

Technical Reference

Capstone Remote Monitoring System (Maintenance Edition)

This document (plus the User Edition), presents the additional capability to monitor, control, and troubleshoot the MicroTurbine via the Capstone Remote Monitoring System (CRMS) software.

Chapter 6: MicroTurbine View Control

The chapter presents view control information.

Fault Trace Update

In the event of a fault shutdown, key operating parameters prior to and after the event are stored in the Controller.

To view the Fault Trace panel, select **[Display] [Fault Trace]** from the MicroTurbine Menu Bar. See Figure 6-1.

The Fault Trace includes a separate record for each of the last 20 faults detected within the MicroTurbine.

The following selections are available from the Fault Trace panel:

- **Number of Records** (Multiple or Single)

Obtain Multiple or Single records.

In case of single record selection, CRMS will obtain the single trace for the fault record whose number is selected within the **Get Number of Records** field.

In case of multiple records, CRMS will obtain the number of trace records selected within the **Get Number Of Records** field.

- **Get Number of Records**

Selecting Number of records.

In case of **Single** record, the selected record number will be the only fault trace record that is obtained from the controller.

In case of **Multiple** records, the selected number will be the number of trace records obtained from the controller starting from trace # 1.

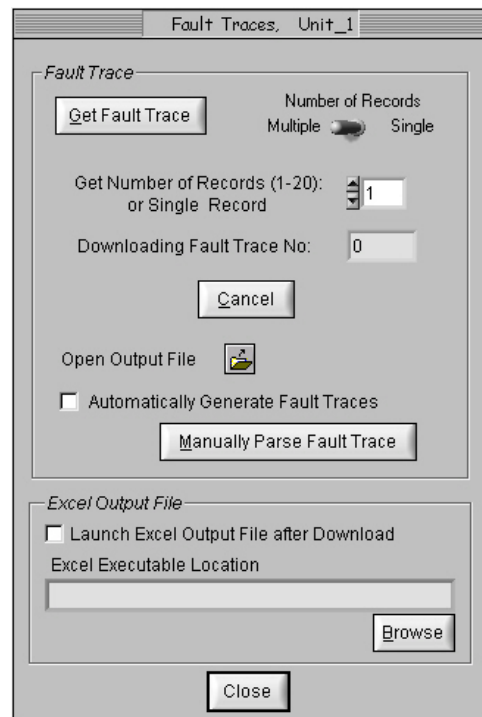


Figure 6-1. Fault Trace Controls Panel

- **Downloading Fault Trace No.**

Displays the number of the fault record whose fault trace is currently being obtained.

- **Automatically Generate Fault Trace**

Automatically generates fault traces in case of a new fault.

- **Launch Excel Output File after Download**

Displays Fault Traces in Excel format after download.

- **Cancel**

Stops the Fault Trace Download operation.

To obtain the fault trace from the MicroTurbine Controller, select:

1. Number of records from the **Get number of Records (1-20) or Single Record**
2. Set **Number of Records** switch
3. Click on **Get Fault Trace** button.

The fault trace data can be found under the installation directory: **c:\pathname**. There is a separate directory for each site. Each fault trace file is also time/date stamped when created.

The file is saved to the path:
**c:\file_data_path\site_id\faults\
 datafilename.dat**

Where **c:\file_data_path** is selected as the default directory from the file management panel.

The default setting for the **c:\file_data_path** directory is **c\installation_directory\data**.

The form of the data filename is as follows:

Mmddy_hhmmss.dat

Example: If the file is created on May 9, 2001 at 2:34:45 pm, the resultant file is:

050901_143445.dat

Clicking and selecting the file from the Manually Parse Fault Trace control button can manually parse the fault trace data.

Incident History Display Panel

To display the fault Incident History, select **[Display] [Incident History]** from the MicroTurbine Menu Bar.

A maximum of 20 fault incidents may be displayed for any MicroTurbine. See Figure 6-2.

Up to 40 fault incidents may be displayed for the Power Server controller.

The fault Incident History provides the following information:

1. Fault Code
2. Incident Name
3. Severity Level
4. Date of Incident
5. Time of Incident

To copy the displayed information to a text file, select the **Open Incident History Text File** button.

The incident history data can be found under the installation directory: **c:\file_data_path**.

There is a separate directory for each site.

The file is saved to the path:
c:\file_data_path\site id\incident.txt

Where **c:\file_data_path** is selected as the default directory from the file management panel.

The default setting for the **c:\file_data_path** directory is **c\installation_directory\data**.

