date and time on the RTU.

**NOTE:** When using Metago Manager LITE, the configuration must be uploaded from the RTU prior to making changes and downloading. This will ensure that the current RTU configuration is present in Metago Manager LITE. Failure to do this may result in the loss of configuration information for an RTU.

#### The RTU Summary Tab

RTU Summary Syste	m Communications	Discrete	Serial Ports	Firmware	SLC Sequencer	1/0 Correlation	Routing	IP Collection	ı
Ethernet IP Address: 10.0 Netmask: 255. Router: 10.0 Upgrade Port: 24 Telnet Port: 23 Modem Mode: <u>Disable</u>	100.33 255.0.0 100.1	RTU erial Ports RAFT: Cral OM 1: Con erial 1: TBC erial 3: TBC erial 3: TBC erial 4: TBC erial 5: TBC erial 6: TBC erial 8: TBC	<b>33</b> t sole 05 05 05 05 05 05 05 05		Discrete 21/0 Modules Options Heartbeat (10 r InSite FULL	nin)			IPLOAD Config
Timorono				<u>E.dit</u>	Tatal Daint C			DO	WNLOAD Config
(GMT-07:00) Mount Daylight Savings En	ain Time (US-Canada Jabled	)			794	ount		Set	RTU Date/Time
NOT CONNECTED	)								

Figure 8- RTU Summary Tab

This tab contains an overview of the configuration of the selected RTU. No RTU parameters can be changed directly from this tab. All underlined blue text items on this tab are links that will redirect the user to the appropriate tab for editing the selected parameter. Also included in the summary is a total point count, which includes all input, output, and health points for all configured devices.

The RTU Summary tab also contains the UPLOAD Config, DOWNLOAD Config, and Set RTU Date/Time buttons.

#### **Uploading the Configuration**

The UPLOAD Config operation retrieves the current configuration from the RTU. Once the configuration is uploaded, configuration changes can be made, and later downloaded to the RTU. If a new database has been built using Metago Manager and has not yet been downloaded to the RTU, do not UPLOAD, as this will overwrite the local database.

Follow these steps to upload the configuration from the RTU into Metago Manager.

- 1. Select the appropriate RTU from the Select RTU list.
- 2. Click on the CONNECT button to establish a connection with the specified RTU. The RTU Login pop-up window appears.
- 3. Enter a valid username and password and click the OK button.
- 4. Select the RTU Summary tab.
- 5. Click the UPLOAD Config button to upload the RTU's configuration onto the PC. The following confirmation dialog box appears

Confirm	ı 🔀
2	This operation will overwrite the configuration that is stored in the database with actual configuration of the RTU.
	Do you wish to continue?
	OK Cancel

6. Click OK to continue the upload configuration operation. A pop-up window appears listing the files that are being uploaded from the RTU to your PC.

Retrieving files from RTU				
Retrieving /usr/rtu/config/pointsid.cfg				
Elapsed Time: 00:00:03	ОК			

7. Once the UPLOAD Config operation is complete, the following information dialog box, including the number of points uploaded, is displayed. Click the OK button to close the dialog box.

Information					
(į)	Configuration upload successful! Uploaded 91 points from RTU.				
	ОК				

Metago Manager now contains the current RTU configuration.

#### **Downloading the Configuration**

The DOWNLOAD Config operation sends the RTU configuration from PC to the RTU.

- 1. Connect to the RTU. (Refer to Connecting to the RTU in Chapter 4 for further details.)
- 2. Select the RTU Summary tab.
- 3. Click the DOWNLOAD Config button. The following confirmation dialog box appears.

Confirm	n 🔀						
?	This operation will overwrite the configuration of the selected RTU. New configuration contains 91 configured points.						
	This operation will take the RTU out of service.						
	Do you wish to continue?						
	OK Cancel						

4. Click OK to continue the DOWNLOAD Config operation.

*Note*: Taking the RTU out of service immediately suspends all RTU operations. No alarms will be collected by the RTU or reported to the Host. The RTU will return to *In Service*, once the DOWNLOAD Config operation has completed and the RTU has been reset.

 The Sending files to RTU... pop-up window appears outlining the progress of the DOWNLOAD Config operation.

Sending files to RTU						
/usr/rtu/config/dnp3_param3.cfg						
Elapsed Time: 00:00:18						

When the operation is successful, the following Information dialog box appears.

Information 🛛 🔀							
į)	Configuration download successful! RTU must be reset for changes to take effect, and to return RTU to IN SERVICE mode.						
	Would you like to disconnect and reset the RTU now?						
	Yes No						

6. Click <u>Yes</u> to disconnect and reset the RTU, and to return the RTU to IN SERVICE mode. The RTU has now been updated with the new configuration.

#### Setting the Date and Time

To set the date and time on an existing RTU,

- 1. Connect to the RTU. (Refer to Connecting to the RTU in Chapter 4 for further details.)
- 2. Select the RTU Summary tab.
- Click the UPLOAD Config button to ensure that the RTU is configured for the correct timezone. (*Note:* UPLOAD will overwrite any database that currently exists in Manager for the current RTU)
- 4. Click the Set RTU Date and Time button to set the date and time on the RTU. The following dialog box appears.

Confirm Time Setting					
The timezone-adjusted time for this RTU is: 10-Dec-15 16:53:31					
10-Dec-15 💌 16:53:31 🚔					
OK					

The override option allows the user to manually change the time that is to be set on the RTU. This is not recommended, as Metago Manager has already compensated for timezone differences between the RTU and the PC. Provided that the PC's clock is correct, the RTU will be set to the correct date and time.

- Click the DISCONNECT button to disconnect from the RTU. *Note*: there is no need to download the configuration or reset the RTU if the time zone and daylight saving parameters were not changed.
- 6. Please see the "System Tab" section for information regarding use and configuration of NTP services.

#### The System Tab

RTU Summary	System	Communications	Discrete	Serial Ports	Firmware	SLC Sequence	er   1/0 Co	rrelation	Routing	IP Collection
System Settings					Users					InSite Options
RTU33		InS	r <b>ting opti</b> ite LITE ite FULL	ons	Name MTC ENG779	Le 38	vel ▲ 5 5 ≡	Add	lUser	No System Info.
Timezone	Timezone							Delet	te User	No Force Points
(GMT-07:00)	(GMT-07:00) Mountain Time (US & Canada)							Edil	tllser	No Reset Ports
🔽 Use Dayli	ght Saving	gs Time					-			
Heartbeat COM1 Timeout		:	Firmware	ver.: 4.02.0	S Alar	r <b>m Dela</b> y Enable De	<b>y</b> elay	Enable NTP		
Heartbeat interval:	10	min Timeout	65534	min	🔲 Persister	nt Logging	Dela	у	0 sec	
		Save 🛛 🔀 Car	ncel							IP 2
NOT CONN	ECTED									

Figure 9 - System Tab

The System Tab contains the following configuration items:

- TID The Target Identifier (TID) identifies the RTU and is the first parameter displayed in any autonomous TL-1 message. It is a maximum of 20 characters long, and is limited to letters, digits, and hyphens. The TID is case sensitive. In most cases, the TID is the RTU's CLLI code (Common Language Location Identifier) <u>Note:</u> When restoring an RTU from a backup file, the TID in this field must match the TID in the RTU Backup File.
- InSite These check boxes enable/disable InSite Full or InSite Lite. InSite is the web server optionally built into the RTU when licensed. When one or the other of these boxes is checked, the "InSite Options" panel on the right of the tab becomes visible, with available options as listed below in InSite Options. If both boxes are unchecked, the InSite options area of the Manager tab disappears and the InSite web browser will not be available on that RTU. For more information about InSite, please consult the InSite Manual (PN: 944-T066).
- Timezone This section allows the user to configure the timezone in which the RTU is located, as well as enable / disable Daylight Savings Time.
- Heartbeat This section allows the user configure the TL1 heartbeat. With the heartbeat enabled, a TL1 event message is generated at the user-configured time intervals.
- COM1 Timeout This checkbox allows the user to disable (default) or enable a login inactivity timeout on the COM1 port at the front of the WS3500. Configuration range from 1 - 65535 minutes. Suggested range is 2-5 minutes.
- Users This section is used to configure the user accounts on the RTU. The maximum number of users that are supported at one time is 15. Each RTU is shipped with a default user of *MTC* with password *shipping*. The MTC user has a permission level of 5. TL-1 command permissions are based on the permission level of their user account. Refer to the WS3500 Metago<sup>®</sup> RTU Technical Manual (PN: 994-T062) for more information on TL-1 commands and messages.

- *Firmware Version* Gives the version of firmware for the WS3500 which Manager is presently connected to, or if offline, the last firmware version uploaded to that unit from the current database.
- Persistent Logging This checkbox disables (default) or enables Persistent logging for WS3500's having firmware 4.03.04 or newer. Operations Logs and TL1 logs will be retained following a reboot or power outage when this box is checked, up to the limit of the circular buffer. (Buffer sizes: Operations - 512 lines, TL1 – 2048 entries)
- Alarm Delay This checkbox disables (default) or enables Alarm reporting delay for WS3500's having firmware 4.03.04 or newer. Valid delay time ranges from 1 to 255 seconds. Delay Alarm delays the reporting of all alarms for the configured time following a reboot to prevent lost TL1 messages or SNMP traps.
- InSite Options— This section enables Manager to configure the operation of certain aspects of user accessibility in the InSite or InSite Lite web browser. This in part depends on the license level originally purchased. <u>i.e.</u> Full InSite or InSite Lite. Functions that are not included in InSite Lite will be greyed out and cannot be changed. For more information on the use of InSite please see the Metago InSite manual (pn# 944-T066).

-**No System Info** – InSite and InSite Lite. Checking this box removes the System Information and Operations Log pages from the web browser and replaces them with an "Access Restricted" banner.

-*No Controls* – InSite only. Checking this box removes the Control Operate Request sub-page and replaces it with an "Access Restricted" banner.

-*No Force Points* – InSite only. Checking this box removes the Force Point Request sub- page and replaces it with an "Access Restricted" banner.

-**No Reset Ports** - InSite only. Checking this box removes the Reset Port Request sub-page and replaces it with an "Access Restricted" banner.

• Enable NTP— This option allows the user to enable or disable (default) a WS3500 having firmware 4.03.04 and newer to synchronize with an NTP time server. Two timer server IP's are available for configuration but both are not required.

#### Adding a User Account

To add a user:

1. Click the Add User button. The Add User window appears.

Add User	
UserName:	Level:
Password:	7
Confirm Password:	<u></u> K
	<u>C</u> ancel

Configure the following fields:

- UserName The user name is referred to as the *uid* (user identification) in the TL-1 command. Maximum length is 10 alphanumeric characters. UserName is case sensitive.
- Level The level is referred to as the *uap* (user access privilege) in the TL-1 commands. Valid user levels are 1 to 5, 5 being the highest. Access to certain TL1 commands is restricted by a minimum user level requirement. Refer to the *WS3500 Metago<sup>®</sup> RTU Technical manual* for more information on TL-1 commands.
- Password The password is referred to as the *pid* in the TL-1 commands. The
  password must be a minimum of 1 character in length, and it cannot start with a
  number. The password is case sensitive.
- Confirm Password Re-enter the password.
- 2. Click OK to close the Add User window, and add the new user.

#### More About User Account Levels

The TL1 activity allowed for each user level is defined in the WS3500 Metago<sup>®</sup> RTU Technical Manual, Appendix A, WS3500 Supported TL1 Messages. Appendix A has the minimum required user level listed together with each command.

User Levels also influence user activity within the WS3500 COM port CLI, through the InSite ® web browser (when licensed and enabled) and in Metago Manager. Please refer to the following three charts as to the effect user level has on these activities prior to creating users in Metago Manager.
User	View	Modify	Ping	View	View	Restart
Level	Config.	Config.	Out	TL1 Logs	Ops Log	RTU
1	Y	N	Y	Y	N	N
2	Y	N	Y	Y	Ν	N
3	Y	N	Y	Y	Ν	N
4	Y	N	Y	Y	N	Y
5	Y	Y	Y	Y	Y	Y

Table 1	User Level	Matrix for	COM 1	CLI Activities
---------	------------	------------	-------	----------------

User	Reset	Force	Operate	Clear	Clear
Level	Ports	Points	Controls	TL1 Log	Ops Log
1	N	N	N	N	N
2	N	N	N	N	N
3	Y	Y	Y	Y	N
4	Y	У	Y	Y	N
5	Y	Y	Y	Y	Y

Table 2 User Level Matrix for InSite® Activities

User	Upload Config	Download	Reset RTU on	Set
Level	from RTU	Config to RTU	disconnect	Time
1	N	N	N	Ν
2	Y	N	N	Ν
3	Y	N	N	Ν
4	Y	N	Y	Ν
5	Y	Y	Y	Y

Table 3 User Level Matrix for Metago Manager® Activities

## **Deleting a User Account**

To delete a user:

- 1. Select the user to be deleted from the Users list.
- 2. Click the Delete User button. A confirmation dialog box appears.



3. Click OK to close the confirmation dialog box, and delete the user.

## **Editing a User Account**

To Edit a user:

- 1. Select the user to be edited from the Users list.
- 2. Click the "Edit User" button . The "Edit User" window is displayed.

🐨 Edit User	
UserName: MTC	Level:
Password:	<u> </u>
*******	<u>C</u> ancel

3. The Level and Password can be changed, however the level of the last 'level 5' user cannot be changed/downgraded. Click 'OK' when done.

Note: You must DOWNLOAD Config and reset the RTU for user changes to take effect.

# The Communications Tab

RTU Summary	System Communications	Discrete	Serial Ports	Firmware	SLC Sequence	r 1/0 Correlatio	on Routing	IP Collection	
Ethernet Settings					ABS IP Reporti	ng	TABS IP Beno	rtina configur	ation
IP Address	10.0.100.12	Upgrade I	Port 24				тлаз п ттеро	rang coningan	30011
Netmask Bouter	255.255.0.0	l einet i	Port 23			Add Port	E	Edit Devices	
nouter	10.0.100.1	Adv	anced		D	elete Port			
-Modem Setti	ings			SI	MP Hosts				
Enable Sta	ndard Modem IBackup IPA	ddress 0.0	).0.0	IF	P Address	Community	Port	Ver 🔺	Add Host
Dial Backu	p Timeout	Router 0.0	).0.0						Edit Host
	TU minutes Dial-out r	number						-	Delete Host
OK 🔀 Cancel							Adva	anced	
NOT CONNE									

Figure 10 - Communications Tab

The WS3500 may report to a Host Management System via TL-1 protocol, TABS or Simple Network Management Protocol (SNMP). The TL-1 protocol can report over a TCP/IP LAN or line modem dial-up connection. TABS reporting can be configured over TCP/IP, or serial. SNMP is only over a TCP/IP LAN connection. If the WS3500 is part of an SNMP-managed network, in addition to configuring the Ethernet Settings, you must also configure the SNMP Hosts.

The Communications Tab contains the following configuration items:

#### **Ethernet Settings**

- IP Address An identifier for a computer or device on a TCP/IP network. Networks using the TCP/IP protocol route messages based on the IP address of the destination. The format of an IP address is a 32-bit numeric address written as four numbers separated by periods. Each number can be zero to 255.
- Netmask Used for administering networks, a netmask is a mask or screen used in conjunction with an IP address. The netmask allows network elements to extract the network ID and host ID from the IP address. A frequently used netmask is 255.255.255.0.
- Router The router field must contain the IP address of a router on the same network segment at the RTU. A router is a device that determines the next network point to which a data packet should be forwarded enroute toward its destination.
- Upgrade Port This is the TCP port used for communication between Metago Manager and an RTU. In most cases, this port number will not be changed from the default value of 24.

Note: Metago Manager actually uses two ports for upgrade, the upgrade port (base port) as well as a port 2 higher (base port + 2). For example, with the upgrade port set to 24, port 26 is also used in the for a Metago Manager connection.

 Telnet Port — This is the TCP port used for upstream TL1 communication with a host. In most cases, this port will not be changed from the default value of 23.

Note: If the Telnet port is required to change, ensure that the new value does not conflict with the Upgrade ports or others such as SNMP host, TABS-IP etc.

 Advanced...— This button displays the Advanced Ethernet Settings window, which contains the following settings:

ONS				Access Con	itrol	
Primary Nam	e Server	10.0.101.99		10.0.101.33		
Backup Name	Server 1	10.0.101.8	_			
Backup Name	Server 2	10.0.101.9				
iateway						
Destination	Gatewa	ay Netma	ask			
Default	10.0.100	).1 255.25	55.0.0			
<	iernet Co	ontroller	4			
< Secondary Eth	<b>vernet Co</b> Address	ontroller 10.0.100.34	•			
<	<b>ternet Co</b> Address Netmask	ontroller 10.0.100.34 255.255.0.0	•			

- Enable DNS This check box is used to enable / disable the DNS (Domain Name Server) configuration. Currently, the only RTU feature that makes use of DNS is I/O Correlation with e-mail output.
- Primary Name Server The IP address of the primary DNS.
- Backup Name Server 1 (OPTIONAL) The IP address of a backup DNS. This server will only be used if the RTU is unable to contact the primary name server.
- Backup Name Server 2 (OPTIONAL) The IP address of a second backup DNS. This server will only be used if the RTU is unable to contact the primary name server or backup name server 1.
- Gateway The Default Destination IP as shown in the example above is the Router IP configured on the main area of the Communications Tab. Other IP addresses may be added if the WS3500 is communicating across several networks, such as when the unit is equipped with a Second NIC card.
- Access Control This panel allows the configuration of an Access Control List (ACL). The ACL is a list of IP addresses which are permitted to connect to the selected RTU. The ACL applies to Metago Manager upgrade connections, Telnet TL1 sessions, and TABSR over IP ports. The default setting in Manager is for ACL to be disabled.

**IMPORTANT NOTE:** ACL behavior enforces that when one or more IP's are configured, all others are excluded. Should a single, wrong IP be configured it will not be possible to remotely access the WS3500. The WS3500 would then need to be returned to Westronic under RMA for repair. Therefore it is highly recommended to configure several IP's and ensure they are carefully verified prior to enabling ACL.

 Secondary Ethernet Controller — A Secondary Ethernet controller is an option for the WS3500. Units having this option can be identified by contacting Westronic Technical Support with the part number of the unit, or by physically inspecting the main module for the presence of a 2<sup>nd</sup> NIC card as outlined in the Main Board segment of the WS3500 Technical Manual (pn# 994-T062).

The IP address of the 2<sup>nd</sup> NIC card must be different to the primary address of the RTU and any of the other IP enabled options in its configuration. It may also need a second router address as outlined above in 'Gateway'

#### Modem Settings

- Enable Modem This check box is used to enable / disable the optional modem interface for regular dial-out reporting of alarms. The modem can also be used for dial-up PPP connections, as well as TI1 sessions using a standard VT100 terminal.
- Enable Dial Backup This checkbox is used to enable / disable the modem for Dial Backup mode. In dial backup mode, the RTU is configured to report alarms via Ethernet, and if the network connection to the host is lost, the optional WS3500 modem will dial-out to report alarms.
- Dial Backup Timeout In order for dial backup to work, the upstream host must be configured to issue a RTRV-HDR command at specified intervals. This interval must also be configured on the RTU. If a RTRV-HDR command is not received in this time interval, the RTU assumes that is has lost its connection to the host, and begins modem dial-out reporting of alarms. Once the network connection has been restored, and the RTU begins receiving the RTRV-HDR commands again, the modem dial out reporting is terminated.
- IP Address This IP address is assigned as the local IP address of the RTU for a dial-up PPP session. This field does not need to be configured if the modem interface will not be used for PPP sessions.
- Router The Router IP address is assigned as the remote IP address for a dialup PPP session. This field does not need to be configured if the modem interface will not be used for PPP sessions.
- Dial-out number The dial-out number is a telephone number that the RTU will dial when a TL1 alarm or event occurs. On successful connection, the WS3500 sends an ASCII stream including all new TL1 messages. This field does not need to be configured if the dial-out alarm reporting feature will not be used.

Note: The WS3500 Ethernet and the Modem PPP interface must be configured such that they are on different subnets, or IP routing problems may occur.

# TABS IP Reporting

- Add port Allows the addition of a TABSR IP port.
- Delete Port Allows the deletion of a TABSR IP port.
- Edit Devices Displays the TABSR Configuration window

For information on the configuration of TABS Reporting, please see Configuring TABS Reporting in Chapter 10.

#### SNMP Hosts

- IP Address The IP Address of the SNMP host.
- Port The TCP port used by the SNMP host. The default SNMP port is 162.
- Version The SNMP version to be used. The WS3500 supports SNMP v.1 and SNMP v.2.
- Community The SNMP community to be joined by the WS3500. The community name is part of the SNMP message header. The community name

defines an access environment for a group of Network Management Systems (NMSs).

 Advanced...— This button displays the Advanced SNMP Settings window, which contains the following settings:

<b>W</b> SNMP Settings	
SNMP Nag	
Interval (minutes):	60
Minimum severity:	MN 💌
	Close

- Enable SNMP nag This check box is used to enable / disable the SNMP nag feature.
- o Interval The time interval at which standing alarms are retrapped.
- Minimum severity The minimum severity of standing alarms to be retrapped. Any standing alarms of selected severity and higher will be retrapped.

To add an SNMP Host,

1. Click the Add Host button. The Add SNMP Host pop-up window appears.

Add SNMP Host		
IP Address	Port	Version
172.16.6.1	162	1 🖨
Community		
public		
		<u>C</u> ancel

- 2. Configure all parameters.
- 3. Click OK to save the configuration. The new host will be added to the SNMP Hosts list.

# The Discrete Tab

RTU Summary Syste	em Communications	Discrete Seri	al Ports Firmware	SLC Sequencer	1/0 Correlation	Routing	IP Collection	
-I/O Modules	Edit Points							
I/O Module 1	—							
	Hea	alth						
	Inp	uts						
	_							
		oute						
Add Module		Juits						
Delete Module								
	)							

Figure 11 - Discrete Tab

The Discrete Tab shows the I/O Modules that have been configured for the RTU. For each configured I/O module, Metago<sup>®</sup> Manager automatically creates 1 Health point, 64 discrete inputs, and 8 discrete outputs.

The following operations are done from the Discrete tab:

- Add I/O modules.
- Delete I/O modules.
- Edit point configurations for all I/O module points health, inputs, and outputs.

#### Adding an I/O Module

To add an I/O module:

- 1. Select the Discrete tab.
- 2. Click the Add Module button. The Add I/O Modules pop-up window appears.

Add I/O Modules								
Select I/O Modules to be added								
<b>I</b>	2	3	4					
5	6	7	8 🗌					
Location			WG:					
CLGYEN	GLAB		SW 🔽					
	OK Cancel							

- 3. I/O modules that are already configured will be grayed out. Check the module(s) to be added, and enter the CLLI code and workgroup (WG) to be applied to the new points.
- 4. Click OK to add the I/O module. This closes the pop-up window and the new I/O module(s) will be displayed in the I/O Modules list.

Each I/O module point is assigned a unique AID. The AID is a read-only field that is used to identify a point in a TL1 message. The following is a description of the formatting for the AID parameter for I/O module points:

- Discrete Inputs DISCRETE-<I/O\_module>-<point\_number>
   Where: I/O module range is 1 8
   point\_number range is 1 64.
- Discrete Outputs DISCRETEC-<I/O\_module>-<point\_number>
   Where: I/O\_module range is 1 8
   point\_number range is 1 8.
- Discrete Health HEALTH-IO-<I/O\_module> Where: I/O\_module range is 1 8.

## Removing an I/O Module

To remove an I/O module:

- 1. Select the Discrete tab.
- 2. Select the I/O module to be deleted from the I/O Modules list.
- 3. Click on the Delete Module button.

# **Editing Discrete Input Points**

To edit discrete input points:

- 1. Select the Discrete tab.
- 2. Select the I/O module to be edited from the I/O Modules list.
- 3. Click the Inputs button. The Edit Point Parameters window appears.

Edit Point Parameters					
AID	Point Description		Location	WG	*
O DISCRETE-1-1	FIRE/SMOKE		CLGYABLAB	EN	
DISCRETE-1-2	FIRE SYSTEM TROUBLE		CLGYABLAB	EN	
DISCRETE-1-3	RECTIFIER MAJOR		CLGYABLAB	EN	
DISCRETE-1-4	RECTIFIER MINOR		CLGYABLAB	EN	
DISCRETE-1-5	RECTIFIER FAIL		CLGYABLAB	EN	
DISCRETE-1-6	RECTIFIER AC FAIL		CLGYABLAB	EN	Add Point
DISCRETE-1-7	RECTIFIER HIGH VOLT		CLGYABLAB	EN	
DISCRETE-1-8	RECTIFIER LOW VOLT		CLGYABLAB	EN	
Point Description FIRE/SMOKE SID ENGLABR1S1 Location CLGYABLAB Units	Alarm Event Alarm-Env AlD Type Cond Type GP Reporting State ENABLED	Severity CR	Normal State ⊘ Closed ⊚ Open	● SA NSA	
	Save	💢 Cancel			DOWNLOAD
					Close

NOTE: Depending on the licence purchased from Westronic, all fields from the above screenshot may not be present. Any fields that are not present do not need to be configured, and may be ignored in this document.

4. Configure the points either by applying a template (refer to *Using Metago* Manager Templates – Chapter 17), or by editing the points individually. Select the point from the point list and configure the Generic and Digital point parameters for each point.

