

# **FIX Remote Alarm**

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# FIX Direct Connect

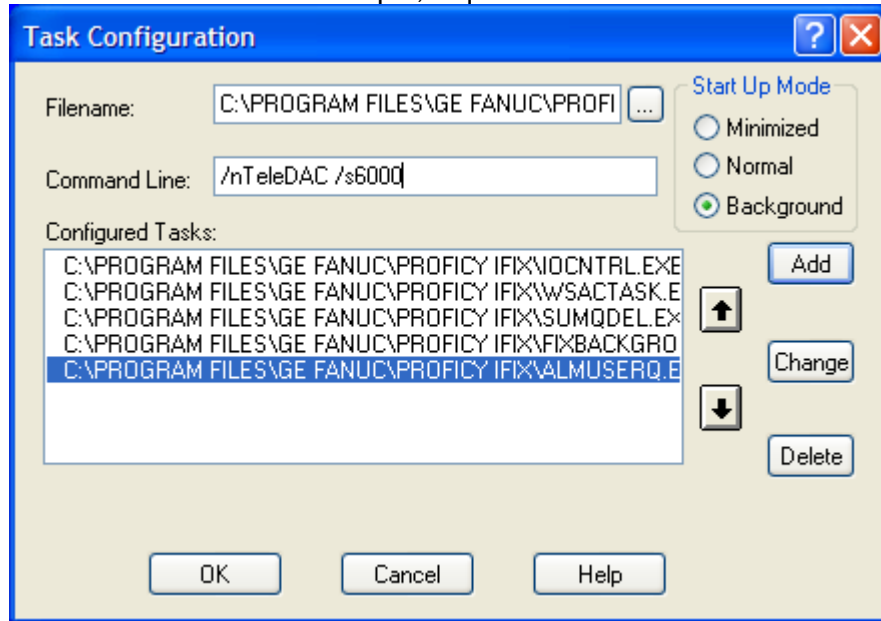
## FIX Direct Connect Setup (Required)

The FIX Remote Alarm relies on a UserQ (choose from AlmUserQ.exe, WUSERQ1.exe, WUSERQ2.exe) to receive data as well as alarm information. This UserQ can be set to launch during the iFIX startup by using the Task Configuration tool located in the System Configuration Utility (SCU).

1. Before you begin the AlmUserQ.exe will need to be moved from the WIN-911 folder to the Proficy iFIX folder. The AlmUserQ.exe is located by default in C:\Program Files\Specter Instruments\WIN911 V7\Tools\. Copy the file to C:\Program Files\GE Fanuc\Proficy iFIX\. (If using iFIX 3.5 or earlier copy the file to C:\Dynamics)
2. Select Start | Programs | Proficy HMI SCADA - iFIX | System Configuration.
3. From the Configure pull-down menu, select Tasks... to launch the Task Configuration dialog window.
4. Use the Filename: selection field to include AlmUserQ.exe (or WUSERQ1.exe, or WUSERQ2.exe) in the Configured Tasks: list. The path by default will be C:\Program Files\GE Fanuc\Proficy iFIX\ AlmUserQ.EXE. This task can be run in the background by selecting Background under Start Up Mode.
5. Next you will need to include a command line argument. First you must give the AlmUserQ a name. This name is defined in the WIN-911 Configurator under the FIX tab in Global Options. By default the name is TeleDAC. The command line argument should read /nTeleDAC  
A queue size can also be configured in the command line. To specify the number of events the queue can hold, add a space followed by a /sXXXX, where X is the

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number of events. For example, a queue size limit of 6000 events is /s6000.



6. Click Add to place the AlmUserQexe /nTeleDAC /s6000 in the Task Configuration list. If you are using the Task Configuration tool to start WIN-911, make sure TeleDAC.exe is placed after the UserQ
7. Select OK and Save the configuration. Restart iFIX.

## FIX Direct Connect Demonstration

In order to gain a quick and thorough understanding of the capabilities of the FIX Direct Connect, Specter presents the FIXDEMO. Located in the **C:\Program Files\Specter Instruments\WIN-911 V7\Tools** folder are all the components necessary to run a complete interactive WIN-911 - FIX demonstration. (This demo requires iFIX or FIX32 to be resident on your host node!) With this demo you will be able to monitor and control predefined data points. From the iFIX (or FIX32) View screen you will be able to vary analog tank levels and toggle digital switches, sending data points in and out of alarm. You may also change values via WIN-411, as well as query reports of current operating conditions. The FIXDEMO is designed to provide you with a comprehensive illustration of the functionality of the WIN-911 - iFIX (or FIX32) ensemble.

1. Using Windows Explorer, open the FIXDEMO folder located in the **C:\Program Files\Specter Instruments\WIN-911 V7\Tools\FixDemo\Dynamics** (or FIX32) directory where you will find the applicable PDB and .GRF .ODF files. Copy the Dynamics.pdb or Fixdemo.pdb into the iFIX Pdb folder and the .GRF or ODF files into the iFIX Pic folder. Next, copy the AlarmAreas.aad into the iFIX Pdb and the FIX Local folders.
2. Using the iFIX System Configuration utility, double-click on the PDB and select Dynamics for the database name. For FIX32 select Fixdemo.pdb.
3. In the iFIX or FIX32 System Configuration utility, select Task Configuration and ensure that AlmUserQ.exe (or WUSERQ1.exe for FIX32) is included in the Configured Tasks window. See the above section, "iFIX Startup Modifications (Required)."
4. From the iFIX or FIX32 Program Folder select Startup. After the startup sequence is complete, go back to the iFIX Program Folder and launch the View program. From the View Menu Bar, select File, Open, Fixmenu.grf or Fixmenu.odf. This will bring you to the Welcome screen:

