

MCEGOLD®

GETTING STARTED GUIDE

PdMA_{EYE}®



Revolutionizing Electrical Reliability



MCEGold PdMAEYE®

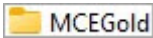
This document is a quick overview of the MCEGold® PdMAEYE® Version 3 software. Detailed information will be found in Chapter 3 of the Product Support Manual upon completion of the manual update which will begin following the completion of this document. The Product Support Manual is available within the MCEGold software by selecting Help, Product Support Manual from the toolbar.

The PdMAEYE allows facilities to test energized AC electric motors and generators, without opening the MCC or switchgear doors. The PdMAEYE uses Signal Conditioning Modules (SCMs) to condition the signal for input into the Data Acquisition system in the PdMAEYE base module. See SCM Configuration Introduction on page 20 for more information or for an in-depth discussion see the Product Support Manual.

PdMAEYE powered by MCEGold has several versions, therefore your version may not have some of the functions described in this document.

Note: To assist you in locating a specific area of interest in this document, an index is provided on page 24.

STARTING MCEGOLD

1. To start MCEGold locate the MCEGold executable  on the blue USB.
2. In the MCEGold Login window (Figure 1), select Language (English is the default), and enter your name and password. The Server and Authentication Mode windows are pre-configured. If not please contact PdMA Technical Support at 813-774-9982.
3. Click **OK**.



MCEGold Login

MCEGold®

Name

Password

Server

Login Mode
Network Desktop

Language
English

Authentication Mode

Licensed To:
Beta Tech Writing
Application Mode:
Network Desktop
Model:
0
Version : 3.2.7.4

OK Cancel

Figure 1: Login Window

Home Window

The MCEGold Home window (Figure 2) opens displaying the Site Navigator, Site Condition, WatchList, and Message Center windows. If you have assets connected to a PdMAEYE, there will be a folder labeled PdMAEYE in the Location area of the window. The Home window operates like a standard window and multiple windows may be open at the same time.

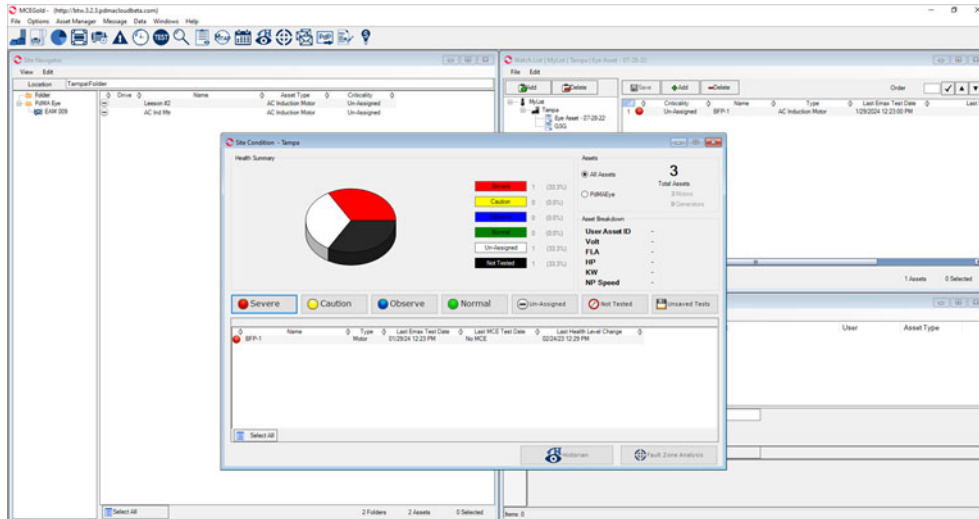
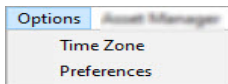


Figure 2: MCEGold Home Window

Menu Items

File - Close, closes MCEGold.

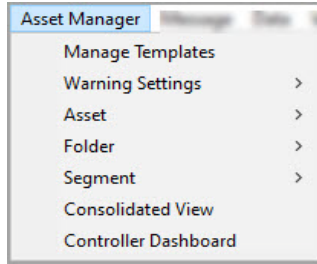


Options - In this window there are two choices, Time Zone and Preferences. Selecting Time Zone opens the Regional Settings window which has tabs for Time Zone and Date/Time.

In the *Time Zone* tab you can change the Time Zone by choosing the desired time zone from the drop down list and clicking **Apply**.

In the *Date/Time* tab you can change from the predefined settings found in the System Date Time Format option to the User Defined option by clicking the appropriate radio button. If the User Defined option is selected, choose the desired date and time formats from the drop down lists. Click **Apply** when the correct selections have been made. Click **OK** to close the Regional Settings window.

Preferences opens the Asset Management Preferences window. In the *Search Results* tab you can set a search limit. In the *General Tab* you can change the default save location, control create message prompt, control display sites on startup, and control temperature display.



Asset Manager - Use Asset Manager to setup the assets (motors), folders, and segments that are found in Site Navigator. Items displayed in the drop down list are dependent on the folder, asset, or segment selected in Site Navigator. The possible Asset Manager functions are Manage Templates, Warning Settings, Asset, Folder, Segment, Consolidated View, and Controller Dashboard.

Manage Templates, opens the Manage User Templates window (Figure 3). This allows you to develop templates for specific kinds of assets. By assigning a unique template to an asset the test results, alarm, and caution values are more meaningful.

