Honeywell

E-Mon Energy® Software

QUICK STARTUP PROCEDURE

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Quick Startup Procedure for E-Mon Energy™

Introduction

Begin by reviewing this entire document to become familiar with the overall procedure steps. After completing each step in the procedure place a check mark in the box next to the step. Once you become familiar with the procedure keep this document on hand to serve as a reference tool.

Prerequisite

To perform this procedure, the following hardware or software configurations are already installed:

Hardware Configuration
- Meter and Recorder
- Communication Interface
- IBM compatible computer (Pentium), 128 MB RAM, 20 GB Hard Drive, with Monitor
- CD ROM Drive
- USB Port or RS-232 Serial Port
- Printer Interface

Software Configuration
- Microsoft Windows 10
- E-Mon Energy Version 1.0.1.6 (Installed)

Logging into E-Mon Energy™

E-Mon Energy Window Explorer

1. Power System up and log into Windows.
   - Type User Name
   - Type Password
   - Click **OK**
2. From the Start menu, click START button \Programs\Emon\E-Mon Energy\E-Mon Energy

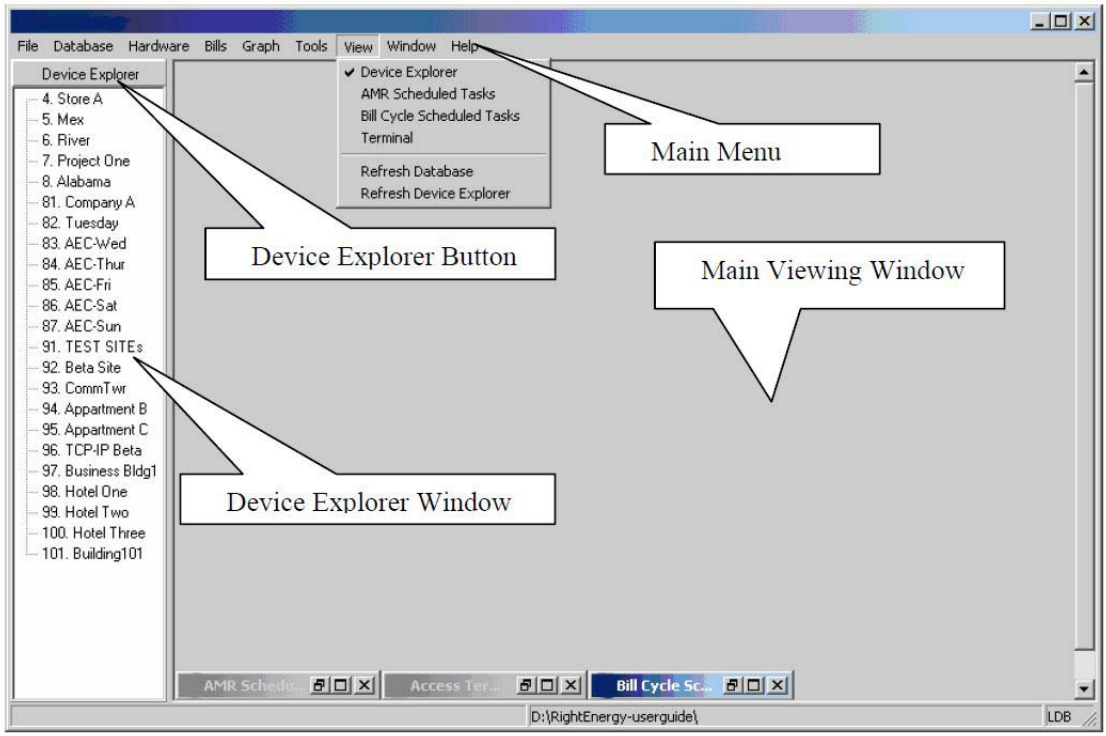


Fig. 1. Explorer Window.

Setting Up a New Connection

Connection Tab

1. From E-Mon Energy™ explorer window, click and select Database\Connection to display the Database window.

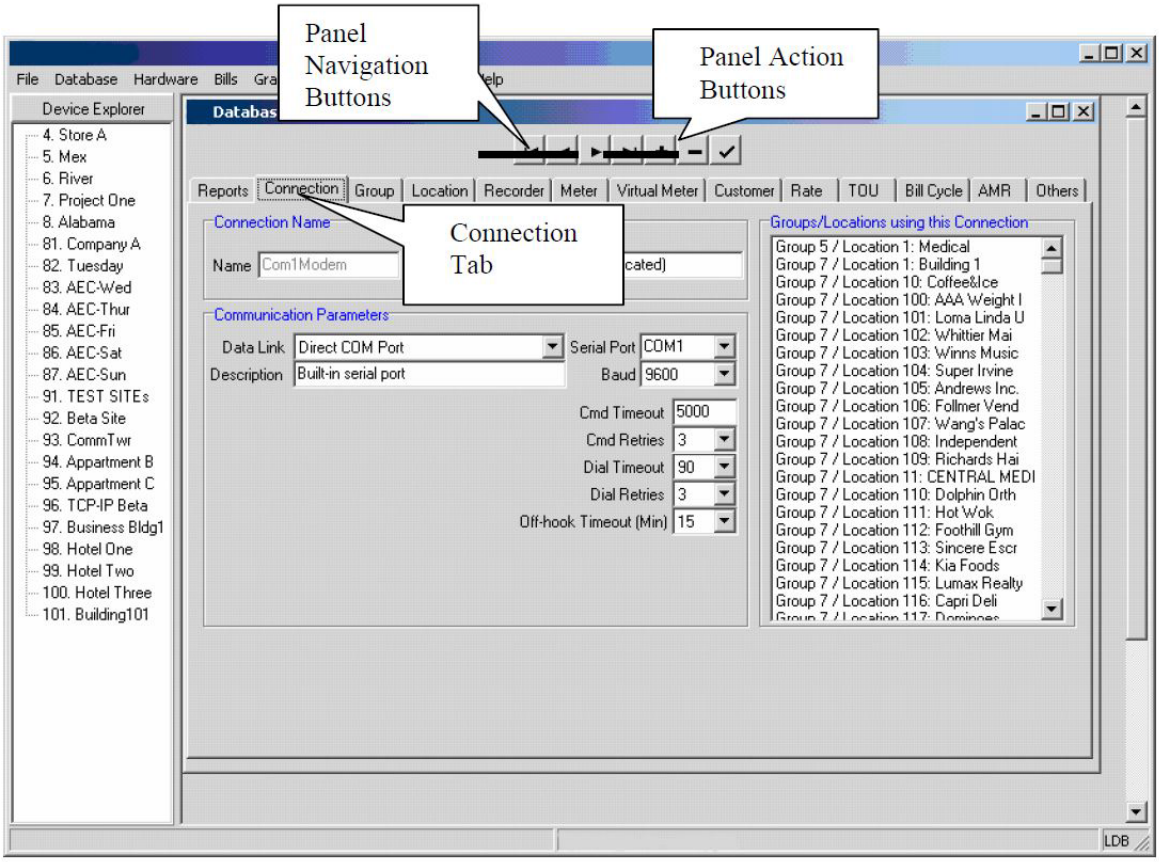


Fig. 2. Database Window, Tabs, Panels, and Buttons.

Connection Name

2. Click on the Panel Action "+" button, to create a new connection.
3. In the Name field, type the Name of the connection link.

   NOTE: This is a required field and must be unique.

4. Tab across, and type a short description in the Description field for your connection.

Communication Parameters

5. From the Data Link drop-down list, select a communication type. Note: If selections are Direct COM Port, Modem or Other, select Serial Port number and Baud rate from drop-down.
6. Verify the remaining default settings:
   - Cmd Timeout (default 3000 ms)
   - Cmd Retries (default 2 times)
   - Dial Timeout (default 60 seconds)
   - Dial Retries (default 2 times)
   - Off-hook Timeout (default 5 minutes)
7. Click on "√" button to accept/save the connection record.
8. If additional communication types are needed repeat steps 2 through 7.