# **Generic point parameters**

- Alarm / Event / Alarm-Env The Alarm, Event and Alarm-Environmental radio buttons configure whether the point is reported as an alarm, as an event or as an environmental alarm. See Appendix C, "Generic Point Parameters" for more information about how these reporting states differ.
- *Point Description* The Point Description field is a freeform text field to be used for a description of the point. Maximum length is 50 characters (punctuation characters are not recommended).
- SID The Source Identifier (SID) is a freeform text field that uniquely identifies a group of points. The SID is used as the target identifier in the TL1 message header. If the SID field is not configured, the RTU's TID is used in its place. Maximum length is 20 characters.
- AID Type The AID Type is a freeform text field that can be used in conjunction with the AID to help identify a point. This can be useful if the AID does not provide enough information to pinpoint the location of the point. Maximum length is 10 characters.
- Location The Location is a freeform text field that is reported in the TL-1 alarm message. This field is also referred to as the CLLI code, and is commonly used to identify the location of an alarm. Maximum length is 11 characters.
- *WG* The workgroup (WG) is a two-character text field that is reported in the TL-1 alarm message. This field is commonly used to determine which workgroup or department needs to be notified when this point changes state.
- Cond Type The Cond Type is a freeform text field that identifies the type of alarm or event being reported. Maximum length is 10 characters.
- Units A four-character text field, describing the measurement unit of the field device. This field is not generally used for digital points.
- Reporting State A dropdown menu with three options: Disabled (default), Enabled, and InSite Only. In this dropdown menu changes can be made on a point by point basis. "Enabling or Disabling Points for an Entire I/O Module" describes a per display method and is found later in this section.
  - An alarm point set to the "InSite Only" state will report only on the InSite alarm summary webpage and will not be reported via TL1 or SNMP. Any alarm point included in a derived alarm expression will have its reporting state set to InSite Only automatically.

<u>Note:</u> The default state of newly configured I/O module points is Disabled. Enabled or InSite Only must be selected from the dropdown list for the point to be reported when it changes state.

# **Digital parameters**

- Severity The severity field can be set to one of five levels. From highest to lowest severity, the levels are CR (Critical), MJ (Major), MN (Minor), RN (Routine), NA (Not Alarmed).
- Normal State The Normal State radio buttons are used to indicate which state is considered to be normal, and conversely, which state indicates an alarm condition. The default configuration is normally open, where a closed contact indicates an alarm.
- Service Affecting— The Service Affecting radio buttons configure the point to be either SA (Service Affecting) or NSA (Non-Service Affecting).

## **Download button**

This button enables the Manager user to update parameters of an individual point without the need to download an entire configuration and restart the WS3500. Please refer to Appendix B for more information on "Point on the Fly" usage.

## **Editing Discrete Output Points**

To edit discrete output points:

- 1. Select the Discrete tab.
- 2. Select the I/O module to be edited from the I/O Modules list.
- 3. Click the Outputs button. The Edit Point Parameters window appears.
- 4. Configure the points either by applying a template (refer to *Using Metago* Manager Templates Chapter 17) or by editing the points individually. Select the point from the point list and configure the Generic and Digital point parameters for each point.

#### **Editing Discrete Health Points**

There is one health point that is automatically generated for each I/O module that is configured. I/O module operation is verified at RTU start-up. If an I/O Module has been configured and is not found at start up, then the corresponding health point is alarmed.

To edit discrete Health points:

- 1. Select the Discrete tab.
- 2. Select the I/O module to be edited from the I/O Modules list.
- 3. Click the Health button. The Edit Point Parameters window appears.
- 4. Configure the Health point by selecting the point from the list, and editing the Generic and Digital point parameters for each point.

#### Enabling or disabling points for an entire I/O module

To enable, disable or set to InSite Only all health, input, or output points on an I/O module:

- 1. Select the Discrete tab.
- 2. Select the I/O module to be edited from the I/O Modules list.
- 3. Click the appropriate button Health, Inputs, or Outputs. The Edit Points Parameters window appears.
- 4. Right-click in the point list, and a drop-down menu appears with the options Disable All, Enable All and InSite Only All. Two other options also appear in this drop down menu: *Import Points…* and *Export Points…* For more information on Import/Export please refer to Chapter 17 "Using Templates".
- 5. Select the Enable All to enable all points in the point list, Disable All to disable all points in the point list or InSite Only All to make all the points in the point list report in InSite only.

The color of the circle in the leftmost column indicates whether the point is enabled, disabled or InSite Only. Green indicates the point is enabled, red indicates the point is disabled and purple indicates the point is InSite only.

# The Serial Ports Tab

-
-
ζ Cancel

Figure 12 - Serial Ports Tab

The Serial Ports Tab contains configuration items regarding the RTU's serial ports. Also, any downstream devices (attached to RTU serial ports) are configured here, along with their alarm points.

The following operations are performed from the Serial Ports Tab:

- Add a port.
- Delete a port.
- View and edit port configuration
- Configure downstream serial devices.

#### **Creating a port**

To create a new port:

1. Click the Add Port button. The Port Settings window appears.

Port Settings		
Port: Serial 1 🗸 🗸	Baud rate: Data Bits: Parity: Stop Bits:	> > > >
		Advanced >>
<u></u> K	<u>C</u> ancel	

Figure 13 - Port Settings window

- 2. The following are used to configure the serial ports:
  - *Port* This list box contains all available serial ports on the RTU. This list may include:
    - > CRAFT, COM1 RS232 ports on front panel of Main Module
    - Serial 1 Serial 8 8 serial ports on rear RTU, jumper configurable RS232/RS485
    - Serial 11 Serial 18 (Serial expansion 1) Optional serial ports available with a Serial Expansion Module (541-T003) or Communications Module (536-3512) at address 1.
    - Serial 19 Serial 26 (Serial expansion 2) Optional serial ports available with a Serial Expansion Module (541-T003) or Communications Module (536-3512) at address 2.

<u>NOTE:</u> In order for the expansion serial ports to appear in the Port list, the serial expansion module(s) must first be configured. This is done on the Serial Ports tab. In the Serial Expansion Modules section, select the appropriate configuration and click the Save button.

• *Type* — Type field specifies the function of the port. The following screenshot of the dropdown menu shows all of the potentially available serial port types:

Port Settings			×
Port: Serial 2 • Type:	Baud rate: Data Bits: Parity:	2400 8 0DD	•
TBOS Reachthrough PPP Craft Console Disabled E2A Collection TABS TABS Reporting	Stop Bits:	2	•
INACS DS5PA E2AP Collection E2AP Reporting	Select Por Port CRAFT	t	Function Craft

<u>NOTE:</u> Available port types are determined by the License Key purchased from Westronic, not all port types may be available on your configuration.

- Console Port by default, the COM 1 port is designated as a Console port. The Console port is used for accessing the Console Configuration Utility and for debugging purposes.
- Craft Port designating the port as a Craft Port provides a local TL-1 interface using a terminal emulator session, such as HyperTerminal or TeraTerm.
- Disabled designating the port as disabled takes that port out of service.
- DS5PA designating the port as a DS5PA port allows the connection of one or more DS5000 devices to the port.
- INACS designating the port as an INACS port allows the connection of one or more INACS devices to the port.
- PPP designating the port as PPP allows for a direct serial PPP session. Additional configuration items are displayed in the Port Settings window when a port is configured as PPP. These additional fields must be configured in order for PPP to function correctly.
- Reachthrough designating the port as a Reachthrough port provides the ability to connect to a serial device remotely, via a pass through IP connection. Serial ports 1 – 8 may be used as Reachthrough ports, and are assigned fixed TCP ports 51 – 58 for telnet connections. Should lower and/or upper Serial Expansion modules be installed and configured for Reachthrough, their fixed TCP port ranges are 151-158 and 251-258 respectively.
- TABS designating the port as a TABS port allows the connection of one or more TABS devices to the port.
- TABS Reporting designating the port as a TABS Reporting port enables the WS3500 to report configured alarms out the serial port in the TABS protocol.

- TBOS designating the port as a TBOS port allows the connection of one or more TBOS devices to the port.
- E2A designating a port as an E2A port allows the connection of one or more E2A devices to the port. The correct dropdown option to configure is "E2A Collection". This can only be done on ports 11-18 or 19-26 when an E2A module has been configured under Serial Expansion Modules as either Slot 1 or Slot 2. For more information on E2A please see Chapter 14 "Configuring E2A Devices" and the E2A supplement pn# 994-T080 shipped with all WS3500 having an E2A communications module.
- Note: Some Manager versions may also show "E2AP Collection" and "E2AP Reporting" as being available at the bottom of the port menu; newer versions will show these last two fields as "Future Use". In either case these last two menu functions are not enabled and will have no effect on unit operation.
- Data bits, Parity, Stop Bits, and Baud the port settings vary based on the type of device to be connected. Below is a list of the typical port settings based on the port type:
  - Console Port—8 data bits, No Parity, 1 stop bit, 57600 baud.
  - Craft Port —8 data bits, No Parity, 1 stop bit, 57600 baud.
  - DS5PA —8 data bits, No parity, 1 stop bit, 1200 baud. Refer to the DS5000 manual for more information.
  - INACS —8 data bits, No parity, 1 stop bit, 2400 baud. Refer to the INACS device manual for more information.
  - > PPP—The port settings must match the end device.
  - Reachthrough The port settings must match the end device. Maximum speed, 57600 baud.
  - > TABS —8 data bits, Odd parity, 1 stop bit, 2400 baud.
  - > TBOS —8 data bits, Odd Parity, 2 stop bits, 2400 baud.

#### Additional Reachthrough Port Settings

Checking or unchecking the 'Console server compatible' box changes the status of ALL ports configured as Reachthrough to that configuration. It is located in the lower right of the Serial Ports tab, only when a Reachthrough port is enabled. See screenshot below.

- When the box is NOT checked (default) both <cr><lf> and <cr><NULL> (when received from the terminal emulator program) are passed through unchanged.
- When the box IS checked (optional) both <cr><lf> and <cr><NULL> are passed through as <cr>. This adjustment may be needed when using the Reachthrough port to correctly interface with some devices.

<u>Note</u>: This option only available in Manager 4.4.1 and newer when used together with WS3500 firmware 4.03.04 and newer.

RTU Summary System	n Communications	Discrete	Serial Ports	Firmware	SLC Sequencer	1/0 Correlation	Routing IP Collection	
Select Port:								
Port	Function	<b>^</b>	Port Setting	<b>js</b> 10		-Serial Expan	sion Modules	
CRAFT	Craft	_	Type: Read	hthrough		None	•	-
Serial 8	Beachthrough		Data bits: 8	Data bits: 8				
	, roson and again		Parity: 0	DD		None		-
			Stop bits: 1 Baud rate: 12	200	_		Save 🔀 Cance	
		•		Edit Setting:	8		Console server comp	atible
Add Port	Delete Port							

#### Reachthrough TCP/IP Port Assignment

TCP/IP port assignment for all WS3500 Reachthrough ports is fixed in the firmware and allocated per the following:

- Standard serial ports 1 8 may be used as Reachthrough ports, and are assigned fixed TCP ports 51 – 58 (respectively) for telnet connections.
- Lower Serial Expansion module (when installed) has a physical serial port assignment of 11-18. When configured for Reachthrough, their fixed TCP port ranges are 151-158 respectively.
- Upper Serial Expansion module (when installed) has physical serial port assignment of 19-26. When configured for Reachthrough, their fixed TCP port ranges are 251-258 respectively.

## Additional PPP port settings

Port Settings		×
Port: Serial 7 Type: PPP	Baud rate: Data Bits: Parity: Stop Bits:	57600 • 8 • NONE • 1 •
PPP Mode O - Listen 1 - Attempt at startup, then Lis 2 - Attempt - Persistant	sten Remote	IP:
ОК	Cancel	]

- PPP Mode A PPP Mode must be selected to determine how the PPP port functions. In Listen mode, the PPP port waits for incoming PPP connections. In Attempt – Persistent mode, the port will continuously attempt to establish a PPP session. In Attempt at startup mode, one attempt to establish a connection is made once when the RTU boots, and then the port enters Listen mode.
- Local IP If the RTU is to assert its own IP address, that IP Address must be entered in the Local IP field. If this field is left blank, the remote end of the PPP connection must assign an IP address for the RTU.
- Remote IP If the RTU is to supply the remote end of the PPP connection with an IP address that IP address must be entered in the Remote IP field. If this field is left blank, the remote end must have its Local IP address configured.

#### Advanced polling parameters

Most port types that are used to poll downstream devices also have some advanced polling parameters. These parameters are accessed by clicking the Advanced >> button on the Port Settings window.

		Advanced <<
Message timeout:	20	x 100 milliseconds
Error pause:	4	seconds
Number of retries:	3	

 Message timeout – The message timeout begins immediately after a poll is sent to a downstream device. If the configured timeout is exceeded before a response is received, the message is considered timed-out. The message timeout value is in 100 millisecond increments, for example, the default value of 20 equals 2 seconds (20 x 100 ms = 2000 ms = 2 sec.).

- *Error pause* The Error pause is the amount of time the RTU will pause after encountering a serial communications error. The Error pause value is in seconds, and the default value is 4 seconds.
- *Number of retries* This is the number of poll retries when a timeout or response error occurs. The default value is 3.
- 3. Once all fields have been configured, click OK. If no devices are associated with the port type, port configuration is complete. If the port type accommodates downstream devices, the Configured Devices panel will be displayed on the Serial Ports Tab, below the Port Settings panel. To configure downstream devices, click the Edit Devices button. Refer to the protocol-specific sections in this manual for information how to configure devices.

## **Deleting a port**

To delete a port:

- 1. Select the port to be deleted from the Select Port list.
- 2. Click on the Delete Port button. A confirmation dialog box appears.

Confirm	n 🛛 🔀
2	Are you sure you wish to delete port "Serial 1" from RTU "WS3500"
	This will also delete all associated devices and points for this port?
	OK Cancel

3. Click OK to delete the port, as well as all associated devices and points.

#### Viewing the configuration of a port

To view the port settings on a port,

1. Select the port from the Select Port list. The Port Settings panel and Configured Devices panel (if applicable) will display the settings for that particular port. To view more port settings, click the Edit Settings button. This displays the port settings window, where all port parameters can be viewed.

#### Editing the port settings

To edit the port settings:

- 1. Select the desired port from the Select Port list. The Port Settings panel and Configured Devices panel (if applicable) will display the settings for that particular port.
- 2. Click the Edit Port button. The Port Settings window appears.
- 3. Make the desired changes in the Port Settings window, and click OK to save your changes.

# The I/O Correlation Tab

I/O Correlation allows for the definition of actions to be taken when a point changes state. These actions may include activating a control output, sending a message on an alphanumeric pager, or sending an e-mail message. Refer to the Configuring Derived Alarms in Chapter 15 for details about the "Derived Alarms" button.

F	RTU Summary	System	Communications	Discrete	Serial Ports	Firmware	SLC Sequencer	1/0 Correlation	Routing	IP Collection	
-	170 Correlati	on									
	Input					0.	utput				
					Add		lit <u>D</u> elet	e Updat	e	Derived	Alarms

Figure 14 - I/O Correlation Tab

## **Creating a Correlation definition**

To add I/O correlations:

1. Click the Add button on the I/O correlation tab. The Add/Edit entry window appears.

Add/Edit entry		
AID	Туре	
Output Point		
AID	Туре	
		<u> </u>

- 2. For each correlation Input Point, the following fields must be configured:
  - AID the AID of the input point.
  - Type the point type of the input point. Currently only DIGITAL type input points are supported.
  - State the state the input point must enter to activate the output. The state is either 0 (Off) or 1 (On).
- After the input point, the output point must also be configured. Different fields are needed based on the type of output point. DIGITAL, PAGER, and EMAIL output types are supported. Following is a description of the fields associated with each type of output point.

DIGITAL output type requires configuration of the following parameters:

- *AID* the AID of the input point.
- Type the point type of the output point is set to DIGITAL
- *State* the target state the output point will enter when the input condition is met. The state is either 0 (Off) or 1 (On).
- Mode the type of control to be issued, either Latch (control remains on until it is released) or Momentary (control remains on for a specific amount of time, and then it is released).
- *Time* if the control type is Momentary, the Time field is displayed. This is the time interval (in milliseconds) for the output to remain in the defined target state.

Add/Edit entry				X
AID DISCRETE-1-1	Type DIGITAL 💌	State ○ 0 (0ff) ⊙ 1 (0n)	]	
Output Point AID DISCRETEC-1-1	Type DIGITAL 💌	State 0 (0ff) 1 (0n)	Mode O Latch O Momentary	Time (ms.) 2000
			<u>0</u> K	<u>C</u> ancel

Figure 15 - Correlation - DIGITAL Output

In the above screenshot, when digital input DISCRETE-1-1 goes into alarm, digital output DISCRETEC-1-1 will turn on for 2 seconds.

PAGER output type requires no AID, therefore this field can be left blank. The following parameters must be configured:

- *Type* the point type of the output point is set to PAGER
- *TAP Dial-In number* the telephone number of the TAP server. This number should be available from the paging service provider.
- Pager ID the pager's ID number. This number should be available from the paging service provider.

Add/Edit entry			X
AID DISCRETE-1-2	Type DIGITAL	State 0 0 (Off) 1 (On)	
AID	Type PAGER	TAP Dial-In Number (403)555-1212	Pager ID 12345678
			<u>OK</u> <u>C</u> ancel

Figure 16 - Correlation - PAGER Output

In the above example, when digital input DISCRETE-1-2 goes into alarm, a page will be sent to the TAP server at (403)555-1212, to be relayed to Pager ID 12345678. The pager message will contain the point CLLI, description, alarm severity, and timestamp.

The parameters in the page are delimited by an asterisk (\*). Following is an example of a page:

```
33:*CLGRYAB*LOW
TEMPERATURE*MJ*Tue Aug 16
17:29:01 2016
```

EMAIL type requires no AID, therefore this field can be left blank. The following parameters must be configured:

- Type the point type of the output point is set to EMAIL
- To the e-mail address to which the alarm message will be sent.
- SMTP the outgoing SMTP mail server you are using to send the message through. This information should be available from network administration. Note: A corporate e-mail server may be suitable for use here.
- CC —the e-mail address to which a CC of the alarm message will be sent. This field is optional
- Reply to the e-mail address that will appear in the Reply-to field of the alarm message.

Add/Edit entry			×
AID DISCRETE-1-2	Type DIGITAL	State 0 0 (Off) 0 1 (On)	
Output Point	Type EMAIL	To tech@site.com	SMTP mail.site.com Reply-to rtumgr@site.com
·		(	<u> </u>

Figure 17 - Correlation - EMAIL Output

4. Click OK to close the Add/Edit entry window, and save the new correlation entry.

#### **Editing a Correlation Entry**

To edit a correlation entry:

- 1. Select the entry to be edited from the list.
- 2. Click the Edit button. The Add/Edit entry window appears.
- 3. Modify the fields in the Add/Edit entry window and click OK to save the changes.

#### **Deleting a Correlation Entry**

To delete a correlation entry:

- 1. Select the entry to be deleted from the list.
- 2. Click the Delete button. The entry will be deleted from the list.

## The Firmware Tab

The Firmware Tab allows the user to perform a firmware upgrade on the RTU. The firmware upgrade package is a .zip file containing the files to be downloaded to the RTU. Upgrades to the RTU firmware should only be performed after consultation with, and approval from Westronic Systems Inc.

<u>Note:</u> Interrupting a firmware upgrade, and in particular powering down the WS3500 during this process, can result in an inoperable system. Do not perform a firmware upgrade if the power to the unit may be removed.

#### Upgrading the firmware

To upgrade the firmware on the RTU:

- 1. Connect to the RTU and upload the configuration.
- 2. Select the Firmware tab.

RTU Summary System Communications Discrete Serial Ports	I/O Correlation Routing Firmware
∼Disk-On-Chip Upgrade (.zip file)	
Firmware Zip file:	
Brows	e
Upgrade Firmware	

3. Click the Browse button, select and open the .zip file. The filename will be displayed in the Disk-On-Chip Upgrade (.zip file) panel.

_Disk-Ωn-Chin Ungrade ( zin file)	
Firmware Zip file:	
-1560 (Disk-On-Chip)\Test Files\DOC_4.02.06.zig ▼	Browse

4. Click the Upgrade Firmware button to initiate the upgrade. A confirmation dialog box appears.

Confirm	×
?	Upgrade RTU to firmware version 4.03.04? This operation will take the RTU out of service.
	Do you wish to continue?
	OK Cancel

Click OK to proceed with the upgrade.

A status window appears, displaying the various files, which are being downloaded to the RTU.



After the upgrade is completed, the following Information dialog box appears

Informa	ation 🛛 🔀
(į)	Firmware upgrade successful! RTU must be reset for changes to take effect, and to return RTU to IN SERVICE mode.
	Would you like to disconnect and reset the RTU now?
	Yes No

5. Click Yes to disconnect and reset the RTU. The RTU will automatically reboot once the Metago Manager connection is terminated. Once the RTU has booted, the new firmware will be running, and the RTU will be returned to IN SERVICE mode.

# The SLC Sequencer Tab

The SLC Sequencer Tab allows the user to map points for the connection and monitoring of SLC devices.

SLC devices can share some points (called SLC common Group), but each device (or terminal) has its own set of COT points. In Metago Manager, the user must create a SLC Common Group, and then add COT points for each device. The user can define one or more common groups, each having one or more COTs. SLC Sequencer can be set up to use either Discrete (I/O module) points, TBOS (serial port) points or E2A points. The points that are to be used for SLC sequencer must already be defined in the RTU configuration before they can be mapped as SLC points. Once a point has been configured as SLC, it is no longer usable as a discrete, TBOS or E2A point. To view an existing SLC or COT Group, click the "View Group" or "View COT" button after the selecting the item in question.

NOTE: The "Use BLB" checkbox in the SLC Options panel only needs to be checked if the BLB feature of the SLC protocol is to be used. This adds the BLB point to the COT configuration window. For the examples in this manual, BLB is not used.

## Adding a SLC Common Group

To add a SLC common group:

1. Select the SLC Sequencer tab.

RTU Summary System Communications Discrete	Serial Ports Firmwar	SLC Sequencer	1/0 Correlation	Routing	IP Collection
TRU Summary System Communications Discrete Discrete Inputs TBOS Inputs E2A Inputs SLC Common Groups COT	Serial Ports Firmwar	SLL Sequencer	SLC Alarm Points Edit	Routing	IP Collection
Add Group Delete Group	Add COT	elete COT	ew Group iew COT		
SLC Options					
NOT CONNECTED					

2. Use the Discrete Inputs, TBOS Inputs or E2A Inputs tabs to select what type of points to use for SLC sequencing. (For this example, Discrete Inputs are used).

3. In the SLC Common Groups panel, Click the Add Group button. The SLC Common Group window is displayed.

SLC Common Group
Name: SLC Disc Grp 1
Major (MJ)
DISCRETE- 1 🕞 - 1 🖨
Minor (MN)
DISCRETE- 1 🕞 - 2 🖨
Power Minor (PMN)
DISCRETE- 1 🕞 - 3 🖨
Fuse (FA)
DISCRETE- 1 🕞 - 4 🖨
Near End (NEFA)
DISCRETE- 1 🔁 - 5 🖨
Far End (FEFA)
DISCRETE- 1 🕞 - 6 🖨
Carrier Line Fail (CLF)
DISCRETE- 1 🕞 - 7 😭
OK Cancel

4. Select the point range to be used. If the first point (Major) is changed, all other points are automatically updated so that the points are in sequence. When all points are configured correctly, Click the OK button.

Confirm	ı 🛛
?	Selected points will be overwritten. Click OK to continue.
	OK Cancel

5. Click OK to proceed with the point mapping.

# Adding a SLC COT

- 1. Select the SLC Sequencer tab.
- 2. In the COT panel, Click the Add COT button (This button is only enabled if there is a common group configured). The SLC COT window is displayed.

SLC COT	
Name:	SLC Disc Grp 1 - COT 1
SLC Group:	SLC Disc Grp 1
Inputs System ID (SI	Dj
DISCRETE	1 🖨 1 🖨
Power / Misco	ellaneous
DISCRETE	1 🖨 2 🌩
Outputs	
Alarm Cut-Off	(ACO)
DISCRETEC	
	OK Cancel

3. Select the input and output point ranges to be used. Once all points are configured correctly, Click the OK button.

Confirm	n 🛛 🔀
?	Selected points will be overwritten. Click OK to continue.
	OK Cancel

4. Click OK to proceed with the point mapping.

## **Editing SLC Alarm Points**

- 1. Select the SLC Sequencer tab.
- 2. Select the appropriate Common group, and COT.
- 3. In the SLC Alarm Points panel, Click the Edit button. The Edit Point Parameters window is displayed.