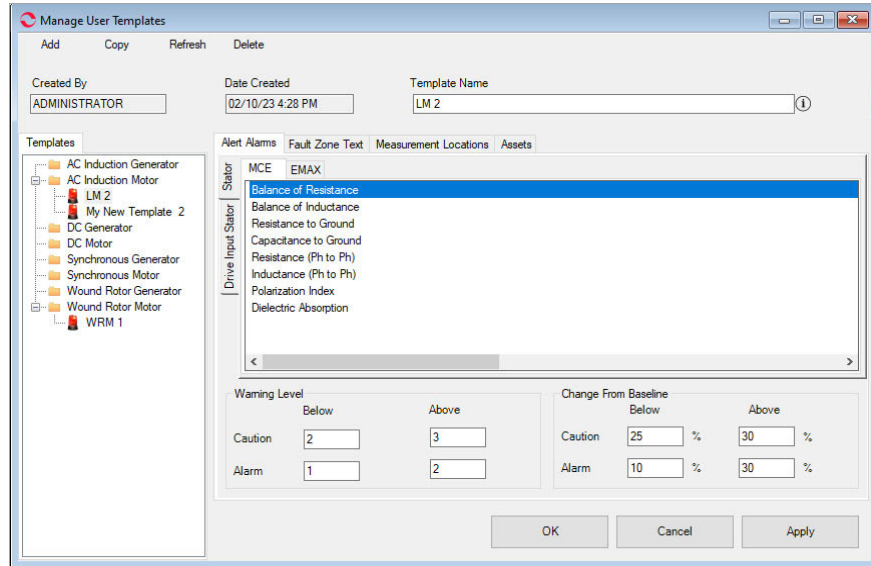
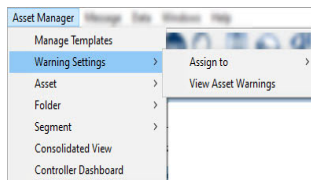
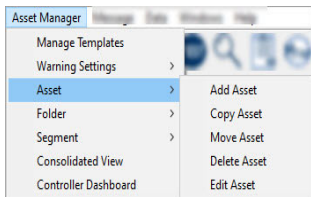


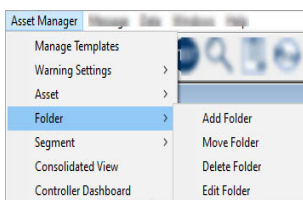
Figure 3: Manage User Templates



Warning Settings (displays only when an asset is selected), **Assign to** allows you to choose either a template (Global) or keep the asset specific warning (Asset).

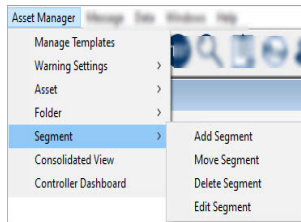


Warning Settings, *View Asset Warning* opens the Warning Settings window for the selected asset. Changes may be made in this window and saved.

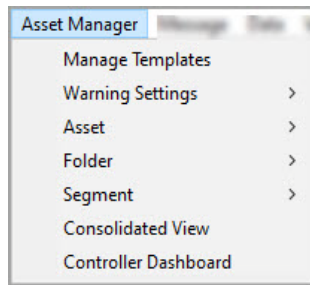


Asset allows you to Add, Copy, Move, Delete, and Edit an asset. You may also access these functions plus Test History, and Warning Settings by right clicking on an asset in the Site Navigator window.

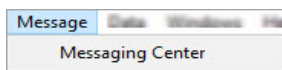
Folder allows you to Add, Move, Delete, and Edit a folder. You may also access these functions plus Add Asset and PdMAEYE Live Status by right clicking on a folder in the Site Navigator.



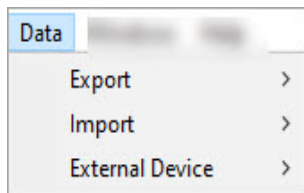
Segment allows you to Add, Move, Delete, and Edit a Segment. You may also access these functions plus Add Asset, Add Asset From Model, and PdMAEYE Live Status by right clicking on a segment in the Site Navigator window.



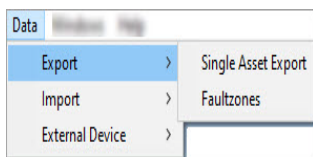
Consolidated View opens the Asset Assignment Summary window. Highlight an asset/s in the Site Navigator and select the Consolidated View. A list of the asset/s with their Model/Template Name, Warning Assignment, Warning Status, and Asset Type displays.



Message – Message opens the Message Center window if it has been closed. It automatically opens when MCEGold is first started. *See the Message Center section in the More Details section.*

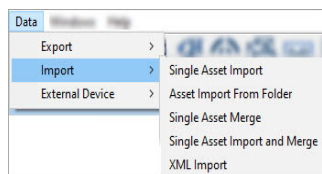


Data – The Data submenus allow a data file to be created so that it can be exported or facilitates importing a file from another computer or merging two data files for the same asset or importing data from an external device.



Export, Single Asset Export exports a single asset to a selected location.
NOTE: Data exported from 3.2 cannot be imported into older MCEGold versions.

Export, Fault Zones exports the fault zone analysis into an XML interface file, to be used by other maintenance software such as SAP[®], Maximo[®], or Indus.



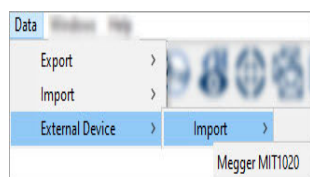
Single Asset Import is used to retrieve an asset data file that has been sent to you electronically.

Asset Import From Folder allows you to locate a folder containing data to be imported.

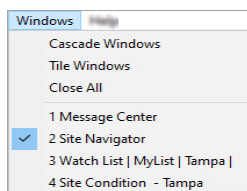
Single Asset Merge function is used to combine two assets into one. Note: Assets must be of the same type in order to be merged.

Single Asset Import and Merge imports the data from a pdp file and directly merges it with the selected asset. A new asset will not appear on the database, the data is directly merged into an existing asset. Note: Assets must be of the same type in order to be merged.

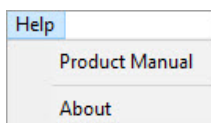
XML Import imports the nameplate information only of an asset via XML format. No data is imported. The nameplate information is automatically imported into MCEGold as a new asset.



External Device, Import, Megger is used to import PI data collected using an external device, the Megger MIT1020 insulation tester.



Windows - Cascade Windows and Tile Windows are the two options on how the open windows are displayed. Close All closes all open windows. The open windows are listed. A check mark indicates which window is active.



Help - The Help menu provides access to the Product Support Manual and About information.

Product Manual displays the chapters of the Product Support manual and Appendixes in PDF form.

About displays the version number, licensing and technology information, shipping address, and how to reach technical support.

Tool Bar Icons

The Tool Bar icons are designed to quickly access the common MCEGold functions with one click.



Site Navigator provides a graphical view of the sites, folders, and assets/motors. Use this icon to restore Site Navigator to the Home window.



Asset Summary provides Last Test Dates, Asset Health (located above the Nameplate information), Nameplate Summary, and the Fault Zone information for the selected asset.