Creating an AMR Schedule

Setting Up the Schedule

1. Select Database\AMR Schedule from the drop-down menu or click on the AMR tab in the Database window.

2. Click on the Panel Action "+" button, to create a new connection.
3. Under Schedule, type in a schedule Name.

4. Type in a Desc. (Description) for the schedule.

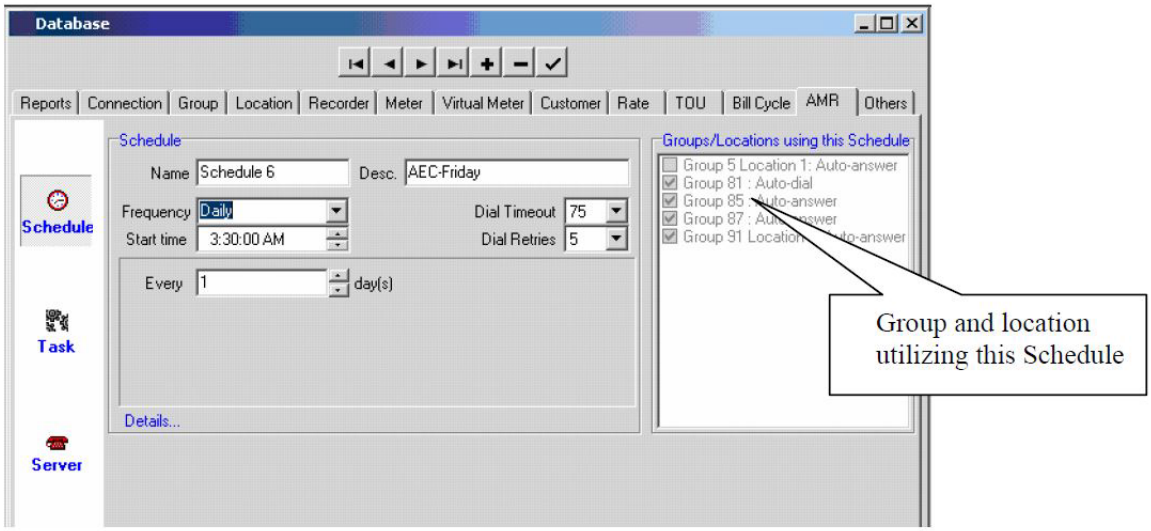


Fig. 3. Figure 3: AMR Schedule

5. From the Frequency drop-down list, select how often you want the schedule to run.

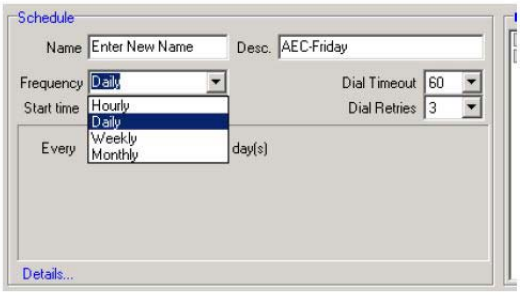


Fig. 4. Figure 4: AMR Schedule Frequencies

NOTE: Depending on Frequency selection the setup details will change accordingly. Note, hourly will not have a Start time it will have 15 minutes increment.

6. Select Daily, click and type inside the text box to change each time increment or by clicking on the ▲ up ▼ down arrows to adjust the time frame for each increment.
7. Select Dial Timeout from the drop-down list.
8. Select Dial Retries from the drop-down list.
9. Next to Every, select ▲ up ▼ down arrows or type in a number for how often on a daily basis you want to run the schedule. (i.e. every 1, 2...days).
10. Click on "√" button to accept/save the AMR schedule record.

Setting Up the Task

1. From the AMR tab, click on Task icon on the white panel.

2. Click on the Panel Action "+" button, to create a new connection.

3. Under the Task (To-do-list), type in a Name for the schedule task.

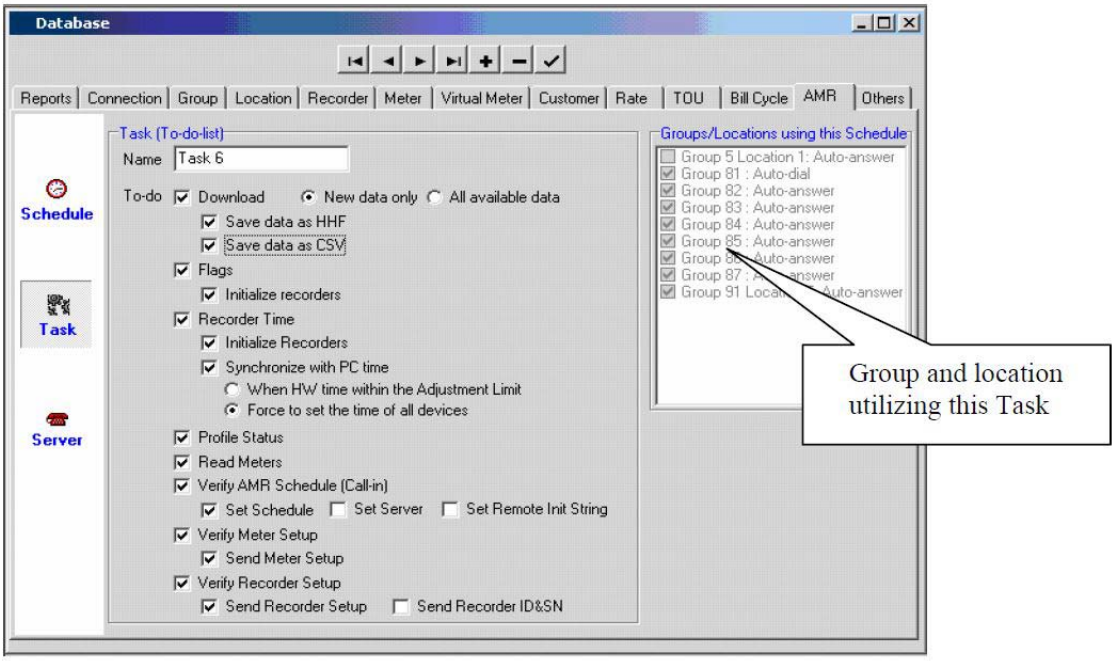


Fig. 5. AMR Task (To-do-list).

4. In the To-do group, click and check the to-do items for the schedule. For details on these to-do items refer to E-Mon Energy. User Manual.
5. Click on "√" button to accept/save the task record.

Setting Up the Server

1. From the AMR tab, click on the Server Icon on the white panel.

2. Click on the Panel Action ∂+P button, to create a new connection.
3. Under Server, type in the Name of the server.
4. Type in the server phone number.
5. Click on "√" button to accept/save the server record.

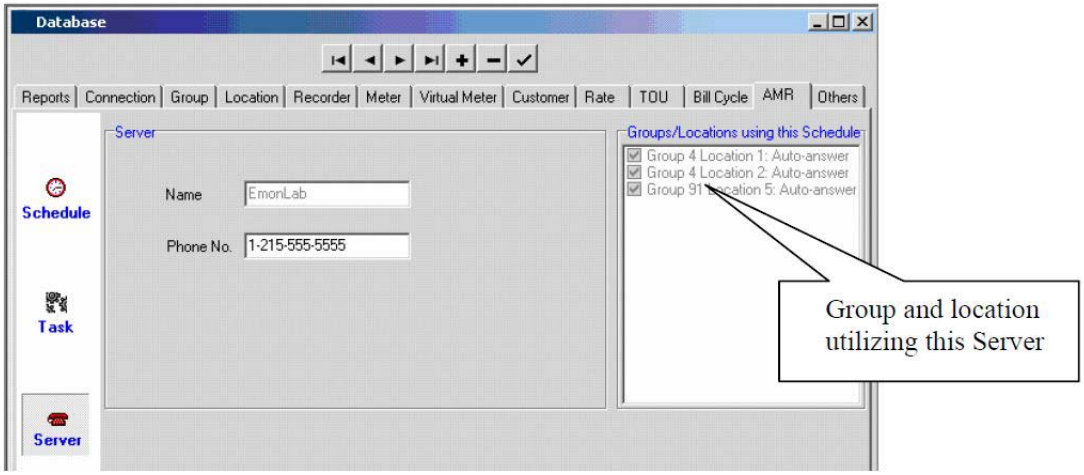


Fig. 6. AMR Server Setup.

⚠ WARNING

When deleting an AMR schedule, Task, or Server, ensure it is not being used by any group and/or location. The "Groups/Locations using this Schedule" list box displays the group/location utilizing the AMR schedule, Task, or Server.

Adding a New Group

Group Tab

1. Select Database\Group from the drop-down menu or click on the Group tab in the Database window.
2. Click on the Panel Action"+" button to add a new group.

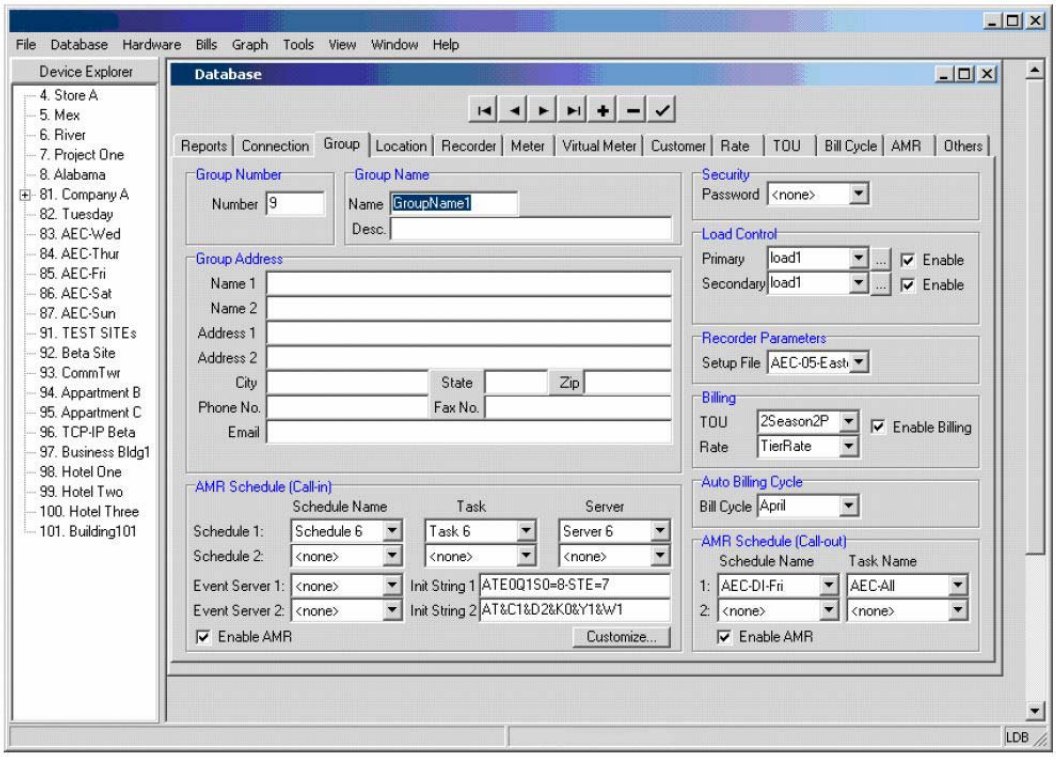


Fig. 7. Group Tab.