W Edit Point Parameters			
AID	Point Description	Location	WG ^
O SLC-1-1-1	SLC Disc Grp 1 - COT 1 - Alarm	N/A	
SLC-1-1-2	SLC Disc Grp 1 - COT 1 - Alarm	N/A	=
SLC-1-1-3	SLC Disc Grp 1 - COT 1 - AC Power Fail - RT	FEND	
SLC-1-1-4	SLC Disc Grp 1 - COT 1 - Fuse Alarm - COT	NEND	
SLC-1-1-5	SLC Disc Grp 1 - COT 1 - Alarm - COT	NEND	
SLC-1-1-6	SLC Disc Grp 1 - COT 1 - Alarm - COT	NEND	Add Point
SLC-1-1-7	SLC Disc Grp 1 - COT 1 - Alarm - RT	FEND	
SLC-1-1-8	SLC Disc Grp 1 - COT 1 - Alarm - RT	FEND	
Generic point parameters Point Description SLC Disc Grp 1 · COT 1 · Alar SID Location WG N/A Units	Alarm Event Alarm-Env Alarm Event Alarm-Env AlD Type Cond Type Cond Type Reporting State ENABLED V	Normal State Closed Open	● SA ⊘ NSA
	Save Cancel		DOWNLOAD
			Llose

4. Configure the points either by applying a template (refer to *Using Metago* Manager Templates – Chapter 17) or by editing the points individually. Select the point to be edited from the point list, then configure the Generic point parameters and the Digital parameters for each point.

#### **Generic point parameters**

Note: Some of the fields in the generic point parameters panel are populated when the SLC device is created. Depending on the license purchased from Westronic, not all fields may be displayed.

- Alarm / Event / Alarm-Env The Alarm, Event and Alarm-Environmental radio buttons configure whether the point is reported as an alarm, as an event or as an environmental alarm. See Appendix C, "Generic Point Parameters" for more information about how these reporting states differ.
- *Point Description* The Point Description field is a freeform text field to be used for a description of the point. Maximum length is 50 characters (punctuation characters are not recommended).
- SID The Source Identifier (SID) is a freeform text field that uniquely identifies a group of points. The SID is used as the target identifier in the TL1 message header. If the SID field is not configured, the RTU's TID is used in its place. Maximum length is 20 characters.

- AID Type The AID Type is a freeform text field that can be used in conjunction with the AID to help identify a point. This can be useful if the AID does not provide enough information to pinpoint the location of the point. Maximum length is 10 characters.
- Location The Location is a freeform text field that is reported in the TL-1 alarm message. This field is also referred to as the CLLI code, and is commonly used to identify the location of an alarm. Maximum length is 11 characters.
- *WG* The workgroup (WG) is a two-character text field that is reported in the TL-1 alarm message. This field is commonly used to determine which workgroup or department needs to be notified when this point changes state.
- *Cond Type* The Cond Type is a freeform text field that identifies the type of alarm or event being reported. Maximum length is 10 characters.
- Units A four-character text field, describing the measurement unit of the field device. This field is not generally used for digital points.
- Reporting State A dropdown menu with three options: Enabled (default for SLC), Disabled, and InSite Only. From this dropdown menu changes can be made on a point by point basis instead of the per page basis as described in "Enabling and Disabling all SLC Points", which is found later in this section.
  - An alarm point set to the "InSite Only" state will report only on the InSite alarm summary webpage and will not be reported via TL1 or SNMP. Any alarm point included in a derived alarm expression will have its reporting state set to InSite Only automatically.

**Note:** Enabled or InSite Only must be selected from the dropdown list for the point to be reported when it changes state.

# **Digital parameters**

- Severity The severity field can be set to one of five levels. From highest to lowest severity, the levels are CR (Critical), MJ (Major), MN (Minor), RN (Routine), NA (Not Alarmed).
- Normal State The Normal State radio buttons are used to indicate which alarm contact state is considered to be normal, and conversely, which state indicates an alarm condition. The default configuration is Open, where a closed contact indicates an alarm.
- Service Affecting— The Service Affecting radio buttons configure the point to be either SA (Service Affecting) or NSA (Non-Service Affecting).

# **Download button**

This button enables the Manager user to update parameters of an individual point without the need to download an entire configuration and restart the WS3500. Please refer to Appendix B for more information on "Point on the Fly" usage.

#### Enabling or disabling all SLC points

To enable, disable or set to InSite Only all health, input, or output points on an I/O module:

- 6. Select the Discrete tab.
- 7. Select the I/O module to be edited from the I/O Modules list.
- 8. Click the appropriate button Health, Inputs, or Outputs. The Edit Points Parameters window appears.
- Right- click in the point list, and a drop-down menu appears with the options Disable All, Enable All and InSite Only All. Two other options also appear in this drop down menu: *Import Points…* and *Export Points…* For more information on Import/Export please refer to Chapter 17 – "Using Templates".
- 10. Select the Enable All to enable all points in the point list, Disable All to disable all points in the point list or InSite Only All to make all the points in the point list report in InSite only.

The color of the circle in the leftmost column indicates whether the point is enabled, disabled or InSite Only. Green indicates the point is enabled, red indicates the point is disabled and purple indicates the point is InSite only.

# The IP Collection Tab

The IP Collection Tab allows the user to map IP Addresses, TCP Ports and the corresponding protocols for collection over IP.

RTU Summary System Communications Discrete Serial Ports Firmware SLC Sequencer I/O Correlation Routing	IP Collection
Session Id TCP Port IP Address Protocol Add Delete	
NOT CONNECTED	

#### Adding an IP Collection Item.

To add an IP Collection Item:

 On the IP Collection tab, click the "Add" button. The "Add IP Collection" window is displayed. <u>Note:</u> The WS3500 supports a maximum of 40 TABS-IP sessions.

🐨 Add IP Collection 📃 🗆 🔀
Session Id: 1
IP Address:
TCP Port:
Protocol:
OK Cancel

- 2. Enter the IP Address and TCP Port to connect to. Select the appropriate protocol from the dropdown list. Currently only TABS-IP-Collection is allowed. The Session Id is populated automatically with the first available Session Id, and cannot be changed.
- 3. The session added in the step above would now appear in the grid and if this was the first session added, the "Configured Device" panel containing the "Edit Device" button would appear beside the grid. To add devices on a particular session, select the session in the grid and click the "Edit Devices" button. The "TABS Configuration" window is displayed (because currently only TABS-IP-Collection is allowed).

TABS	Confi	gurati	ion				×
Devi	ce Ado	lress					
0	] 1	2	3	4	5	6	7
8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23
24	25	26	27	28	29	30	31
Disp	ays		Delete		Edit	Point: Health	
						Ē	ose

# The Routing Tab

The TL1 Routing Tab allows the user to map the TID, IP Address and TCP Port of downstream TL1 enabled devices through the WS3500 so that device's alarms can be reported as part of the WS3500 alarms. <u>Note</u>: Any downstream alarms routed by the WS3500 will NOT be part of the InSite <sup>™</sup> summary; they will be reported as TL1 only.

RTU Summary	System	Communications	Discrete	Serial Ports	Firmware	SLC Sequencer	1/0 Correlation	Routing	IP Collection	
-TL1 Routing										
Downstream T	'ID	IP	Port							
	Add	Edit	De	elete						
	OTED									
	LUIED									

# Adding a TL1 Routing Session

To add a TL1 Routing Session:

1. On the Routing tab, click the "Add" button. The "Add/Edit TL1 Routing entry" window is displayed. <u>Note:</u> The WS3500 supports a maximum of 32 TL1 Routing sessions.

Add/Edit TL1 Routing e	ntry 🛛 🖾
Downstream TID: Downstream IP: Downstream Port:	
	OK Cancel

- 2. Enter the downstream TID, IP Address and TCP Port to connect with. If connecting over a standard IP session from a WS1800 the port will always be port 23. When collecting from a wireless modem enabled WS1800 this port selection must match the port configured in the WS1800 modem menu. For other devices, this port choice is configurable to any standard TCP port that may be needed.
- 3. Click the "OK" button to add the entry to the TL1 Routing list.

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# **Configuring TBOS Devices**

Serial ports may be configured as TBOS, which allows for the polling of up to 8 Telemetry Bit-Oriented Serial (TBOS) displays.

This section describes how to configure TBOS inputs, outputs and health points.

# Adding TBOS displays

1. Select the Serial Ports tab and create a TBOS port, or select one from the Select Port list.

ort	Function	Port Settings     Port: Serial 1	Serial Expansion Modules
:RAFT 'OM 1	Craft	Type: TBOS	None
erial 1	TBOS	Data bits: 8	Slot 2 (Top):
		Baud rate: 2400	None
		Configured Devices 0 devices configured	

Figure 18 - Serial Ports - TBOS

2. Click the Edit Devices button to configure devices on that port. The Edit Devices dialog box appears.

Tedit Devices	×
Configured Devices:	
	Add Device
	Delete Device
Name Type	
CLU	
Edit Points	
Health Inputs	Outputs
	Close

3. Click the New Device button to add a device.

Addin	g a Devic	e		×
Devi TBC	ce Name: IS Display			Display:
	Location:		WG:	~
🗹 Inp	ut points tput points	🗸 ОК		Cancel

Enter values for all of the following fields:

- Display Address of the TBOS display. The valid address range is 1 8.
- CLLI If a CLLI is entered here, it is applied to all points on the device.
- WG If the WG (workgroup) is selected here, it is applied to all points on the device.
- 4. Click OK to save the changes and close the pop-up window. The Edit Devices window re-appears.
- 5. Click the Close button to close the Edit Devices window.

## **Deleting a TBOS display**

- 1. Click on the Serial Ports tab.
- 2. Select the desired TBOS port from the Select Port list.
- 3. Click the Edit Devices button. The Edit Devices window appears.
- 4. Select the device from the Configured Devices list and click the Delete Device button. A confirmation dialog box appears.

Confirm	n 🔀
2	Are you sure you wish to delete this device and all associated points?
	Yes No

- 5. Click the Yes button to confirm the deletion.
- 6. Click the Close button to close the Edit Devices window.

# **TBOS** Inputs

For each configured TBOS serial port, there can be up to 8 displays, and each display has 64 TBOS inputs.

For each TBOS input point, there is an associated AID field. The AID is a read-only field that is automatically created by Metago<sup>®</sup> Manager. For TBOS input points the format of the AID is TBOS-<port>-<display>-<point number>, where *port* is the serial port number (1-8, 11-26), *display* is the display number (1-8), and *point number* is the TBOS

point number (1-64). For example, TBOS-6-1-64 indicates that the TBOS point is configured on serial port 6, display 1, and it is TBOS point 64.

## **Editing TBOS Inputs**

To edit the TBOS inputs:

- 1. Select the Serial Ports tab, and select the TBOS port to be edited from the Select Port list.
- 2. Click the Edit Devices button. The Edit Devices window appears.

Edit Devices			23
Configured De	evices:		
TBOS Display 1			Add Device
TBOS Display 2			
		=	Delete Device
		_	
		*	
Device Info		-	
Name		Туре	
TBOS Display	1	TBOS	
	CLLI		
	CLGYABLA	3	
Edit Points			
Health	Inp	uts	Outputs
			Close

3. Select the display to be edited from the Configured Devices list, and click the Inputs button. The Edit Point Parameters window appears.

AID	Point	Description		Location	WG		
TB0S-1-1-1	Not Ass	signed		CLGYABLAB	EN		
TBOS-1-1-2	Not Ass	signed		CLGYABLAB	EN		
TBOS-1-1-3	Not Ass	signed		CLGYABLAB	EN		
TBOS-1-1-4	Not Ass	signed		CLGYABLAB	EN		
TBOS-1-1-5	Not Ass	signed		CLGYABLAB	EN		
TBOS-1-1-6	Not Ass	signed		CLGYABLAB	EN		Add Po
TBOS-1-1-7	Not Ass	signed		CLGYABLAB	EN		
TBOS-1-1-8	Not Ass	signed		CLGYABLAB	EN	Ŧ	Delete H
eneric point parame	eters <ul> <li>Alarm</li> </ul>	○ Event ○ Alarm-Env	Digital parameters	s Normal State			
eneric point parame Point Description Not Assigned	eters	⑦ Event ⑦ Alarm-Env	Digital parameters	s Normal State ⊘ Closed	© \$4	Ą	
eneric point parame Point Description Not Assigned SID	eters Alarm	Event Alarm-Env	Digital parameter: Severity NA 💌	s © Closed © Open	© 54 ම NS	A SA	
Point Description Not Assigned SID Location	eters ● Alarm ▼ √G	Event Alarm-Env	Digital parameter:	s © Closed @ Open	) S4 () N5	A SA	
Point Description Not Assigned SID Location VCLGYABLAB	eters Alarm Alarm MG EN	Event Alarm-Env AID Type Cond Type GP	Digital parameters	s Normal State Closed Open	© 54 © NS	A SA	
Point Description Not Assigned SID Location  V CLGYABLAB Units	eters Alarm V VG EN V	Event Alarm-Env AID Type Cond Type GP Reporting State DISABLED	Digital parameter:	s Normal State Closed Open	© S4 ⊚ N5	A SA	

4. Configure the points either by applying a (refer to *Using Metago* Manager Templates – Chapter 17) or by editing the points individually. Select the point to be edited from the point list, then configure the Generic point parameters and the Digital parameters for each point.

## **Generic point parameters**

Note: Some of the fields in the generic point parameters panel are populated when you create a TBOS device. Depending on the license purchased from Westronic, not all fields may be displayed.

- Alarm / Event / Alarm-Env The Alarm, Event and Alarm-Environmental radio buttons configure whether the point is reported as an alarm, as an event or as an environmental alarm. See Appendix C, "Generic Point Parameters" for more information about how these reporting states differ.
- *Point Description* The Point Description field is a freeform text field to be used for a description of the point. Maximum length is 50 characters (punctuation characters are not recommended).
- SID The Source Identifier (SID) is a freeform text field that uniquely identifies a group of points. The SID is used as the target identifier in the TL1 message header. If the SID field is not configured, the RTU's TID is used in its place. Maximum length is 20 characters.
- AID Type The AID Type is a freeform text field that can be used in conjunction with the AID to help identify a point. This can be useful if the AID does not provide enough information to pinpoint the location of the point. Maximum length is 10 characters.
- Location The Location is a freeform text field that is reported in the TL-1 alarm message. This field is also referred to as the CLLI code, and is commonly used to identify the location of an alarm. Maximum length is 11 characters.
- *WG* The workgroup (WG) is a two-character text field that is reported in the TL-1 alarm message. This field is commonly used to determine which workgroup or department needs to be notified when this point changes state.
- *Cond Type* The Cond Type is a freeform text field that identifies the type of alarm or event being reported. Maximum length is 10 characters.
- Units A four-character text field, describing the measurement unit of the field device. This field is not generally used for digital points.
- Reporting State A dropdown menu with three options: Disabled (default), Enabled, and InSite Only. In this dropdown menu changes can be made on a point by point basis. "Enabling and Disabling all TBOS Inputs in a Display" describes a per display method and is found later in this section.
  - An alarm point set to the "InSite Only" state will report only on the InSite alarm summary webpage and will not be reported via TL1 or SNMP. Any alarm point included in a derived alarm expression will have its reporting state set to InSite Only automatically.

*Note:* The default state of newly configured TBOS points is Disabled. Enabled or InSite Only must be selected from the dropdown list for the point to be reported when it changes state.

# **Digital parameters**

 Severity — The severity field can be set to one of five levels. From highest to lowest severity, the levels are CR (Critical), MJ (Major), MN (Minor), RN (Routine), NA (Not Alarmed).
- Normal State The Normal State radio buttons are used to indicate which state is considered to be normal, and conversely, which state indicates an alarm condition. The default configuration is normally open, where a closed contact indicates an alarm.
- Service Affecting— The Service Affecting radio buttons configure the point to be either SA (Service Affecting) or NSA (Non-Service Affecting).

#### **Download button**

This button enables the Manager user to update parameters of an individual point without the need to download an entire configuration and restart the WS3500. Please refer to Appendix B for more information on "Point on the Fly" usage.

#### Enabling and disabling all TBOS Inputs in a Display

To enable, disable or report in InSite only all TBOS points in a display:

- 1. Select the Serial Ports tab.
- 2. Select the TBOS port to be edited from the Select Port list.
- 3. Click the Edit Devices button.
- 4. Select the TBOS display to be edited from the list.
- 5. Click the Inputs Button. The Edit Points Parameters window appears.
- Right- click in the point list, and a drop-down menu appears with the options Disable All, Enable All and InSite Only All. Two other options also appear in this drop down menu: *Import Points…* and *Export Points…* For more information on Import/Export please refer to Chapter 17 – "Using Templates".
- 7. Select the Enable All to enable all points in the point list, Disable All to disable all points in the point list or InSite Only to make all the points in the point list report in InSite only.

The color of the circle in the leftmost column indicates whether the point is enabled or disabled. Green indicates the point is enabled, red indicated the point is disabled and purple indicates the point is InSite only.

#### **TBOS Outputs**

For each TBOS output point, there is an associated AID field. The AID is a read-only field that is automatically created by Metago® Manager. For TBOS output points the format of the AID is TBOSC-<port>-<display>-<point number>, where *port* is the serial port number (1-8, 11-26), *display* is the display number (1-8), and *point number* is the TBOS point number (1-64). For example, TBOSC-6-1-64 indicates that the TBOS point is configured on serial port 6, display 1 and it is TBOS output point 64.

#### **Editing TBOS Outputs**

When a TBOS port is initially created, output points could optionally be added. If outputs were not added then, they can be added at any time.

To edit TBOS outputs:

- 1. Select the Serial Ports tab.
- 2. Select the TBOS port to be edited from the Select Port list.
- 3. Click the Edit Devices button. The Edit Devices dialog box appears.
- 4. Select the display to be edited.
- 5. Click the Outputs button. If the output points have already been created, go to step 6; otherwise
  - a. The following message appears:

Confirm	n 🔀
2	No output points are configured for this TBOS port, would you like to add them now?
	OK Cancel

- b. Click OK to create the output points. All 8 TBOS displays will now contain 64 output points.
- 6. The Edit Point Parameters window appears.

Edit Point Parameters					
AID	Point Description		Location	WG	*
TBOSC-1-1-1	Not Assigned		CLGYABLAB	EN	
TBOSC-1-1-2	Not Assigned		CLGYABLAB	EN	
TBOSC-1-1-3	Not Assigned		CLGYABLAB	EN	
TBOSC-1-1-4	Not Assigned	Not Assigned			
TBOSC-1-1-5	Not Assigned	CLGYABLAB	EN		
TBOSC-1-1-6	Not Assigned	CLGYABLAB	EN	Add Point	
TBOSC-1-1-7	Not Assigned	CLGYABLAB	EN		
TBOSC-1-1-8	Not Assigned		CLGYABLAB	EN	Delete Point
Not Assigned SID	AID Type	Severity NA 💌	Normal State	🔿 SA	
			Open	NSA	
CLGYABLAB EN					
Units	Reporting State DISABLED				
	Save	🔀 Cancel			DOWNLOAD
					Close

- 7. Configure the points either by applying a template (refer to *Using Metago* Manager Templates Chapter 17) or by editing the points individually. Select the point from the point list, then configure the Generic point parameters and the Digital parameters for each point. Refer to "Generic Point Parameters" and "Digital Parameters" earlier in this chapter for the definitions of the parameters and more information.
- 8.

#### **TBOS Health Points**

Each configured TBOS port, has one health point assigned to the port as a whole, and a health point for each configured display. Communication failures with individual TBOS displays will result in the associated display health point being alarmed. If all devices on a port are failed then the port health point is also alarmed.

*Table 4* lists the AID, point description, severity, and normal state for each TBOS Health Point, the *x* in the AID and point description refers to the serial port number. For example, HEALTH-6-0 would represent the TBOS Health point on serial port 6 and its default point description would be TBOS PORT 6 FAIL.

AID	Point Description	Severity	Normal State
HEALTH-x-0	TBOS PORT x FAIL	CR	Open
HEALTH-x-1	TBOS PORT x DISPLAY 1	MJ	Open
HEALTH-x-2	TBOS PORT x DISPLAY 2	MJ	Open
HEALTH-x-3	TBOS PORT x DISPLAY 3	MJ	Open
HEALTH-x-4	TBOS PORT x DISPLAY 4	MJ	Open
HEALTH-x-5	TBOS PORT x DISPLAY 5	MJ	Open
HEALTH-x-6	TBOS PORT x DISPLAY 6	MJ	Open
HEALTH-x-7	TBOS PORT x DISPLAY 7	MJ	Open
HEALTH-x-8	TBOS PORT x DISPLAY 8	MJ	Open

Table 4 TBOS Health Point Configuration

#### **Editing TBOS Health Points**

NOTE: Under normal circumstances, TBOS Health points will not need to be edited.

To edit the TBOS Health points,

- 1. Click on the Serial Ports tab.
- 2. Select the TBOS port toe be edited from the Select Port list.
- 3. Click the Edit Devices button. The Edit Devices window appears.
- 4. Click the Health button. The Edit Point Parameters window appears with a list of all 9 TBOS health points for that serial port.
- 5. Configure each TBOS Health point by selecting the point in the point list then configuring the Generic point parameters and the Digital parameters.

#### Enabling and disabling all TBOS points in a Display

To enable, disable or report in InSite only all TBOS points in a display:

- 1. Select the Serial Ports tab.
- 2. Select the TBOS port to be edited from the Select Port list.
- 3. Click the Edit Devices button.
- 4. Select the TBOS display to be edited from the list.
- 5. Click the appropriate button, Inputs, Outputs, or Health. The Edit Points Parameters window appears.

- 6. Right-click in the point list, and a drop-down menu appears with the options Disable All, Enable All and InSite Only All.
- 7. Select the Enable All to enable all points in the point list, Disable All to disable all points in the point list or InSite Only to make all the points in the point list report in InSite only.

The color of the circle in the leftmost column indicates whether the point is enabled or disabled. Green indicates the point is enabled, red indicated the point is disabled and purple indicates the point is InSite only.

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#### **Configuring TABS Devices**

Serial ports configured as TABS will communicate with downstream devices using the Telemetry Asynchronous Block Serial (TABS) protocol.

This section describes how to configure TABS serial ports, including addressing, displays, inputs, outputs and health points.

#### Adding TABS devices

1. Select the Serial Ports tab and either create a new TABS port or select one from the Select Port list.

B	TU Summary System	m Communications	Discrete	Serial Ports	Firmware	SLC Sequencer	1/0 Correlation	Routing IP Collection	
9	elect Port:								
	Port	Function	<b>^</b>	Port Setting	js		Serial Expans	sion Modules	
	CRAFT	Craft	_	Type: TABS	5		None		-
	CUM 1 Serial 1			Data bits: 8			Slot 2 (Top):		
	Jenari	1803		Parity: 0	DD		None		-
			=	Stop bits: 1 Baud rate: 24	400 Edit Setting			Save 🔀 Ca	ncel
			•	Configured Odevices cor	Devices nfigured		Point 64 Display	ay Failure Alarms	
	Add Port	Delete Port			Edit Device	es			
	NOT CONNECTED								

Figure 19- Serial Ports – TABS Device

- 2. Click the Edit Devices button to configure the downstream devices on the selected port. The TABS Configuration window appears.
- 3. When TABS is configured for any given port, the 'Point 64 Display Failure Alarm" checkbox becomes visible in the middle-right of the Serial Ports tab. Checking (enabling) this box causes the WS3500 to treat the 64<sup>th</sup> point in each display as a communications failure alarm for that display. When this box is checked, if communication with that display is lost, a separate alarm will be generated by the WS3500 indicating the failure of that particular display. This alarm is in addition to the overall port health alarms normally generated by the WS3500.

<u>Note</u>: Checking this box means any alarm physically connected to point 64 of the downstream device is ignored. Due to this behavior, point 64 is automatically labelled by Manager with a new point description.

Eg "TABS Display 1 - Comm failure"

5	TAE	IS Co	nfigu	ratior	1				<
C	Devic	e Add	lress						h
	0	1	2	3	4	5	6	7	
	8	9	10	11	12	13	14	15	
	16	17	18	19	20	21	22	23	
	24	25	26	27	28	29	30	31	
	Displa	iys				Edit	Point: Health		
Ľ				<u>D</u> elete			<u>C</u> le	ose	

4. Click the desired Device Address button, and then click the Add button to add a TABS display at that address. The Adding a Device window appears.

Adding	a Device			X
Devid	ce Name:			Display:
TAB	S A:0 Disp:1			1
	Location:	١	WG:	
	CALGYAB		EN	-
🔽 Inpu 🔽 Out	ut points put points	OK	>	Cancel

Enter values for the following fields:

- Display The display number of the TABS device. The valid address range is 0 to 255.
- CLLI The CLLI code is a freeform text field in the TL-1 alarm message that is used to identify the location of an alarm. Maximum length is 11 characters.
- WG The WG (workgroup) is a two-character text field that is reported in the TL-1 alarm message.
- Input points Check this field to configure 64 input points. The CLLI and WG parameters will automatically be applied to the 64 input points. Note: Input points are always configured for TABS devices, and therefore cannot be de-selected.
- Output points Check this field to configure 64 output (control) points. The CLLI and WG parameters will automatically be applied to the 64 output points.
- 5. Click the OK button to close the Adding a Device window. The TABS Configuration window reappears.
- 6. If defining more than one display on that address, continue to click the Add button and define all the displays for that address.

7. Click the Close to save the changes and close the TABS Configuration window. The Serial Ports panel reappears. The total number of Configured Devices will be updated to display the total number of TABS devices on that serial port.

#### **Deleting TABS Displays**

- 1. Select the Serial Ports tab and select a TABS port from the Select Port list.
- 2. Click the Edit Devices button. The TABS Configuration pop-up window appears.
- 3. Select the display you wish to delete from the Displays list and click the Delete button. A confirmation dialog box appears.