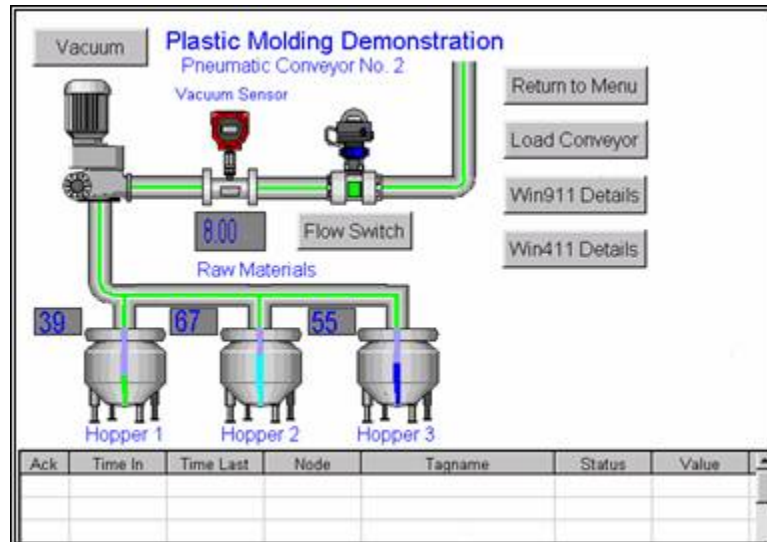


This is the main menu of the Dynamics. From here you can toggle between the Plastic Molding, City Water, and Building Security demos. You may also review the requirements

## FIX Remote Alarm

for running this demo or exit the View program altogether. Let us start by launching the WIN-911 runtime module with the "FIX Remote Alarm DEMO" configuration.

1. Launch the WIN-911 Configurator and select File, Open, FIX Direct Connect DEMO.mdb. This will set the current configuration pointer to run this configuration the next time TeleDAC.exe is started.
2. Start TeleDAC.exe and observe the "Status" of the runtime module during the launch sequence to ensure all components start successfully.
3. Returning to the FIXMENU, select the Plastic Molding button.



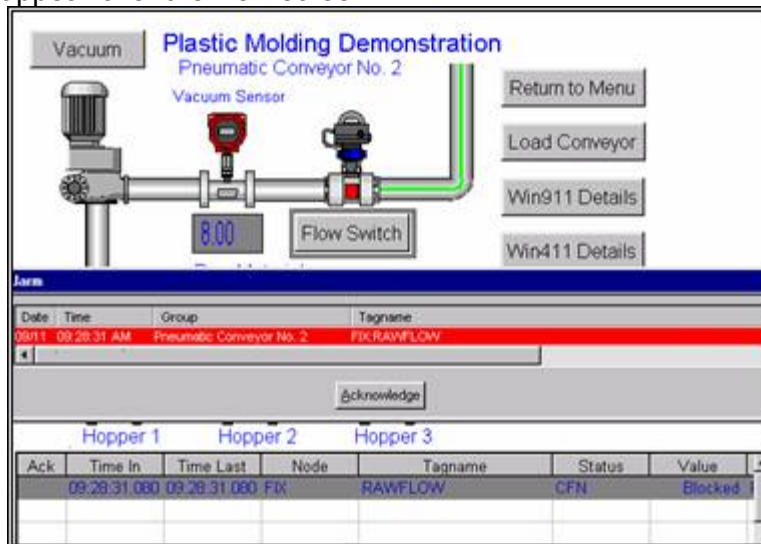
Located in this View screen are digital toggle switches: Load Conveyor, Flow Switch, analog Hoppers #1, #2, and #3 and an analog keyboard entry field for the Vacuum Sensor. Also located in the "Plastic Molding/Raw Material Hopper Levels" view screens are WIN911/411 Details that define the alarm limits that have been configured for each data point. The Return to Menu button returns the user to the FIXMENU; and at the bottom of the screen is the alarm message window, which details the status of current alarms.

Let's experiment with the Plastic Molding demo:

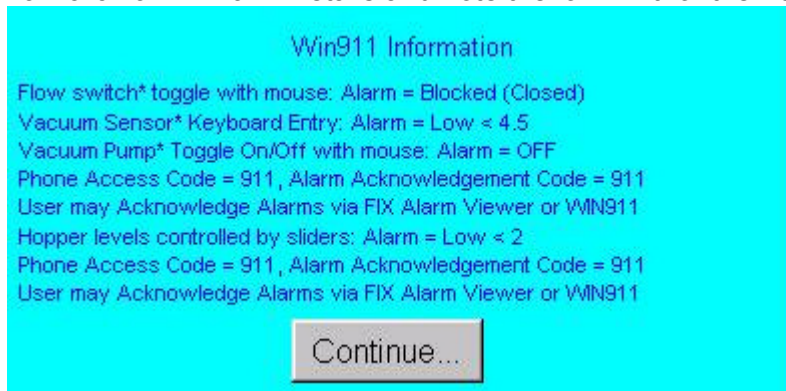
1. Select the Load Conveyor button at the top right of the Plastic Molding window. This will change the color of the conduit to green, representing the flow of raw materials.
2. Click the Flow Switch button, which will invoke a push button entry to appear. Select Close and OK, causing the Flow Sensor to close, simulating the indication of material flow stoppage. This will cause an alarm message field and a Box to



appear over the view screen.



- Acknowledge this alarm from WIN-911 by clicking on the Acknowledge button located in the lower center of the pop-up box. Notice that the pop-up box disappears and a check appears to the left of the alarm message window, indicating the current alarm had been acknowledged.
- Click on the Flow Switch button a second time to reopen the flow. The raw materials flow will be restored and the alarm message will turn green and disappear, indicating the data point returned to its normal state.
- Now click on WIN911 Details and note the low limit for the Vacuum Sensor:



- Next, highlight the Vacuum Sensor value box located at the top center, just below the analog gauge. Using your keypad, enter 2 and hit return. This will send the value below the low limit, causing another pop-up box to appear on top of the view screen.

Please continue to experiment with the WIN-911 - FIX32 ensemble using WIN911/411 Details to cue you in on the system alarm limits. The Pneumatic Conveyor, City Water, and Building Security operate in the same general manner, although each varies slightly to illustrate the different ways WIN-911 can be configured to process data. Modification to the FIX Direct Connect.mdb to include pager and voice connections will give a more comprehensive demonstration of WIN-911 capabilities.

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Note: When changing from one demo to another, it is best to acknowledge and clear all items of the current demo. Otherwise, alarm messages pertaining to the current demo may show up in a later demo and cause confusion.

## FIX Block Types

WIN-911's FIX Remote Alarm option supports nine Fix block types for local node monitoring:

1. Analog Input (AI) - Read/Write
2. Analog Output (AO) - Read/Write
3. Analog Alarm (AA) - Read/Write
4. Analog Register (AR) - Read/Write
5. Digital Input (DI) - Read/Write
6. Digital Output (DO) - Read/Write
7. Digital Alarm (DA) - Read/Write
8. Digital Register (DR) - Read/Write
9. Multiple Digital Input (MDI)

Support has been added for Rate of Change and Deviation alarms.