Group Number and Name

3. In the Number field, type a Group Number.

   NOTE: Must be unique number between 1 and 32767. This field is required and must be unique.

4. In the Name field, type a Group Name.

Group Address

5. Type and complete the Group Address fields.

   NOTE: These fields are not required.

AMR Schedule Call-In

If you plan to use the "Group AMR Schedule" option for Call-in/Call-home:

6. From the AMR Schedule (Call-In) group fields, select Schedule Name, Task, Server, and Event Server from each drop-down list for only Schedule 1.

   NOTE: If you created and save a new AMR schedule, Task, and Server; it should appear in the drop-down list.

7. Check the "Enable AMR" box.

AMR Schedule Call-Out

If you plan to use the "Group AMR Schedule" option for Call-out:

8. In the AMR Schedule (Call-out) group fields, select Schedule Name, Task Name from each drop-down lists for only Schedule 1.
9. Check the “Enable AMR” box.
10. Click on “√” button to accept/save the group record.

Update the Device Explorer

11. Click the DEVICE EXPLORER button, to refresh the directory.

    NOTE: You will notice that the Group Number and Group Name have been added.

Customizing the Group AMR Schedule

When “Use Group AMR” is checked, E-Mon Energy. will automatically assign call-in time for each of the location in the group. The initial schedule time will be assigned to the first location. Subsequent location time will be offset by E-Mon Energy using the “AMR Call Interval.” If you wish to customize the default offset time, proceed to the next step.

12. To further customize the AMR Schedule group, click on the CUSTOMIZE button.

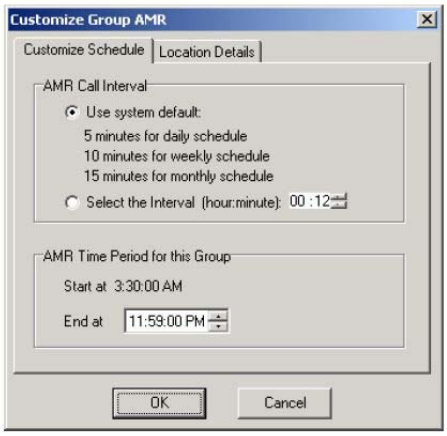


Fig. 8. Customize Group AMR Schedule (Customize Schedule Tab).

Customize Schedule Tab

13. From the Customize Schedule tab, under AMR Call Interval, select either “Use system default” or “Select the Interval in (hour:minute)”.
14. If setting interval, enter or click on ▲ up and ▼ down arrows for minutes or hours.

    NOTE: Default intervals are based on a single modem. If your computer has multiple modems for auto answer, you may decrease the interval proportionally.
    Under AMR Time Period for this Group, to change hrs: min: sec: AM/PM for Ends at: Click and type inside the text box to change each time increment or by clicking on the ▲ up and ▼ down arrows to adjust the time frame for each increment.
    Note: The Start Time can not exceed the End Time

Adding a New Location

Location Tab

1. Select Database\Location from the drop-down menu or click on the Location tab in the Database window.
2. From the Device Explorer window, highlight and select the Group Number to add location.

3. Click on the Panel Action“+” button to add a new location.

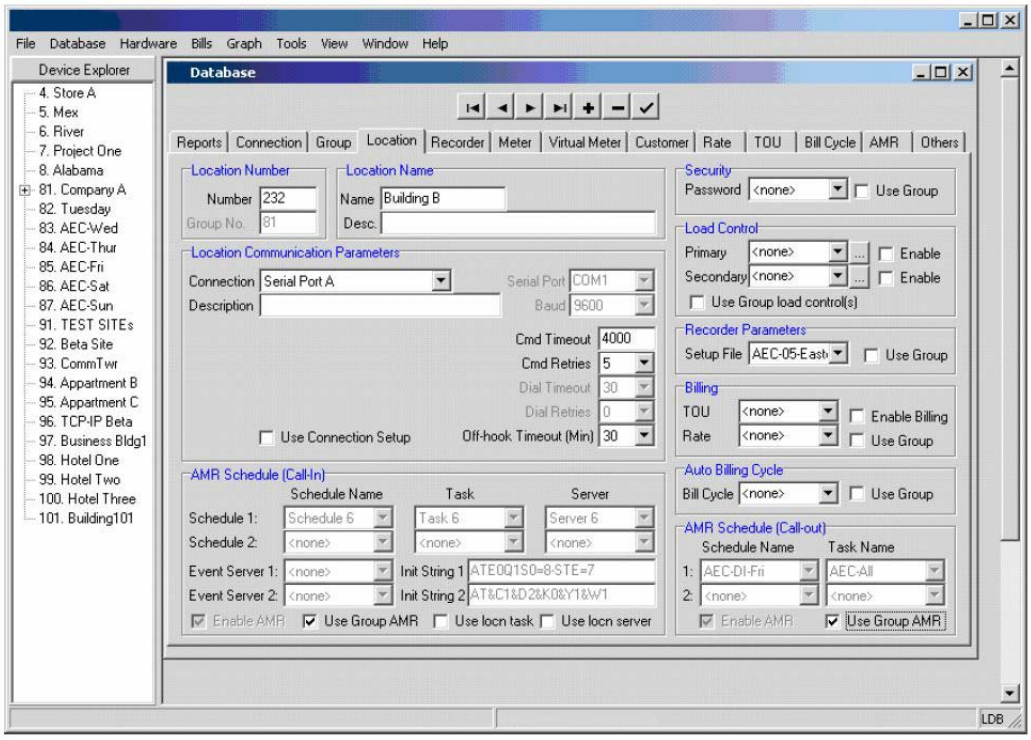


Fig. 9. Location Tab.

Location Number and Name

4. In the Number field, type in a Location Number. Must be unique number between 1 and 32767.

   NOTE: This field is required and must be unique. Location 0 is for virtual recorders and meters.

5. Tab across, in the Name field, type in a Location Name.

Location Communication Parameters

6. Tab down, from the Connection drop-down list and select a connection type or your custom settings (i.e. Serial Port A)
7. Tab down, in the Description field, type a description for your connection.

   NOTE: This is optional for Call-In, required for Call-Out.

AMR Schedule Call-In

If you plan to use the “Use Group AMR” option, check the “Use Group AMR” box and proceed to Step 10.

8. From the AMR Schedule (Call-In) group fields, select Schedule Name, Task, Server, and Event Server from drop-downs for only Schedule 1.

   NOTE: If you created and save a new AMR schedule, Task, and Server; it should appear in the drop-down list.

9. Check the “Enable AMR” box.

AMR Schedule Call-Out

If you plan to use the “Use Group AMR” option, check the “Use Group AMR” box and proceed to Step 12.

10. In the AMR Schedule (Call-out) group fields, select Schedule Name, Task Name from dropdown for only Schedule 1.
11. Check the “Enable AMR” box.
12. Click on “√” button to accept/save the location record.

Update the Device Explorer

13. Click the DEVICE EXPLORER button, to refresh the directory. You will notice that the Location Number and Name have been added under the Group Name

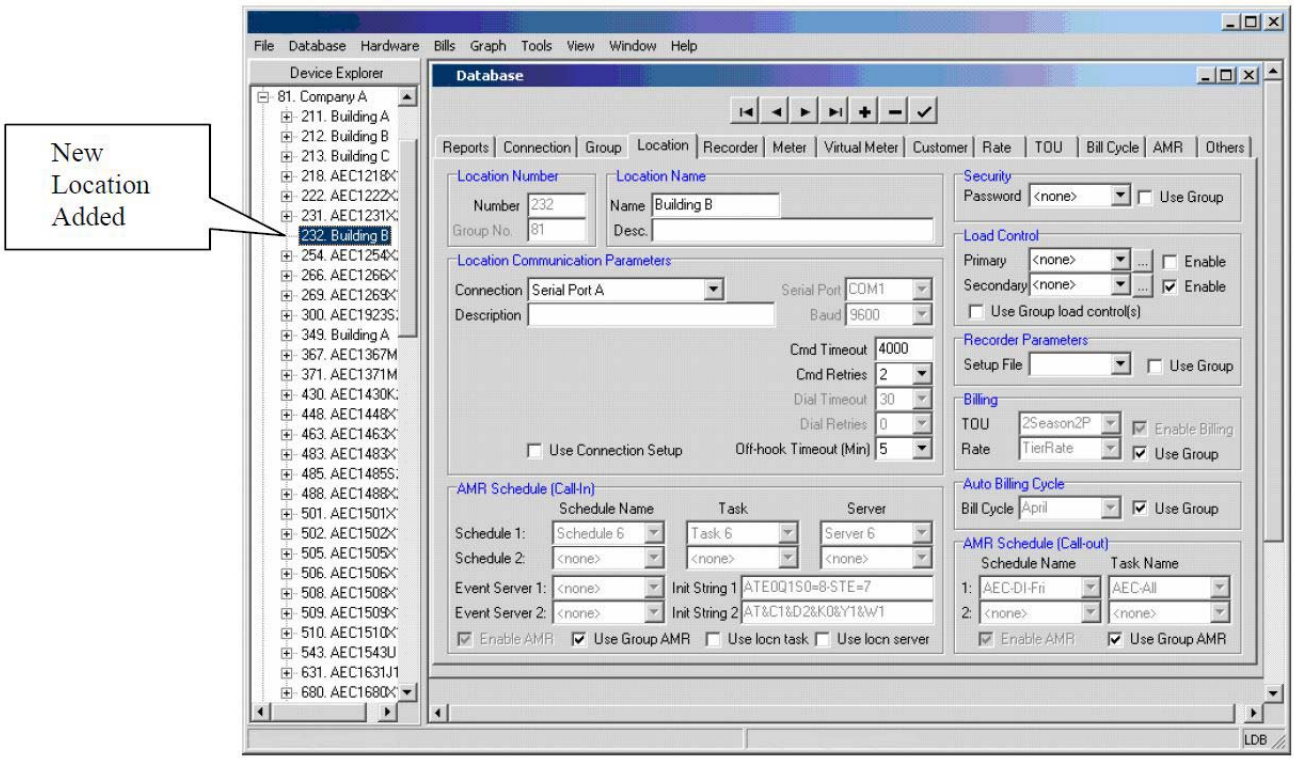


Fig. 10. Device Explorer New Location.

