

PowerPROview

Data Memory Module

How to Guide

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TABLE OF CONTENTS

Introduction.....	1
Connecting the Memory Module.....	1
How To Record Data	1
Start Recording	1
Stop Recording	1
How To Download Data.....	2
How To Erase Data	3
Erasing from PowerPROview.....	3
Erasing using the Memory Module button and the PA Pro.....	3
How To Configure the Memory Module	4

PowerPROview

Data Memory Module How To Guide

Introduction

This manual deals with various aspects of a Data Memory Module connected to the PowerPROview software. For information on operating the PowerPROview software see the PowerPROview Users Manual.

Connecting the Memory Module

The Data Memory Module can be connected by either using a POWERLink USB adapter or by connecting it to a Power Analyzer Pro's ESC port. Typically it will be connected to a Power Analyzer Pro for it can only record the Pro's data output. Connecting a Memory Module using a POWERLink gives you the ability to download, erase and configure but not to record.

How To Record Data

You manually control recording of data using the button on the Memory Module and the LCD screen of the Power Analyzer Pro that it is plugged into.

Start Recording

When the Memory Module is first plugged into the Pro you need to press its button once quickly (LCD display should say "Press button . . ."). You will then see the Main Menu. The menu item with the arrows on either side is the item currently selected (i.e. "<-> Record <-"). Pressing the button once quickly will move to the next selection and then back to the first item. Holding the button down for approximately 2 seconds will select that item.

To start recording, select the "Record" item and hold the button down until the Record Menu appears. Select "Start" and hold the button down until the next screen appears: "Erase All Data?". If you select "No" then it will not start recording. The Memory Module only holds one recording at a time and will erase the data before each recording session. If there is no recorded data you will not see the Erase All Data message.

To begin recording press the button once to select "Yes" and then hold down the button until the Record Menu appears again. Select "Start" and hold the button down until the Memory Module LED starts flashing Red. This indicates that it is recording.

Stop Recording

Recording will stop either when memory is full or the button is held down for about 2 seconds. To stop recording manually hold the button down until the LCD stops flashing red and starts flashing green.

PowerPROview


Data Memory Module How To Guide

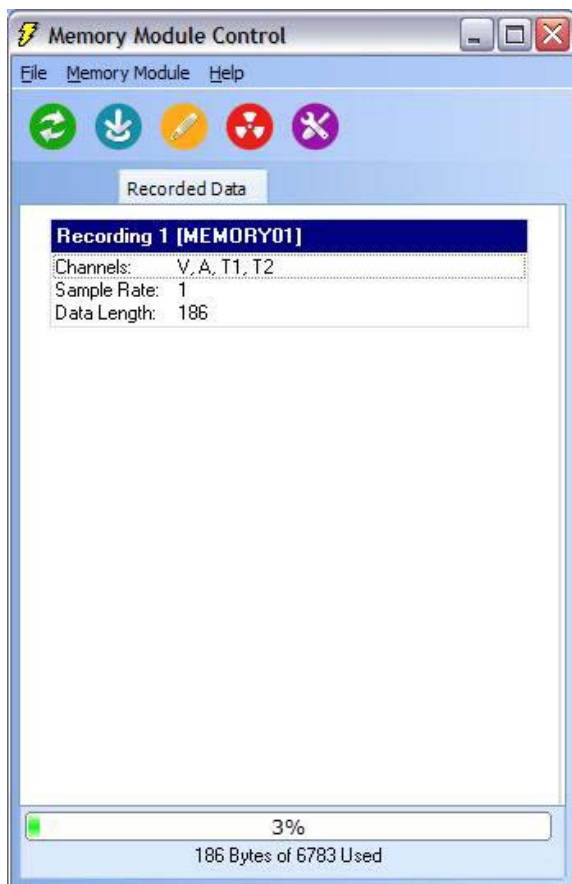
How To Download Data

With the Memory Module plugged into either a PA Pro or a POWERLink, you will see the Memory Module Toolbar appear in the PowerPROview window once you are connected to the device.



Method 1:


Click on the  button to open the Memory Module control window.



You will see under "Recorded Data" information about your recording. What channels were recorded, sample rate, and the length of the recorded data. At the bottom you will see how much of the total memory that was used.

PowerPROview


Data Memory Module How To Guide

Click on the download button  and it will read the recorded data from the Memory Module into the computers memory. You will see a please wait window while it is processing the data:



Once the data has been transferred to the computer a save dialog window will open. Type in the name of the file that you wish to save the data to and click Save. Your recorded data is now downloaded and saved to file where you can edit, view, export, or graph the data.