Special Block Types have been added for Bailey DSC:

1. Block Device Driver (BDD)
2. Block Digital Input (BDI)
3. Remote Control Memory (RCM)
4. Block Multistate Device Driver (BMD)
5. Remote Motor Control Block (RMC)
6. Remote Manual Set Constant (RMS)
7. Block Analog Input (BAI)
8. Block Station (BST)
9. Data Acquisition Analog (DAA)

Special Block Types have been added for Texas Instruments. Refer to TI for details.

1. AAO Data (AAO)
2. BMS Data (BMS)
3. DAO Data (DAO)

Special Block Type has been added for GE Infrastructure sensing. Refer to GE Infrastructure Sensing for details.

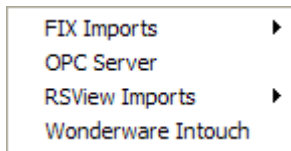
FIX Remote Alarm

Kaye Analog Alarm (KAA)

Special Block Type has been added for GxP Automation. Refer to GxP Automation for details.

Analog Alarm Modified (AAM) - Read/Write

## Import Source

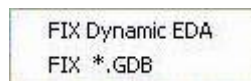


Use the WIN-911 Configurator's File\Import function to save time and energy as well as ensure data-point syntax accuracy. This easy to use function will scan the FIX database for all data-points that WIN-911 can monitor and present them in a list of data-point import candidates. From that list you select the needed data singularly by clicking individual points or in mass by clicking the first in a series and shift-clicking on the last.

Note: The only tags that will appear for import are block types that WIN-911 can monitor (AA, AI, AO, AR, DA, DI, DO, DR, MDI, BDD, BDI, RCM, BMD, RMC, RMS, BAI, BST, DAA, AAO, BMS, DAO, KAA, AAM), all other tags will not show up for selection.

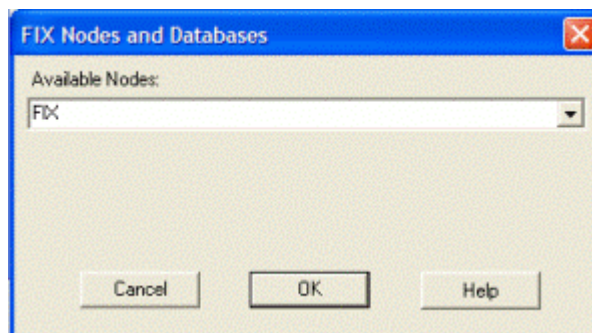
Warning: It is possible to manually define tags in WIN-911 for unsupported block types; however, at runtime those alarms will not function.

There are two methods of importing to choose from: 1) FIX Dynamic EDA and 2) FIX \*.GDB. The Dynamic EDA is the easier and preferred method. The only drawback is that the FIX must be running to perform this kind of import.



## FIX Dynamic EDA Database Select

Prior to importing FIX data dynamically you must have FIX running. The FIX Dynamic EDA import works for all versions of Fix: FIX32 or iFIX. The Dynamic EDA Import can be used without interrupting the FIX; it is definitely less time consuming than the GDB import, and supports the same block types as the GDB import. The first step in doing the FIX Dynamic import is to select a node name.



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WIN-911 communicates with the running FIX32 or iFIX and gives you a list of node ns from which to choose. If the FIX is a stand alone system WIN-911 will show you all of the names associated with this particular node such as its physical, logical and backup names. When FIX is networked WIN-911 will show you all node names this particular node is aware of plus all of its variations. Once a Node name is selected from the drop down list, you will be presented the FIX Tag Select dialog box.

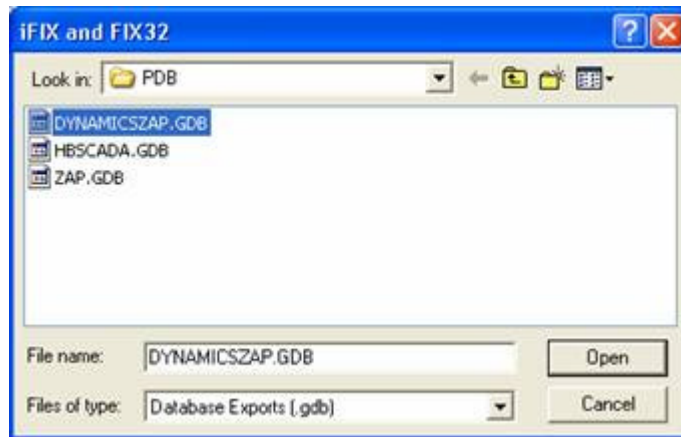
## Redundant Applications

When importing tags from a redundant FIX Node the user wants to select the local logical node name from the Available Nodes: list. This will import the tags into WIN-911 with the proper node prefix for representing both physical nodes in the redundant pair.

## FIX \*.GDB Database Select

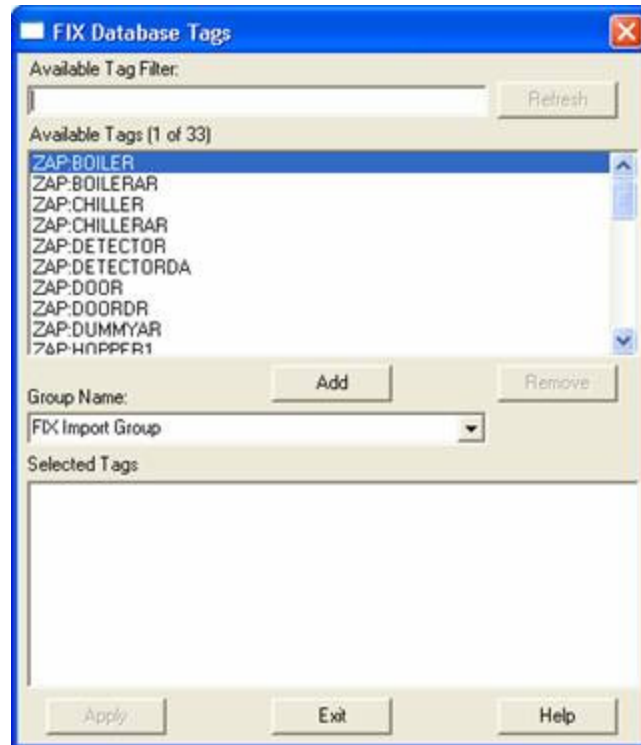
From the iFIX Database Manager select Database\Export\\*.GDB to generate a “\*.GDB” file from the master “\*.PDB” file.