Setting a Location and Scanning for Meters

Select Location

1. From E-Mon Energy™ Explorer Window, click and select Hardware\Set Location from the drop-down menu. The Select Location Dialog opens.

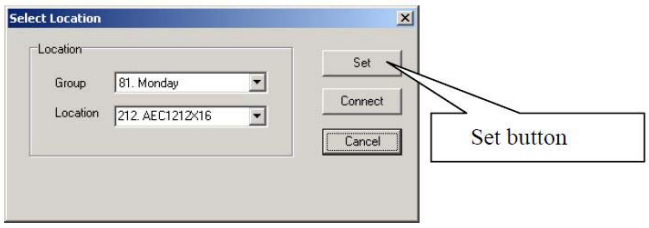


Fig. 11. Select Location Dialog.

2. From the Group drop-down list, select a Group.
3. From the Location drop-down list, select a Location you want to scan and communicate with.
4. Click on SET button. The Access window opens.

NOTE: The Group and Location displays in the window's status bar area

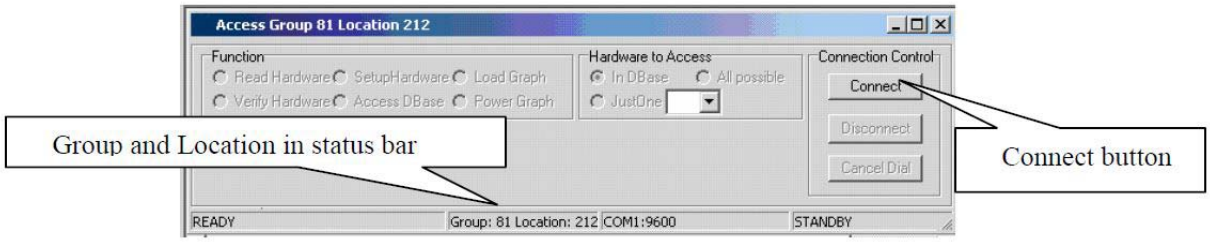


Fig. 12. Access Window.

5. Click on CONNECT button, to establish connection and access the Function and Hardware to Access Groups.

Scanning Devices

1. From the Function group box, click on Setup Hardware.
2. From the Hardware to Access group box, click on All possible.

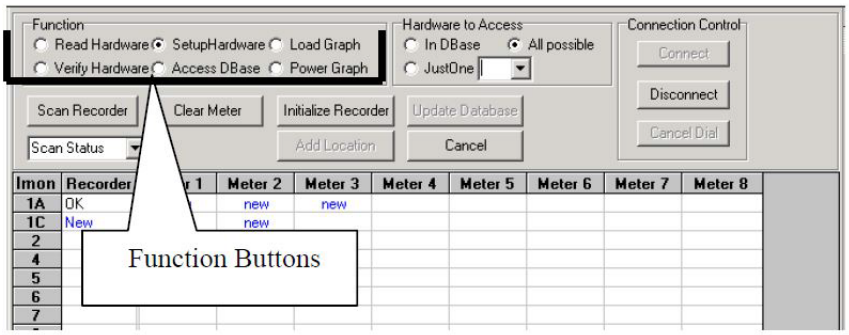


Fig. 13. Scan Recorder and Status Window.

3. Click on SCAN RECORDER button. By default E-Mon Energy will start scanning for any new devices starting with IDs of 1A, 1B..... Once the new devices are detected, the grid will display the Recorder ID and the Meter Channel Status (OK, New, Bad....)
4. Once E-Mon Energy™ scans and moves past the last installed device ID, wait a few seconds and click CANCEL. At this point, it will allow you to update the database.
5. Click on UPDATE DATABASE button, a dialog box displays with 4 list boxes New Device, Add to DB, Bad Device, and Delete from DB. Note: The “New Device” list box displays all new devices detected during the scan. The Bad devices will display under “Bad

Device" list box. The database list boxes allow you to add a new device or remove a bad device from that location.

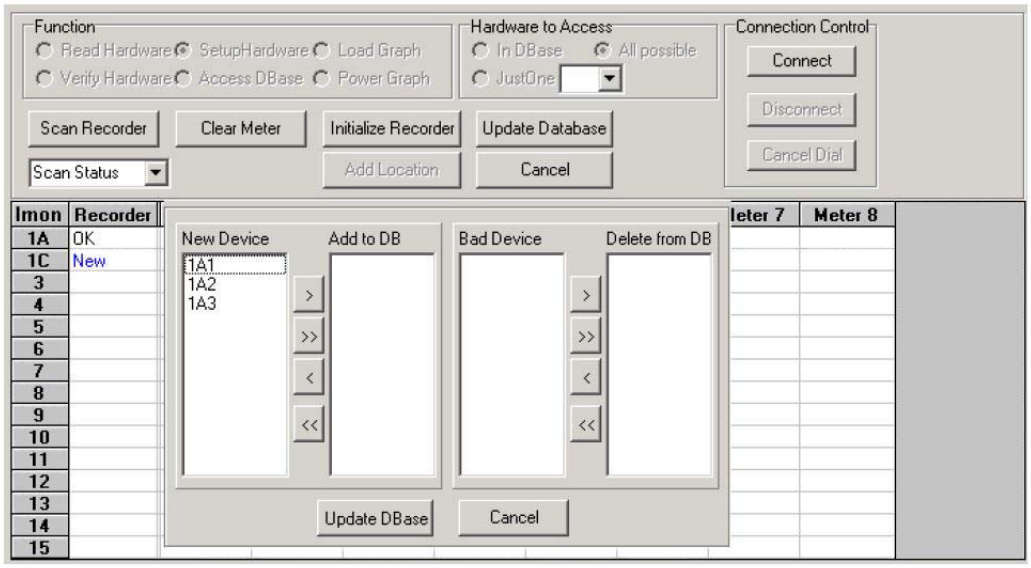


Fig. 14. Update Database.

6. In the New Device list box, click on a device. (e.g. 1A1),

7. Click on the > right arrow button to move the new device into the Add to DB list box. To add all devices, click the >> right double arrow button and all devices will move to the Add to DB list box.

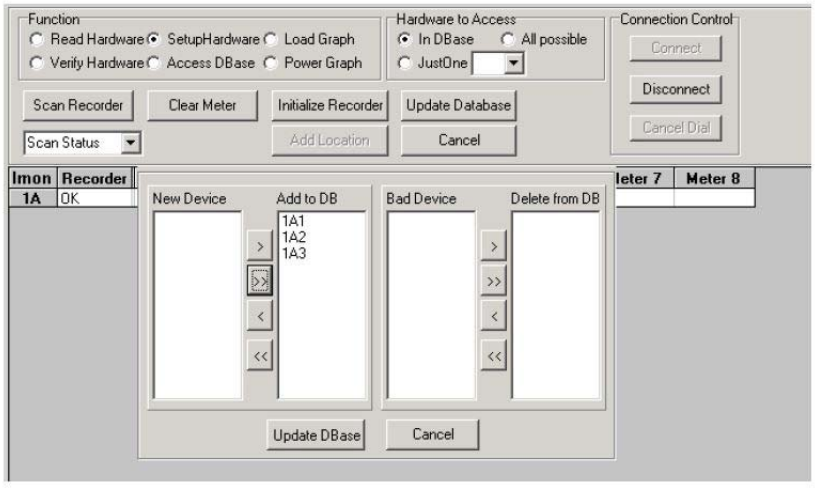


Fig. 15. Adding New Devices to Database.

8. Click on UPDATE DBASE button to add the devices to the database. The Access window now displays meters as OK rather then NEW.

Fig. 16. Database update complete message dialog.

Initializing the Recorder

1. With ONLINE status, click on Setup Hardware, and click on INITIALIZE RECORDER Button. The Initialize recorder to factory dialog opens.

Fig. 17. Initialize recorder to factory defaults dialog.

2. Select either the All displayed in Grid or Just One and choose from the drop-down list. Since this is a New Location we are selecting All displayed in Grid. A Just One example can be an existing location and adding another recorder to it.
3. Click OK or CANCEL to exit. A message dialog opens warning that this command erases all record information and resets back to factory default settings.

Fig. 18. Warning Dialog.