Confirm	n 🛛 🔀
?	Are you sure you want to delete this display?
	OK Cancel

- 4. Click OK to confirm the deletion.
- 5. Click the Close button to close the TABS Configuration window.

#### **TABS Inputs**

For each TABS input point, there is an AID field. The AID is a read-only field that is automatically created by Metago<sup>®</sup> Manager. For TABS input points, the format of the AID is TABS-<port>-<address>-<display>-<point number>, where *port* is the serial port number (1-8, 11-26), *address* is the device address number (0-31), *display* is the display number (0-255), and *point number* is the TABS point number (1-64). For example, TABS-7-0-1-64 indicates that the TABS point is configured on serial port 7, address 0, display 1, and it is input point 64.

#### **Editing TABS Inputs**

When a TABS display is created, 64 input points are automatically added. To edit these inputs:

- 1. Select the Serial Ports tab and select the TABS port to be edited from the Select Port list.
- 2. Click the Edit Devices button. The TABS Configuration window appears.
- 3. Select the appropriate TABS display from the Displays list and click the Inputs button. The Edit Point Parameter window appears.

AID	Point	Description		Location	WG		
TABS-1-0-1-1	TABS I	NPUT 1		CALGYAB	EN		
TABS-1-0-1-2	TABS I	NPUT 2		CALGYAB	EN		
TABS-1-0-1-3	TABS I	NPUT 3		CALGYAB	EN		
TABS-1-0-1-4	TABS I	NPUT 4	CALGYAB	EN			
TABS-1-0-1-5	TABS I	NPUT 5	CALGYAB	EN			
TABS-1-0-1-6	TABS I	NPUT 6	CALGYAB	EN		Add Po	
TABS-1-0-1-7	TABS I	NPUT 7	CALGYAB	EN			
TABS-1-0-1-8	TABS I	NPUT 8		CALGYAB	EN	-	Delete P
Point Description	Alarm	🔘 Event 🛛 🔘 Alarm-E	nv	Namel Chata			
Point Description TABS INPUT 1 SID	<ul> <li>Alarm</li> <li></li> </ul>	Event Alarm-E	nv Severity NA 💌	Normal State Closed Open	© S/ ◉ N	4 SA	
Point Description TABS INPUT 1 SID Location W	<ul> <li>Alarm</li> <li></li> <li>/G</li> </ul>	© Event © Alarm-E AID Type Cond Type	nv Severity NA V	Normal State	⊘ S/ ⊚ N	4 SA	
Point Description TABS INPUT 1 SID Location W CALGYAB E	Alarm     Alarm     G	© Event © Alarm-E AID Type Cond Type GP	nv Severity NA v	Normal State ○ Closed ④ Open	© Si ⊚ N	Δ SA	
Point Description TABS INPUT 1 SID Location W CALGYAB E Jnits	Alarm     Alarm     G     N     v	© Event © Alarm-E AID Type Cond Type GP Reporting State	nv Severity NA 💌	Normal State ○ Closed ④ Open	© S/ ⊚ N	A SA	
Point Description TABS INPUT 1 SID Location W CALGYAB E Jnits	Alarm     Alarm     G	Cond Type GP Reporting State DISABLED	nv Severity NA •	Normal State	⊘ S/ ⊚ N	A SA	

Figure 20 - Edit Point Parameters – TABS Inputs

4. Configure the points either by applying a template (refer to *Using Metago* Manager Templates – Chapter 17) or by editing the points individually. Select the point from the point list then configure the Generic and Digital point parameters for each point.

#### **Generic point parameters**

Note: Some of the fields in the generic point parameters panel are populated when you created the TBOS device. Depending on the license purchased from Westronic, not all fields may be displayed.

- Alarm / Event / Alarm-Env The Alarm, Event and Alarm-Environmental radio buttons configure whether the point is reported as an alarm, as an event or as an environmental alarm. See Appendix C, "Generic Point Parameters" for more information about how these reporting states differ.
- Point Description The Point Description field is a freeform text field to be used for a description of the point. Maximum length is 50 characters (punctuation characters are not recommended).
- *SID*—The Source Identifier (SID) is a freeform text field that uniquely identifies a group of points. The SID is used as the target identifier in the TL1 message header. If the SID field is not configured, the RTU's TID is used in its place. Maximum length is 20 characters.
- AID Type The AID Type is a freeform text field that can be used in conjunction with the AID to help identify a point. This can be useful if the AID does not provide enough information to pinpoint the location of the point. Maximum length is 10 characters.
- Location The Location is a freeform text field that is reported in the TL-1 alarm message. This field is also referred to as the CLLI code, and is commonly used to identify the location of an alarm. Maximum length is 11 characters.

- *WG* The workgroup (WG) is a two-character text field that is reported in the TL-1 alarm message. This field is commonly used to determine which workgroup or department needs to be notified when this point changes state.
- Cond Type The Cond Type is a freeform text field that identifies the type of alarm or event being reported. Maximum length is 10 characters.
- Units A four-character text field, describing the measurement unit of the field device. This field is not generally used for digital points.
- Reporting State A dropdown menu with three options: Disabled (default), Enabled, and InSite Only. In this dropdown menu changes can be made on a point by point basis. "Enabling and Disabling all TABS Inputs" describes a per display method and is found later in this section.
  - An alarm point set to the "InSite Only" state will report only on the InSite alarm summary webpage and will not be reported via TL1 or SNMP. Any alarm point included in a derived alarm expression will have its reporting state set to InSite Only automatically.

*Note:* The default state of newly configured TABS points is Disabled. Enabled or InSite Only must be selected from the dropdown list for the point to be reported when it changes state.

#### **Digital parameters**

- Severity The severity field can be set to one of five levels. From highest to lowest severity, the levels are CR (Critical), MJ (Major), MN (Minor), RN (Routine), NA (Not Alarmed).
- Normal State The Normal State radio buttons are used to indicate which state is considered to be normal, and conversely, which state indicates an alarm condition. The default configuration is normally open, where a closed contact indicates an alarm.
- Service Affecting— The Service Affecting radio buttons configure the point to be either SA (Service Affecting) or NSA (Non-Service Affecting).

#### **Download button**

This button enables the Manager user to update parameters of an individual point without the need to download an entire configuration and restart the WS3500. Please refer to Appendix B for more information on "Point on the Fly" usage.

#### **Enabling and Disabling All TABS Inputs**

To enable, disable or report in InSite Only all TABS inputs in a display:

- 1. Select the Serial Ports tab.
- 2. Select the TABS port to be edited from the Select Port list.
- 3. Click the Edit Devices button.

- 4. Select the TABS display to be edited from the list.
- 5. Click the appropriate button, Inputs, Outputs, or Health. The Edit Points Parameters window appears.
- Right- click in the point list, and a drop-down menu appears with the options Disable All, Enable All and InSite Only All. Two other options also appear in this drop down menu: *Import Points…* and *Export Points…* For more information on Import/Export please refer to Chapter 17 – "Using Templates".
- 7. Select the Enable All to enable all points in the point list, Disable All to disable all points in the point list or InSite Only to make all the points in the point list report in InSite only.

The color of the circle in the leftmost column indicates whether the point is enabled or disabled. Green indicates the point is enabled, red indicated the point is disabled and purple indicates the point is InSite only.

#### **TABS Outputs**

For each TABS output point, there is an AID field. The AID is a read-only field that is automatically created by Metago<sup>®</sup> Manager. For TABS output points the format of the AID is TABSC-<port>-<address>-<display>-<point number>, where port is the serial port number (1-8, 11-26), address is the device address (0-31), *display* is the display number (0-255), and *point number* is the TABS point number (1-64). For example, TABSC-7-0-1-64 indicates that the TABS point is configured on serial port 7, address 0, display 1, and it is output point 64.

#### **Editing TABS Outputs**

When creating a TABS display, the user is given the option of automatically creating 64 output points. If the output points are not added at that time, they can be added later.

To edit TABS output points:

- 1. Select the Serial Ports tab and select the TABS port to be edited from the Select Port list.
- 2. Click the Edit Devices button. The TABS Configuration window appears.
- Select the TABS display to be edited from the Displays list and click the Outputs button. If the output points were not added when the TABS device was created, the following message box appears:

Confirm	n 🛛 🔀
2	No output points are configured for this display, would you like to add them now?
	OK Cancel

Click OK to add the output points.

4. The Edit Point Parameters window appears.

AID	Point [	escription			Location	WG		
TABSC-1-0-1-1	TABS 0	UTPUT 1			CALGYAB	EN		
TABSC-1-0-1-2	TABS O	UTPUT 2			CALGYAB	EN		
TABSC-1-0-1-3	TABS 0	UTPUT 3			CALGYAB	EN		
TABSC-1-0-1-4	TABS 0	UTPUT 4			CALGYAB	EN		
TABSC-1-0-1-5	TABS 0	UTPUT 5			CALGYAB	EN		
TABSC-1-0-1-6	TABS 0	TABS OUTPUT 6			CALGYAB	EN		Add Poi
TABSC-1-0-1-7	TABS 0	UTPUT 7			CALGYAB	EN		
TABSC-1-0-1-8	TABS 0	UTPUT 8			CALGYAB	EN	-	Delete Po
-oincidescription					Name I Chak-			
TABS OUTPUT 1 SID Location WG CALGYAB EN		AID Type Cond Type GP		everity NA 💌	Normal State Closed Open	© S/ © N:	A SA	

Figure 21 - Edit Point Parameters – TABS Outputs

Configure the points either by applying a (refer to Using Metago Manager Templates

 Chapter 17) or by editing the points individually. Select the point to be edited from the point list then configure the Generic and Digital point parameters for each point. See earlier in this chapter for definitions of the parameters.

#### **TABS Health Points**

Each configured TABS port, has one TABS health point for the entire port, and a health point assigned to each configured TABS address. Communication failures with individual address will result in the associated health point being alarmed. If all devices on a port fail, then the port health point is alarmed.

*Table 5* lists examples of AID, point description, severity, and normal state parameters for TABS health points. The *x* in the AID and point description represents the serial port number; the y represents TABS device addresses (0 - 31). For example, HEALTH-7-1 would represent a TABS device on serial port 7, at address 1 and the default point description would be TABS PORT 7 ADDR 1.

AID	Point Description	Severity	Normal State
HEALTH-x	TABS PORT x FAIL	CR	Open
HEALTHxy	TABS PORT x ADDR y	MJ	Open

Table 5 TABS Health Point Configuration

#### **Editing TABS Health Points**

To edit TABS Health points,

- 1. Select the Serial Ports tab and select the TABS port to be edited from the Select Port list.
- 2. Click the Edit Devices button. The TABS Configuration window appears.

AID	Poin	t Description			Location	WG	*
HEALTH-1	TABS	PORT 1 FAIL					
HEALTH-1-0	TABS	PORT 1 ADDR 0			CALGYAB	EN	
							=
							💂 🛛 Delete F
eneric point para	motore			Digital parameters			
renenc point para	meters			Digital parameters			
Point Description	Alarm	🔘 Event 🛛 🔘 Alarr	n-Env				
TABS POBT 1 FAIL				Severity	Normal State		
SID		AID Tune		CR 💌	Closed	- 54 - N	~
	▼		▼		Upen	<b>O</b> N3	DA
Location	WG	Cond Type					
		GP					
		Benorting State					
Units		ENABLED	•				
Units							
Units							

3. Click the Health button. The Edit Point Parameters window appears.

4. Configure TABS Health points by selecting the point from the point list, then configuring the Generic and Digital point parameters for each point. Refer to "Generic Point Parameters" and "Digital Parameters" earlier in this chapter for definitions of the parameters and more information.

# 

## **Configuring TABS Reporting**

Serial ports configured as TABS Reporting will communicate with upstream hosts using the Telemetry Asynchronous Block Serial (TABS) protocol. TABS Reporting can also be configured on TCP/IP ports for TABS over IP reporting.

This section describes how to configure TABS Reporting ports, including addressing, mapped displays, inputs, and outputs.

#### Adding TABS Reporting Ports

1. For serial TABS reporting, select the Serial Ports tab and either create a new TABS Reporting port or select one from the Select Port list.

RTU Summary Syste	m Communications	Discrete	Serial Ports	Firmware	SLC Sequencer	1/0 Correlation	Routing	IP Collection	
Select Port:									
Port	Function	-	Port Setting	<b>js</b> I 1		-Serial Expan Slot 1 (Bottom):	sion Mod	ules	
CRAFT	Craft	-	Type: TABS	Reporting		None			-
Serial 1	TABS Benorting		Data bits: 8			Slot 2 (Top):			
	in its of reporting		Parity: 01	DD		None			-
		E	Stop bits: 1 Baud rate: 24	100 Edit Settin	gs			🖉 Save 🗌	💢 Cancel
		Ţ	Configured O devices cor	Devices nfigured					
Add Port	Delete Port			Edit Devic	es				
NOT CONNECTED									

Figure 22- Serial Ports – TABS Reporting

For TABS over IP reporting, select the communications tab, and either add or select a TCP/IP port.

RTU Sumr	nary S	ystem Co	ommunications D	iscrete	Serial Ports	Firmware	SLC Seque	ncer	1/O Correlation	Routing	IP Collection	on
II - Ethern a IP Ac a Ne 5 F	et Sett dress mask outer	<b>ings</b> 10.0.100.2 255.255.0. 10.0.100.1	22 U	ograde F Telnet F Adv	Port 24 Port 23 anced		ABS IP Rep P/IP ports 5000	Add Dele	d Port	ABS IP Rep 0 d	orting config evices confi Edit Device	guration igured
a Modem Enat Enat Dial	<b>Settin</b> Ile Stan Ile Dial I Backup 10	n <b>gs</b> dard Mode Backup Timeout minutes	m IP Addr Rou Dial-out numi	ess 0.0 ter 0.0 ber 000	0.0		Address	C	ommunity	Port	Ver /	Add Host Edit Host Delete Host
NOT C	DNNEC	TED										

Figure 23- Communications – TABS over IP Reporting

2. Click the Edit Devices button to configure the mapped displays on the selected port. The TABSR Configuration window appears.

TAB	TABSR Configuration												
	oint M Device	<b>appir</b> Addre	<b>19</b> 888						Mapped Displays				
	0	1	2	3	4	5	6	7	Add				
	8	9	10	11	12	13	14	15					
	16	17	18	19	20	21	22	23	Edit				
	24	25	26	27	28	29	30	31	Delete				

3. Click the desired Device Address button, and then click the Add button to add a TABS display at that address. The TABSR Display Mapping window appears.

TABSR Display Mapping
TABS Address: 0
TABS Display: 0
Input Points
Select Device: 🔽 😽
# of points: 0
Output Points
Select Device: 💌 💌
# of points: 0
OK Cancel

Enter values for the following fields:

Note: A mapped display for TABS Reporting can be configured with input points, output points, or both.

- *TABS Display* The display number of the TABS device. The valid address range is 0 to 255.
- Input Points Select Device Select a device from the drop-down list of devices that are configured on the selected RTU. Any device that contains digital input points can be mapped to a TABS display. The # of points field is automatically populated based on the selected device.
- Output Points Select Device Select a device from the drop-down list of devices that are configured on the selected RTU. Any device that contains digital output (control) points can be mapped to a TABS display. The # of points field is automatically populated based on the selected device.
- 4. Click the OK button to close the TABSR Display Mapping window. The TABSR Configuration window reappears.
- 5. If defining more than one display on that address, continue to click the Add button and define all the displays for that address.

6. Click the Close to save the changes and close the TABS Configuration window. The total number of Configured Devices will be updated to display the total number of mapped TABS devices on that port.

#### Editing TABS Reporting Mapped Displays

- 1. Select a TABS port from either the Serial Ports tab, or the Communications tab.
- 2. Click the Edit Devices button. The TABSR Configuration window appears.
- 3. Select the display you wish to edit from the Displays list and click the Edit button.
- 4. The TABSR Display Mapping window appears. Make desired changes.
- 5. Click the Close button to close the TABSR Display Mapping window.

#### **Deleting TABS Reporting Mapped Displays**

- 1. Select a TABS port from either the Serial Ports tab, or the Communications tab.
- 2. Click the Edit Devices button. The TABSR Configuration window appears.
- 3. Select the display you wish to delete from the Displays list and click the Delete button.
- 4. Click the Close button to close the TABSR Configuration window.

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### **Configuring INACS Devices**

Serial ports configured as INACS will communicate with downstream devices using the Integrated Network Alarm & Control System (INACS) protocol.

This section describes how to configure INACS serial ports, including INACS stations, status lines, outputs, and health points for each INACS device.

#### Adding INACS devices

1. Select the Serial Ports tab and either create an INACS port or select one from the Select Port list.

Port	Function	-	Port Settings	Serial Expansion Modules					
CRAFT	Craft	_	Tupe: INACS	Nono					
COM 1	Console		Data bits: 8 Parity: NONE Stop bits: 1 Baud rate: 2400	INORE					
Serial 1	DS5PA			Slot 2 (Top):					
erial 2	Reachthrough			None					
erial 3	Reachthrough								
ierial 4	INACS	H		Save 🛛 🖓 Cance					
erial 5	TABS								
erial 6	Reachthrough								
ierial 7	Reachthrough	- -	Configured Devices						
			1 devices configured						
			[FPR ]						
Add Port	Delete Port		Edit Devices						

Figure 24 - Serial Ports – INACS Device

2. Click the Edit Devices button to configure the devices connected to the port. The INACS Configuration window appears.

W INACS Configuration
Stations
Add
Delete
Status Lines
1234567
8 9 10 11 12 13 14
OUTPUTS HEALTH TBOS FAIL
Close

3. Click the Add button to add a station (device). The Adding a Device window appears.

Adding a Device		X
Device Name:		Station:
STATION 1		1
Location:		WG:
CALGYAB		EN 💌
	🗸 ок	🗙 Cancel

Enter values for all of the following fields:

- Station The Station field represents the INACS station address. The supported range is 1 to 2046. *Note*: According to INACS Protocol, INACS station 0 is reserved for ALL Station usage and INACS station 2047 is reserved for INACS RTU dial-in, neither are supported by the WS3500.
- Location (CLLI) The CLLI code is a freeform text field that is reported in the TL-1 alarm message. The CLLI code is a maximum of 11 characters long and is used to identify the site location of an alarm.
- WG The WG is a two-character text field that is reported in the TL-1 alarm message.
- 4. Click the OK to close the window. The INACS Configuration window reappears.
- 5. Configure Status Lines for a configured station.
  - a. Click the numbered button corresponding to the status line to be added. A confirmation dialog box appears.



- b. Click OK to close the confirmation dialog box. This automatically adds 32 INACS inputs on that status line. A **bolded** status line number button in the INACS Configuration window indicates that the status line is configured, and 32 INACS inputs have been added.
- 6. Click the Close button to close the INACS Configuration window. The Serial Ports panel reappears. The total number of Configured Devices will be updated and display the total number of INACS stations (devices) on that serial port.

#### **Deleting INACS Stations**

- 1. Select the Serial Ports tab and select the INACS port to be edited from the Select Port list.
- 2. Click the Edit Devices button. The INACS Configuration window appears.
- 3. Select the station to be deleted from the Station list and click the Delete button. The station and all its associated points will be deleted.
- 4. Click the Close button to close the INACS Configuration window.

#### **INACS** Inputs

For each INACS input point, there is an AID field. The AID is a read-only field that is automatically created by Metago<sup>®</sup> Manager. For INACS input points, the format of the AID is INACS-<port>-<station>-<status line>-<point number>, where port is the serial port number (1-8, 11-26), station is the station address (1-2046), status line is the status line number (1-14), and point number is the INACS point number (1-32). For example, INACS-5-1-14-32 indicates that the INACS point is configured on serial port 5, station 1, status line 14, and it is input point 32.

#### **Editing INACS Inputs**

When a status line is added, 32 input points are automatically created. To edit these inputs:

- Select the Serial Ports tab and select the INACS port to be edited from the Select Port list.
- 2. Click the Edit Devices button. The INACS Configuration window appears.
- 3. Select the station to be edited from the Stations list and click the appropriate status line number button. The Edit Point Parameters window appears.

AID	Point I	Description		Location	WG		
INACS-4-1-1-1	INACS	INPUT 1		CALGYAB	EN	=	
INACS-4-1-1-2	INACS	INPUT 2		CALGYAB	EN		
INACS-4-1-1-3	INACS	INPUT 3		CALGYAB	EN		
INACS-4-1-1-4	INACS	INPUT 4		CALGYAB	EN		
INACS-4-1-1-5	INACS	INPUT 5		CALGYAB	EN		
INACS-4-1-1-6	INACS	INPUT 6		CALGYAB	EN		Add Poi
INACS-4-1-1-7	INACS	INPUT 7		CALGYAB	EN		
INACS-4-1-1-8	INACS	INPUT 8		CALGYAB	EN	Ŧ	Delete Po
				N 100 1			
INACS INPUT 1 SID Location WG CALGYAB EN Units	<b>•</b>	AID Type Cond Type GP Reporting State	Severity NA 💌	Normal State Closed © Open	© S/ ◉ N	A SA	

Figure 25 - Edit Point Parameters – INACS Inputs

Configure the points either by applying a (refer to Using Metago Manager Templates

 Chapter 17) or by editing the points individually. Select the point to be edited from
the point list, then configure the Generic and Digital point parameters for the point.

#### **Generic point parameters**

Note: Depending on the license purchased from Westronic, not all fields may be displayed.

- Alarm / Event / Alarm-Env The Alarm, Event and Alarm-Environmental radio buttons configure whether the point is reported as an alarm, as an event or as an environmental alarm. See Appendix C, "Generic Point Parameters" for more information about how these reporting states differ.
- Point Description The Point Description field is a freeform text field to be used for a description of the point. Maximum length is 50 characters (punctuation characters are not recommended).
- SID The Source Identifier (SID) is a freeform text field that uniquely identifies a group of points. The SID is used as the target identifier in the TL1 message header. If the SID field is not configured, the RTU's TID is used in its place. Maximum length is 20 characters.
- *AID Type* The AID Type is a freeform text field that can be used in conjunction with the AID to help identify a point. This can be useful if the AID does not provide enough information to pinpoint the location of the point. Maximum length is 10 characters.
- Location The Location is a freeform text field that is reported in the TL-1 alarm message. This field is also referred to as the CLLI code, and is commonly used to identify the location of an alarm. Maximum length is 11 characters.
- WG The workgroup (WG) is a two-character text field that is reported in the TL-1 alarm message. This field is commonly used to determine which workgroup or department needs to be notified when this point changes state.

- Cond Type The Cond Type is a freeform text field that identifies the type of alarm or event being reported. Maximum length is 10 characters.
- Units A four-character text field, describing the measurement unit of the field device. This field is not generally used for digital points.
- Reporting State A dropdown menu with three options: Disabled (default), Enabled, and InSite Only. In this dropdown menu changes can be made on a point by point basis. "Enabling and Disabling all INACS Inputs" describes a per display method and is found later in this section.
  - An alarm point set to the "InSite Only" state will report only on the InSite alarm summary webpage and will not be reported via TL1 or SNMP. Any alarm point included in a derived alarm expression will have its reporting state set to InSite Only automatically.

*Note:* The default state of newly configured INACS points is Disabled. Enabled or InSite Only must be selected from the dropdown list for the point to be reported when it changes state.

#### **Digital parameters**

- Severity The severity field can be set to one of five levels. From highest to lowest severity, the levels are CR (Critical), MJ (Major), MN (Minor), RN (Routine), NA (Not Alarmed).
- Normal State The Normal State radio buttons are used to indicate which state is considered to be normal, and conversely, which state indicates an alarm condition. The default configuration is normally open, where a closed contact indicates an alarm.
- Service Affecting— The Service Affecting radio buttons configure the point to be either SA (Service Affecting) or NSA (Non-Service Affecting).

#### **Download button**

This button enables the Manager user to update parameters of an individual point without the need to download an entire configuration and restart the WS3500. Please refer to Appendix B for more information on "Point on the Fly" usage.

#### **Enabling and Disabling all INACS Inputs**

To enable, disable or report in InSite only all INACS inputs in a display:

- 1. Select the Serial Ports tab.
- 2. Select the INACS port to be edited from the Select Port list.
- 3. Click the Edit Devices button.
- 4. Select the INACS display to be edited from the list.
- 5. Click the Inputs button. The Edit Points Parameters window appears.
- Right- click in the point list, and a drop-down menu appears with the options Disable All, Enable All and InSite Only All. Two other options also appear in this drop down menu: *Import Points…* and *Export Points…* For more information on Import/Export please refer to Chapter 17 – "Using Templates".

7. Select the Enable All to enable all points in the point list, Disable All to disable all points in the point list or InSite Only to make all the points in the point list report in InSite only.

The color of the circle in the leftmost column indicates whether the point is enabled or disabled. Green indicates the point is enabled, red indicated the point is disabled and purple indicates the point is InSite only.

#### **INACS Outputs**

For each INACS output point, there is an AID field. The AID is a read-only field that is automatically created by Metago<sup>®</sup> Manager. For INACS output points, the format of the AID is INACSC-<port>-<station>-<point number>, where *port* is the serial port number (1-8, 11-26), *station* is the station address (1-2046), and *point number* is the INACS point number (1-256). For example, INACSC-5-1-32 indicates that the INACS point is configured on serial port 5, station 1, and it is output point 32.