From the File pull-down menu in the WIN-911 Configurator select Import\iFIX and FIX32.

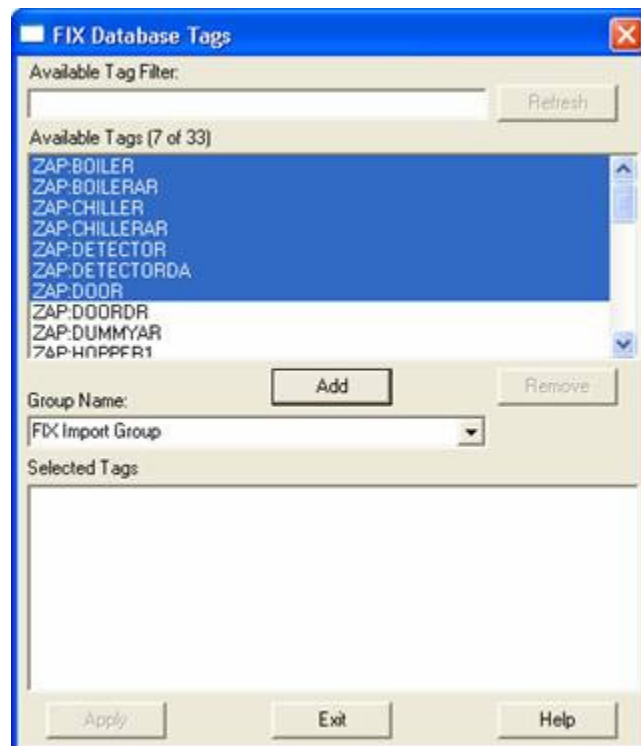


Select the appropriate “\*.GDB” file by browsing the appropriate folder.

## Importing Tags

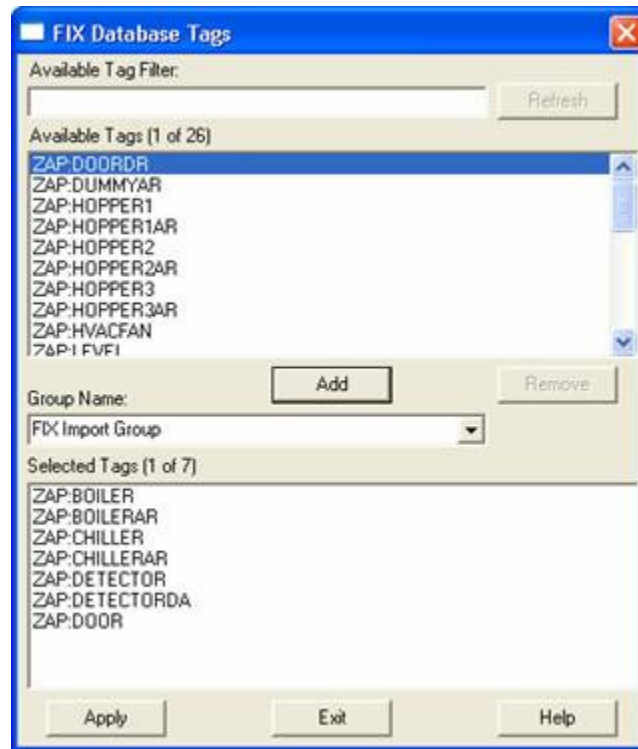


To select a block of tags to import quickly, click on the first tag of the block.



## FIX Remote Alarm

Next, scroll down to the bottom of the block list and shift-click the last tag.



Once all the tags are selected, press the Add button and the application will fill the Selected Tags from the entire "\*.PDB" database.

If you wish to deselect any of the tags from the list before the import macro is run, select them from the Selected Tags using the Remove button. Otherwise, select Apply and the WIN-911 database import will execute.



## Global Options

### FIX Program Path

Use of the Direct Connect option with GE's FIX will require providing WIN-911 with the location of the HMI package. The field provided allows the user a choice between manually entering the path, or using the Browse button to invoke the Select FIX Directory dialog box to define the path.

### Alarm Queue

WUSERQ1, WUSERQ2, or AlmUserQ can be selected to pass data to WIN-911 by choosing the appropriate radio button.

AlmUserQ Name must be declared by WIN-911 and when the AlmUserQ radio button is selected this text box is enabled. The default name is "TeleDAC" (case sensitive), but the user may name it anything up to sixteen characters.

Note: Specter Instruments recommends iFIX Dynamics users only use AlmUserQ rather than either of the WuserQ's.

Special Note for AlmUserQ: The following command line must be entered in the Configure Tasks list in the SCU: "/nTeleDAC"

### Security

Enable Security checkbox configures WIN-911 for iFIX security features. Text boxes are provided for the iFIX security Login Name and Password.

Note: Be sure that the user login entered here can write to all alarm groups WIN-911 is monitoring, or acknowledgements originating from WIN-911 will not be honored by iFIX.

### Alarm on any communications failure

Select this check box to allow alarm notifications in the event of a communications failure.

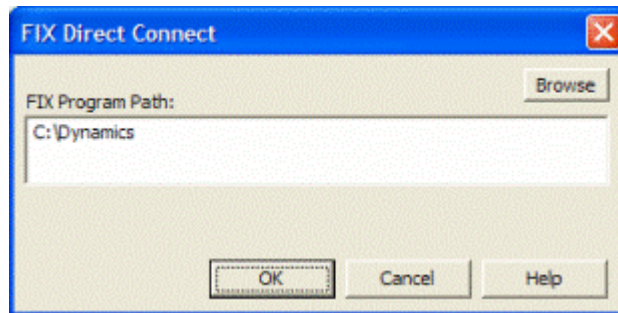
## Data Source Definition



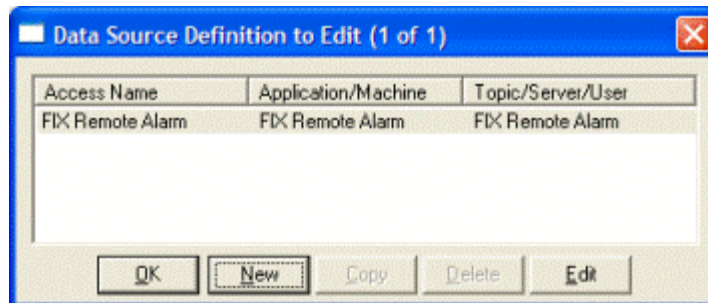
This button is used to setup data communications. Data point addressing can be monotonous and syntactically rigorous. Rather than being forced into remembering (and exactly typing) the Direct Connect invocation string for each "Item Name" to be alarmed, you merely select the appropriate data source type from the selection list. When you define data points, a selection box will provide you with a list of "Access Names" to choose from. Simply select "FIX Remote Alarm".