4. Click the YES button. The Access Group opens with an Initializing recorder status.

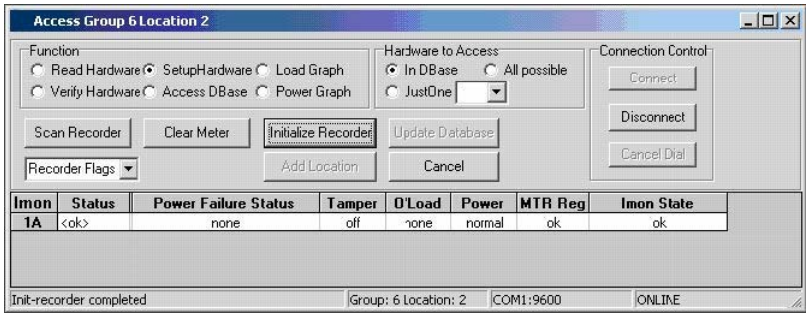


Fig. 19. Access Group Initializing recorder status.

Setting the Recorder Information

1. Click on Access DBase button.
2. Click on Recorder Tab, in the Data Recorder Parameters group, select the Profile Interval from drop-down.
3. Select the Peak Demand from the drop-down.
4. Select the Rolling Demand from the drop-down. Note: The End of Interval is built in and it is not necessary to select from the drop-down
5. Click inside list box on each time increments and enter the min. and max Time Adjustment or click on ▲ up ▼ down arrows to adjust the time frame for each increment.
6. Select the Time Zone from the drop-down list.
7. Click on Enable DS Time.

8. Click on SEND RECORDER button to accept/send the data to the recorder.

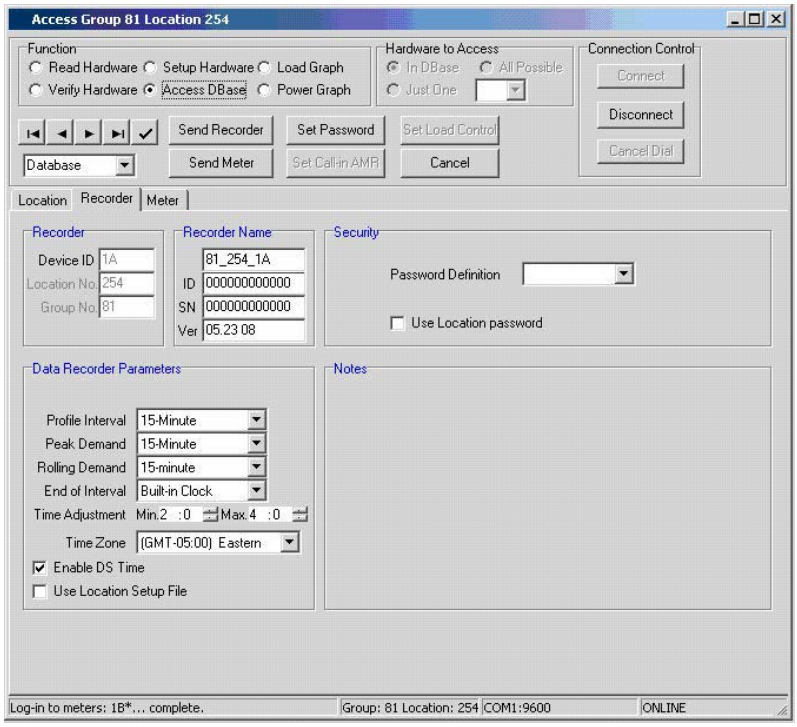


Fig. 20. Access Dbase Send Recorder Parameters.

Setting the Meter Information

1. Click on Meter Tab, in the Meter Size group, select the Voltage from drop-down.
2. Select the Sensor Size (Amps) from the drop-down.
3. Select the Set of Sensors (Sets) from the drop-down.
4. Select the Pulse Input Type (KWh Meter) from the drop-down. Note: The On/Off (50/50) must be selected.
5. From the Energy Type group, select the Pulse Fact.

   NOTE: The Meter Mult is pre-set and is automatically generated.

6. Click on SEND METER button to accept/send the data to the meter.

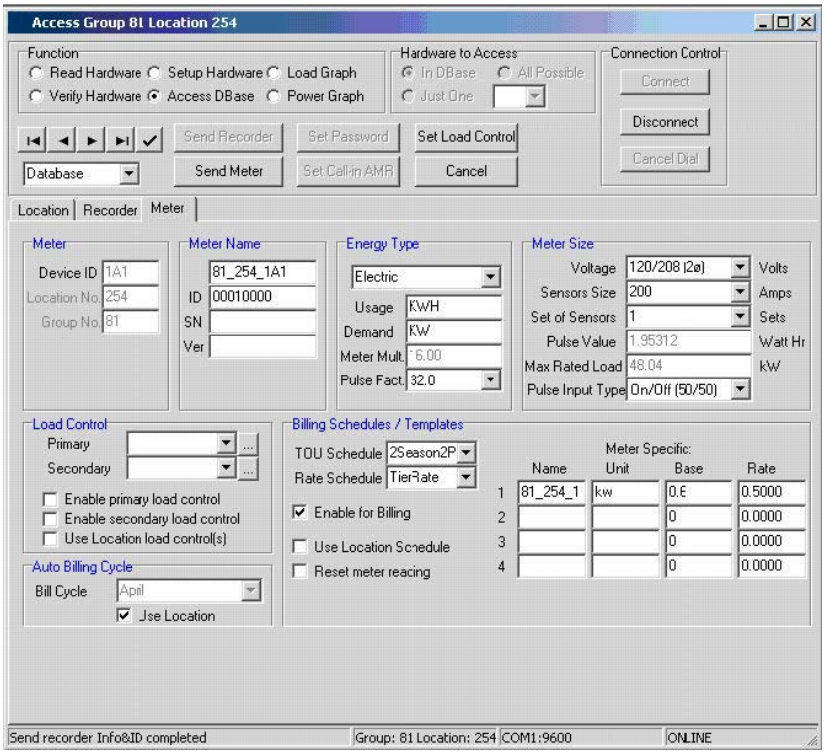


Fig. 21. Access Dbase Send Meter Parameters.

Reading Hardware

1. From the Access Function Group, click on Read Hardware.
   The system will read the meters and display profile status (i.e. Status, Start Date, Days left from last Download, Sampling Rate, State (On/Off), Last Time downloaded data (Download Thru), and how many Days left to Download to Avoid Data Lost).

   Optional: If only reading one meter, select Just One and chose from the drop-down list to the right.

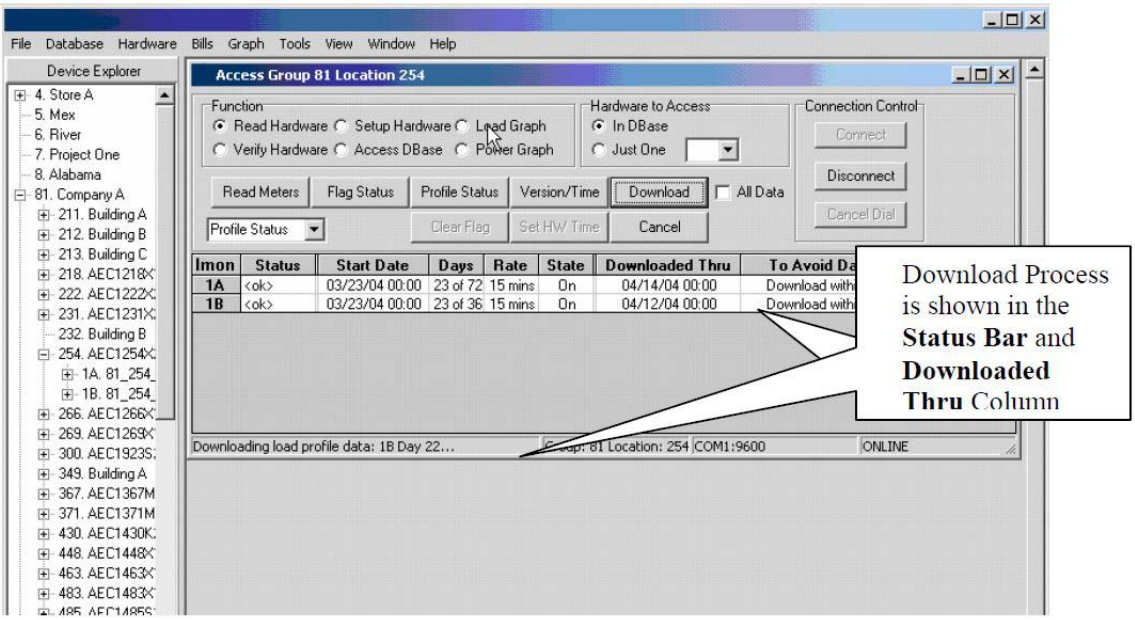


Fig. 22. Access Group Profile Status.

2. If you want to force a download of all data from the recorder, check All data from the recorder, prior to clicking the Download Button. The download process will begin, and shown in the Downloaded Thru and status bar in the lower left hand corner. When down load is complete, the status bar will indicate – status complete.