#### **Editing INACS Outputs**

To edit output point parameters:

- 1. Select the Serial Ports tab and select the INACS port to be edited from the Select Port list.
- 2. Click the Edit Devices button. The INACS Configuration window appears.
- 3. Select the appropriate INACS station from the Stations list and click the Outputs button. If output points have not been added, a confirmation dialog box appears.

Confirm	ı 🗙
2	Outputs have not yet been configured for this station, would you like to configure them now?
	OK Cancel

Click OK to add the outputs and close the confirmation dialog box. The Edit Point Parameters window appears.

AID	Point	Description	Location WG
			Add P Delete
<b>eneric point</b> Point Description	parameters Alarm	○ Event ○ Alarm-Env	
SID	▼	AID Type	
Location	WG	Cond Type	
Units		Heporting State  ▼	
		Save 🕺 Cance	el DOWNLOAD

4. In the Edit Point Parameters window, click the Add Points button to add output points. The Add... window appears.

Add 🔀
Starting point:
Number of points to add:
OK Cancel

5. Enter the starting point number and the number of points to add. Click OK. The output points are added to the point list.

Edit Point Paramete	rs							
AID	Point	Description			Location	WG		
INACSC-4-1-9	INACS	OUTPUT 9			CALGYAB	EN		
INACSC-4-1-10	INACS	OUTPUT 10			CALGYAB	EN		
INACSC-4-1-11	INACS	OUTPUT 11			CALGYAB	EN		
INACSC-4-1-12	INACS	OUTPUT 12			CALGYAB	EN		
INACSC-4-1-13	INACS	OUTPUT 13			CALGYAB	EN		
INACSC-4-1-14	INACS	OUTPUT 14			CALGYAB	EN	=	Add Point
INACSC-4-1-15	INACS	OUTPUT 15			CALGYAB	EN		
INACSC-4-1-16	INACS	OUTPUT 16			CALGYAB	EN	-	Delete Point
Point Description INACS OUTPUT 16 SID Location CALGYAB Units	WG EN v	© Event	Alarm-Env	Severity NA .	Normal State O Closed O Open	SA I NS	i iA	
			Save	🔀 Cancel		[	D	

Figure 26 - Edit Point Parameters – INACS Outputs

- Configure the points either by applying a (refer to Using Metago Manager Templates

   Chapter 17) or by editing the points individually. Select the point to be edited from the point list, then configure the Generic and Digital point parameters for each point (refer to 'Generic Point Parameters' earlier in this section).
- 7. Click the Close button when the output points are all configured. The INACS Configuration window re-appears.

#### **INACS Health Points**

Each configured INACS port has an INACS health point for the entire port, and one health point for each configured INACS station. Communication failures with individual stations result in the associated health point being alarmed. If all stations on a port fail, then the port health point is alarmed.

In addition to the Health points created automatically by Metago Manager, the INACS protocol supports additional health points called INACS TBOS port fail F-bit points. A TBOS FAIL point is automatically added when a new station is added. If the INACS device is in TBOS mode, it will report the TBOS PORT FAIL (F-bit) point if all the TBOS devices on that port fail.

*Table 6* lists examples of AID, point description, severity, and normal state for INACS health points and TBOS FAIL points. The *x* represents the serial port number (1-8, 11-26); the y represents the station on the INACS device (1 – 2046). For example, HEALTH-7-1 would represent the INACS device on serial port 7 at station address 1, and its default point description would be TABS PORT 7 STN.

AID	Point Description	Severity	Normal State
HEALTH-x	INACS PORT x FAIL	CR	Open
HEALTH-x-y	INACS PORT x STN y	MJ	Open
INACSFB-x-y	INACS PORT x STN y TBOS PORT FAIL	MJ	Open

Table 6 INACS Health Point Configuration

#### Editing INACS TBOS PORT FAIL (F-BIT) Points

If the INACS device is in TBOS mode, it will report the TBOS PORT FAIL (F-bit) point if all the TBOS devices on that port fail. To edit TBOS PORT FAIL points,

- 1. Select the Serial Ports tab and select the INACS port to be edited from the Select Port list.
- 2. Click the Edit Devices button. The INACS Configuration window appears.
- 3. Select the INACS station to be edited from the Stations list.
- 4. Click the TBOS FAIL button. The Edit Points window appears, listing the INACS F-bit points. *Note: These points are automatically added when INACS stations are added.*

	1					le con d	
AID INACSER-4-1	Point INACS	Description POBT 4 STN 1 TROS	PORT FAIL		Location CALGYAR	EN	
<b>eneric point parame</b> Point Description	ters	○ Event ○ Al	larm-Env	Digital parameters			Add Poir
INACS PORT 4 STN 1 SID Location W	TBOS PORT F.	AIL AID Type Cond Type	▼	Severity MJ 💌	<ul> <li>Closed</li> <li>Open</li> </ul>	© SA ● NSA	
CALGYAB E Units	N <b>v</b>	GP Reporting State ENABLED	▼				

- 5. Select the point to be edited from the point list, then configure the Generic and Digital point parameters for each point (refer to 'Generic Point Parameters' earlier in this section).
- 6. Click the Close button to close the Edit Point Parameters window.

#### **Editing INACS Health Points**

To edit INACS Health points,

- 1. Select the Serial Ports tab and select an INACS port from the Select Port list.
- 2. Click the Edit Devices button. The INACS Configuration window appears.
- 3. Click the Health button. The Edit Point Parameters window appears.

Edit Point Parameters								Σ
AID	Point	Description			Location	WG	*	
HEALTH-4	INACS	PORT 4 FAIL						
HEALTH-4-1	INACS	PORT 4 STN 1			CALGYAB	EN	-	
							=	
							Add Po	in
							💂 🛛 Delete P	0
Conorio point poromate				Digital parameters				
aenenc point paramett	ers			Digital parameters				
Point Description	Alarm	🔘 Event 🛛 🔘 Ala	irm-Env					
INACS POBT 4 FAIL				Severity	Normal State			
SID		AID Tupe		CR 💌	Closed	SA SA		
[					Open	(O) NS	A	
Location WG	;	Cond Tupe						
		GP		•				
Unite	<u> </u>	Beporting State						
Onixs			-					
			🖉 Save	🕺 Cancel		ſ	DOWNLOAD	
			~					
							Close	e

4. Configure INACS Health points by selecting the point in the point list, then configuring the Generic and Digital point parameters for each point. Refer 'Generic Point Parameters' earlier in this chapter for the definitions of the parameters.



## **Configuring DS5PA Devices**

Serial ports configured as DS5PA (DS5000 Protocol Acquisition) poll downstream RTUs using the DS5000 protocol.

This section describes how to configure DS5PA serial ports, including stations, status lines, outputs, analogs and health points.

#### Adding DS5PA devices

1. Select the Serial Ports tab and either create a DS5PA port or select one from the Select Port list.

Port	Function	~	Port Settings	Serial Expansion Modules	
CRAFT	Craft		Port: Serial 1	Slot 1 (Bottom):	
COM 1	Console		Type: DS5PA	None	
Serial 1	DS5PA		Data bits: 8	Slot 2 (Top):	
		=	Stop bits: 1 Baud rate: 1200 Edit Settings		√ Save ∑ Cance
		~	Configured Devices 0 devices configured		
Add F	Port Delete Port	ו	Edit Devices		

Figure 27 - Serial Ports – DS5PA Device

2. Click the Edit Devices button to configure the devices connected to the selected port. The DS5PA Configuration window appears.

DS5PA Configuration	a heating	L X
Stations	Status Lines	
		Outputs
		Health
		TBOS Ports
Add Delete	Edit Add Delete	Analogs
		Close

Figure 28 DS5PA Configuration dialog box

3. Click the Add button below the Stations list to add a station. The Adding a Device window appears.

ŀ	Adding a Device	23
	Device Name:	Address:
	STATION 1	1
	Location:	WG:
	CLGYABLAB	EN 💌
		OK 🗙 Cancel

Enter values for the following fields:

- Address The DS5000 station address. The supported range is 1 to 254.
- Location (CLLI) The CLLI code is a freeform text field that is reported in the TL-1 alarm message. The CLLI code is a maximum of 11 characters long and is used to identify the site location of an alarm.
- WG The WG is a two-character text field that is reported in the TL-1 alarm message.
- 4. Click OK to close the Adding a Device window. The DS5000 Configuration window reappears with the new station displayed in the Stations list and Status Line 0 (DS5000 system status points) automatically configured on that station.

DS5PA Configuration	a hearing	×
Stations STATION 1	Status Lines DS5PA STN:1 LINE:0	Outputs
		Health
		TBOS Ports
Add Delete	Edit Add Delete	Analogs
		Close

- 5. Configure the Status Lines for that station.
  - a. Click the Add button under the Status Lines list. The Status Lines window appears.

😿 Status Lines	
Add statu	ıs line #
1	
ОК	Cancel

- b. Enter the status line number to be added and click OK to close the window. This automatically adds 32 DS5PA inputs on that status line. The DS5PA Configuration window reappears with the new Status Line displayed in the Status Lines list.
- c. Repeat the above process until all desired Status Lines are configured for that Station. The valid range of status lines is 0 to 16, with status line 0 reserved for the system status points. (Refer to *DS5PA Discrete Inputs* later in this chapter for steps on how to modify the configuration of input points).
- 6. Configure the Discrete Outputs for the station.
  - a. In the DS5PA Configuration window, click the Outputs button. If the discrete output points were not previously defined, the following confirmation dialog box appears.



- b. Click OK to close the confirmation dialog box. The DS5PA Configuration window reappears. The text in the Outputs button is now **bolded** indicating that output points have been configured for that station.
- c. Click on the Outputs button to add output points. The Edit Point Parameters window appears with no points entered.

d. Click the Add Points button. The Add pop-up window appears.

Ac	ld 🛛 🔀
	Starting point:
	Number of points to add:
	OK Cancel

e. Enter the starting point number and the number of points to add. Click OK. The output points will be added to the point list. The maximum number of discrete control points per DS5PA station is 128 (range 1 to 128).

🐨 Edit I	Point Parameters							
AID	)	Point Descript	ion		Location	WG		
OS!	5PAC-1-1-121	DS5PA OUTPUT	121		CALGYAB	EN		
🔴 DSS	5PAC-1-1-122	DS5PA OUTPUT	122		CALGYAB	EN		
🔴 DSS	5PAC-1-1-123	DS5PA OUTPUT	123		CALGYAB	EN		
🔴 DSS	5PAC-1-1-124	DS5PA OUTPUT	124		CALGYAB	EN		
🔴 DSS	5PAC-1-1-125	DS5PA OUTPUT	125		CALGYAB	EN		
🔴 DSS	5PAC-1-1-126	DS5PA OUTPUT	126		CALGYAB	EN		Add Point
🔴 DSS	5PAC-1-1-127	DS5PA OUTPUT	127		CALGYAB	EN		
🔴 DS	5PAC-1-1-128	DS5PA OUTPUT	128		CALGYAB	EN	-	Delete Point
Gene	eric point parameters			Digital parameters				
Poir DS <sup>1</sup> SID Loc. CAI Unit	nt Description 5PA OUTPUT 128	Alarm Eve AlD Typ Cond Ty Cond Ty Reportin DISABL	nt Alarm-Env e pe g State ED v	Severity NA 💌	Normal State Closed Open	ି 54 ତ NS	A SA	
	Save Save DOWNLOAD							
								Close

- f. Configure the points either by applying a template (refer to *Using Metago* Manager Templates Chapter 17) or by editing the points individually. Select a point from the point list, then configure the Generic and Digital point parameters for each point (refer to Generic Point Parameters later in this chapter).
- g. Click the Close button to save the changes and close the Edit Point Parameters window. The DS5PA Configuration window reappears.
- 7. Configure the TBOS Ports for the DS5000 station.
  - a. In the DS5PA Configuration window, click the TBOS Ports button. The DS5PA TBOS Ports window appears.



b. Click the port button for the port to be edited. If the port has not already been added, the following message appears:

Confirm	
This port has not been d Would you like to define	efined. it now?
OK Cancel	]

c. Click the OK button to add the port; the DS5PA TBOS Displays window appears. All eight TBOS displays, containing 64 input points per display are automatically created (indicated by the **bolded** text on the Input Points Display buttons).

DS5PA TBOS Displays - Stn: 1 Port: 1						
Input Points						
Display 1 (1-32)	Display 2 (1-32)	Display 3 (1-32)	Display 4 (1-32)			
Display 1 (33-64)	Display 2 (33-64)	Display 3 (33-64)	Display 4 (33-64)			
Display 5 (1-32)	Display 6 (1-32)	Display 7 (1-32)	Display 8 (1-32)			
Display 5 (33-64)	Display 6 (33-64)	Display 7 (33-64)	Display 8 (33-64)			
Output Points						
Display <u>1</u>	Display 2	Display <u>3</u>	Display <u>4</u>			
Display <u>5</u>	Display <u>6</u>	Display 7	Display <u>8</u>			
			Close			

There are two buttons associated with each Display in the Input Points panel. The numbers in brackets represent the point number. For example, Display 1 (1 - 32) represents display 1, TBOS input points 1 to 32. Display 1 (33 - 64) represents display 1, TBOS input points 33 to 64.

d. To configure the TBOS input points, click the appropriate Display button in the Input Points panel. The Edit Point Parameters window appears.

AID	Point	Description			Location	WG	*
DS5T-1-1-1-1	DS5PA	TBOS INPUT 1					
DS5T-1-1-1-1-2	DS5PA	TBOS INPUT 2					
DS5T-1-1-1-3	DS5PA	TBOS INPUT 3					
DS5T-1-1-1-4	DS5PA	TBOS INPUT 4					
DS5T-1-1-1-1-5	DS5PA	TBOS INPUT 5					
DS5T-1-1-1-6	DS5PA	TBOS INPUT 6					Add P
DS5T-1-1-1-7	DS5PA	TBOS INPUT 7					
DS5T-1-1-1-8	DS5PA	TBOS INPUT 8					- Delete
Point Description	eters Alarm	⊚ Event ©	) Alarm-Env	Orgital parameter	Normal State		
Point Description DS5PA TBOS INPUT	<ul> <li>Alarm</li> </ul>	Event	) Alarm-Env	Severity	Normal State	SA	A .
Point Description DS5PA TBOS INPUT SID	Alarm	C Event C	) Alam-Env	Severity	Normal State Closed Open	<ul><li>SA</li><li>NS</li></ul>	а 54
Point Description DS5PA TBOS INPUT SID Location W	eters Alarm VG	Event C	Alam-Env	Digital parameter	s Normal State Closed Open	© SA ⊚ NS	а 6А
Point Description DS5PA TBDS INPUT SID Location V	Alarm     Alarm     G	Event AlD Type Cond Type GP	Alarm-Env	Digital parameter	Normal State Closed Open	SA © NS	а 5А
Point Description OS5PA TBOS INPUT SID Location V Units	eters Alarm VG VG	© Event © AID Type Cond Type GP Reporting State DISABLED	) Alarm-Env	Severity NA 💌	Normal State Closed Open	© SA ⊚ NS	A SA

- e. Configure the points either by applying a template (refer to *Using Metago* Manager Templates Chapter 17) or by editing the points individually. Select the point from the point list, then configure the Generic and Digital point parameters for each point (refer to Generic Point Parameters later in this chapter).
- f. Click the Close button to save the changes and close the Edit Point Parameters window. The DS5PA TBOS Displays window box reappears.
- g. Repeat steps 7-d to 7-f until all the desired TBOS input points are configured on that port.
- h. To configure the TBOS Output Points, click the appropriate Display button in the Output Point panel in the DS5PA TBOS Displays window. If the output points have not been previously configured, the following message appears:



- i. Click the OK button to add the TBOS output points. The Edit Point Parameters window appears. 64 TBOS output points are automatically created.
- j. Configure the points either by applying a template (refer to *Using Metago* Manager Templates Chapter 17) or by editing the points individually. Select the point to be edited from the point list, then configure the Generic and Digital point parameters for each point (refer to Generic Point Parameters later in this chapter).
- k. Click the Close button to save the changes and close the Edit Point Parameters window. The DS5PA TBOS Displays window reappears.

- I. Repeat steps 7-h to 7-k until you have defined all the TBOS output points on that port.
- m. Close all the windows until the DS5PA TBOS Ports dialog box reappears. Repeat steps 7-a to 7-I until all desired TBOS ports have been added to the station.
- 8. Configure the Analog points for the DS5000 Station.
  - a. In the DS5PA Configuration window, click the Analogs button. The Analog Form window appears.

🐨 DS5PA Analog Form - Stn: 1	
Analog(1-8) Analog(9-16) Analog(17-24)	Analog(25-32)
Analog(33-40) Analog(41-48) Analog(49-56)	Analog(57-64)
Delete Shelf	Close

b. Each DS5000 Shelf can have 8 analog points, for a maximum of 64 analogs for each DS5000 system. Select the analog group required. Analogs are further separated into Lines, starting at Line 151, each line containing 2 analog points. Line 151, would contain Analog point 1 and Analog point 2, etc.

W DS5PA Analog Lines - Stn: 1 Shelf: 1	
Line 151 Line 152 Line 153	Line 154

c. Select the Line # button for the analog points to be added. The Edit Points Parameter window appears.
👿 Edit Point Parameters				
AID ○ DS5PAA-1-1-1 ● DS5PAA-1-1-2	Point Description DS5PA Analog 1 DS5PA Analog 2	Lo	vication WG	Add Point
Generic point parameter Point Description DS5PA Analog 1 SID Location WG	S Alarm Event Alarm-Env AlD Type Cond Type GP Cond Type GP Cond State	Analog parameters Zero Span 0 255 EngZero EngSpan 0 -60 DeadBand 0 •	Alarm         Value           Hi Hi         0         Image: Compare the second	Severity SA NA V NA V NA V NA V
	ENABLED V Save	Cancel	[	DOWNLOAD Close

- d. Configure the points either by applying a template (refer to *Using Metago* Manager Templates Chapter 17) or by editing the points individually. Select the point from the point list, then configure the Generic and Analog parameters for each point (refer to Generic Point Parameters later in this chapter).
- e. Click the close button to save the changes and close the Edit Point Parameters window. The DS5PA Analog Lines box appears.
- f. Repeat steps 8-b to 8-e until all the desired Analog input points are configured on that shelf.
- Click the Close button to close all the windows until the DS5PA Configuration window appears. Repeat steps 3 to 7 above until all the required stations associated with the DS5PA serial port have been added.

# **Deleting DS5PA Stations**

- 1. Select the Serial Ports tab and select the DS5PA port to be edited from the Select Port list.
- 2. Click the Edit Devices button. The DS5PA Configuration window appears.
- 3. Select the station to be deleted from the Station list and click the Delete button below the Stations list. The station and all its associated points will be deleted.
- 4. Click the Close button to close the DS5PA Configuration window.

#### **DS5PA Discrete Inputs**

For each DS5PA discrete input point, there is an AID field. The AID is a read-only field that is automatically created by Metago<sup>®</sup> Manager. For DS5PA discrete input points, the format of the AID is DS5PA-<port>-<station>-<status line>-<point number>, where *port* is the serial port number (1-8, 11-26), *station* is the station address (1-254), *status line* is the status line number (0-16), and *point number* is the DS5PA point number

(1-32). For example, DS5PA-5-1-14-32 indicates that the DS5PA point is configured on serial port 5, station 1, status line 14, and it is input point 32.

#### **Editing DS5PA Discrete Inputs**

When a status line is added, 32 input points are automatically created. To edit these inputs:

- 1. Click the Serial Ports tab and select the DS5PA port to be edited from the Select Port list.
- 2. Click the Edit Devices button. The DS5PA Configuration window appears.
- Select the station to be edited from the Stations list, then select the desired status line from the Status Lines list. Click the Edit button. The Edit Point Parameters window appears.

Edit Point Parameters	and the second s			
AID	Point Description	Location	WG 🔺	
DS5PA-1-1-1	DS5PA INPUT 1	CALGYAB	EN	
DS5PA-1-1-2	DS5PA INPUT 2	CALGYAB	EN	
DS5PA-1-1-3	DS5PA INPUT 3	CALGYAB	EN	
DS5PA-1-1-4	DS5PA INPUT 4	CALGYAB	EN	
DS5PA-1-1-1-5	DS5PA INPUT 5	CALGYAB	EN	
DS5PA-1-1-6	DS5PA INPUT 6	CALGYAB	EN	Add Point
DS5PA-1-1-7	DS5PA INPUT 7	CALGYAB	EN	
DS5PA-1-1-8	DS5PA INPUT 8	CALGYAB	EM 👻	Delete Point
Point Description DS5PA INPUT 1 SID Location WG CALGYAB EN Units	Alarm Event Alarm-Env AlD Type Cond Type GP Cond Type Beporting State DISABLED	Severity Normal State NA  © Closed © Open	─ SA ● NSA	
	Save S	§ Cancel	D0'	WNLOAD
				Close

Figure 29 - Edit Point Parameters – DS5PA Discrete Inputs

4. Configure each of the DS5PA input points, either by applying a template (refer to *Using Metago* Manager Templates – Chapter 17) or by editing the points individually. Select the point to be edited from the point list, then configure the parameters for that point.

# **Generic point parameters**

Note: Depending on the license purchased from Westronic, not all fields may be displayed.

- Alarm / Event / Alarm-Env The Alarm, Event and Alarm-Environmental radio buttons configure whether the point is reported as an alarm, as an event or as an environmental alarm. See Appendix C, "Generic Point Parameters" for more information about how these reporting states differ.
- *Point Description* The Point Description field is a freeform text field to be used for a description of the point. Maximum length is 50 characters (punctuation characters are not recommended).

- SID The Source Identifier (SID) is a freeform text field that uniquely identifies a group of points. The SID is used as the target identifier in the TL1 message header. If the SID field is not configured, the RTU's TID is used in its place. Maximum length is 20 characters.
- AID Type The AID Type is a freeform text field that can be used in conjunction with the AID to help identify a point. This can be useful if the AID does not provide enough information to pinpoint the location of the point. Maximum length is 10 characters.
- Location The Location is a freeform text field that is reported in the TL-1 alarm message. This field is also referred to as the CLLI code, and is commonly used to identify the location of an alarm. Maximum length is 11 characters.
- WG The workgroup (WG) is a two-character text field that is reported in the TL-1 alarm message. This field is commonly used to determine which workgroup or department needs to be notified when this point changes state.
- Cond Type The Cond Type is a freeform text field that identifies the type of alarm or event being reported. Maximum length is 10 characters.
- Units A four-character text field, describing the measurement unit of the field device. This field is not generally used for digital points.
- Reporting State A dropdown menu with three options: Disabled (default), Enabled, and InSite Only. In this dropdown menu changes can be made on a point by point basis. "Enabling and Disabling all DS5PA Discrete Inputs" describes a per display method and is found later in this section.
  - An alarm point set to the "InSite Only" state will report only on the InSite alarm summary webpage and will not be reported via TL1 or SNMP. Any alarm point included in a derived alarm expression will have its reporting state set to InSite Only automatically.

*Note:* The default state of newly configured DS5PA points is Disabled. Enabled or InSite Only must be selected from the dropdown list for the point to be reported when it changes state.

# **Digital parameters**

- Severity The severity field can be set to one of five levels. From highest to lowest severity, the levels are CR (Critical), MJ (Major), MN (Minor), RN (Routine), NA (Not Alarmed).
- Normal State The Normal State radio buttons are used to indicate which state is considered to be normal, and conversely, which state indicates an alarm condition. The default configuration is normally open, where a closed contact indicates an alarm.
- Service Affecting— The Service Affecting radio buttons configure the point to be either SA (Service Affecting) or NSA (Non-Service Affecting).

# Download button

This button enables the Manager user to update parameters of an individual point without the need to download an entire configuration and restart the WS3500. Please refer to Appendix B for more information on "Point on the Fly" usage.

#### Enabling and Disabling all DS5PA Discrete Inputs

To enable, disable or report in InSite only all DS5PA inputs in a display:

- 1. Select the Serial Ports tab.
- 2. Select the DS5PA port to be edited from the Select Port list.
- 3. Click the Edit Devices button.
- 4. Select the DS5PA display to be edited from the list.
- 5. Click the Inputs button. The Edit Points Parameters window appears.
- Right- click in the point list, and a drop-down menu appears with the options Disable All, Enable All and InSite Only All. Two other options also appear in this drop down menu: *Import Points…* and *Export Points…* For more information on Import/Export please refer to Chapter 17 – "Using Templates".
- Select the Enable All to enable all points in the point list, Disable All to disable all points in the point list or InSite Only to make all the points in the point list report in InSite only.

The color of the circle in the leftmost column indicates whether the point is enabled or disabled. Green indicates the point is enabled, red indicated the point is disabled and purple indicates the point is InSite only.

# **DS5PA Discrete Outputs**

For each DS5PA discrete output point, there is an AID field. The AID is a read-only field that is automatically created by Metago<sup>®</sup> Manager. For DS5PA discrete output points, the format of the AID is DS5PAC-<port>-<station>-<point number>, where port is the serial port number (1-8, 11-26), station is the station address (1-254), and point number is the DS5PA point number. For example, DS5PA-5-1-32 indicates that the DS5PA point is configured on serial port 5, station 1, and it is discrete output point 32.

#### **Editing DS5PA Discrete Outputs**

To edit the discrete output points:

- 1. Select the Serial Ports tab and select the DS5PA port to be edited from the Select Port list.
- 2. Click the Edit Devices button. The DS5PA Configuration window appears.
- 3. Select the DS5PA station to be edited from the Stations list and then click the Outputs button. The Edit Point Parameters window appears.