Site Condition displays health information about all of the assets within the selected site. The data automatically updates when a different site is chosen. Buttons are provided to allow access to the Historian and Fault Zone Analysis. Use this icon to restore Site Condition to the Home window.



Nameplate displays the nameplate data for the selected asset so you can view or modify the data. Some fields are automatically entered by the software and cannot be modified. An area to assign a criticality code to the motor is provided. The code is limited to four characters, any combination of alpha and numeric.



Add Asset is used to add an asset. You can also reach it from the Asset Manager, Asset, Add Asset menu.

Note: Throughout MCEGold, the term asset is used to denote a motor or generator.



Warning Settings displays the warning settings for the selected asset. If the asset hasn't been assigned a template (using the Asset Manager, Warning Setting from the menu) the default settings are displayed. Changes to the settings can be made here.



Test History displays MCE, EMAX, and PdMAEYE test data, nameplate information, and Asset Health for the selected asset. The All Tests (not available for PdMAEYE) has the option to segregate the tests based on location.



Test Selection opens the Test Selection window that is used to select individual MCE and EMAX tests for the selected asset. If an automatic combination of tests are preferred the MCE Auto or EMAX Auto icons can be chosen from the toolbar. *See the Testing section for additional information.*



Search opens the Asset Search window to the simple search. For a more detailed search click the **Advanced** button (lower right) to open the Advanced Search window. You may return to the simple search by clicking the **Simple Search** button.



WatchList automatically displays when MCEGold starts. It allows you to set up lists of assets. The list may be of assets to watch for criticality purposes or to set up a service route for a technician. Use this icon to restore WatchList to the Home window if it has been closed. *See WatchList in the More Details section for additional information.*



MTAP opens the MTAP configuration window. You must first highlight an asset in the Site Navigator. The window provides information if the asset is linked to an MTAP or allows you to manually link the asset to an MTAP.



Scheduler opens the Schedule Configuration window which is used to set up the PdMAEYE for surveillance or scheduled testing. The segment must be selected before clicking on the Scheduler icon. A detailed description of the Scheduler is found in Chapter 3 of the Product Support Manual.



MCE Auto icon only appears on a field tester. It automatically starts the Standard Test followed by the Polarization Index. At the end of the tests, after the results are saved, the Fault Zone Report is displayed. Before selecting the MCE Auto icon an asset must be selected in the Site Navigator.



Emax Auto icon only appears on a field tester. It automatically starts the Rotor Evaluation, Eccentricity, Power and Demod tests. At the end of the tests, after the results are saved, the Fault Zone Analysis window displays. Before selecting the EMAX Auto icon an asset must be selected in the Site Navigator.



Historian allows you to search for and view key performance indicator (KPI) results. You must first select an asset or segment. *See the More Details section for additional information.*



Fault Zones displays the Fault Zone Report for the selected asset.



Message window automatically displays when MCEGold starts. In the Message Center you can enter messages, view messages, and delete messages for one or a list of assets. Use this icon to restore the Message Center to the Home window if it has been closed. *See the More Details section for additional information.*



Export File opens the Create Export File window, which is used to create an export file (.pdp) for the selected asset. The export file is used to send data electronically.



Report opens the Report Selection window. *See the More Details section for additional information.*



Energy Analysis opens the Energy Cost Analysis window which analyzes operating and replacement cost for AC Induction Design B motors only. A detailed description of the Energy Cost Analysis module is found in Chapter 3 of the Product Support Manual.

MORE DETAILS

Site Navigator

The Site Navigator window displays the site (1), folder (2), segment (3), and asset(4).

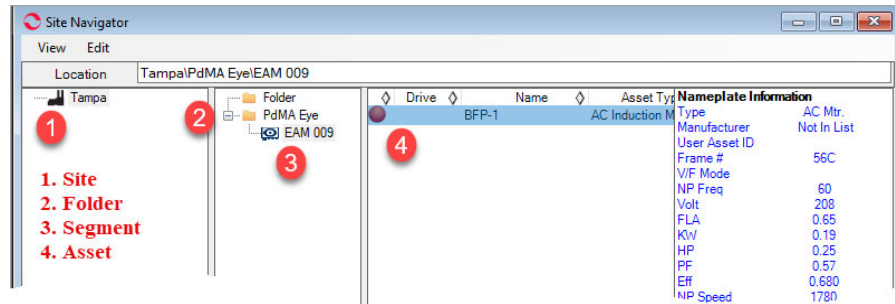


Figure 4: Site Navigator

Link Asset to Segment

The first step in setting up the PdMAEYE is to link the asset (4) to the segment (3). See Figure 4.

1. Right click on the segment (3).
2. From the dropdown list select Edit Segment.

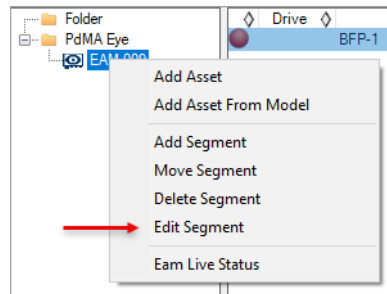


Figure 5: Edit Segment

3. In the Edit Segment window click the checkbox Link Segment to PdMAEYE (1).

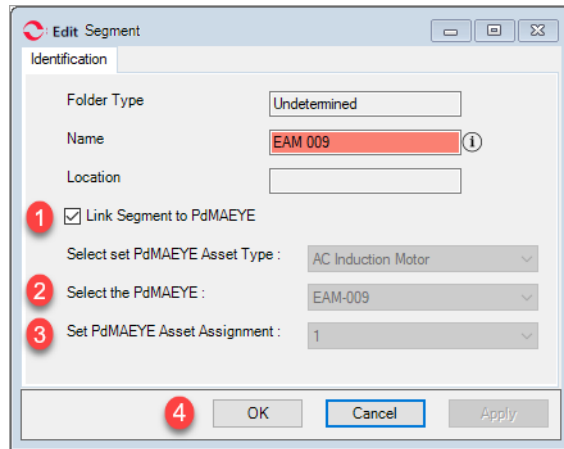


Figure 6: Edit Segment Window

4. From the Select the PdMAEYE dropdown list highlight the correct PdMAEYE ID (2).
5. Verify the number 1 appears in the Set PdMAEYE Asset Assignment (3).
6. Click **OK** (4).