Note: The data source definition is automatically configured if the FIX database was imported using one of WIN-911's FIX import utilities.

Here the FIX Program Path is defined. You may use the Browse button to locate the path. Click OK.

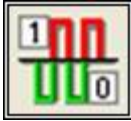


Selecting "Edit" or double-clicking on the "Access Name" will bring you back to the FIX Program Path window.



# Digital Definitions

## Digital Definition

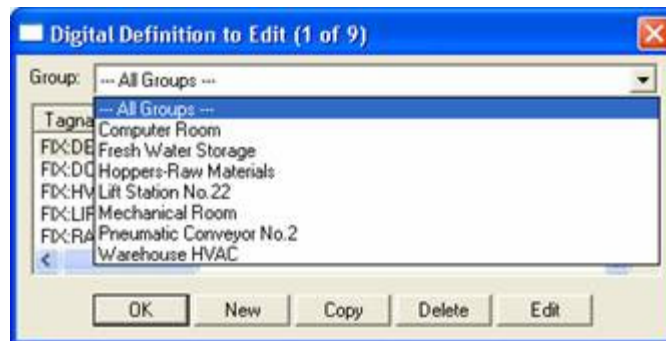


This button is used to define all digital points. With both WIN-911 and WIN-411, alarms or monitored points are classified as either a Digital “1” or “0”, or “bit picked” Analog data values. Digital alarms/points are configured within this button.

Special Note: Lite Mode users are limited to a total of 24 digital tags and unlimited watchdog alarms. Analog tags are not supported in Lite Mode.

## Digital Definition to Edit

Alarms are organized by Group. Using the pull down list box, select the Group that the new or existing alarm/point is assigned. Only the alarms/points associated with the Group will be listed. You may select the appropriate Group by the pull-down list box, or select All Groups.



After selecting the specific Group or selecting All Groups, you are ready to add or modify digital alarms.

Selecting New, Edit or double-clicking on the Access Name will bring up the Digital Definition dialog.

## Base Definition

### Tagname

The tagname is an alias of the FIX alarm name. This is only a user friendly name for the alarm. It is not used to address the alarm within FIX.

### Description

The Description field is used to provide a more detailed description of an alarm or point. One of the time saving features of the FIX Remote Alarm option is how WIN-911 utilizes the Description field as defined within the SCADA package. This field is active when the tag is imported; if it is manually created, then the field is disabled.

### Group Name

Alarms are organized by Group. Assign the alarm Group using the drop down menu here.

### Bit

If you are using the FIX Remote Alarm option, this field will be disabled, as Remote Alarm is the only valid selection.

### Access Name

The Access Name is used to refer to your FIX Data Source Definition.

### Use Tagname for Item

Check this box to copy the Tagname into the Item Name field.

### Item Name

The Item Name is used to identify the particular item to monitor from the FIX. The actual name entered here must conform exactly to the FIX's data point nomenclature. In the case of the FIX Remote Alarm option for FIX, the Item Name must be entered as such:

Node:Tag Name

This field is case sensitive and must be defined.

Note: The Terms "Node" and "Tag Name" are terms specific to the FIX. FIX Tag Names do not include filters. Please refer to FIX documentation for details. You can also use the FIX's SCU and Database Builder to determine proper input for both. Care should be taken not to confuse WIN-911's "Tagname" and the FIX's "Tag Name".

## Alarm Conditions

### Alarm and Normal Text Strings

The Alarm and Normal Text Strings for FIX data points are defined within the FIX SCADA package and do not need to be redefined here. Since this information is accessed directly from the FIX, these fields are disabled.

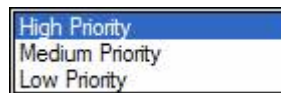
### Digital Alarm

The Digital Alarm state for FIX data points are defined within the FIX SCADA package and do not need to be redefined here. Since this information is accessed directly from the FIX, this field is disabled.

### Initial Value

The Initial Value for FIX data points are defined within the FIX SCADA package and do not need to be redefined here. Since this information is accessed directly from the FIX, this field is disabled.

### Priority



The Priority for FIX data points are defined within the FIX SCADA package and do not need to be redefined here. Since this information is accessed directly from the FIX, this field is disabled. Within a Group, a higher priority alarm will bump a lower priority alarm down the queue to call out, even if the lower priority alarm was first in line. Alarm priority is originally defined when a point is imported.

Note: iFIX 4.0 uses a seven layered priority structure that maps to WIN-911's three layered structure as follows: Critical, HIHI, and HIGH iFIX priorities are translated to WIN-911's High Priority. Medium iFIX priorities map to WIN-911's Medium Priority, and LOW, LOLO, and INFO iFIX priorities translate to WIN-911's Low Priority.

## Automatic Acknowledgement

### Never

Selecting this radio button will require a manual acknowledgement of the alarm.

### On Alarm

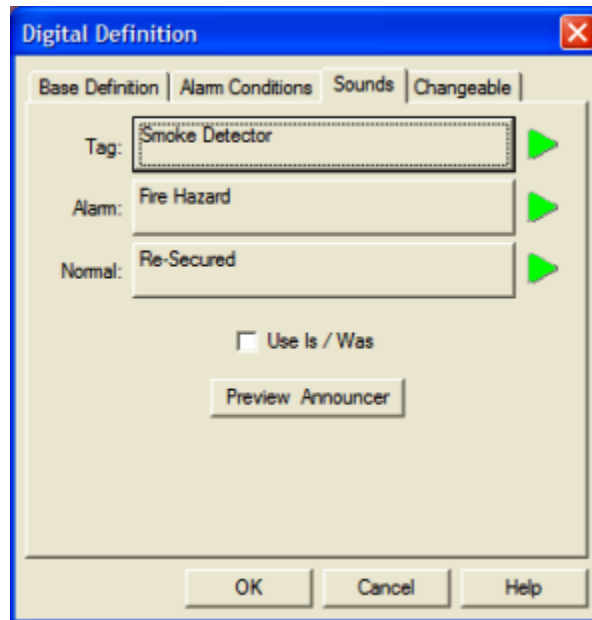
Selecting this radio button will cause the alarm to automatically become Acknowledged as it enters into an alarm condition. This option would allow audio reports of an alarm's current condition without initiating other reporting options listed in the Group. If this option is active, the message (going into an alarm condition) will not generate Pop-Up alarm messages or any of the Dial-Out options. Because the alarm is automatically acknowledged, the message coming back to a normal state would indicate that the condition is in the normal mode. The Was message would never be used.