Edit Point Parameters	5	_	_					
AID	Point	Description			Location	WG		
DS5PAC-1-1-1	DS5PA	OUTPUT 1			CALGYAB	EN		
DS5PAC-1-1-2	DS5P4	OUTPUT 2			CALGYAB	EN		
DS5PAC-1-1-3	DS5PA	OUTPUT 3			CALGYAB	EN		
DS5PAC-1-1-4	DS5PA	OUTPUT 4			CALGYAB	EN		
DS5PAC-1-1-5	DS5P4	OUTPUT 5			CALGYAB	EN		
DS5PAC-1-1-6	DS5PA	OUTPUT 6			CALGYAB	EN		Add Point
DS5PAC-1-1-7	DS5PA	OUTPUT 7			CALGYAB	EN		
DS5PAC-1-1-8	DS5PA	OUTPUT 8			CALGYAB	EN	Ŧ	Delete Point
Generic point param       Point Description       DS5PA DUTPUT 8       SID       Location       CALGYAB       Units	eters Alarm V WG EN V	Cond Type	Alarm-Env	Digital parameter	S Normal State ○ Closed ④ Open	() S. () N	A SA	
		DISABLED	▼ ✓ Save	🔀 Cancel			D	)WNLOAD

Figure 30 - Edit Point Parameters – DS5PA Outputs

- 4. To add points, click the Add Points button.
- Configure the points either by applying a template (refer to Using Metago Manager Templates – Chapter 17) or by editing the points individually. Select the point to be edited from the point list, then configure the Generic and Digital point parameters for each point (refer to Generic Point Parameters earlier in this chapter).

#### **DS5PA Health Points**

Each configured DS5PA port, has one DS5PA health point for the entire port, and a health point assigned to each configured DS5PA station. Communication failures with individual stations result in the associated health point being alarmed. If all stations on a port fail then the port health point is alarmed.

*Table 7* lists the AID, point description, severity, and normal state of DS5PA health points. The *x* in the AID and point description represents the serial port number (1-8, 11-26); the y in the point description represents the station on the DS5PA device (1 - 254). For example, HEALTH-7-1 would represent the DS5PA Health point for serial port 7, DS5000 station 1, and its default point description would be DS5PA PORT 7 STN 1.

AID	Point Description	Severity	Normal State
HEALTH-x	DS5PA PORT x FAIL	CR	Open
HEALTH-x-y	DS5PA PORT x STN y	MJ	Open

Table 7 DS5PA Health Point Configuration

#### **Editing DS5PA Health Points**

To edit the DS5PA Health points:

1. Select the Serial Ports tab and select the DS5PA port to be edited from the Select Port list.

- 2. Click the Edit Devices button. The DS5PA Configuration window appears.
- 3. Click the Health button. The Edit Point Parameters window appears.

w	Edit Point Parameters	1. A					
	AID	Point Description		Location	WG		
	HEALTH-1	DS5PA PORT 1 FAIL					
	HEALTH-1-1	DS5PA PORT 1 STN 1					
						Add Point	Ĩ
L						•	2
	Generic point parameters		Digital parameters				ηH
	Baint Decembring	Alarm 🔘 Event 🔘 Alarm-Env					
	Inssea PORT 1 FAIL		Severity	Normal State			
	SID		CR 💌	Closed	SA (	•	
	■		]	Open 0	<b>O</b> N2	A	
	Location WG	Cond Type	·				
		▼ GP	]				
	Units	Reporting State ENABLED -					
		Sav	e 🔀 Cancel			DOWNLOAD	]
						Close	

4. Configure each DS5PA Health point by selecting the point in the point list then configuring the Generic and Digital point parameters for each point. Refer to Generic Point Parameters earlier in this chapter for the definitions of the parameters.

# **DS5PA TBOS Points**

For each DS5PA TBOS input and output point, there is an AID field. The AID is a readonly field that is automatically created by Metago<sup>®</sup> Manager. The AID types are:

```
DS5T-<v>-<x>-<z> (TBOS inputs) and
```

DS5TC-<v>-<w>-<z> (TBOS outputs)

Where:

- *v* = the WS3500 serial port (1-8, 11-26)
- w = the DS5000 station number (1-254)
- x = the DS5000 downstream TBOS port (1-8)
- y = the DS5000 downstream TBOS display (1-8)
- z = point number (1-64)

#### **Editing DS5PA TBOS Points**

To edit DS5PA TBOS points:

- 1. Select the Serial Ports tab and select the DS5PA port to be edited from the Select Port list.
- 2. Click the Edit Devices button. The DS5PA Configuration window appears.
- 3. Select the station to be edited from the Station List, and then click the TBOS Ports button. The DS5PA TBOS Ports window appears.
- 4. Click the desired Port button. The DS5PA TBOS Displays window appears.
- 5. Click the desired Display button. The Edit Parameters window appears.

AID	Point	Description			Location	WG	*
DS5T-1-1-1-1	DS5PA	TBOS INPUT 1					=
DS5T-1-1-1-2	DS5PA	TBOS INPUT 2	2				
DS5T-1-1-1-3	DS5PA	TBOS INPUT 3	}				
DS5T-1-1-1-4	DS5PA	TBOS INPUT 4	ļ				
DS5T-1-1-1-5	DS5PA	TBOS INPUT 5	i				
DS5T-1-1-1-6	DS5PA	TBOS INPUT 6	6				Add Po
DS5T-1-1-1-7	DS5PA	TBOS INPUT 7	,				
DS5T-1-1-1-8	DS5PA	TBOS INPUT 8	}				
eneric point param Point Description	eters O Alarm	🔿 Event	⊘ Alarm-Env	Digital parameter	Normal State		
Point Description OS5PA TBOS INPUT SID Location	eters Alarm Alarm VG 	Cond Type	Alarm-Env	Digital parameter Severity NA 💌	Normal State Closed Open	() S/ () N	4 SA

6. Configure the points, either by applying a template (refer to *Using Metago* Manager Templates – Chapter 17) or by editing the points individually. Select the point from the point list, then configure the Generic and Digital point parameters for each point (refer to Generic Point Parameters earlier in this chapter).

#### Enabling and Disabling DS5PA TBOS Points

To enable, disable or report in InSite only all DS5PA TBOS inputs in a display:

- 1. Select the Serial Ports tab.
- 2. Select the DS5PA port to be edited from the Select Port list.
- 3. Click the Edit Devices button.
- 4. Select the DS5PA station to be edited from the list.
- 5. Click the TBOS Ports button.
- 6. Click the desired TBOS port button.
- 7. Click the desired display button. The Edit Points Parameters window appears.
- 8. Right-click in the point list and a drop-down menu appears with the options Disable All, Enable All and InSite Only All.
- 9. Select the Enable All to enable all points in the point list, Disable All to disable all points in the point list or InSite Only to make all the points in the point list report in InSite only.

The color of the circle in the leftmost column indicates whether the point is enabled or disabled. Green indicates the point is enabled, red indicated the point is disabled and purple indicates the point is InSite only.

# **DS5PA Analog Inputs**

For each DS5PA Analog input point, there is an AID field. The AID is a read-only field that is automatically created by Metago<sup>®</sup> Manager. The AID types are:

DS5PAA-<X>-<y>-<z>

Where:

x = the WS3500 serial port (1-8, 11-26)

y = the DS5000 station number (1-254)

z = the DS5000 analog input point number (1-64)

# **Editing Analog Inputs**

To edit DS5PA inputs,

- 4. Select the Serial Ports tab.
- 5. Select the DS5PA Port to be edited from the Select Port list.
- 6. Select the station to be edited from the Station List, and then click the Analogs button.
- 7. Select the Analog shelf to be edited.

8. Select the Line # which contains the Analog inputs to be edited. The Edit Point Parameters window appears.

AID	Point	Description			Le	ocation	₩G		
DS5PAA-1-1-1	DS5PA	Analog 1							
DS5PAA-1-1-2	DS5PA	Analog 2							
								=	
									Add Poi
									Delete Pr
								Ŧ	
eneric point param	eters			Analog pa	arameters				
	Alarm	Event	Alarm-Env	Zero	Span	Alarm	Value	Sev	veritv SA
Point Description				0	255	1010	0		
DS5PA Analog 1				EngZero	EngSpan		0		
		AID Tupe		0	-60	HI	0	🚔 🛛 NA	
SID		нь туро							
SID	▼		▼	Dear	dBand	LO	0	🖨 🛛 🗛	
SID Location <sup>N</sup>	▼ ⊮G	Cond Type	▼	Dea 0	dBand		0		
SID Location	▼ wG	Cond Type	•••	Dea 0	dBand	LO LO LO	0	NA	
SID Location N Units	▼ wG ▼	Cond Type GP Reporting St	▼ ▼	Dea 0	dBand T	LO LO LO	0	NA	
SID Location N Units	▼ wG ▼	Cond Type GP Reporting St ENABLED	▼ ▼ ate	Dea 0	dBand T	LO LO LO	0	NA	
SID Location N Units	♥ ₩G	Cond Type GP Reporting St ENABLED	v v ate	Dear 0	dBand	L0 L0 L0	0	NA	

9. Configure the points, either by applying a (refer to *Using Metago* Manager Templates – Chapter 17) or by editing the points individually. Select the point from the point list, then configure the Generic (refer to Generic Point Parameters earlier in this chapter) and Analog point parameters for each point.

# **Analog Parameters**

The DS5000 analogs are based on a 4-bit analog/digital converter. For all inputs, the Zero value is 0 and the Span is up to 16,383, depending on the Analog Type set in the DS5000 for each point (Refer to DS5000 documentation for Analog Types). Recommened Span value for Type 4 Analogs is 1000 and for Type 16 is 5998.

- Zero The minimum raw data value provided by the DS5000.
- *Span* The span of the raw data provided by the DS5000. The formula for calculating Span is

Span = Maximum raw data value - Minimum raw data value

- EngZero The scaled data value corresponding to the Zero value.
- EngSpan The span of the scaled data for this input. The formula for calculating EngSpan is

EngSpan = Maximum scaled data value - EngZero

 Deadband — The deadband value is used to keep an analog point from being inadvertently reported as a change of state when the input fluctuates slightly. A change of state will be reported only when the analog value has exceeded the threshold by a value greater than the deadband.

# **Alarm Processing Parameters**

- *Alarm* Each analog point has four alarm thresholds: high-high (HI HI), high (HI), low (LO), and low-low (LO LO).
- Value For each threshold, enter the scaled threshold value. An alarm will be reported when the analog value has crossed the configured threshold value + the deadband.
- Severity—An alarm severity can be assigned for each alarm threshold.
- SA Each threshold can be designated as either SA (service affecting) or NSA (non service affecting).

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# **Configuring E2A Devices**

Serial/202T Modem ports configured as E2A (E-Telemetry) poll downstream RTUs using the E2A protocol.

This section describes how to configure E2A serial/202T modem ports, including remote addresses, displays, outputs and health points.

# Adding E2A devices

1. Select the Serial Ports tab and either create an E2A Collection port or select one from the Select Port list.

aft onsole ABS 305 2A Collection 24 Collection	Port: Serial 11 (EXP1 P01) Type: E2A Collection HandShake: Simple DTR/DSR: DTR	Slot 1 (Bottom): Serial (8 port) (E2A)
onsole ABS BOS 2A Collection 2A Collection	Type: E2A Collection HandShake: Simple DTR/DSR: DTR	Serial (8 port) (E2A)
ABS BOS 2A Collection 2A Collection	HandShake: Simple DTR/DSR: DTR	Slot 2 (Top): None
30S 2A Collection 2A Collection	DTR/DSR: DTR	None
2A Collection 2A Collection		Carrent St. Carrent
2A Collection		Canal SC Canal
		Save 🐼 Lancel
2A Collection	Edit Settings	
2A Collection		
•	Configured Devices 10 devices configured	
Delete Port	Edit Devices	
2/	A Collection	A Collection Configured Devices 10 devices configured Edit Devices

Figure 31 – Serial/202T Modem Ports – E2A Device

2. Click the Edit Devices button to configure the devices connected to the selected port. The E2A Configuration window appears.

Terminal State Collection Configurat	ion 💶 🗖 🔀
-Remote Addresses	Add
	Delete
-Displays	Edit Points
Add Delete	

Figure 32 E2A Configuration dialog box

3. Click the Add button beside the Remote Address list to add a new remote device. The Adding a Device window appears.

Adding a Device	
Device Name:	Remote:
Remote Address	
Location:	WG:
Input points Output points	✓ OK X Cancel

Enter values for the following fields:

- Remote The E2A remote address. The supported range is 1 to 256.
- Location The Location (CLLI code) is a freeform text field that is reported in the TL-1 alarm message. The CLLI code is a maximum of 11 characters long and is used to identify the site location of an alarm.
- WG The WG is a two-character text field that is reported in the TL-1 alarm message.
- 4. Click OK to close the Adding a Device window. The E2A Configuration window reappears with the new address displayed in the Remote Addresses list. A default display number 5 is also added with every Remote Address because at least one display is required for a remote address.

Transformation Configur	ation 💶 🗖 🔀
Remote Addresses Remote Address 1	Add
	Delete
Displays E2AC IN:1 Disp:5	Edit Points
Ad Delete	

# Adding E2A Displays

- 1. Select the Serial Ports tab and select an E2A port from the Select Port list.
- 2. Click the Edit Devices button. The E2A Configuration pop-up window appears.

3. Select the Remote Address you wish to add the new display to and click the Add button. The following pop-up window will appear.

🐨 E2A Coll Add Display	
Add Display #	
Location:	WG:
Output points OK	Cancel

Enter values for the following fields:

- Add Display # The E2A Display number. The supported range is 5 to 64.
- Location The Location (CLLI code) is a freeform text field that is reported in the TL-1 alarm message. The CLLI code is a maximum of 11 characters long and is used to identify the site location of an alarm.
- WG The WG is a two-character text field that is reported in the TL-1 alarm message.
- *Output Points* The Output Points check box should be checked if this display has output points.
- 4. Click OK to add the display.
- 5. Click the Close button to close the E2A Configuration window.

# **Deleting E2A Displays**

- 1. Select the Serial Ports tab and select an E2A port from the Select Port list.
- 2. Click the Edit Devices button. The E2A Collection Configuration pop-up window appears.
- 3. Select the display you wish to delete from the Displays list and click the Delete button. A confirmation dialog box appears.



- 4. Click OK to confirm the deletion.
- 5. Click the Close button to close the E2A Collection Configuration window.

# E2A Inputs

For each E2A input point, there is an AID field. The AID is a read-only field that is automatically created by Metago<sup>®</sup> Manager. For E2A input points, the format of the AID is TABS-<port>-<address>-<display>-<point number>, where *port* is the serial port number (11-18), *address* is the device address number (1-256), *display* is the display

number (1-64), and *point number* is the E2A point number (1-64). For example, E2A-11-1-5-64 indicates that the E2A point is configured on serial port 11, address 1, display 5, and it is input point 64.

#### **Editing E2A Inputs**

When an E2A display is created, 64 input points are automatically added. To edit these inputs:

- 1. Select the Serial Ports tab and select the E2A port to be edited from the Select Port list.
- 2. Click the Edit Devices button. The E2A Configuration window appears.
- 3. Select the appropriate E2A display from the Displays list and click the Inputs button. The Edit Point Parameter window appears.

Edit Point Parameters						- • ×
AID	Point Descripti	oint Description			WG	•
E2A-11-1-5-1	E2A INPUT 1					
• E2A-11-1-5-2	E2A INPUT 2					
\varTheta E2A-11-1-5-3	E2A INPUT 3					
• E2A-11-1-5-4	E2A INPUT 4					
• E2A-11-1-5-5	E2A INPUT 5					
• E2A-11-1-5-6	E2A INPUT 6					Add Point
• E2A-11-1-5-7	E2A INPUT 7					
• E2A-11-1-5-8	E2A INPUT 8					- Delete Point
Point Description E2A INPUT 1 SID Location WI	Alarm Ever     AlD Type     AlD Type     GP     Reportin	Alarm-Env e e e e e e e e g State	Severity	Normal State	⊙ SA ⊚ NS	A
	DISABL	ED V	🔀 Cancel			DOWNLOAD

Figure 33 - Edit Point Parameters – E2A Inputs

4. Configure the points either by applying a template (refer to *Using Metago* Manager Templates – Chapter 17) or by editing the points individually. Select the point from the point list then configure the Generic and Digital point parameters for each point.

# **Generic point parameters**

Note: Some of the fields in the generic point parameters panel are populated when you created the E2A device. Depending on the license purchased from Westronic, not all fields may be displayed.

- Alarm / Event / Alarm-Env The Alarm, Event and Alarm-Environmental radio buttons configure whether the point is reported as an alarm, as an event or as an environmental alarm. See Appendix C, "Generic Point Parameters" for more information about how these reporting states differ.
- *Point Description* The Point Description field is a freeform text field to be used for a description of the point. Maximum length is 50 characters (punctuation characters are not recommended).

- SID The Source Identifier (SID) is a freeform text field that uniquely identifies a group of points. The SID is used as the target identifier in the TL1 message header. If the SID field is not configured, the RTU's TID is used in its place. Maximum length is 20 characters.
- AID Type The AID Type is a freeform text field that can be used in conjunction with the AID to help identify a point. This can be useful if the AID does not provide enough information to pinpoint the location of the point. Maximum length is 10 characters.
- Location The Location is a freeform text field that is reported in the TL-1 alarm message. This field is also referred to as the CLLI code, and is commonly used to identify the location of an alarm. Maximum length is 11 characters.
- WG The workgroup (WG) is a two-character text field that is reported in the TL-1 alarm message. This field is commonly used to determine which workgroup or department needs to be notified when this point changes state.
- Cond Type The Cond Type is a freeform text field that identifies the type of alarm or event being reported. Maximum length is 10 characters.
- Units A four-character text field, describing the measurement unit of the field device. This field is not generally used for digital points.
- Reporting State A dropdown menu with three options: Disabled (default), Enabled, and InSite Only. In this dropdown menu changes can be made on a point by point basis. "Enabling and Disabling all E2A Inputs" describes a per display method and is found later in this section.
  - An alarm point set to the "InSite Only" state will report only on the InSite alarm summary webpage and will not be reported via TL1 or SNMP. Any alarm point included in a derived alarm expression will have its reporting state set to InSite Only automatically.

*Note:* The default state of newly configured E2A points is Disabled. Enabled or InSite Only must be selected from the dropdown list for the point to be reported when it changes state.

# **Digital parameters**

- Severity The severity field can be set to one of five levels. From highest to lowest severity, the levels are CR (Critical), MJ (Major), MN (Minor), RN (Routine), NA (Not Alarmed).
- Normal State The Normal State radio buttons are used to indicate which state is considered to be normal, and conversely, which state indicates an alarm condition. The default configuration is normally open, where a closed contact indicates an alarm.
- Service Affecting— The Service Affecting radio buttons configure the point to be either SA (Service Affecting) or NSA (Non-Service Affecting).

#### **Download button**

This button enables the Manager user to update parameters of an individual point without the need to download an entire configuration and restart the WS3500. Please refer to Appendix B for more information on "Point on the Fly" usage.

#### **Enabling and Disabling all E2A Inputs**

To Enable, Disable or report in InSite only all E2A inputs in a display:

- 1. Select the Serial Ports tab.
- 2. Select the E2A port to be edited from the Select Port list.
- 3. Click the Edit Devices button.
- 4. Select the E2A display to be edited from the list.
- 5. Click the appropriate button, Inputs, Outputs, or Health. The Edit Points Parameters window appears.
- Right- click in the point list, and a drop-down menu appears with the options Disable All, Enable All and InSite Only All. Two other options also appear in this drop down menu: *Import Points…* and *Export Points…* For more information on Import/Export please refer to Chapter 17 – "Using Templates".
- Select the Enable All to enable all points in the point list, Disable All to disable all points in the point list or InSite Only to make all the points in the point list report in InSite only.

The color of the circle in the leftmost column indicates whether the point is enabled or disabled. Green indicates the point is enabled, red indicated the point is disabled and purple indicates the point is InSite only.

# E2A Outputs

For each E2A output point, there is an AID field. The AID is a read-only field that is automatically created by Metago<sup>®</sup> Manager. For E2A output points the format of the AID is E2AC-<port>-<address>-<display>-<point number>, where *port* is the serial port number (11-18), *address* is the device address (1-256), *display* is the display number (1-64), and *point number* is the E2A point number (1-64). For example, E2AC-11-1-1-64 indicates that the E2A point is configured on serial port 11, address 1, display 1, and it is output point 64.

# **Editing E2A Outputs**

When creating an E2A display, the user is given the option of automatically creating 64 output points. If the output points are not added at that time, they can be added later.

To edit E2A output points:

- 1. Select the Serial Ports tab and select the E2A port to be edited from the Select Port list.
- 2. Click the Edit Devices button. The E2A Configuration window appears.
- Select the E2A display to be edited from the Displays list and click the Outputs button. If the output points were not added when the E2A device was created, the following message box appears:

Confirm	n 🛛 🔀
2	No output points are configured for this display, would you like to add them now?
	OK Cancel

Click OK to add the output points.

4. The Edit Point Parameters window appears.

) Edit Point Parameters	5						- <b>•</b> X
AID	Point I	Description			Location	₩G	*
O E2AC-11-1-5-1	E2AC C	UTPUT 1					
E2AC-11-1-5-2	E2AC C	)UTPUT 2					
E2AC-11-1-5-3	E2AC C	UTPUT 3					
E2AC-11-1-5-4	E2AC C	UTPUT 4					
E2AC-11-1-5-5	E2AC C	UTPUT 5					
E2AC-11-1-5-6	E2AC C	UTPUT 6					Add Point
E2AC-11-1-5-7	E2AC C	UTPUT 7					
E2AC-11-1-5-8	E2AC C	UTPUT 8					- Delete Point
Point Description  E2AC OUTPUT 1 SID Location Units	Alarm     WG     Transmission	© Event	Alarm-Env	Severity NA ▼	Normal State Closed Open	ି S/ ම NS	A SA
		ENABLED	•	X Cancel			

Figure 34 - Edit Point Parameters - E2A Outputs

 Configure the points either by applying a template (refer to Using Metago Manager Templates – Chapter 17) or by editing the points individually. Select the point to be edited from the point list then configure the Generic and Digital point parameters for each point. Refer to "Generic Point Parameters" earlier in this chapter for definitions of the parameters.

# E2A Health Points

Each configured E2A port, has one E2A health point for the entire port, and a health point assigned to each configured E2A address. Communication failures with individual address will result in the associated health point being alarmed. If all devices on a port fail, then the port health point is alarmed.

*Table 7* lists examples of AID, point description, severity, and normal state parameters for E2A health points. The x in the AID and point description represents the serial port number; the y represents E2A device addresses (0 - 31). For example, HEALTH-7-1 would represent an E2A device on serial port 7, at address 1 and the default point description would be E2A PORT 7 ADDR 1.

AID	Point Description	Severity	Normal State
HEALTH-x	E2A Collection x FAIL	CR	Open
HEALTH-x-y	E2A Coll Port x Remote Address y	MJ	Open

Table 8 E2A Health Point Configuration

#### **Editing E2A Health Points**

To edit E2A Health points,

- 1. Select the Serial Ports tab and select the E2A port to be edited from the Select Port list.
- 2. Click the Edit Devices button. The E2A Configuration window appears.

3. Click the Health button. The Edit Point Parameters window appears.

Edit Point Parameters					- • ×
AID	Point Description		Location	WG	*
O HEALTH-11	E2A Collection 11 FAIL				
HEALTH-11-1	E2A Coll Port 11 Remote Address 1				
					Add Point
Generic point parameters	Alarm 🔘 Event 🔘 Alarm-Env	Digital parameters			
Point Description		Savaritu	Normal State		
E2A Collection 11 FAIL		CD	Closed	🔘 SA	
SID	AID Type	UR 💌	Open	NS	A
Location WG	Cond Type				
	▼ GP				
Units	Reporting State				
	ENABLED -				
	Save	🔀 Cancel			

4. Configure E2A Health points by selecting the point from the point list, then configuring the Generic and Digital point parameters for each point. Refer to "Generic Point Parameters" earlier in this chapter for definitions of the parameters and more information.

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# Chapter **15**

# **Configuring Derived Alarms**

The WS3500 derived alarm system can take information from a large number of alarms and process that information to generate fewer but more meaningful alarms. It uses a simple system of binary logic to accomplish this.

# Adding / Editing Derived Alarms

1. To add/edit derived alarms select the Derived Alarms button from the I/O Correlation tab. This brings up the derived alarm form.

у Б	dit Point Parameters								_ 🗆
	AID	Point I	Description			Location	WG		
0	DERIVED-1	DERIVE	ED ALARM 1						
0	DERIVED-2	DERIVE	ED ALARM 2						Add I/O Co
0	DERIVED-3	DERIVE	ED ALARM 3						
•	DERIVED-4	DERIVE	ED ALARM 4						View Edi
									Add Point
									Addition
								-	Delete Poi
6	ieneric point parameters				Digital parameters				
	Point Description DERIVED ALARM 4 SID Location Units Units	Alarm	C Event C AID Type Cond Type GP Reporting State ENABLED	✓ Alarm-Env	Severity MJ T	Normal State C Closed © Open	C S. C N	A SA	]
				🖉 Save	💢 Cancel			D	OWNLOAD
									Close

Figure 35 - Edit Point Parameters - Derived Alarms

2. Select 'Add Point' to add a derived point. To edit a derived alarm highlight the derived alarm and click 'View Edit'. This will bring up the Add / Edit Derived Points Form.