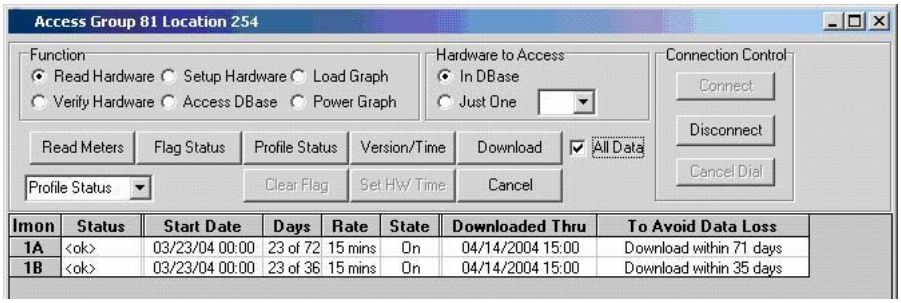


Fig. 23. Access Group Profile Status Complete

3. Click on VERSION/TIME button, and verify if version is correct.

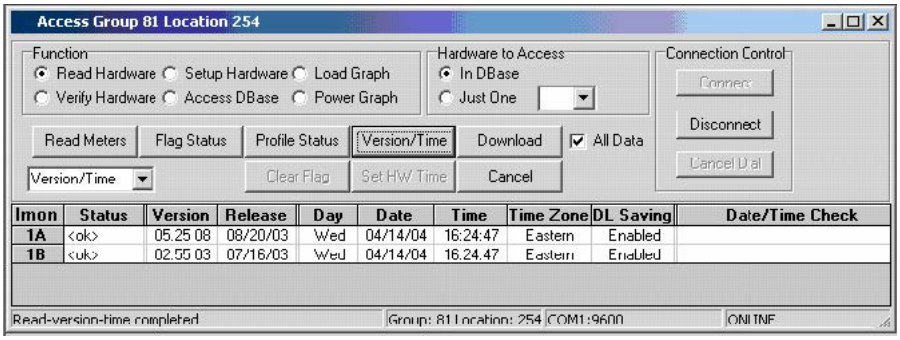


Fig. 24. Access Group Version/Time.

Checking Flag Status

1. Click on FLAG STATUS button. E-Mon Energy™ will check the recorder for any potential errors and post a flag. If any columns within the grid show a “Red” flag this indicates a problem or failure.

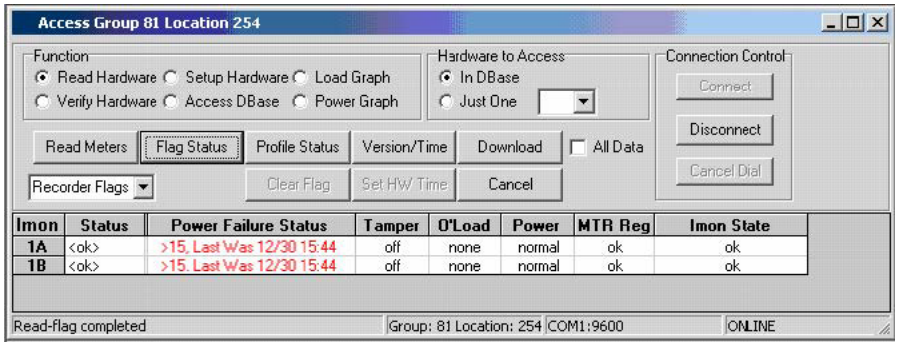


Fig. 25. Access Group Flag Status

a. The flag shown in the above illustration is a Power Failure. A power failure indicates that the meter has lost power at some point. The Power Failure Status displays the last power failure date and time.
b. If the Tamper Alarm is active (on), a flag will indicate that the door is open. If Tamper Alarm is not active the column will display off.
c. The O’Load column will display an Overload flag if the meter shows excessive amperage.
d. The Power column a flag reflects the power/voltage state of the meters. These flags can be low, noisy, or unstable. This column should always show Normal.
e. The MTR Reg column will display a Bad flag when the recorder real-time clock is malfunctioning.

2. After correcting the failure, you can reset and clear the flags, by clicking on the CLEAR FLAG button.

Loading Profile and Generate Demand Profile Graph

Load Profile

1. From E-Mon Energy™ explorer window, click and select Graph\Load Profile from the dropdown menu. The Load Profile graph displays.

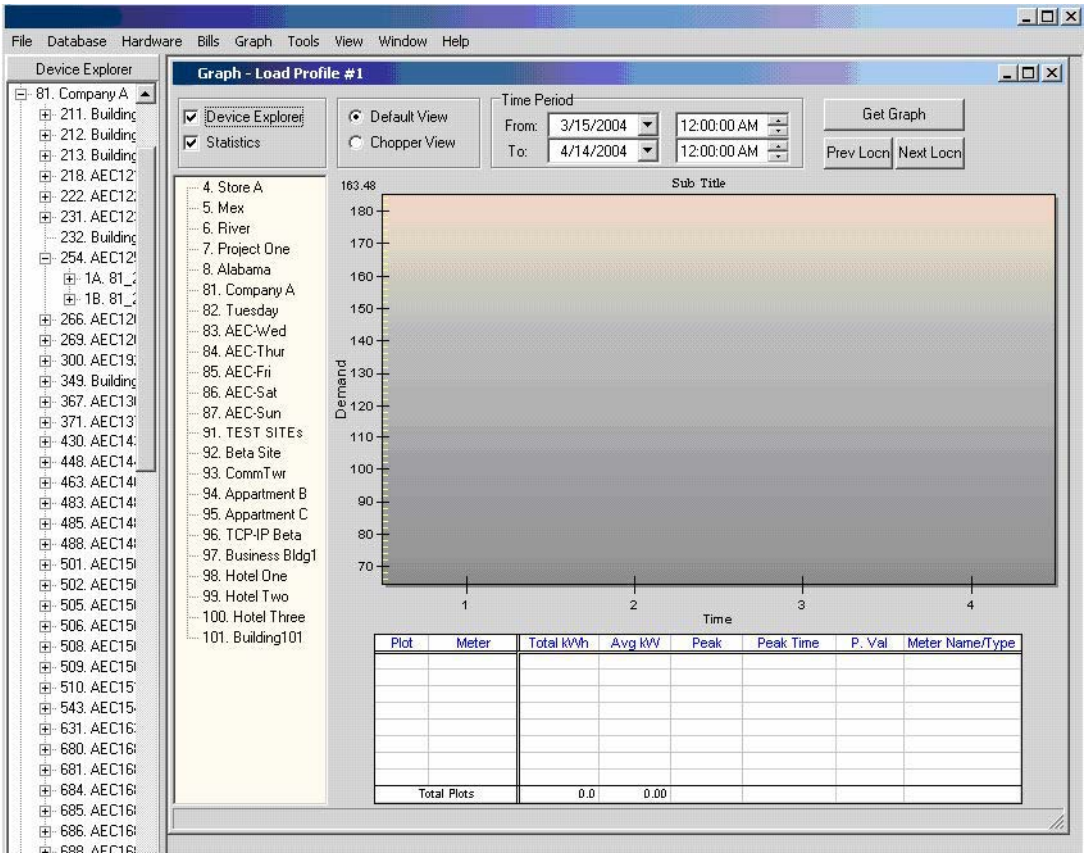


Fig. 26. Load Demand Profile.

Selecting Graph Time Period

2. In the From (Date) field, click on the drop-down arrow, select year, month, and day to start plotting the meters.

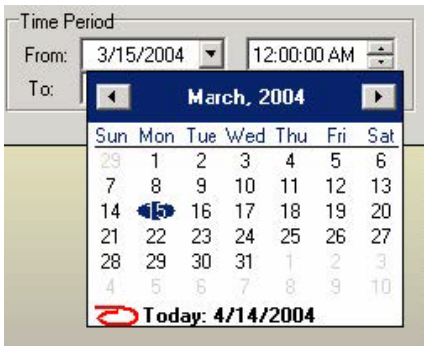


Fig. 27. Time Period Calendar.

3. In the To (Date) field, click on the drop-down arrow, select the year, month, and day to stop plotting the meters.
4. In the From (Time) field, change hrs: min: sec: AM/PM to Starts at:
   Click and type inside the text box to change each time increment or by clicking on the ▲ up ▼ down arrows to adjust the time frame for each increment.

   NOTE: The Start Time can not exceed the End Time

5. In the To (Time) field, change the hrs: min: sec: AM/PM to Stop at.

Selecting Meters to Plot

6. In the shaded device directory, select a Group, click and drill-down to the Recorder level, and then to the Meter Level, if you wish to graph a single meter.