## FIX Remote Alarm

### On Return To Normal

Selecting this radio button will cause the alarm to automatically acknowledge as it returns to normal. This option removes the requirement that the associated alarm be responded to by a person in the event that no one has acknowledged the alarm at the time it returns to a normal condition. Experiment with all three of these options to get the results you desire.

## Sounds



### Tag Sound

The Tag Sound text is used to synthesize audio for the name of your alarm. If you are using the Wave Files Only option, you may select your wave file here.

### Alarm & Normal Sound

The text here is used to announce the normal and alarm states of you alarm.

### Use Is / Was

In some cases, using the Is/Was sounds will not make sense. Selecting the check-box next to Use Is/Was will activate its use. Leaving the check box blank will omit its use. An example of this sound would be "The Entry Door IS open".

### Preview Announcer

Selecting this button will allow you to review this alarm's audio ... AS IT WILL BE HEARD IN THE LOCAL ANNOUNCER ... for each condition of the alarm. Selecting the "Auto Acknowledge" option discussed above will affect whether you can test the "State Acknowledged" button.

## **Changeable**

The last tab selection is for WIN-411 applications only. If you have chosen the WIN-411 option, a user may call-in to the computer to inquire on digital values, not just alarm conditions. If configured, the user may even change the value from a touch-tone telephone. If the developer elects to allow the user to make changes, each alarm, or data point must be configured to permit changes.

### **Enable Changes by Operator**

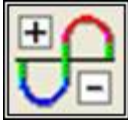
This check box will allow changes to this alarm or status point. If this check box is left unchecked, changes will not be allowed.

Note: Digital Block types that are writable are FIX version dependent.



# Analog Definitions

## Analog Definition

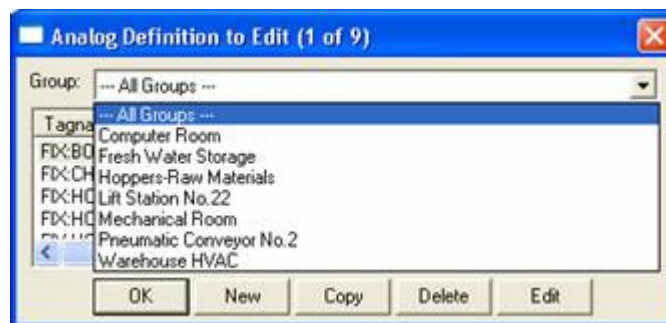


Click this icon to edit Analog Alarms, otherwise known as level alarms.

Special Note to Lite Mode Users: Analog alarms are not permitted in Lite Mode.

## Analog Definition to Edit

Alarms/Points are arranged by Groups. Using the pull down list box, select the Group that the new or existing alarm/point is assigned. Only the alarms/points associated with the Group will be listed. You may select the appropriate Group from , or select All Groups.



After selecting the specific Group or selecting All Groups, you are ready to add or modify analog alarms.



Selecting New, Edit or double-clicking on the Tagname will bring up the Analog Definition sheet.

## Base Definition

### Tagname

The tagname is an alias of the FIX alarm name. This is only a user friendly name for the alarm. It is not used to address the alarm within FIX.

### Description

The Description field is used to provide a more detailed description of an alarm or point. One of the time saving features of the FIX Remote Alarm option is how WIN-911 utilizes the Description field as defined within the SCADA package. This field is enabled when the tag is imported, if it is manually created, then the field is disabled.

### Group Name

Alarms are organized by Group. Assign the alarm Group using the drop down menu here.

### Engineering Units

The Engineering Units field for a FIX data point is defined within the FIX SCADA package import and can be redefined.

### Access Name

The Access Name is used to refer to your FIX Data Source Definition.

### Use Tagname for Item

Check this box to copy the Tagname into the Item Name field.

### Item Name

The Item Name is used to identify the particular item to monitor from the FIX. The actual name entered here must conform exactly to the FIX's data point nomenclature. In the case of the FIX Remote Alarm option for FIX, the Item Name must be entered as such:

Node:Tag Name

This field is case sensitive and must be defined.

Note: The Terms "Node" and "Tag Name" are terms specific to the FIX. FIX Tag Names do not include the filter. Please refer to FIX documentation for details. You can also use the FIX's SCU and Database Builder to determine proper input for both. Care should be taken not to confuse WIN-911's "Tagname" and FIX's "Tag Name".

## **Conversion**

### Conversion Type

The FIX Direct Connect does not support conversion of raw data values.

### Number of Decimal Places

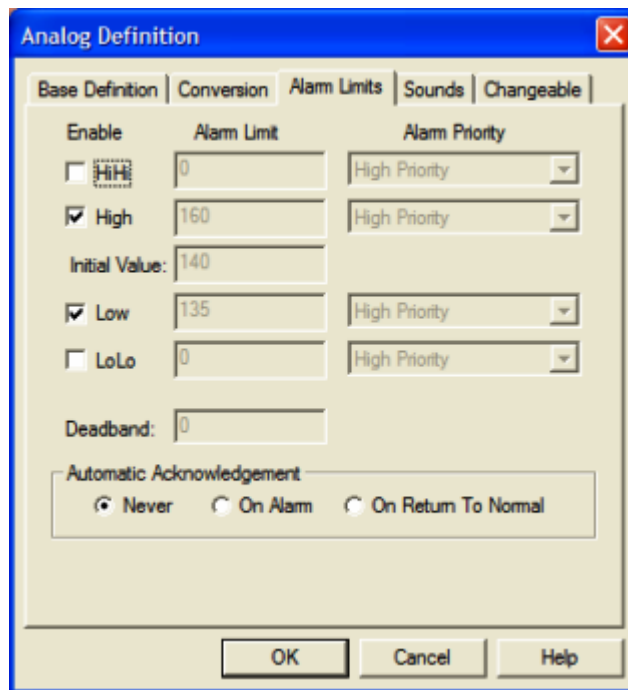
WIN-911 supports 32 bit signed integers and 32 bit floating point values. A 32 bit integer is the default data type. For floating point numbers set the number of decimal places to something other than zero.