🐨 Add Derived Poi	nts Form			_ <b>_ _ _ _</b>
DerivedPoint:	ExistingPoints:		Operator:	
5 🚖	DISCRETE-1-2	•	AND	-
DISCRETE-1-1	DISCRETE-1-3 DISCRETE-1-4 DISCRETE-1-5 DISCRETE-1-6 DISCRETE-1-6 DISCRETE-1-7 DISCRETE-1-8			
			ОК	Cancel

- 3. The derived expression can be input/edited here and must meet the requirements of the parsing engine (described below).
  - a. The Existing Points and Operator drop down boxes can be used to simplify the process.
    - i. The Existing Points drop down box will show all available AIDs for the current equation, including previous derived alarms.
    - ii. The Operator drop down box will fill in the correct characters for the selected operator but will require that the AIDS be typed in.
  - b. Every expression and normal operator (i.e. not brackets) must be clearly separated by a space.
    - i. In Example "A OR B" is acceptable however "AORB" is not.
- 4. Once the expression is input/edited as desired, select OK. If no errors are found this will add/modify the derived alarm and change the alarm reporting state of the involved alarms to InSite Only.

# Parsing Engine

When the Operator dropdown menu is clicked on, a list of available Operators is displayed as illustrated in the screenshot below:

👿 Edit Derived Poir	nts Form		
Derived Point:		Operator:	•
DISCRETE-I-I	AND DISCRETE-1-2	AND OR NOT # OF (,,,) # YOF (,,)	
		CI ANY BN ANY MN ANY MN ANY MJ ANY CR	

#### **Operators**

() Brackets – These are special case operators as they do not affect truth on their own. Instead they allow for controlling order of operations within this parsing engine. They require one expression and follow the form: (A)

There is no simple truth table example for brackets. See the section 'Order of Operations' later in this chapter to get an idea of how brackets work.

AND – This is the binary logical 'and' operator. It requires two expressions and follows the form: A AND B

The truth table for AND is as follows:

Α	В	A AND B
0	0	0
0	1	0
1	0	0
1	1	1

 $\mathbf{OR}$  – This is the binary logical 'or' operator. It requires two expressions and follows the form:  $\mathbf{A} \, \mathbf{OR} \, \mathbf{B}$ 

The truth table for OR follows:

Α	В	A OR B
0	0	0
0	1	1
1	0	1
1	1	1

**NOT** – This is the unary logical 'not' operator. It requires one expression and follows the form: **NOT A** 

The truth table for NOT is as follows:

Α	NOT A
1	0
0	1

**#OF** requires the number '#' of desired members as well as a membership list of expressions. The OF operator will be true if # or more members of its list are true. It follows the form: **# OF (A, B, C...)** 

A simple example of the #OF operator is 2 OF ( A , B , C ). The truth table for this example follows:

Α	В	С	2 OF (A, B, C)
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	1
1	1	0	1
1	1	1	1

**#XOF** requires the exact number '#' of desired members as well as a membership list of expressions. The XOF operator will only be true if exactly # of members of its list are true. It follows the form: **# XOF (A, B, C....)** 

Α	В	С	2 XOF (A,B,C)
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	1
1	1	0	1
1	1	1	0

A simple example of the XOF operator is 2 XOF (A, B, C). The truth table for this example follows:

**ANY** will be True if any alarms in the Derived alarm you are configuring are active. ANY alarms differ from other derived alarms in that they are global in nature (i.e. sample group is from the entire configuration of the WS3500, not from a specified list of members). As a result they do not require a list of members or the use of brackets. Using brackets with the ANY operators will generate an error message in Manager.

A simple example of the ANY operator is ANY

The following expressions work in an identical manner except for the severity involved, so will be treated as a group. These expressions are a means of Derived Alarms filtering-in or filtering-out desired or undesired severities as may be required.

The operators are:

**ANY\_RN** will be True when any alarms of severity RN or greater are active.

**ANY\_MN** will be True when any alarms of severity MN or greater are active.

ANY\_MJ will be True when any alarms of severity MJ or greater are active.

ANY\_CR will be True when any alarms of severity CR are active.

The order of severity is: CR > MJ > MN > RN

#### Order of operations

Unless defined by brackets, the order of operations within this engine is strictly left to right. The normal operators ( i.e. not brackets ) have NO inherent precedence. This is not typical of parsing engines and **it is highly recommended that brackets be used in expressions with more than one operator in order to guarantee expected behavior**. The brackets guarantee that the expression contained within will be fully evaluated before its value is considered in the surrounding expression.

Examples follow to illustrate.

#### First Example

Expression entered: A AND B OR C

Here is the expression again with brackets added to illustrate the left to right order of operations. : (( A AND B ) OR C )

So the truth table for this would be

Α	В	С	A AND B OR C
0	0	0	0
0	0	1	1
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	1
1	1	0	1
1	1	1	1

#### Second Example

This will be very similar to the first example but this time with brackets added to change the order of operations.

#### Expression entered: A AND ( B OR C )

This time the truth table would be as follows.

Α	В	С	A AND (BOR C)
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	1
1	1	0	1
1	1	1	1

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Menus

#### File Menu

File	
Ba	ackup RTU
R	estore RTU
E	kit

#### **Backup RTU**

RTU configurations created using Metago Manager are stored in a database. Any changes that are made to an RTU's configuration are written to Metago Manager's database. To avoid accidental loss of RTU configuration data, either as a result of system failure, or user entry error, it is highly recommended to backup the RTU configurations frequently. An RTU backup file consists of a .zip file containing RTU configuration files for all configured RTU parameters. RTU backup files are portable, and can easily be archived for later use. These RTU backup files can be restored at any time to recover lost data

To backup an RTU:

- 1. Select the RTU to be backed up from the RTU list in Manager.
- 2. Select Backup RTU from the File menu. A confirmation dialog box appears, showing the total number of points configured for the selected RTU.

Confirm	ı 🔀
2	This operation will create a backup of the selected RTU, which contains 146 configured points.
	Do you wish to continue?
	Yes No

3. Click the Yes button to continue with the backup. The Save As window appears.

Save As					? 🛛
Savejn:	🚞 backup		~	G 🤌 😕 🖽	•
My Recent Documents					
Desktop					
My Documents					
My Computer					
	File <u>n</u> ame:	RTU121		*	<u>S</u> ave
My Network	Save as <u>t</u> ype:	Zip Archive (*.zip)		~	Cancel

- 4. Select to the target location where the backup is to be saved. By default, the file is saved on your PC in the C:\Program Files\Westronic\Metago Manager \backup folder.
- 5. By default, the file name will be the RTU TID. This file name may be changed, but it is recommended that the file name should contain the TID (e.g. Current date could be appended to the file name from the above example: RTU121\_012416.zip). The file is saved as a .zip file. Click the Save button to save the file and close the Save As window.

An Information dialog box appears indicating a successful operation.



6. Click the Ok button to close the dialog box.

#### **Restore RTU**

To restore an RTU from a backup file, the currently configured TID of the selected RTU in Metago Manager must match the TID contained in the RTU backup file.

To restore an RTU:

- 1. Select the RTU to be restored from the Select RTU list.
- 2. Select Restore RTU from the File menu. A confirmation dialog box appears.



3. Click the OK button to continue. The Open window appears.

Open							? 🔀
Look jn:	🚞 backup		~	G	🗊 E	• 🛄 ۹	
My Recent Documents	RTU121.zp						
My Documents							
My Computer							
	File <u>n</u> ame:				•	- [	<u>O</u> pen
My Network	Files of <u>type</u> :	Zip Files (*.zip)			•	/ [	Cancel

- 4. Select the location of the RTU Backup file to be opened. (Use the Look in drop-down list or the buttons in the Open dialog box to locate the folder).
- 5. In the File name text box, type the name of the RTU backup vile to be opened, or select the file from the list.
- 6. Click the Open button to open the file.

An Information dialog box appears indicating a successful operation, as well as how many points were restored from the backup file.

Informa	ation 🛛 🔀
(į)	RTU Restore successful! Restored 146 points.
	ОК

7. Click the OK button to close the dialog box. The RTU configuration and database will be restored from the backup file and displayed in the various Tabs.

#### Exit

The Exit option in the File menu allows the user to exit Metago Manager. A confirmation dialog box appears.

Confirm	· 🛛
2	Close Metago Manager?
	OK Cancel

Click OK to close Metago Manager.

# **Options Menu**

Op	tions <u>H</u> elp
	Enter license key
	View <u>L</u> og file
	<u>A</u> ID Type
	Condition Type
	<u>W</u> orkgroups
	<u>S</u> ID
	Application timeout
	Change DB Partition
	Download timeout

#### Enter license key ...

With this option, the user can enter a new license key for Metago Manager. This option should only be used if you have purchased a new Metago Manager License from Westronic. These keys allow or restrict access to certain features within Metago Manager. The ownership of these license keys is tracked by Westronic; only authorized license keys should be used with Metago Manager. Entering an invalid license key may render the application unusable.

To enter a new license key:

1. Select Enter license key from the Tools menu. The License Key window appears.

Licen	se Key							×
Ple	ase ente	r your li	icense ko	ey as fi	ound or	the CE	) envelope .	
I		-		]-[]				]
					<u>0</u> K		<u>C</u> ancel	

- 2. Enter the license key as it was sent by Westronic, in upper case letters.
- 3. Click OK to close the License Key window. A dialog box appears.



4. Click OK to close the dialog box. Exit and re-open Metago Manager for changes to take effect.

#### View Log file

With this option, you can view the RTU transaction log files stored on the PC.

The RTU transaction log files contain a record of all the operations that affect the RTU. These log files are named according to the TID of the RTU.

The log files are stored in the Metago Manager\logs directory. The operations that are documented in the log files are connection, disconnection, update config, upgrade image, file download, and any Winsock errors. These log files can be useful in determining where an error occurred in a certain process.

Note: The user is responsible for the management of the log files. Depending on the number of operations, these files could grow in number and size, so they need to be monitored and archived if necessary.

To view an RTU Log file,

1. Select View Log file from the Options item in the menu bar. The Open window appears:

Open							? 🛛
Look jn:	🚞 RTU121		~	G	3 🖻	•	
My Recent Documents	RTU121_16020 RTU121_20020 RTU121_20020 RTU121_23020	14.log 14.log 14.log					
Desktop							
My Documents							
My Computer							
<b></b>	File <u>n</u> ame:	RTU121_230204.log			*		<u>O</u> pen
My Network	Files of type:	RTU Log Files			~		Cancel

- 2. Select the folder for the RTU. The folder name is the RTU TID. Within each folder, the names of the files will contain the RTU TID and the date. The date will be in the format of ddmmyy.
- 3. Select the file you wish to view and then click the Open button. The RTU log file appears in a text editor.

Following is an example of a RTU Transaction log file for RTU121.

```
02/22/04, 14:00:37> !!! Error
Winsock Connect Error!
The attempt to connect timed out.
02/22/04, 14:03:17> !!! Error
Winsock Connect Error!
The attempt to connect timed out.
02/22/04, 14:04:30> Connected to RTU: RTU121 (172.16.6.121:26)
02/22/04, 14:04:37> User: MTC logged in (level 5)
```

# AID Type ...

NOTE: Depending on the license purchased from Westronic, this option may not be available. Any options that are not available may be ignored in this document.

The AID Type is a freeform text field that can be used in conjunction with the AID to help identify a point. This can be useful if the AID does not provide enough information to pinpoint the location of the point. Maximum length is 10 characters. The AID Type list is global to all RTUs in Metago Manager.

To create a new AID Type:

1. Select AID Type from the Options menu. The AID Type window appears.

😿 AID Type	×
AID Type list is global to all configured RTUs.	
AID_string	<u>A</u> dd <u>E</u> dit <u>D</u> elete
AID Type	<u>C</u> lose

- 2. Click the Add button.
- 3. Enter the AID Type in the text box.
- 4. Click the Save button to save the definition. The new AID Type will now be in the list.

To modify an AID Type:

- 1. Select AID Type from the Options menu. The AID Type window appears.
- 2. Select the AID Type to be edited from the list. Click the Edit button.
- 3. Modify the AID Type.
- 4. Click the Save button to save the definition. The modified AID Type will now be in the list.

To delete an AID Type:

- 1. Select AID Type from the Options menu. The AID Type window appears.
- 2. Select the AID Type to be deleted from the list.
- 3. Click the Delete button to remove the definition. If the selected AID Type is currently used on any RTU in Metago Manager, it will not be deleted. Otherwise, the AID Type will be deleted from the list.

#### **Condition Type**

NOTE: Depending on the license purchased from Westronic, this option may not be available. Any options that are not available may be ignored in this document.

The Condition Type is a freeform text field that identifies the type of alarm or event being reported. Maximum length is 10 characters. The Condition type list is global to all RTUs configured in Metago Manager.

To create a new Condition Type:

1. Select Condition Type from the Options menu. The Condition Type window appears.

😿 Condition Type		
Condition Type list is global to all configured RTUs.		
CondType_string GP TH	▲dd Edit	
Condition Type GP Save C <u>a</u> ncel		

- 2. Click the Add button.
- 3. Enter the Condition Type in the text box.
- 4. Click the Save button to save the definition. The new Condition Type will now be in the list.

To modify a Condition Type:

- 1. Select Condition Type from the Options menu. The Condition Type window appears.
- 2. Select the Condition Type to be edited from the list. Click the Edit button.
- 3. Modify the Condition Type.
- 4. Click the Save button to save the definition. The modified Condition Type will now be in the list.

To delete a Condition Type:

NOTE: There are two default Condition Type entries that cannot be deleted, they are GP, and TH.

- 1. Select Condition Type from the Options menu. The Condition Type window appears.
- 2. Select the Condition Type to be deleted from the list.
Click the Delete button to remove the definition. If the selected Condition Type is currently used on any RTU in Metago Manager, it will not be deleted. Otherwise, the Condition Type will be deleted from the list.

#### Workgroups

The Workgroups item allows the user to define the two-character workgroup (WG) text field that is reported in the TL-1 alarm message. This field is commonly used to determine which workgroup or department needs to be notified when this point changes state. The workgroup is often used as a filtering parameter for alarms. The Workgroup list is global to all RTUs in Metago Manager.

To create a new workgroup:

1. Select Workgroups from the Options menu. The Workgroups window appears.

5	w 🕅	orkgroup	
	١	Workgroup list is global to all configu	ured RTUs.
	WG	Description 🔼	
	TR	Transport	
	SW	Switching	Add
	EN	Environment —	
	DA	Data	
		<b>~</b>	<u>D</u> elete
	De: Tra	cription WG	
		Save Cancel	<u>C</u> lose

- 2. Click the Add button.
- 3. Enter a description of the workgroup in the Description text box.
- 4. Enter a 2-character acronym for the workgroup in the WG text box.
- 5. Click the Save button to save the definition. The workgroup will now be in the list of workgroups.

To modify a workgroup:

- 1. Select Workgroups from the Options menu. The Workgroups window appears.
- 2. Select the workgroup to be edited from the list. Click the Edit button.
- 3. Modify the description and/or WG fields.
- 4. Click the Save button to save the definition. The modified workgroup will now be in the list of workgroups.

To delete a workgroup:

- 1. Select Workgroups from the Options menu. The Workgroups window appears.
- 2. Select the workgroup to be deleted from the list.

3. Click the Delete button to remove the definition. The workgroup will be deleted from the list of workgroups.

#### SID

NOTE: Depending on the license purchased from Westronic, this option may not be available. Any options that are not available may be ignored in this document.

The Source Identifier (SID) is a freeform text field that uniquely identifies a group of points. The SID is used as the target identifier in the TL1 message header. If the SID field is not configured, the RTU's TID is used in its place. Maximum length is 20 characters. The SID list is RTU specific.

To create a new SID:

1. Select SID from the Options menu. The SID window appears.

😿 SID	
SID list is specific to the selected	irtu.
SID_string	
ENGLABRISI	<u>A</u> dd
	<u>D</u> elete
SID	
ENGLABR1S1	
Save Cancel	<u>C</u> lose

- 2. Click the Add button.
- 3. Enter the SID in the text box.
- 4. Click the Save button to save the definition. The new SID will now be in the list.

To modify an SID:

- 1. Select SID from the Options menu. The SID window appears.
- 2. Select the SID to be edited from the list. Click the Edit button.
- 3. Modify the SID.
- 4. Click the Save button to save the definition. The modified SID will now be in the list.

To delete an SID:

- 1. Select SID from the Options menu. The SID window appears.
- 2. Select the SID to be deleted from the list.
- Click the Delete button to remove the definition. If the selected SID is currently used on the selected RTU in Metago Manager, it will not be deleted. Otherwise, the SID will be deleted from the list.

#### **Application timeout**

The Application timeout option allows the user to enable or disable the inactivity timeout feature. If the feature is enabled, when Metago Manager is idle (no keystrokes or mouse movement) for the configured interval, any RTU connection is terminated and Metago Manager closes. It is highly recommended to enable this feature with a practical duration such as 30 minutes. This will prevent an unattended/forgotten instance of Manager from tying up a WS3500 and leaving it unable to be configured by any other user on the network.

To configure the application timeout feature:

1. Select Application timeout from the Options menu. The Application timeout configuration window appears.

Application timeout configuration			
Enable application timeout			
Application terminated after 1 😭 minutes of inactivity.			
ОК			

- 2. Click the Enable application timeout checkbox.
- 3. Enter the time inactivity time in minutes (or select using the arrow buttons).
- 4. Click the OK button to close the window. If Metago Manager is idle (no keystrokes or mouse movement) for the configured amount of time, a Timeout notification window appears warning you that Metago Manager will terminate in 15 seconds. To stop the application from closing, click the Cancel button.

Metago Manager - Timeout	<			
Metago Manager has been idle for 15 minutes!				
Application will terminate in 15 seconds				
Cancel				

To disable the application timeout feature:

- 1. Select Application timeout from the Options menu. The Application timeout configuration window appears.
- 2. Click the Enable application timeout checkbox and remove the check mark.
- 3. Click the OK button to close the window.

#### **Change DB Partition**

NOTE: Depending on the license purchased from Westronic, this option may not be available. Any options that are not available may be ignored in this document.

The typical installation of Metago Manager uses a database that is on the same PC as the installation itself. This is geared toward an environment where only one person requires access, or when the PC is in a shared area, to be accessed by several different users.

An alternate installation is where the database is installed on a shared network drive, which is accessible by more than one user. In this configuration, multiple database partitions may be defined. Each database partition may be accessible to multiple users, but only one user can access a particular partition at a time.

The *Change DB Partition* menu option allows the user to create or select a different Metago Manager database.

To switch to a different database partition:

1. Select Change DB Partition from the Options menu. The Select a database partition window appears.

Select a database part	ition			
local database	C:\Prog	ram Files (x86)\Westronic\M	etago Manager\[	ОБЛ
My test configs on server	\\W!	}01∖Firmware\WS35	00\Custom test c	onfigs
Add		Edit	De	lete
Edit Selection				
Name local databas	е			
Path C:\Program Files (x86)\Westronic\Metago Manager\Db\				
Path C:\Program F	iles (x86)\	Westronic\Metago Manage	\Db\	
Path C:\Program Fi	iles (x86)\	\Westronic\Metago Manage	\Db\ Save	Cancel
Path C:\Program Fi	iles (x86)\	Westronic\Metago Manage	\Db\ Save	Cancel

- 2. The left list column contains a freeform text description of the database partition; the right column contains the database path. Select the desired database partition from the list.
- 3. Click the Select button to open the selected database partition. This closes the Select a database partition window and returns to Metago Manager main window and opens the selected database.

To add a new database partition:

- 1. Select Change DB Partition from the Options menu. The Select a database partition window appears.
- 2. Click the Add button. This enables the Edit Selection section.

🐨 Select a database part	ition		
local database	C:\Progr	am Files (x86)\Westr	onic\Metago Manager\Db\
My test configs on server	\\WS	01\Firmware\	WS3500\Custom test configs
Add		Edit	Delete
Edit Selection			
Path	) conings		
			Save Cancel
			Select Close

- 3. Enter a descriptive name for the new database partition.
- 4. Enter the database path, or browse using the ... button.
- 5. Click the Save button to add the new database partition to the list.

NOTE: If the selected Path does not exist, the user is asked if it should be created.



NOTE: If the path exists, but does not contain a valid Metago Manager database, the user is asked if a default database should be copied to the selected location

Confirm	n 🛛 🔀
2	The specified path does not appear to contain a Metago Manager database.
	Would you like to copy a default database to this location?
	OK Cancel

To delete a database partition:

NOTE: The actual database files are not deleted, only the list entry in the Select a database partition window is removed.

- 1. Select Change DB Partition from the Options menu. The Select a database partition window appears.
- 2. Select the database partition to be deleted.
- 3. Click the delete button. A confirmation dialog box appears.

Confirm 🔀
Are you sure you wish to delete the selected item from this list?
OK Cancel

4. Click OK to delete the database partition.

#### **Connection timeout**

The Connection timeout menu allows the user to change the timing for specific aspects of file movement in the Metago Manager application. Westronic recommends these timeouts are left at default values for all TCP/IP connected WS3500's. Please contact Westronic Technical support for additional information.

W Upload Download Ti	meout Configuration	<b>— — X</b>				
Use Default Values						
File Upload\Download	3	Minutes				
File Removal	0	Minutes				
File Permissions	0	Minutes				
File Ownership	0	Minutes				
	ОК					

To configure the application timeout feature:

- 1. Select Application timeout from the Options menu. The Application timeout configuration window appears.
- 2. Click "Use Default Values"
- 3. Close the Upload/Download Timeout window.

#### Help Menu



#### About

The About item in the Help menu displays the Metago Manager about window. This is where the Metago Manager version number is found.

Hit 'OK" or the X to close this window.



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# Chapter

## Using Metago Manager Templates

A template is a file that contains a series of point configurations. If the same series of points will occur on several devices, a template can be created to simplify the creation and maintenance of those devices. Metago Manager templates can be imported and exported from within the desired Edit Point Parameters window of Metago Manager.

The template file is a comma separated value file (.csv file), which can be viewed and edited using a standard text editor, or Microsoft<sup>®</sup> Excel. Refer to Appendix A for an example of a Metago Manager .csv template file.

**NOTE:** Templates are only available in Metago Manager. The import/export options are not present in Metago Manager LITE.

#### **Exporting Metago Manager Template Files**

Exporting point templates is done from the Edit Point Parameters window. For more information on displaying the Edit Point Parameters window for specific device types, refer to the section of this manual that deals with that specific device.

To export a template file:

1. Proceed to the Edit Point Parameters window.

Metago Manager [local dat Edit Point Parameters	abase]		-	
AID DISCRETE-1-1 DISCRETE-1-2 DISCRETE-1-3 DISCRETE-1-4 DISCRETE-1-5	Point Description           SLC Disc Grp 1 - Major (MJ)           SLC Disc Grp 1 - Minor (MN)           SLC Disc Grp 1 - Power Minor (PMN)           SLC Disc Grp 1 - Fuse (FA)           SLC Disc Grp 1 - Near End (NEFA)		Location CLGYABLAB CLGYABLAB CLGYABLAB CLG CLG Disabl	
DISCRETE-1-6 DISCRETE-1-7 DISCRETE-1-8	SLC Disc Grp 1 - Far End (FEFA) SLC Disc Grp 1 - Carrier Line Fail (CLF) RECTIFIER LOW VOLT		CLG' Enable CLG' Insite ( CLG' Import	All dd Point Only All lete Point t Points
Generic point parameters Point Description SLD Disc Grp 1 - Fuse (FA) SID ENGLABR1S1 Cocation UGGYABLAB Units	Alarm Event Alarm-Env AlD Type Cond Type GP Ture Reporting State	Digital parameters Severity NA	Export Normal State Closed Open	Points SA NSA
	DISABLED	Cancel		DOWNLOAD Close

2. Right-click in the point list, and select Export Points from the pop-up menu. The Export Points window appears.

Export Points	×
Start Point	Range 64
ОК	Cancel

- 3. In the Export Points window, select where to start exporting the point configurations (Start Point text field) and the number of points (Range) to export.
  - In the Start Point text box, type the starting point number or use the up and down arrow buttons to select the starting point number.
  - In the Range text box, type the number of points to export or use the up and down arrow buttons to select the number of points to export.
- 4. Click the OK button to close the Export window. The Save As window appears.

Save As			? 🔀
Savejn:	🔁 RTU Templates	🕑 🥝 🌶 🔛 -	
My Recent Documents	64 discretes.csv EDMONTON.csv		
Desktop			
My Documents			
My Computer			
	File <u>n</u> ame: 64 discretes.csv	· · · · · · · · · · · · · · · · · · ·	<u>S</u> ave
My Network	Save as type: Comma separated valu	le file (*.csv) 💌	Cancel

- 5. Select to the target location for the export file.
- 6. In the File name textbox, enter the name of the file. The file is automatically saved as a comma separated value (.csv) file.

Note: Wherever possible, try to use descriptive filenames to facilitate future use of these template files.