Site Condition

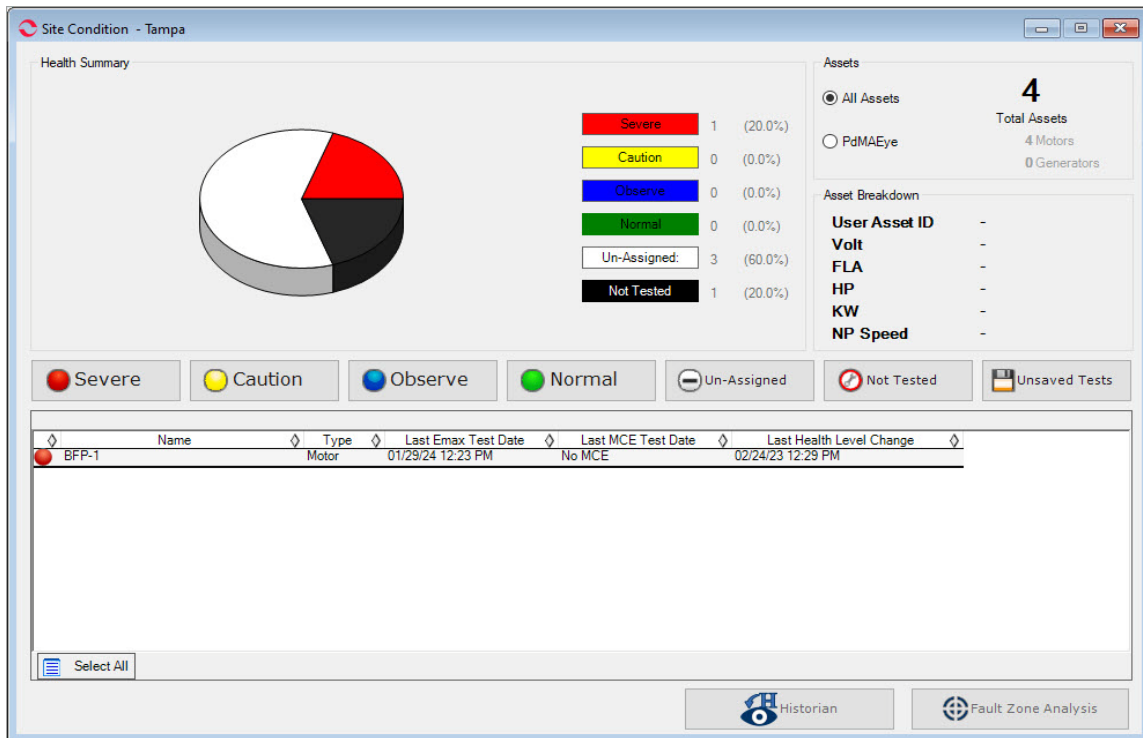



Figure 7: Site Condition Window

The Site Condition window automatically opens when MCEGold is started or when the Site Condition icon  is selected from the toolbar.

The window opens displaying All Assets. Select PdMAEYE in the Assets section to view results for only PdMAEYE assets.

The Site Condition window, Figure 7 provides an overview of the assets in the site including total number and percent in each asset health condition. Clicking on an asset health condition code button located above the list of assets creates a list of assets in that condition and displays it in the lower section of the window. The assets are listed alphabetically by name. The columns may be sorted by clicking on the diamond to the right of the column title. The diamond changes to a triangle, indicating the column has been sorted. When the triangle is clicked the column reverse sorts. Clicking on an asset name causes it to be located and highlighted on the Site Navigator and brings up any associated messages in the Message Center.


Clicking the diamond to the right of the *Last EMAX Test Date* or the *Last MCE Test Date* sorts the assets by earliest to most recent test date. Click again and it reverse sorts.

Clicking the diamond to the right of *Type* or *Last Health Level Change* causes the asset types to be grouped together. Click again and it reverse sorts.

Clicking the Historian button in the lower right corner opens the PdMAEYE Historian for the selected asset.

Clicking the Fault Zone Analysis button in the lower right corner opens the Fault Zone Report for the selected asset.

Historian

The Historian window (Figure 8) opens when the Historian icon  is selected from the toolbar or the Historian button is selected in the Site Condition window. Historian allows you to search for and view key performance indicator (KPI) time series results. This is useful for trending and troubleshooting. Currently it displays test values, for twenty KPIs. To access Historian an asset or segment must be selected.

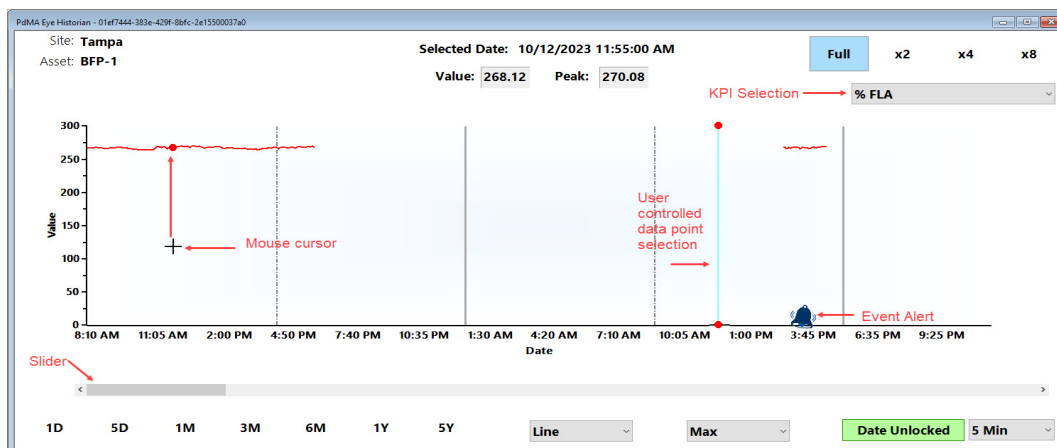


Figure 8: Historian Window

The Selected Date and Value (top center) change according to the location of the cursor on the graph.

To Zoom in or out of the graph without changing the graph resolution select Full, x2, x4, and x8 in the top right corner. When zoomed, a slider bar is available so that you may access values not visible in the window.


KPIs are selected from the drop down list in the upper right corner.

The graph displays data according to the time selection (1D, 5D, 1M, etc.) made using the options in the lower left corner. Changing the time may be necessary in order to locate and display the test values.