## Alarm Limits

The four Alarm Limits are used to determine when alarm conditions occur. The value must be above the high limits for the high alarms and below the low limits for the low alarms. If the value is scaled, the limits must be within the scaled range. With the FIX Remote Alarm option, the Alarm Limits are set within the FIX; hence, the “Alarm Limit” input fields are disabled.

Notice that you do not have user defined visual alarm messages with Analog alarms. The visual messages are fixed: High, HiHi, Low, and LoLo.

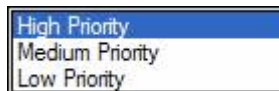
The alarm selection boxes are used to select the desired alarm states to be monitored. In WIN-411 applications, you may occasionally have a data point which you want to monitor, but not alarm. In such cases, do not select any of the Alarm States check boxes.



## Initial Value

The Initial Value function is set within the FIX and is not a valid function for WIN-911. This field is disabled for the FIX Remote Alarm.

## Priority



The Priority for FIX data points are defined within the FIX SCADA package and do not need to be redefined here. Since this information is accessed directly from the FIX, this field is disabled. Within a Group, a higher priority alarm will bump a lower priority alarm

down the queue to call out, even if the lower priority alarm was first in line. Alarm priority is originally defined when a point is imported.

Note: iFIX 4.0 uses a seven layered priority structure that maps to WIN-911's three layered structure as follows: Critical, HIHI, and HIGH iFIX Priorities are translated to WIN-911's High Priority. Medium iFIX priorities map to WIN-911's Medium Priority, and LOW, LOLO, and INFO iFIX priorities translate to WIN-911's Low Priority.

## Deadband

The Deadband function is set within the FIX and is not a valid function for WIN-911. This field is disabled for the FIX Remote Alarm.

## Automatic Acknowledgement

### Never

Selecting this radio button will require a manual acknowledgement of the alarm.

### On Alarm

Selecting this radio button will cause the alarm to automatically become Acknowledged as it enters into an alarm condition. This option would allow audio reports of an alarm's current condition without initiating other reporting options listed in the Group. If this option is active, the message (going into an alarm condition) will not generate Pop-Up alarm messages or any of the Dial-Out options. Because the alarm is automatically acknowledged, the message coming back to a normal state would indicate that the condition is in the normal mode. The Was message would never be used.

### On Return To Normal

Selecting this radio button will cause the alarm to automatically acknowledge as it returns to normal. This option removes the requirement that the associated alarm be responded to by a person in the event that no one has acknowledged the alarm at the time it returns to a normal condition. Experiment with all three of these option boxes to get the results you desire.

## Sounds

### Tag Sound

The Tag Sound text is used to synthesize audio for the name of your alarm. If you are using the Wave Files Only option, you may select your wave file here.

### Alarm Sounds

A specific sound can be specified for each of the alarm conditions. These sounds are normally the verbalization of the phrases "above the high limit," "above the HiHi limit," "below the low limit," and "below the LoLo limit." In addition, there is a return to normal sound which may be the phrase "now normal."

### Engineering Unit Sound

The Engineering Units field is an optional sound which identifies the engineering units a value represents. Analog values may be scaled and displayed as real world units of measure. Typical units are DEGF and GPM.

### Is / Was Selection

Check this box to use the Is and Was sounds.

### Preview Announcer

Selecting this button will allow you to review this alarm's audio ... AS IT WILL BE HEARD IN THE LOCAL ANNOUNCER... for each condition of the alarm. Selecting the "Auto Acknowledge" option discussed above will affect whether you can test the "State Acknowledged" button.

## Changeable

The last tab selection is for WIN-411 applications only. If you have chosen the WIN-411 option, a user may call in to the computer to inquire on data values, not just alarm conditions. If configured, the user may even change a value from a touch-tone telephone. If the developer elects to allow the user to make changes, each alarm or data point must be configured to permit changes.

### Changeable by Operator

This check box will allow changes to this alarm or data point. If this check box is left unchecked, changes will not be allowed.

### Minimum and Maximum Values

Changes will be allowed only within the minimum and maximum values.

You must assign the range allowed for a change.

Minimum Value: Integer.....-32768

Minimum Value: FP without round-off error ...-9999999

Maximum Value: Integer..... +65535

Maximum Value: FP without round-off error ...+9999999

## Watchdog Timer Definitions

### Watchdog Timer Definition

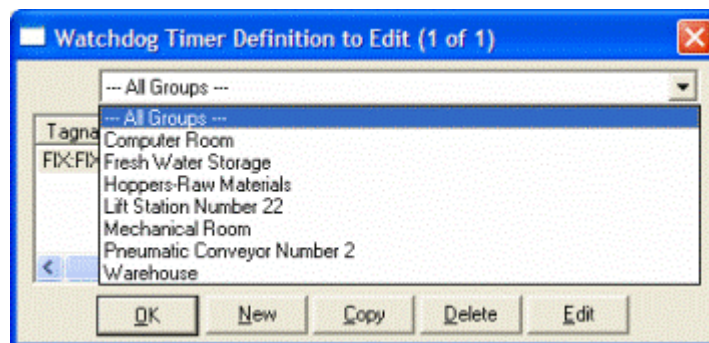


Most applications for WIN-911 and WIN-411 are industrial alarming or monitoring requirements that are being fed factory floor data from a FIX Remote Alarm Server. Should trouble exist in either the server, cabling, or the actual control device, WIN-911/411 will stop receiving new data from the source. For this reason, WIN-911's alarm reporting chores would be restricted, or totally shutdown. Therefore, the Watchdog Timer Alarms have been implemented. This method will also detect when a PLC has been shut down for maintenance or program changes. The Watchdog Timer option in WIN-911 will alert you if FIX Direct Connect activity from specific devices becomes inactive. Watchdog Timers are arranged by Groups just like other alarms/points. Using the pull down list box, select the Group that the new or existing alarm/point is assigned. Only the Watchdog Timers associated with the Group will be listed.