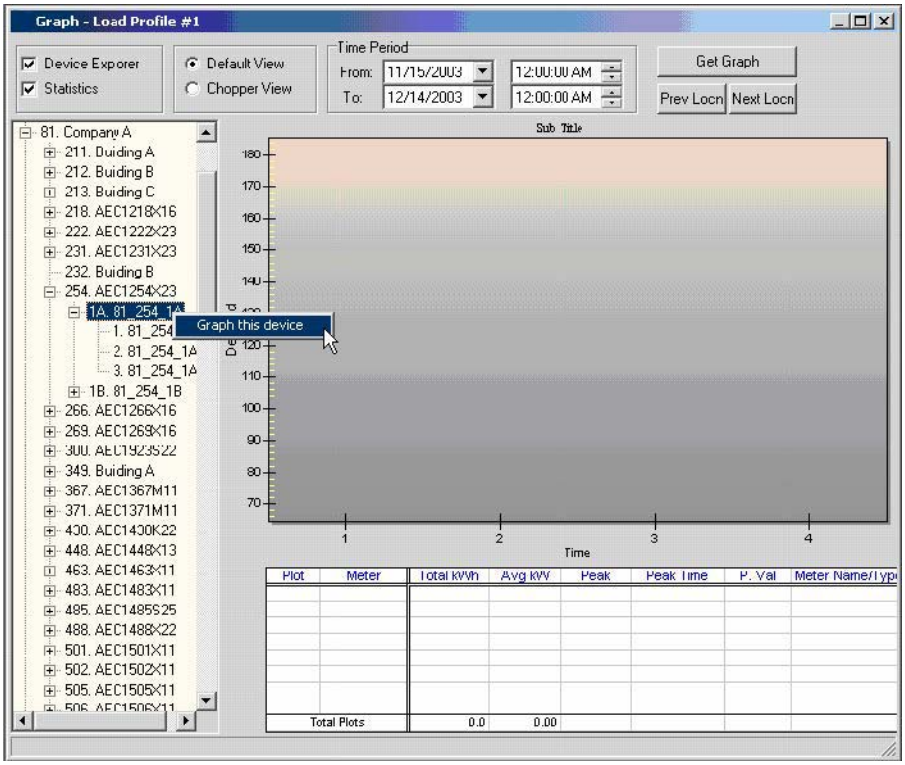


Fig. 28. Demand Profile Device Selection.

7. Right-Click on the Recorder ID, and highlight, left-click on GRAPH THIS DEVICE button. The statistic table below populates with all the meters within the recorder. *Each Meter is shown with a specific color to correspond with the plot number.*

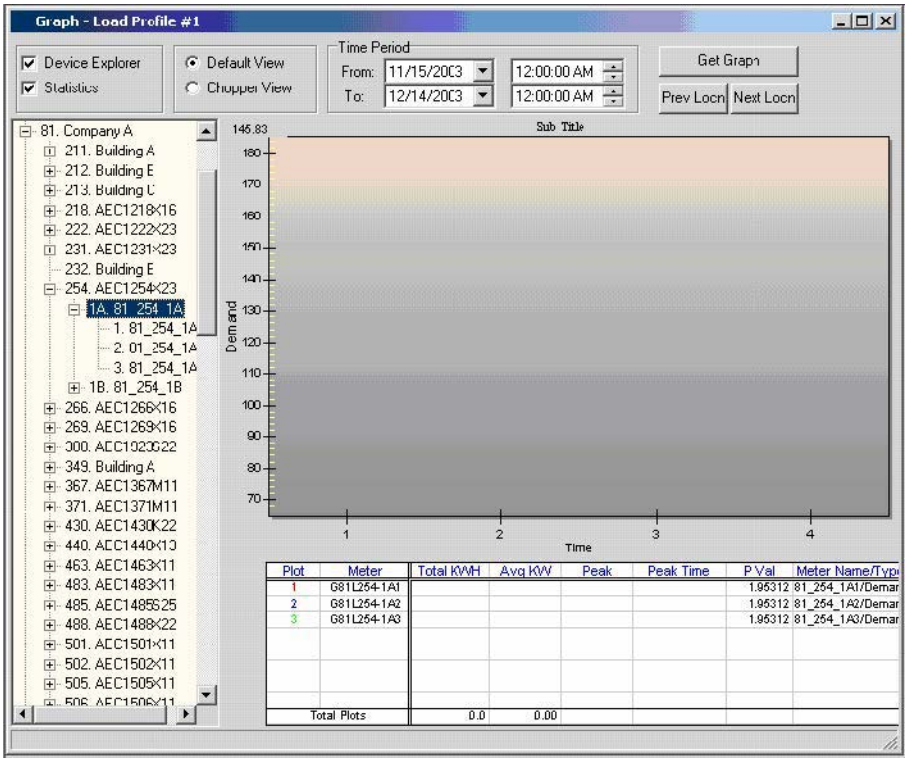


Fig. 29. Demand Profile Statistic Table.

Plotting the Graph

8. Click on GET GRAPH button.
The statistic table refreshes and populates with the Total KWh, Avg. KW, Peak, and Peak Time during the selected Time Period. The graph above plots the rise and fall of the load as KW on a Date/Time frame. Above the plotted graph displays the meter ID(s) and color code.

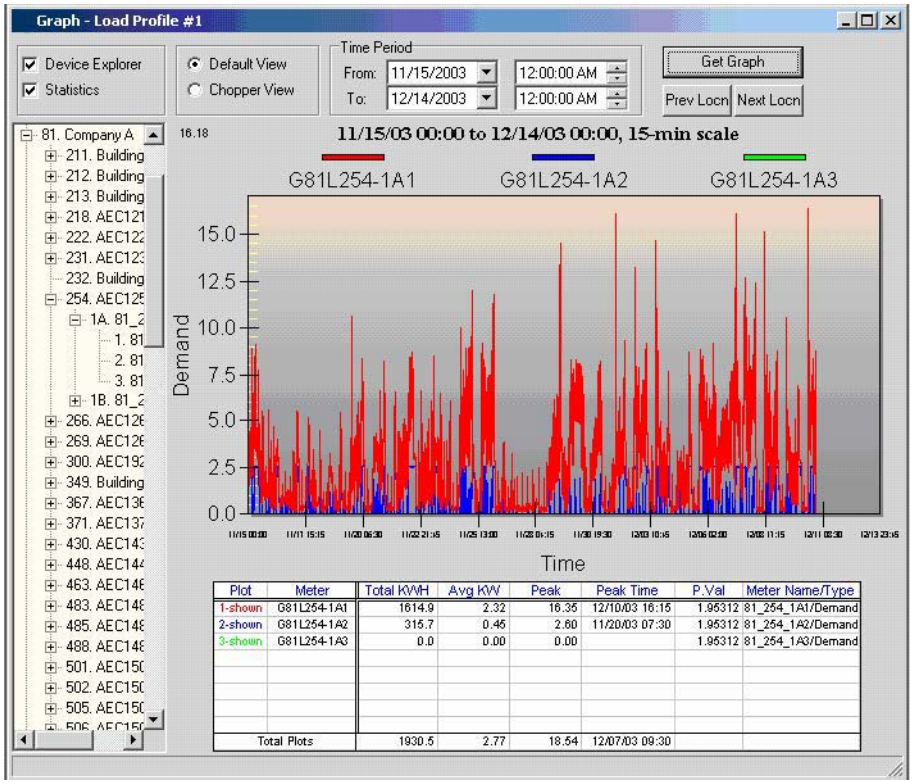


Fig. 30. Demand Profile Graph.

9. To expand the graph for clear view, click, hold, and drag your mouse within the graph area.

NOTE: A gray vertical line will appear, and the mouse pointer will change to a magnifying glass. See illustration Expand View (1 and 2) below.

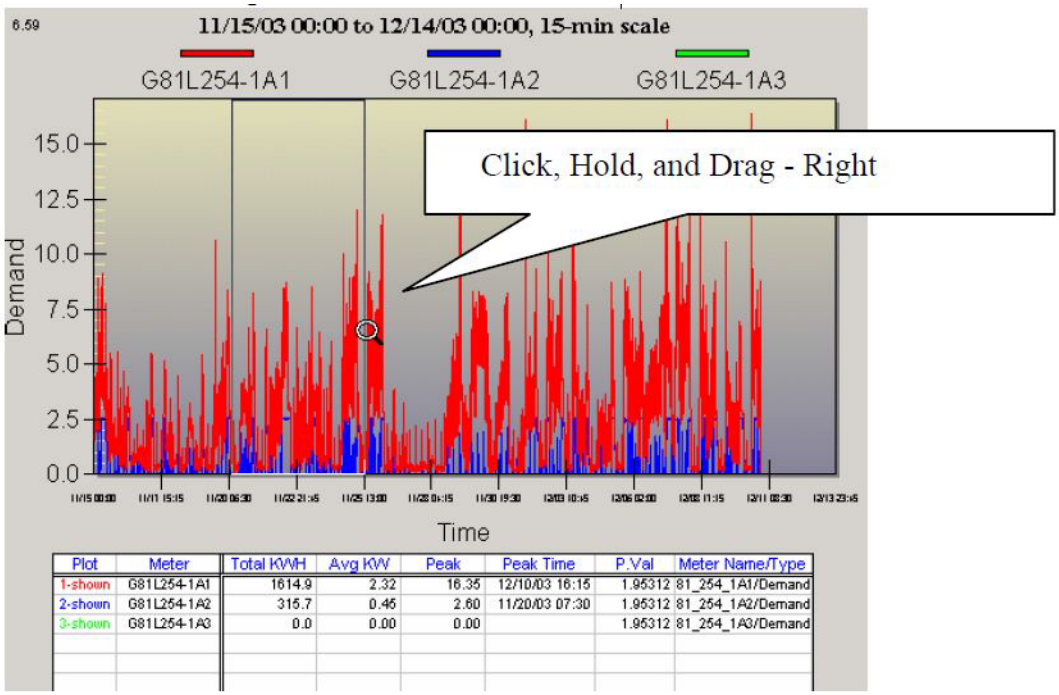


Fig. 31. Demand Profile Graph Expand View (1).