No.	Incident Name	Severity Level	Date	Time
3021	PAME FAILED	Intrnl Warning	06/20/2002	10:05:13
5001	NO FUEL DEVICE	Fuel Fault	06/20/2002	10:04:53
16000	PMP NOT PRIMED	Fuel Fault	06/20/2002	08:29:19
3021	PAME FAILED	Intrnl Warning	06/20/2002	08:02:35
5001	NO FUEL DEVICE	Fuel Fault	06/20/2002	08:00:40
3021	PAME FAILED	Intrnl Warning	06/19/2002	14:56:26
3021	PAME FAILED	Intrnl Warning	06/18/2002	15:23:52
7010	INVLDT UTLCN	Internal Fault	06/18/2002	15:23:50
11000	GDSP SPI COMM	Internal Fault	06/18/2002	15:17:34
11001	IDSP SPI COMM	Internal Fault	06/18/2002	15:17:33
3021	PAME FAILED	Intrnl Warning	06/18/2002	15:17:15
7010	INVLDT UTLCN	Internal Fault	06/18/2002	15:17:12
3021	PAME FAILED	Intrnl Warning	06/18/2002	15:03:27
7010	INVLDT UTLCN	Internal Fault	06/18/2002	15:03:25
3021	PAME FAILED	Intrnl Warning	06/18/2002	13:42:45
7010	INVLDT UTLCN	Internal Fault	06/18/2002	13:42:43
3021	PAME FAILED	Intrnl Warning	06/18/2002	13:30:11
7010	INVLDT UTLCN	Internal Fault	06/18/2002	13:30:09
11001	IDSP SPI COMM	Internal Fault	06/18/2002	13:28:31
3021	PAME FAILED	Intrnl Warning	06/18/2002	13:23:49

Figure 6-2. Incident History Display Panel

Intra Devices Faults

PIC-controlled device (such as the SPV, GSPV, RFC, and the Display) fault information can be obtained from the Intra Device Fault Panel. See Figure 6-3.

To view the Intra Device Fault Panel, select **[Display] [Intra Devices Incidents]** from the MicroTurbine Menu Bar. The following information is displayed on the Intra Devices Incidents Panel:

1. Device Name
2. Fault Number (data bit number)
3. Fault Description

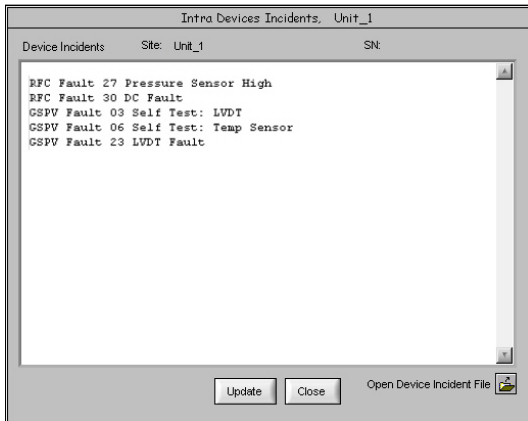


Figure 6-3. Intra Devices Incidents

The fault must be active in order to view the component faults. For example, if a FUEL FAULT is observed and is currently present, open the Intra Device Incidents window to isolate the fault to a given component.

To copy displayed information to a text file, select the **Open Device Incident File** button.

The device incident data can be found under the installation directory: **c:\file_data_path**. There is a separate directory for each site.

The file is saved to the path:

c:\file_data_path\site id\fault.txt

Where **c:\file_data_path** is selected as the default directory from the file management panel.

The default setting for the **c:\file_data_path** directory is **c:\installation_directory\data**.

Fuel Solenoid States

To view the fuel system Solenoid States while the system is operating, select **[Display] [Solenoid States]** from the MicroTurbine Menu Bar.

If a fuel device is detected, the ring control automatically switches to that device.

The **System Type** is automatically selected for all of the latest software versions. The fuel device and **System Type** can also be manually selected from the Select Fuel Device and **System Type** pull-down menus.

The following solenoids can be displayed from the Solenoid State Panel (Figure 6-4):

- -Injector 1
- -Injector 2
- -Injector 3
- -Injector 4 (Model C60 only)
- -Injector 5 (Model C60 only)
- -Injector 6 (Model C60 only)
- -Injector 1, 2 (Model C60 only)
- -Shutoff
- -Premix
- -Start Air (LFC only)
- -Fuel Drain (LFC only)
- -Fuel Purge (LFC only)
- -Boost Pump (LFC only)
- -Drain Pump (LFC only)
- -Priming Solenoid (LFC only)

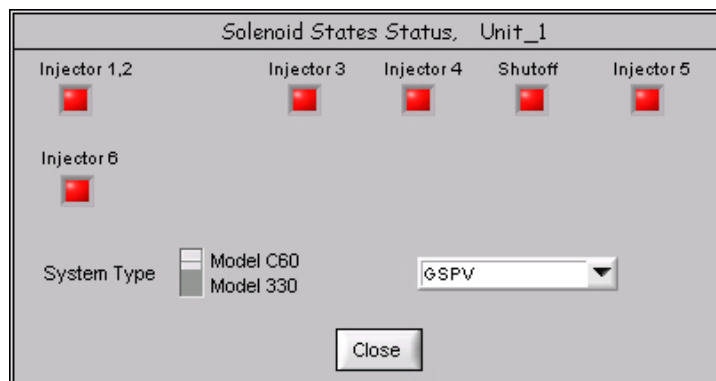


Figure 6-4. Fuel Solenoid States Display Panel

Notes and Related Information