To utilize the Watchdog Timer, you must choose a changing integer data value in each device to be monitored. A good example of such a data value would be a "continuous changing counter value" programmed into the PLC that you are monitoring. The Watchdog Timer would monitor this data value. If the value does not change over a pre-selected time period, an Alarm Message would be generated. If you are not receiving data, you cannot alarm it. A typical voice message for this condition could be: "WARNING, PLC#4, HAS LOST COMMUNICATIONS WITH ALARM LOGGER."

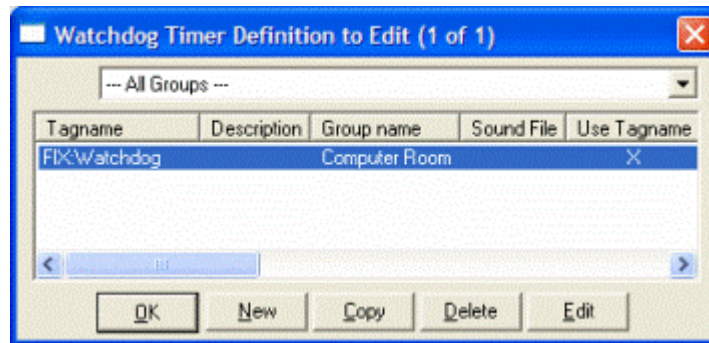
### Watchdog Timer Definition to Edit

Alarms/Points are arranged by Groups. Using the pull down list box, select the Group that the new or existing watchdog alarm is assigned. Only the watchdogs associated with the Group will be listed. You may select the appropriate Group by the pull-down list box, or select "All Groups."



After selecting the specific Group or selecting "All Groups," you are ready to add or modify analog alarms.





Selecting New, Edit or double-clicking on the Tagname will bring up the Watchdog Timer Definition sheet.

## Base Definition

### Tagname

Tagname is a unique identifier of an alarm/point.

### Description

The Description field is used to display more information about a particular alarm.

### Group Name

Alarms are organized by groups for reporting out-of-tolerance conditions.

You have by now created a unique Watchdog alarm. You must choose a predefined Group to specify the reporting actions for this alarm. (Remember, you have already selected a group name, specifying the reporting options and an optional sound for this group.) A review of the Group button is not a bad idea here. To select another Group, click on the drop-down arrow with the cursor and choose.

You may change the Group assignment simply by selecting another defined Group from the drop down list box.

### Access Name

The Access Name is used to select a predefined FIX Remote Alarm server from the list defined in the data sources. This field must be defined.

### Tagname for Item

Selecting this box will cause the Tagname to be copied directly into the item name. This is useful when connecting to other tag oriented programs.

### Item Name

The "Item Name" is used to identify the particular item to monitor via FIX Direct Connect. The actual name entered will vary from server to server. Consult the server documentation for additional information. This field is case sensitive and must be defined.

## Alarm Conditions

### Alarm and Normal

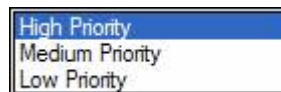
The “Alarm States” text identifies the normal and alarm states that appear on the alarm monitor displays and reports.

### Time-out After \_\_ Minutes

The “Time-out After \_\_ Minutes” field is a count down timer preset. Each time a new value is read into the selected item, the counter is reset to the preset value. If the timer ever counts down to zero, the alarm occurs. This entry is in one-minute increments. If you have a very slow changing server, a selection of 10 minutes might be appropriate. A faster application might require a time-out setting of 1 minute.

If a value of “0” minutes is configured in the field, the Watchdog behaves like a one-shot alarm that does not care if the value ever changes. The alarm for a “0” minute Watchdog will be triggered by a loss of communication with the data source. Since the FIX Remote Alarm cannot reestablish communication with WIN-911, these Watchdogs can never return to normal.

### Priority



For each alarm, you may select three levels of “Priority”: High, Medium, and Low. For each “Group”, a higher priority alarm will bump a lower priority alarm down the queue to call out, even if the lower priority alarm was first in line.

### Automatic Acknowledgement

#### Never

Selecting this radio button will require a manual acknowledgement of the alarm.

#### On Alarm

Selecting this radio button will cause the alarm to automatically become “Acknowledged” as it enters into an alarm condition. This option would allow audio reports of an alarm’s current condition without initiating other reporting options listed in the “Group”. If this option is active, the message (going into an alarm condition) will not generate “Pop-Up” alarm messages or any of the “Dial-Out” options. Because the alarm is automatically acknowledged, the message coming back to a normal state would indicate that the condition is in the normal mode. The “Was” message would never be used.

#### On Return To Normal

Selecting this radio button will cause the alarm to automatically acknowledge as it returns to normal. This option removes the requirement that the associated alarm be responded to by a person in the event that no one has acknowledged the alarm at the time it returns

## FIX Remote Alarm

to a normal condition. Experiment with all three of these options to get the results you desire.

## Sounds

### Tag, Alarm, and Normal Sounds

Like other WIN-911 alarms, the Sounds are essentially a verbalization of the description, and the Alarm and Normal text to be used in the audio annunciation. As with other sounds, the sounds are selected from a dialog box.

### Is / Was Selection

In some cases, using the Is/Was audio will not make sense. Selecting the check-box next to Use Is/Was will activate its use. Leaving the check-box blank will omit its use.

### Preview Announcer

Selecting this button will allow you to review this alarm's entire audio ... AS IT WILL BE HEARD IN THE LOCAL ANNOUNCER... for each condition of the alarm.

## FIX Data Integrity Errors

There are three basic error conditions that are monitored regarding I/O connection health and data security. These are as follows:

Error	Definition
<b>I/O Failure</b>	A failure between the driver and device
<b>Communication Failure</b>	A failure between the SCADA and driver
<b>No Data Yet</b>	E1212: No data available, ???
<b>Exceeded the deviation setpoint</b>	This alarm occurs when the current value of the block varies from the Target Value field by an amount greater than the deviation alarm's value
<b>Exceeded the rate of change setpoint</b>	Value exceeds rate of change setting

Please refer to FIX documentation for information regarding these messages.

### INI Settings for Communication Alarms

The WIN-911.ini file stores configuration settings relating to communication failure alarms. If you would like to change the way WIN-911 handles these alarms, the file may be edited with a text editor. Find the [FIX Remote Alarm] heading and add the settings you wish to use to the bottom.

#### StaticDescriptions

Type StaticDescriptions=1 and WIN-911 will use the description defined in WIN-911 for the alarm, instead of the FIX comment field.

#### CommErrorIgnore

Type CommErrorIgnore=1 and all comm error events will be ignored.