Using the mouse cursor to hover over the window causes an indicator to move on the graph and changes the Selected Date information.

Clicking on the graph causes a line to be inserted at that spot. This is shown in Figure 8 as a light blue line with red dots at the top and bottom. The date and time at the top of the window will change according to the placement of the line.

Note: To change the line or cursor line color, press the Ctrl key. Click on the item you want to change (Line Color or Cursor Line Color) and the color pallet window appears. Select a color and click OK.

Not currently available, but coming in a future release is the Event Alert. Whenever a KPI enters an alert status based on fault zone analysis an event indicator  will be placed at the bottom of the graph to indicate an issue. There may be multiple indicators.

The test data graph may be displayed in an Area, Bar, Line, or Step format by making your selection from the drop down list located at the bottom of the window.

Each aggregate point on the Historian could consist of a couple of tests if looking at 1D or dozens of tests if looking at 1M. To view the aggregate KPI history from a Max, Min, and Avg perspective select the appropriate option in the drop down list located at the bottom of the window.

An additional method to view more details or a higher resolution on past data when you have selected a large data range (i.e., 1M, 3M, etc.) is to change the data resolution using the drop down list in the lower right corner. 5 Minute aggregate resolution is the highest resolution. Once you have locked the date by clicking on the Historian, then select a different resolution to center and zoom in on the selected locked date. For reference, the locked in date and time appear at the top of the window in the Selected Date location.

Fault Zone Analysis

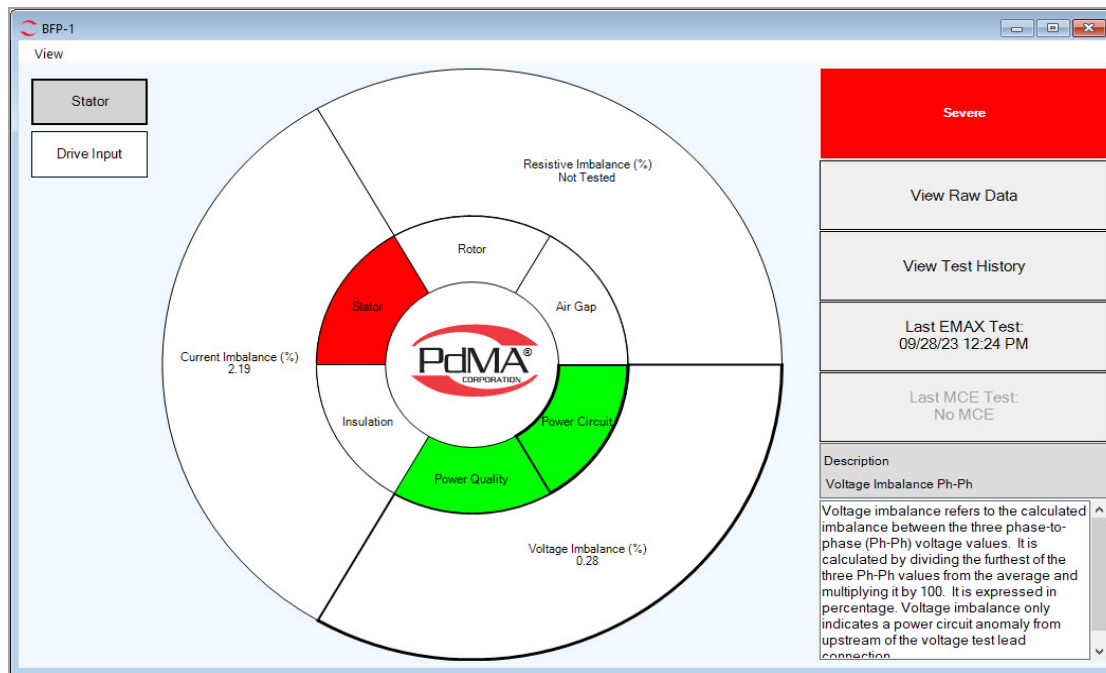


Figure 9: Fault Zone Analysis

The Fault Zone Analysis window, Figure 9, displays an ocular graph of the six fault zones color coded to their asset health condition and the asset's test values. Clicking on each fault zone at the center of the graph displays the values for that fault zone in the outer ring. A description of the test value appears on the lower right side of the window. Clicking on the Asset Health Condition Code (top section of the right hand column) opens the Asset Health Level Update window allowing you to change the asset health condition code of that asset. Clicking on the other buttons in the column opens the appropriate window to display the selected asset's test values.

From the View menu, Refresh returns to the original ocular graph/view and Fault Zone List View displays the Fault Zone Analysis in a table format in a new window.

For a full description of the Fault Zone Analysis window see Chapter 3 of the Product Support Manual.

WatchList

The WatchList window opens when MCEGold is started or when the WatchList icon  is selected from the toolbar.

The WatchList window (Figure 10) can be used for multiple purposes. For example, it can be a list of critical motors or a service route for the technician or both. The WatchList can contain lists developed by multiple users.

The window consists of three sections, the upper left section displays the various lists created by the user, the lower left section gives the details of the active list, and the large section to the right displays the assets in the active list. Due to computer screen

size limitations the complete WatchList window is not visible. To view the complete window it is necessary to maximize the window using the square maximize button in the upper right or scroll left and right using the scroll bar across the bottom.