7. Click the Save button to save the file and close the Save As window.

An Information dialog box appears indicating a successful operation.



8. Click OK to close the dialog box.

#### Importing Metago Manager Template Files

Importing point templates is done from the Edit Point Parameters window. For more information on displaying the Edit Point Parameters window for specific device types, refer to the section of this manual that deals with that specific device.

To export a template file,

1. Proceed to the Edit Point Parameters Window.

🐨 Metago Manager [local data	abase]		
👿 Edit Point Parameters			
AID	Point Description	Location	WG ^
O DISCRETE-1-1	FIRE/SMOKE		EN
DISCRETE-1-2	FIRE SYSTEM TROUBLE	Disable All	EN
DISCRETE-1-3	RECTIFIER MAJOR	Enable All	EN
DISCRETE-1-4	RECTIFIER MINOR	Insite Only All	EN
DISCRETE-1-5	RECTIFIER FAIL		EN
DISCRETE-1-6	RECTIFIER AC FAIL	Import Points	EN Add Point
DISCRETE-1-7	RECTIFIER HIGH VOLT	Export Points	EN Delete Peint
DISCRETE-1-8	RECTIFIER LOW VOLT	CLUTADLAD	EN T
Point Description FIRE/SMOKE SID ENGLAB_MANUAL Location WG CLGYABLAB EN Units	Alarm Event Alarm-Env	Severity CR ▼ © Closed © Open	● SA ● NSA
			Close
NOT CONNECTED			

2. Right-click in the point list, and select Import Points from the pop-up menu. The Open window appears.

Open						? 🛛
Look jn:	🚞 RTU Template	es	~	G 🦻	<del>ب</del>	
My Recent Documents	64 discretes.csv	2 /				
Desktop						
My Documents						
My Computer						
<b></b>	File <u>n</u> ame:	64 discretes.csv			*	<u>O</u> pen
My Network	Files of <u>type</u> :	Comma separated value file (*	(.csv)		~	Cancel

- 3. Select the location of the file to open. (Use the Look in drop-down list or the buttons in the Open dialog box to locate the folder.)
- 4. In the File name text box, type the name of the file to open, or select the file from the list.
- 5. Click the Open button to open the file.
- 6. The Import Points window appears.

Import Points	
Start Point	Range 64 🖨
ОК	Cancel

- 7. In the Import Points window, select where to start applying the point definitions and the number of points you want to import.
  - In the Start Point text box, type the starting point number or use the up and down arrow buttons to select the starting point number.
  - In the Range text box, type the number of points to import or use the up and down arrow buttons.
  - The CLLI field is an optional field. The CLLI is an 11-character freeform text field that is reported in the TL-1 alarm message. The CLLI is commonly used to identify the site location of the alarm point. The CLLI code will be applied to all the

points that you are importing. If the text box is left blank, no CLLI will be applied to any of the imported points.

8. Click the OK button to close the window. An information dialog box appears indicating a successful operation.



9. Click the Ok button to close the dialog box.

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#### DB Loader

DB loader is a utility which is installed on the PC with Metago Manager. This utility is able to import and export template files in a .CSV format for easy manipulation in Excel. Files from DB Loader are different to those discussed in the previous chapter. Files from DB Loader include all fields from every alarm point in the system.

<u>IMPORTANT NOTE</u>: As DB loader uses the same database as Metago Manager it is not possible to run both applications at the same time.

Typically the desired RTU would be selected from the TID list as shown in the screenshots below. You would then choose to export or import points as appropriate; either exporting from the given RTU file for manipulation, or importing back to the given RTU file for saving or uploading to the unit.

#### **DBLoader Use-Cases**

The following outlines some specific use-cases for DBLoader:

- DBloader WILL handle the case where an imported CSV file does NOT include all configured points. When it encounters this:
  - It will make the appropriate changes to the points that are included.
  - It will NOT remove the points that are not included.
- DBloader WILL handle the case where points are included in the CSV but not in the configuration. HOWEVER IT WILL NOT ADD THE POINTS TO THE CONFIGURATION. THEY MUST BE ADDED THROUGH MANAGER. When DB Loader encounters this:
  - It will work normally on points that ARE included in the configuration.
  - For points that are in the CSV but NOT in the configuration it will generate a warning.
- DBloader WILL handle the case where the data entered by a field is too large. In this case:
  - It will shorten the data to fit.
- The order of points in the CSV file is NOT important. They may be in any order.

#### Exporting Points to .CSV with DBLoader

To export a points database file,

- 1. Ensure Metago Manager is closed, then open DBLoader
- 2. Select the desired RTU from the TID list
- 3. Click on the "Export Points" tab then on the 'Export' radio button.
- 4. A standard file save menu will open with the current TID as the offered name. Save the file by name and location as appropriate.
- 5. The .CSV file is now ready for use.

MM DB Loader		
Metago Mana	ager Da	tabase Loader V1.9 🛛 🐨 Westronic
Select RTU TID Dualquad-collector RTU22 RTU22 RTU22 RTU33-save	E	Import Points Export Points Create Data File Export all points configured for this RTU into a ".csv" file. Export
WS3500_ship_config	-	Progress IDLE About Exit

#### Importing Points from a .CSV file with DBLoader

To Import a .CSV file,

- 1. Ensure Metago Manager is closed, then open DBLoader
- 2. Select the desired RTU from the TID list
- 3. Click on the "Import Points" tab then on the 'Browse' radio button. A standard file selection menu will open, select the desired .CSV file and click on the 'Open' button in the file window.

WM DB Loader	10	equit a template file.	
Metago Mana	ger Da	atabase Loader V1.9 🛛 🚺	Westronic
Select RTU		Import Points Export Points	
TID Dualquad-collector		Select Data File	
RTU22		C:\Users\pl _ re\Desktop\Dualquad	Browse
RTU22	=		
RTU33-save		Import	
VZ_DEMO			
WS3500_ship_config		Progress IDLE	
	-		About Exit

- 4. Once verified the correct file is selected, click on the "Import" radio button in the DBLoader screen.
- 5. The Progress bar in the lower right of the screen will show "Validating Data File" and a new sub-window called "Added Types" will open. If no new types have been added to the RTU, this window will be empty as shown below. Click OK.

W Added Types		X
	ОК	

6. If new types have been added to the RTU, then the Added Types sub-window will show what types have been added as in the example below.

w Added Types	
Added SID testpointSID	
	Οκ

7. Once OK has been clicked in the Added Types window, another new window will open called "Validate Points". The next two screenshots show examples of this window first with a file having no errors, and then with a file having errors because of a mismatch between the .csv file and the actual unit configuration.

Validate Points	
Warnings / Errors:	
NO WARNINGS/ERRORS EN	COUNTERED
Points in import file: <b>146</b> Points found in DB: <b>146</b> Warnings: <b>0</b>	Continue importing points?



- 8. Under "Continue importing points?" click OK or Cancel as appropriate.
- 9. The progress bar will show that the points are being imported, followed by an information window as shown below when the process is complete.



10. Click OK, the RTU file is now ready for use in Metago Manager.

#### Example of a .CSV file from DBLoader

The following is an example of a .csv File from DBLoader containing over 300 Alarm points of various types. It is in comma delimited (.csv) format which can be viewed and modified using a standard text editor or Microsoft<sup>®</sup> Excel. **This particular example has been size adjusted** to show that an export from DBLoader will contain **all** the points configured in that unit such as: Discrete, TBOS, TABS, INACS, and DS5PA.

In the following example there are 8 Discrete I/O points visible, along with 4 controls, a variety of Health points, TBOS points and TABS-IP collection points.

The CSV file is very useful and powerful for changing point descriptions, SID's, enabling or disabling points, changing workgroups and for templating from one unit to another.

It is important to note that new points cannot be created in a .CSV file; they will not be successfully imported and will generate errors at the time of importing.

1	#AID	DESC	CLLI	WG	SEV	ENABLED(	NO/NC	SA/NSA	SID	AIDTYPE	ALARM/EVENT	CONDTYPE	
2	DISCRETE-1-1	Technician door entr	test rack	EN	RN	TRUE	NO	NSA			ALARM	GP	
3	DISCRETE-1-2	Generator crank	test_rack	EN	MN	TRUE	NO	NSA			ALARM	GP	
4	DISCRETE-1-3	Rectifier Fail Major	test rack	EN	MJ	TRUE	NO	NSA			ALARM	GP	
5	DISCRETE-1-4	Rectifier Fail Critical	test_rack	EN	CR	TRUE	NO	NSA			ALARM	GP	
6	DISCRETE-1-5	Parking gate open	test_rack	EN	RN	TRUE	NO	NSA			ALARM	GP	
7	DISCRETE-1-6	DISCRETE INPUT 6	test_rack	EN	NA	TRUE	NO	NSA	testSID		ALARM	GP	
8	DISCRETE-1-7	DISCRETE INPUT 7	test_rack	EN	NA	TRUE	NO	NSA			ALARM	GP	
9	DISCRETE-1-8	DISCRETE INPUT 8	test_rack	EN	NA	TRUE	NO	NSA			ALARM	GP	
130	DISCRETEC-1-1	DISCRETE OUTPUT 1	test_rack	EN	NA	TRUE	NO	NSA			ALARM	GP	
131	DISCRETEC-1-2	DISCRETE OUTPUT 2	test_rack	EN	NA	TRUE	NO	NSA			ALARM	GP	
132	DISCRETEC-1-3	DISCRETE OUTPUT 3	test_rack	EN	NA	TRUE	NO	NSA			ALARM	GP	
133	DISCRETEC-1-4	DISCRETE OUTPUT 4	test_rack	EN	NA	TRUE	NO	NSA			ALARM	GP	
146	HEALTH-1-0	TBOS PORT 1 FAIL			CR	TRUE	NO	NSA			ALARM	GP	
147	HEALTH-1-1	TBOS PORT 1 DISP 1			MJ	TRUE	NO	NSA			ALARM	GP	
148	HEALTH-1-2	TBOS PORT 1 DISP 2			MJ	FALSE	NO	NSA			ALARM	GP	
149	HEALTH-1-3	TBOS PORT 1 DISP 3			MJ	FALSE	NO	NSA			ALARM	GP	
150	HEALTH-1-4	TBOS PORT 1 DISP 4			MJ	FALSE	NO	NSA			ALARM	GP	
151	HEALTH-1-5	TBOS PORT 1 DISP 5			MJ	FALSE	NO	NSA			ALARM	GP	
152	HEALTH-1-6	TBOS PORT 1 DISP 6			MJ	FALSE	NO	NSA			ALARM	GP	
153	HEALTH-1-7	TBOS PORT 1 DISP 7			MJ	FALSE	NO	NSA			ALARM	GP	
154	HEALTH-1-8	TBOS PORT 1 DISP 8			MJ	FALSE	NO	NSA			ALARM	GP	
155	HEALTH-1-1234-0	TABSIP SESSION ID 1	ADDR 0	EN	MJ	TRUE	NO	NSA			ALARM	GP	
156	HEALTH-1-1234	TABSIP SESSION ID 1	FAIL		CR	TRUE	NO	NSA			ALARM	GP	
157	HEALTH-IO-1	I/O MODULE 1 FAIL		EN	CR	TRUE	NO	NSA			ALARM	GP	
158	HEALTH-IO-2	I/O MODULE 2 FAIL		EN	CR	TRUE	NO	NSA			ALARM	GP	
159	TBOS-1-1-1	Not Assigned	loopback	DA	NA	FALSE	NO	NSA			ALARM	GP	
160	TBOS-1-1-2	Not Assigned	loopback	DA	NA	FALSE	NO	NSA			ALARM	GP	
161	TBOS-1-1-3	Not Assigned	loopback	DA	NA	FALSE	NO	NSA			ALARM	GP	
162	TBOS-1-1-4	Not Assigned	loopback	DA	NA	FALSE	NO	NSA			ALARM	GP	
223	TABSIP-1-0-1-1	TABSIP INPUT 1		EN	NA	TRUE	NO	NSA			ALARM	GP	
224	TABSIP-1-0-1-2	TABSIP INPUT 2		EN	NA	TRUE	NO	NSA			ALARM	GP	
225	TABSIP-1-0-1-3	TABSIP INPUT 3		EN	NA	TRUE	NO	NSA			ALARM	GP	
226	TABSIP-1-0-1-4	TABSIP INPUT 4		EN	NA	TRUE	NO	NSA			ALARM	GP	
227	TABSIP-1-0-1-5	TABSIP INPUT 5		EN	NA	TRUE	NO	NSA			ALARM	GP	
228	TABSIP-1-0-1-6	TABSIP INPUT 6		EN	NA	TRUE	NO	NSA			ALARM	GP	
351													

# Appendix

### Examples of Metago Manager .csv Template Files

The following is an example of a Metago Manager .csv Template File containing 35 digital points from a Discrete I/O module. This template is in comma delimited (.csv) format, and can be viewed and modified using a standard text editor or Microsoft<sup>®</sup> Excel. This template can be applied to any digital points, such as: Discrete, TBOS, TABS, INACS, and DS5PA. They can be imported/exported on a per-display basis from the specific "Edit Point Parameters" window, which is shown in many chapters throughout this manual.

**NOTE:** Although similar in appearance to the DBLoader .CSV files, the usage of Metago Manager .CSV template file (as illustrated below) is not the same. Please refer to Chapter 17 for more information.

#METAGO MAI	NAGER - POINT EXPORT								
#VERSION									
	4								
#DIGITAL	DESC	WG	SEV	ENABLED(TRUE/FALSE)	NO/NC	SA/NSA	AID_type	Cond_type	ALM_type
	1 Technician door entry	EN	RN	TRUE	NO	NSA		GP	ALARM
	2 Generator crank	EN	MN	TRUE	NO	NSA		GP	ALARM
	3 Rectifier Fail Major	EN	MJ	TRUE	NO	NSA		GP	ALARM
	4 Rectifier Fail Critical	EN	CR	TRUE	NO	NSA		GP	ALARM
	5 Parking gate open	EN	RN	TRUE	NO	NSA		GP	ALARM
	6 DISCRETE INPUT 6	EN	NA	TRUE	NO	NSA		GP	ALARM
	7 DISCRETE INPUT 7	EN	NA	TRUE	NO	NSA		GP	ALARM
	8 DISCRETE INPUT 8	EN	NA	TRUE	NO	NSA		GP	ALARM
	9 DISCRETE INPUT 9	EN	NA	TRUE	NO	NSA		GP	ALARM
	10 DISCRETE INPUT 10	EN	NA	TRUE	NO	NSA		GP	ALARM
	11 DISCRETE INPUT 11	EN	NA	TRUE	NO	NSA		GP	ALARM
	12 DISCRETE INPUT 12	EN	NA	TRUE	NO	NSA		GP	ALARM
	13 DISCRETE INPUT 13	EN	NA	TRUE	NO	NSA		GP	ALARM
	14 DISCRETE INPUT 14	EN	NA	TRUE	NO	NSA		GP	ALARM
	15 DISCRETE INPUT 15	EN	NA	TRUE	NO	NSA		GP	ALARM
	16 DISCRETE INPUT 16	EN	NA	TRUE	NO	NSA		GP	ALARM
	17 DISCRETE INPUT 17	EN	NA	TRUE	NO	NSA		GP	ALARM
	18 DISCRETE INPUT 18	EN	NA	TRUE	NO	NSA		GP	ALARM
	19 DISCRETE INPUT 19	EN	NA	TRUE	NO	NSA		GP	ALARM
	20 DISCRETE INPUT 20	EN	NA	TRUE	NO	NSA		GP	ALARM
	21 DISCRETE INPUT 21	EN	NA	TRUE	NO	NSA		GP	ALARM
	22 DISCRETE INPUT 22	EN	NA	TRUE	NO	NSA		GP	ALARM
	23 DISCRETE INPUT 23	EN	NA	TRUE	NO	NSA		GP	ALARM
	24 DISCRETE INPUT 24	EN	NA	TRUE	NO	NSA		GP	ALARM
	25 Loopback alarm on Control 1	EN	RN	TRUE	NO	NSA		GP	ALARM
	26 Loopback alarm on Control 2	EN	MN	TRUE	NO	NSA		GP	ALARM
	27 Loopback alarm on Control 3	EN	MJ	TRUE	NO	NSA		GP	ALARM
	28 Loopback alarm on Control 4	EN	CR	TRUE	NO	NSA		GP	ALARM
	29 DISCRETE INPUT 29	EN	NA	TRUE	NO	NSA		GP	ALARM
	30 DISCRETE INPUT 30	EN	NA	TRUE	NO	NSA		GP	ALARM
	31 DISCRETE INPUT 31	EN	NA	TRUE	NO	NSA		GP	ALARM
	32 DISCRETE INPUT 32	EN	NA	TRUE	NO	NSA		GP	ALARM
	33 DISCRETE INPUT 33	EN	NA	TRUE	NO	NSA		GP	ALARM
	34 DISCRETE INPUT 34	EN	NA	TRUE	NO	NSA		GP	ALARM
	35 DISCRETE INPUT 35	EN	NA	TRUE	NO	NSA		GP	ALARM

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# Appendix B

#### Point on the Fly Configuration

#### **On-the-fly Point Configuration**

On-the-fly point configuration provides the user with a way to update individual points on an RTU without re-downloading the entire database or having to bring the RTU offline.

On-the-fly point configuration *cannot* be used to add or remove points from an RTU. It is intended to update the parameters of existing points that have already been downloaded to the RTU.

For SID, AID Type, WG, and Cond Type fields, on-the-fly configuration is limited to selections that have already been downloaded to the RTU. New values for these fields cannot be added with on-the fly configuration. Changes requiring such new values; or larger scale modifications to points will require a new configuration to be sent to the RTU in the typical manner.

To update a point using on-the-fly configuration:

- 1. Select the RTU to be updated from the Select RTU list box.
- 2. Click the CONNECT button, and login to the RTU.
- 3. Select the appropriate Edit Point Parameters window and find the desired point.

Edit Point Paran	neters						
AID	Point Description			Location	WG	~	
O DISCRETE-1-1	DISCRETE INPUT						
DISCRETE-1-2	DISCRETE INPUT 2	2					
DISCRETE-1-3	DISCRETE INPUT :	}					
DISCRETE-1-4	DISCRETE INPUT						
DISCRETE-1-5	DISCRETE INPUT 5	5					
DISCRETE-1-6	DISCRETE INPUT 6	3					Add F
DISCRETE-1-7	DISCRETE INPUT	,					
DISCRETE-1-8	DISCRETE INPUT 8	}				✓ L	Delete
Enabled Point Description DISCRETE IN SID Location Units	Alarm	C Event	Severity NA	Normal State Closed Open	○ S/ ⊙ N	А 5А	
		🖉 Save	🔀 Cancel			DOW	/NLO.
						l	CI

4. Edit the point parameters as desired, and click the DOWNLOAD button to perform the update on the RTU.



5. Click OK to continue the on-the-fly point configuration.



- 6. Click OK to finish the process.
- 7. Click the Close button to close the Edit Point Parameters window.
- 8. Click the DISCONNECT button to disconnect from the RTU.
- 9. The RTU will not go offline or need to be reset, and the operation is complete.



#### **Generic Point Parameters**

In the Edit Point Parameters windows within a WS3500 configuration are radio button options called 'Generic Point Parameters'. From these the user has the option of choosing the point to be reported as an 'Alarm', an 'Event', or as an 'Alarm-Env' which is an Environmental alarm. The behavior of each is different both in the Edit Point Window and when reported via TL1.

#### Edit Point Window Behavior

With "Alarm" selected within an Edit Point Parameters window (default setting of Manager) all licensed fields are available for editing. The Edit Point Parameters window will appear as it is generally shown throughout this document.

When the '**Alarm-Env**' option has been selected (for point 8 as is shown in the screenshot below) the window behavior for that point changes. Unlike the point configurations in most other examples within this document, several options on the tab for this alarm point are greyed out and not able to be changed.

These are:

- Location
- WG
- AID TYPE
- SA/NSA

AID	Point Description		Location	WG		
DISCRETE-1-1	DISCRETE INPUT 1					
DISCRETE-1-2	DISCRETE INPUT 2					
DISCRETE-1-3	DISCRETE INPUT 3					
DISCRETE-1-4	DISCRETE INPUT 4					
DISCRETE-1-5	DISCRETE INPUT 5					
DISCRETE-1-6	DISCRETE INPUT 6		alarm			Add Poi
DISCRETE-1-7	DISCRETE INPUT 7		Event			
DISCRETE-1-8	DISCRETE INPUT 8 Alarm Env-for	Manual			-	Delete Po
Generic point parame	eters	Digital parameters				
Point Description		<u> </u>	Normal State			
Point Description DISCRETE INPUT 8 A SID Location V	Alarm Env-for Manual AID Type VG Cond Type	Severity MN	Normal State Closed Open	SA ( NS	λ δΑ	
Point Description DISCRETE INPUT 8 A SID Location V Units	Alam Env-for Manual AID Type VG Cond Type Cond Type GP T Reporting State ENABLED T	Severity MN V	Normal State Closed Open	© 54 ⊚ №5	λ δΑ	

When the the **'Event'** option has been selected (for point 7 as is shown in the screenshot below) the window behavior for that point also changes. Only one option on the tab is greyed out and cannot be changed.

It is:

• Severity

AID	Point D	escription		Location	WG		
DISCRETE-1-1	DISCRE	TE INPUT 1					
DISCRETE-1-2	DISCRE	TE INPUT 2					
DISCRETE-1-3	DISCRE	TE INPUT 3					
DISCRETE-1-4	DISCRE	TE INPUT 4					
DISCRETE-1-5	DISCRE	TE INPUT 5					
DISCRETE-1-6	DISCRE	TE INPUT 6		alarm			Add Poi
DISCRETE-1-7	DISCRE	TE INPUT 7		Event			Delete P
DISCRETE-1-8	DISCRE	TE INPUT 8 Alarm Env-for Manua	al			Ŧ	Delete F
eneric point parameti	ers	Event	Digital paralleters				
eneric point parameter Point Description DISCRETE INPUT 7 SID	ers Alarm	Event Alam-Env AlD Type	Severity MN 💌	Normal State Closed Open	<ul><li>SA</li><li>NS</li></ul>	ι δΑ	
Point Description DISCRETE INPUT 7 SID Location WE Event Units	Alarm	Event Alarm-Env AID Type     GP     GP     w     cond Type     GP     w     cond Type	Severity	Normal State O Closed O Dpen	ି SA ତ NS	λ λA	

For a more complete description of all the fields shown in above screenshots, please refer to 'Generic Point Parameters' in the "Discrete Tab" section of this manual.

#### TL1 Retrieve Alarm and InSite Alarm Behavior

The behavior of each is differs somewhat both in TL1 when Retrieve Alarm is used, and when viewed on the InSite web browser of the WS3500. The following is a summary of this behavior:

When Generic Point Parameter checked as an **Alarm** or as an **Event**:

- If the TL1 command 'RTRV-ALM;' is used, all points in Alarm and Events will be returned
- If the TL1 command 'RTRV-ALM-ENV;' is used, no Alarms will be returned
- Active Alarms and Events reports on InSite summary
- Active Alarms and Events appear normally on I/O module InSite page
- Active Alarms and Events appear normally on Browse Database InSite page

When Generic Point Parameter checked as an Alarm-Env:

- Any TL1 returns for Alarm-Env will have NSA only as SA not configurable
- Any TL1 returns for Alarm-Env will have a blank WG field
- Any TL1 returns for Alarm-Env will have a blank AID field
- If the TL1 command 'RTRV-ALM-ENV;' is used, ONLY Alarm-Env points in alarm will be returned
- If the TL1 command 'RTRV-ALM;' is used, all points in alarm INCLUDING Alarm-Env points will be returned
- Alarm-Env reports on InSite summary without any CLLI (Location)
- Alarm-Env appears normally on I/O module InSite page
- Alarm-Env appears normally on Browse Database InSite page

**NOTE:** For information on autonomous Alarm, Event and Alarm-Environmental behavior, please refer to "*WS3500 Supported TL-1 Messages*" – in Appendix A of the WS3500 Technical manual.

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### Acronyms and Abbreviations

This section contains the acronyms and abbreviations found throughout this manual. Although each acronym and abbreviation is explained when first introduced, this listing consolidates the acronyms and abbreviations.

ACL	Access Control List
AID	Access Identifier
BLB	Bank Loop Back
CLI	Command Line Interface
CLLI	Common Language Location Identifier.
сот	Central Office Terminal
CPU	Central Processor Unit
CSV	Comma Separated Value
DCE	Data Communications Equipment
DNS	Domain Name Server
DS5PA	DS5000 Protocol Acquisition
DTE	Data Terminal Equipment
E2A	E-Telemetry
I/O	Input/Output
INACS	Integrated Network Alarm & Control System
LAN	Local Area Network
NE	Network Element
NIC	Network Interface Controller
NSA	Not Service Affecting

**NTP** Network Time Protocol

PC	Personal Computer
PIDs	Parameter Identifiers
PPP	Point to Point Protocol
RTU	Remote Terminal Unit
SA	Service Affecting
SID	Station Identifier
SLC	Subscriber Loop Carrier
SNMP	Simple Network Management Protocol
TABS	Telemetry Asynchronous Block Serial
TBOS	Telemetry Byte Oriented Serial
TCP/IP	Transmission Control Protocol/Internet Protocol
TID	Target Identifier
TL-1	Transaction Language 1
TMN	Telecommunications Network Management
WG	Work Group

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