Method 2:

From the Memory Module toolbar click on the download button  and it will read the recorded data from the Memory Module into the computers memory as indicated in Method 1.

How To Erase Data

Erasing from PowerPROview

On either the Memory Module toolbar or the Memory Module control window click on



the erase button. It will ask you to confirm that you wish to permanently erase all recorded data in the Memory Module. Click yes and the recorded data will be erased.

Erasing using the Memory Module button and the PA Pro

With the Memory Module plugged into to PA Pro's ESC port the Pro's LCD screen is used in conjunction with the Memory Module's button for various functions. After plugging in the Memory Module press the button once as indicated in the LCD screen. You will then see the Memory Module menu items on the second line of the LCD display. The item currently selected will be bracketed with two arrows:

->Menu Item<-


Press the button quickly to move to the next item. Press the button until the arrows bracket the Erase item. Next press and hold the button for about 2 seconds or until the LCD display changes. The next screen confirms that you want to erase the data. Press the button quickly to select Yes, then press and hold the button for about 2 seconds or until the display changes. The data will then be erased.

PowerPROview

Data Memory Module How To Guide

How To Configure the Memory Module

You can configure the Memory Module using the Memory Module button and the PA Pro LCD display or by using PowerPROview. To use the button to configure the Memory Module refer to the Memory Module manual.

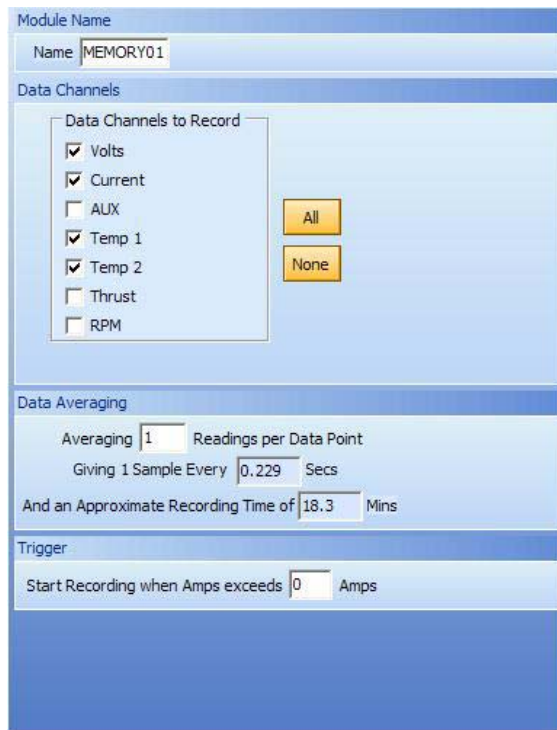
From either the Memory Module Toolbar or the Memory Module Control window click on the configure button  to read the configuration from the Memory Module and display the configuration window.



Next, Click on the Recording Tab

PowerPROview

Data Memory Module How To Guide



The screenshot shows the 'Data Memory Module' configuration window. It has a 'Module Name' section with a text box containing 'MEMORY01'. Below is the 'Data Channels' section with a list of channels to record: Volts (checked), Current (checked), AUX (unchecked), Temp 1 (checked), Temp 2 (checked), Thrust (unchecked), and RPM (unchecked). To the right of this list are 'All' and 'None' buttons. The 'Data Averaging' section includes 'Averaging' set to 1, 'Readings per Data Point' set to 1, 'Giving 1 Sample Every' set to 0.229 Secs, and 'And an Approximate Recording Time of' set to 18.3 Mins. The 'Trigger' section has a text box for 'Start Recording when Amps exceeds' set to 0 Amps.

Give your Memory Module a name for identification from other modules if you want.

Select the channels that you want to record. Selecting more channels reduces the recording time as indicated in the Data averaging section.

Usually an Average of 1 reading (fastest) is fine but if your data is changing slowly and you want a longer recording change the number of readings per data point as needed.

Set the Trigger threshold amps at a value that you feel will be the point at which you want to start recording. Usually this is set at a value greater than the idle current of the motor.

Once you have the configuration the way you want it write it to the Memory Module by

clicking on the Write Configuration To button



. Your configuration will then be written to the Memory Module.

Each time the configuration window is opened it will read the configuration from the Memory Module. You can save different configurations to a file for quick and easy configuration by loading the configuration and writing it to the Memory Module.