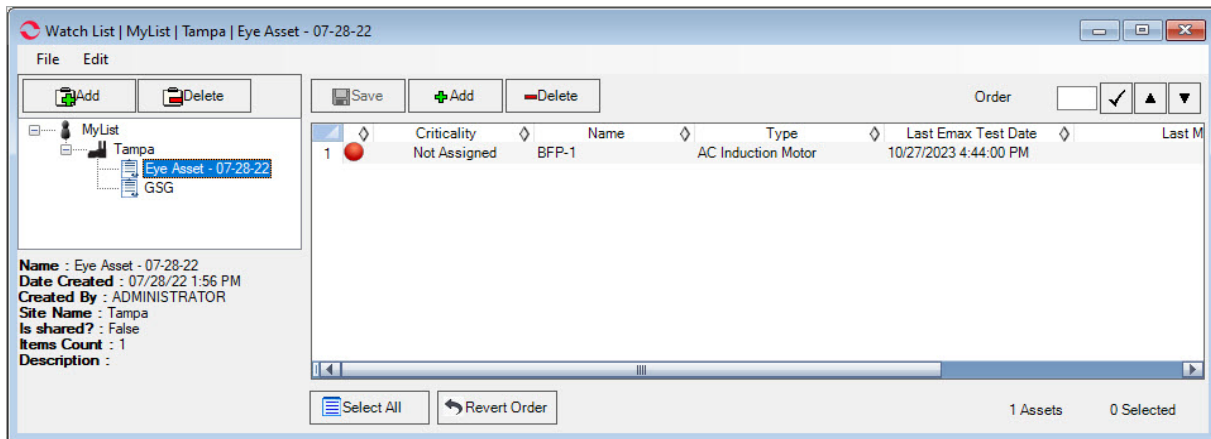




Figure 10: WatchList Window

Create a WatchList

1. In the WatchList window (upper left section), click  .
2. In the WatchList Create window (Figure 8 on page 12) fill in the name for your list, check the Shared box if you wish others to be able to view or make changes to this list. Enter a description. All other information is automatically entered for you. Click **Create**. The  icon and list name will appear on the layout displayed in the upper left section of the WatchList window. The lower left section gives the details of the WatchList.

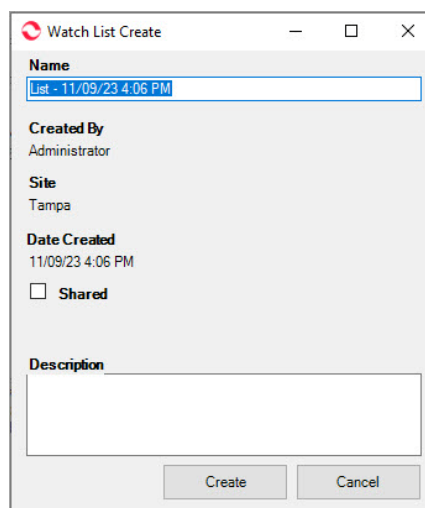


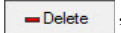


Figure 11: WatchList Create Window

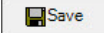
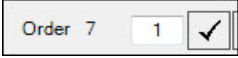

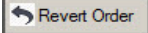
Add Asset to WatchList

1. Highlight the asset in the Site Navigator window.
2. Highlight the WatchList name in the upper left section.
3. In the section above the asset list on the right, click . The asset information is added to the WatchList.

Delete WatchList or Asset


, found in the upper left section, deletes the selected WatchList and , found above the asset list section on the right, deletes the selected asset from the WatchList.

Other Useful WatchList Information

- Save icon  saves the WatchList. If you do not save your changes, you will be prompted to save upon closing the WatchList or closing MCEGold.
- To move one asset to a different row/order, highlight the asset, enter the desired row/order number in the text box, and click the check button.  In this example the asset on line 7 will be moved to line 1.
- The Up and Down icons  move the selected asset up or down one level.
- You may change the order of the asset list by highlighting the number to the left of the asset and dragging it to a new location in the list.
- To return the asset list to its default order click the Revert Order button  located at the bottom of the window.
- Clicking on an asset name causes it to be located and highlighted on the Site Navigator.

Message Center

In Message Center you can enter, view, and delete messages for one asset or a list of assets.

The Message Center window (Figure 12) opens when MCEGold is started or when the Message icon  is selected on the toolbar.

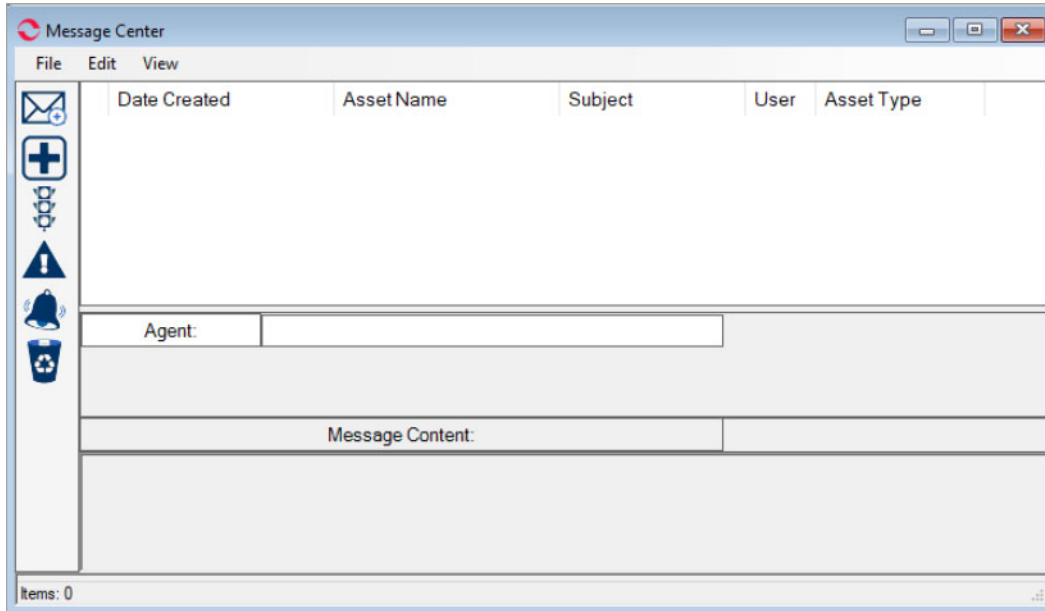

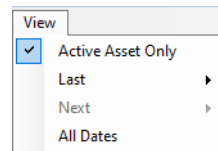


Figure 12: Message Center

1. When Message Center initially opens, the Asset Diagnostic  option is the default setting.
2. Select View and verify that Active Asset Only (default) is in the checked or unchecked position (which ever is desired).



If Active Asset Only is checked, then the asset selected in Site Navigator is displayed, but only if it has messages associated with it.

If Active Asset Only is not checked in the View drop down list, a list of all the assets with messages will display. Highlight the asset to view its associated messages.

3. Proceed with the desired action for the message using the File, Edit, View menu or the icons in the left pane.

Messages

Note: Once a message is created it can be deleted, but no edits/changes can be made to it.

To view the message content, highlight the line that corresponds to the desired asset/message. The information is displayed in the Message Content section below the list.

Compose

Note: Once a message is created it cannot be edited. It can be deleted, but no edits/changes can be made to it.

Using Compose allows you to add a message or attach files to an asset's record. Compose can be reached by selecting File, Create Message on the menu or clicking the Compose icon. The Create Asset Message window appears (Figure 13).

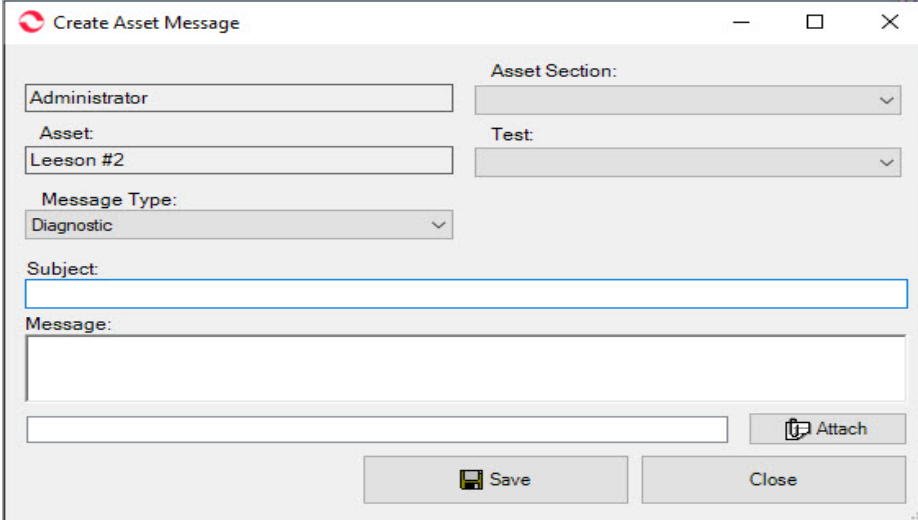


Figure 13: Create Asset Message Window

Subject and message are required fields. After composing the message you may attach a file or graphic by using the Attach button. When you are finished, click the Save button.

For more detailed information see Chapter 3 of the Product Support Manual.

Condition Code

Messages are automatically generated when a condition is assigned or changed. Click the Condition Code icon to view assets that have condition code message associated this them.

Warning Levels

Messages are automatically generated when a warning level is changed. Click the Asset Warning Levels icon to view assets that have an associated warning level.

Event Alerts

Messages are automatically generated when an alarming condition is reached. Click the Event Alerts icon to view assets that have an associated warning level.

Trash

Clicking the Trash icon displays a list of deleted messages. You can restore them to their original location by highlighting the message and selecting Edit, Restore Message from the menu. To permanently delete the message, select Edit, Delete Message from the menu.

To refresh the Message Center window, close the window and reopen it.

Testing

Segment vs. Asset

In the Site Navigator you can visually see your PdMAEYE hierarchy. At the top is the Site, under the site are the Folders. The PdMAEYE folder contains a Segment, which is the name of the PdMAEYE location. The segment has an asset associated with it. The asset is the motor or generator the PdMAEYE is attached to. The PdMAEYE folder can have multiple segments, but a segment can only have one asset.

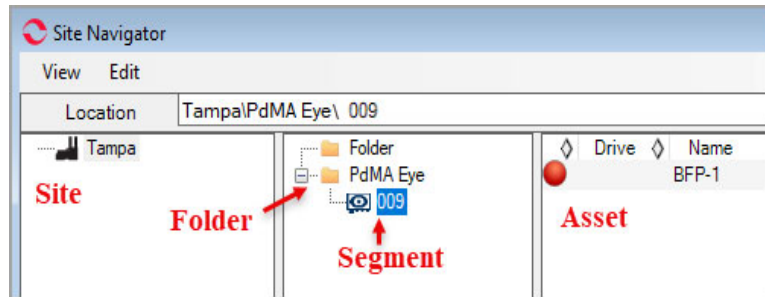


Figure 14: Site Navigator

On-Demand Testing

It may be necessary to run just one test or you may desire an immediate test. To do that you can manually perform On-Demand testing. See Figure 15.

1. From the Site Navigator window, locate and highlight the PdMAEYE segment, not the associated asset.
2. Click the Test icon on the toolbar.
3. In the Test Selection window highlight the desired test.
4. Make any changes to the test setup.

- Click the **Test** button to start the test.

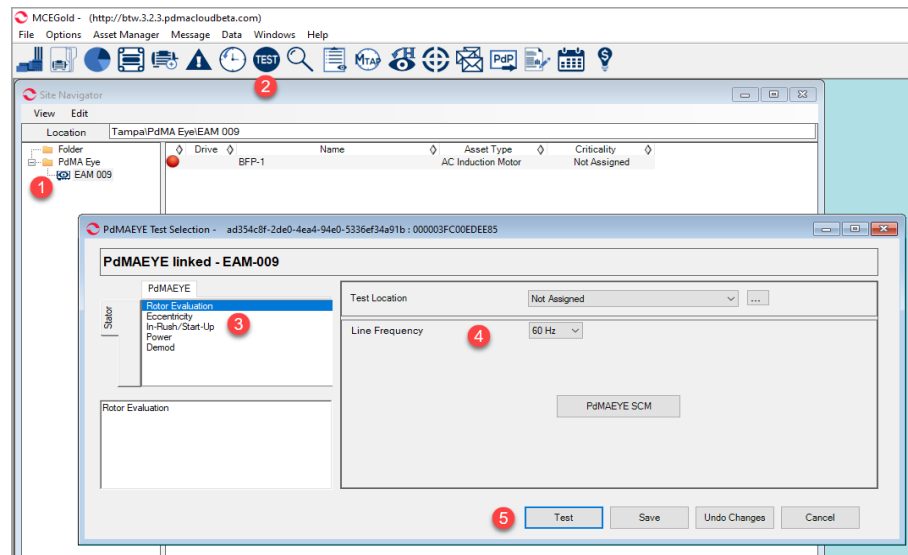


Figure 15: On-Demand Testing Sequence

SCM Configuration Introduction

Prior to using the PdMAEYE you must configure the Signal Conditioning Modules (SCMs). SCMs are configured using either the Basic Configuration window or the Advanced SCM Configuration. This is a brief overview of the process. For detailed information see the Product Support Manual.

- Highlight the PdMAEYE segment (1).

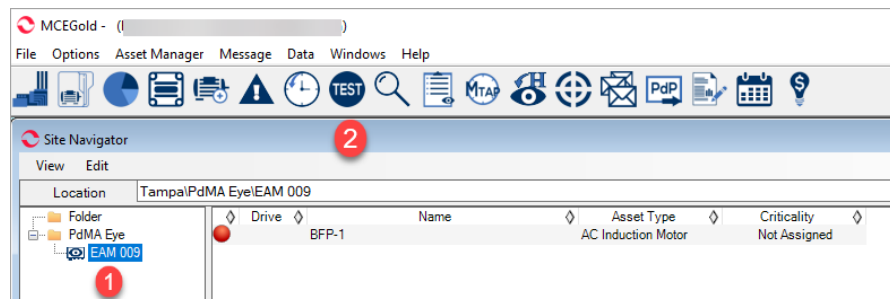


Figure 16: Signature Configuration

- Click the **Test** icon on the tool bar (2).

- In the PdMAEYE test selection window click the **PdMAEYE SCM** button.

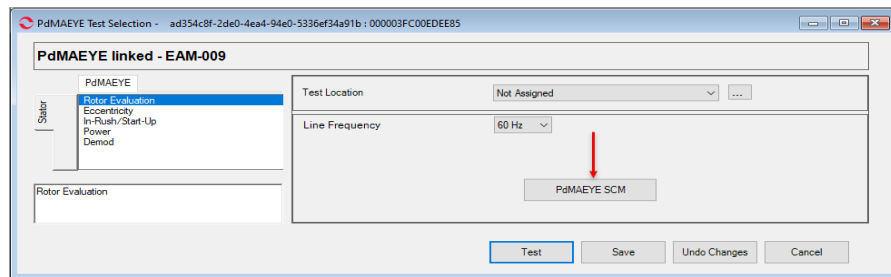


Figure 17: PdMAEYE Test Selection

- The SCM Configuration window opens. Only cells with a white background are editable. To access the Advanced SCM Configuration window click the **Show Adv Config Info** button in the upper right. When you are in the Advanced SCM Configuration window the button changes to read Show Basic Config Info.

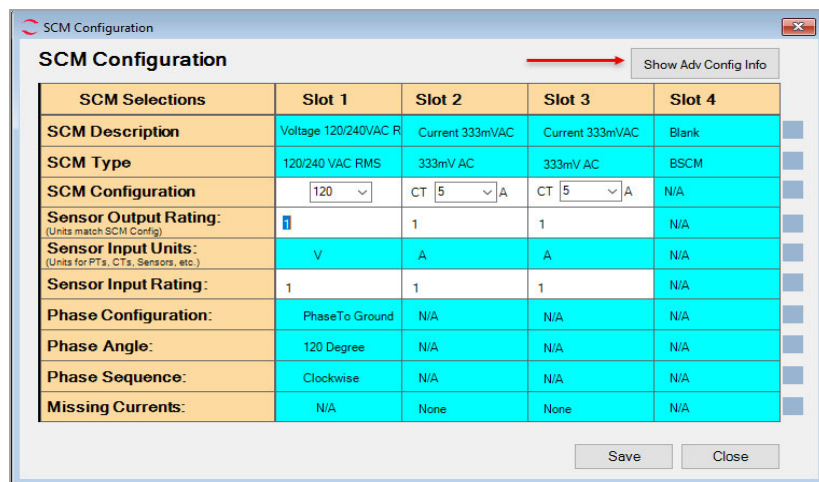


Figure 18: SCM Configuration

- After making adjustments click **Save**.

Toolbar Testing Icons

There are a possibility of three icons on the toolbar associated with testing. Which testing icons are available depends on your tester version.



Test Selection opens the Test Selection window so that you may setup the asset for testing if needed. There are different options depending on if you have selected an asset or segment in the Site Navigator. To test from a tester, select any one of the MCE or EMAX tests and click **Test**. From the Cloud desktop you can only modify and save a test setup.



MCE Auto icon only appears on a field tester, not the Cloud desktop. It automatically starts the Standard Test followed by the Polarization Index. At the end of the tests, after the results are saved, the Fault Zone Report is displayed. Before selecting the MCE Auto icon an asset must be selected in the Site Navigator.



EMAX Auto icon only appears on a field tester, not the Cloud desktop. It automatically starts the Rotor Evaluation, Eccentricity, Power and Demod tests. At the end of the tests, after the results are saved, the Fault Zone Analysis window displays. Before selecting the EMAX Auto icon an asset must be selected in the Site Navigator.

See the Product Support Manual for more information on testing.

Reports

The Report Selection window (Figure 19) is reached by selecting the Report


icon  on the tool bar


Figure 19: Report Selection Window

There are eight reports available: AC EMAX Summary, Asset Health Level, Asset Inventory, MCE Summary, Message History, PI DA Summary, Detailed, and Word Report Templates.

Depending on the Report selected the appearance and options in on the right section of the window will change.

Detailed instructions on using the reports are found in Chapter 3 of the Product Support Manual.

Search and Advanced Search

Search is reached through the Search icon  on the toolbar. Use this to search by Asset/Segment Name or User Asset ID. To search using more in depth criteria use advanced search. To reach Advanced Search (Figure 20), click the Advanced button

on the lower right side of the Asset Search window. To return to the Asset Search window click the Simple Search button in the lower right corner.

Search and Advanced Search are discussed in detail in Chapter 3 of the Product Support Manual.

Figure 20: Advanced Search Window

Shutting Down MCEGold

MCEGold may be shut down by selecting File, Close from the menu or clicking the close button (red X) in the upper right corner. You will be asked to verify that you want to close MCEGold.

Where to Get Help

Technical Support is available Monday through Friday, 8 A.M. to 5 P.M., EST. You may contact PdMA Technical Support by any of the following methods.

- Telephone: (813) 774-9982
- Fax: (813) 620-0206
- Email: techsupport@pdma.com
- Web site: www.pdma.com

Product Support Manual

To access the Product Support Manual from the menu select Help, Product Manual. A window opens displaying each chapter in the manual as a PDF file. Double click the

chapter you wish to view. You must have Adobe Acrobat Reader to view a PDF file. The free Reader can be downloaded from <http://www.adobe.com/products/reader.html>.

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