Navigating in the Graph

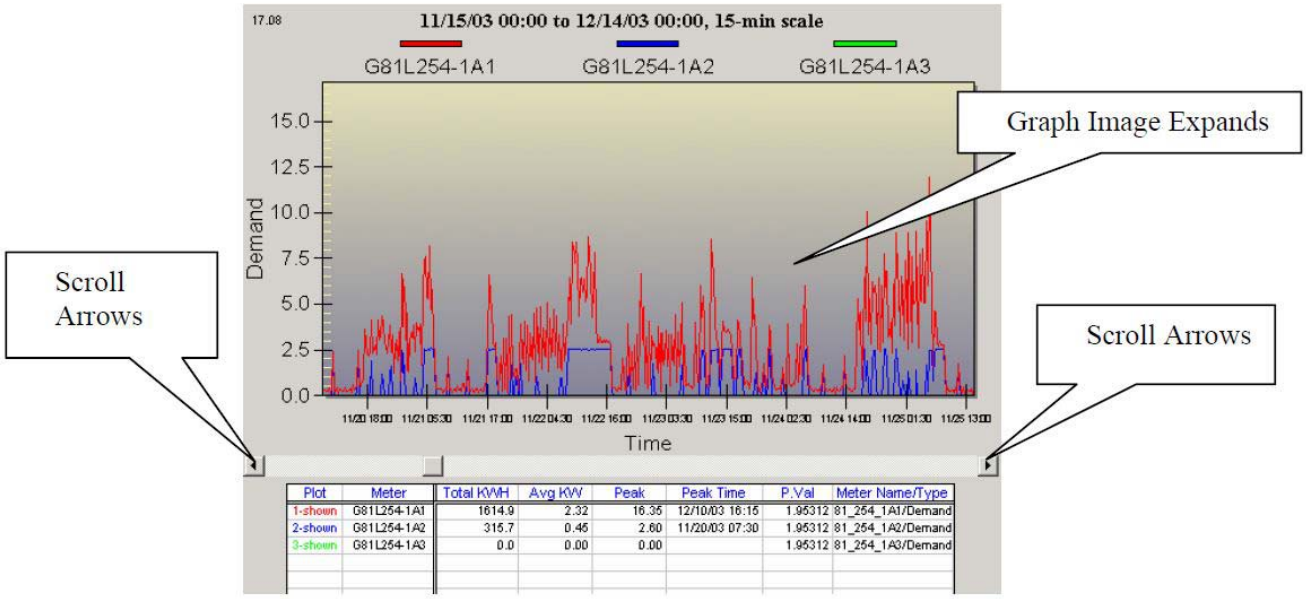


Fig. 32. Demand Profile Graph Expand View (2).

In the Zoom view, use the scroll arrows/bar to view the whole entire graph from left to right.

10. To return to the original graph size, right click in graph, and select Undo Zoom from the dropdown menu.

NOTE: The other drop-down menu items are not supported at this time.

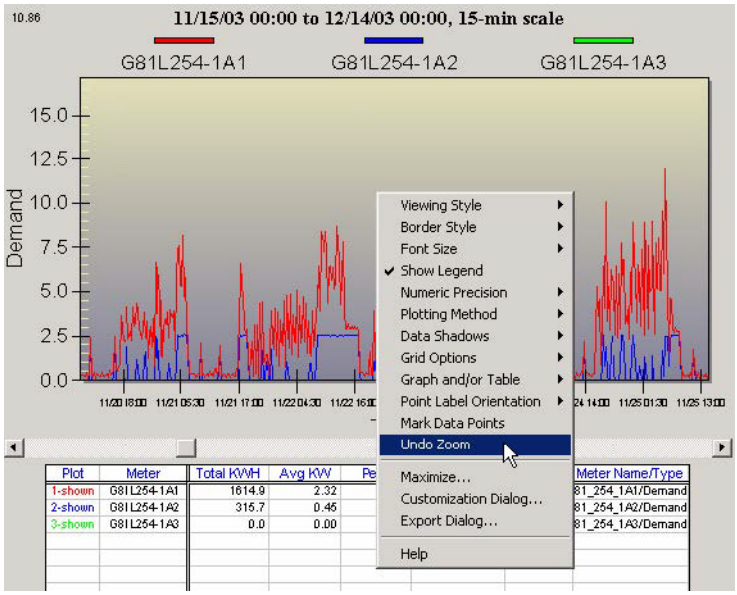


Fig. 33. Demand Profile Graph- Undo Zoom Feature.

Other viewing options are:

- **Device Explorer** – Uncheck to remove Device Explorer from window view.
- **Statistics** – Uncheck to remove Statistics Table from window view.
- **Default View** – Click on to change the graph view to a line graph. *Note: This is the default graph view.*
- **Chopper View** – Click on to change the graph view to a daily demand view based on your Time Period selection.

Printing a Graph

1. To print a graph, click and select File/Print from the drop-down menu.
2. Select printing default printer or customize printer setup.
3. Click OK button or click CANCEL button to exit.

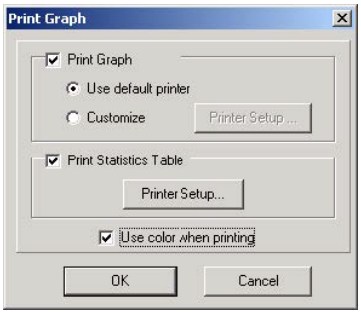


Fig. 34. Print Graph Dialog.

Exporting Graph Data

1. To export graph data as a CSV (common-separated variable) file, select File/Export Graph Data as CSV...A Save As dialog opens to save with a CSV extension.

   NOTE: CSV file format is used to exchange data between different applications (i.e. MS Excel)

2. Enter a File Name and click the SAVE button.

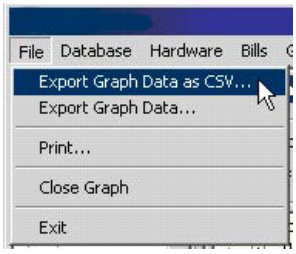


Fig. 35. Export Graph Data as CSV Menu.

3. To export graph data in other formats, select Export Graph Data... An Exporting Demand Profile dialog opens.

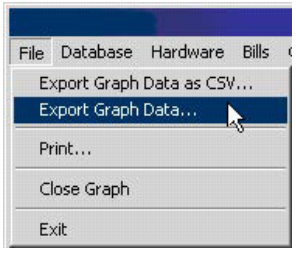


Fig. 36. Export Graph Data Menu.

4. Select an Export format. The *Exporting Demand Profile dialog displays several format options to use. Metafile, BMP, JPEG, PNG, and a Text delimited file that can be imported into a spreadsheet.*
5. Select an Export Destination location (to a Clip Board, as a File, or sent to a Printer.)
6. If saving as an image, select the object size or Pixel.
7. Click on EXPORT to save the file and complete the file parameters.
8. To Print the graph image, click on PRINT. (The print button appears when the Printer radio button is selected)

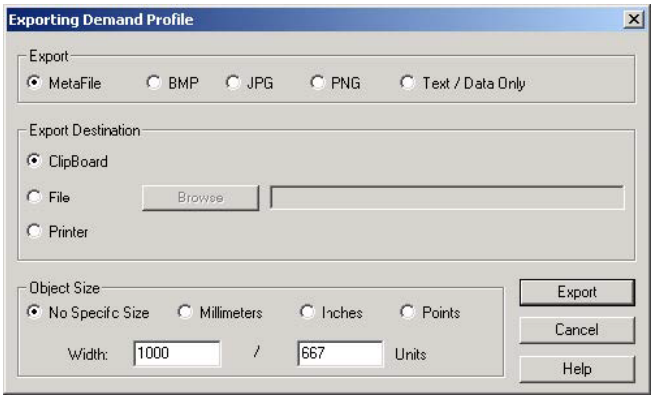


Fig. 37. Exporting Demand Profile Dialog.

Creating a Pie Chart

1. From the graph, to open a Pie Chart view, click anywhere on the graph lines or bars to open the chart.

   NOTE: Select from any two viewing options: Percent or Value.

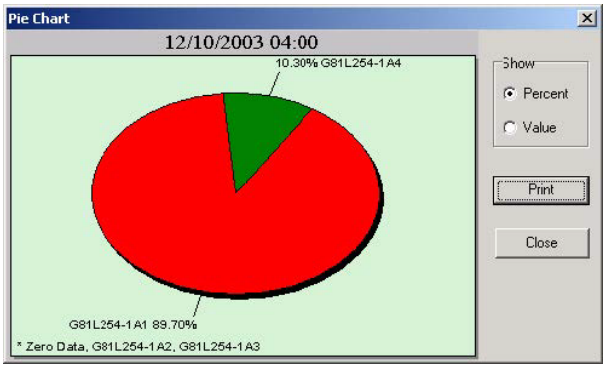


Fig. 38. Pie Chart.

2. Click PRINT button to print the pie chart, or click CLOSE button to exit.

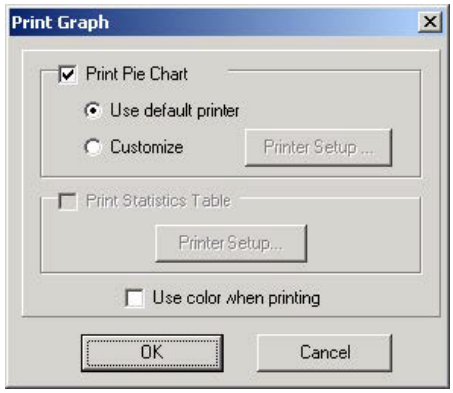


Fig. 39. Print Pie Chart Graph.

Selecting Graph Options

1. From the Graph drop-down list, select Display Options. The Graph Options Dialog will open.
2. Select the Plot Style for the Graph (Line, Stacked Bar, Stacked Area, Bar, and Area).

   NOTE: The Line Style is the default setting for the graph.

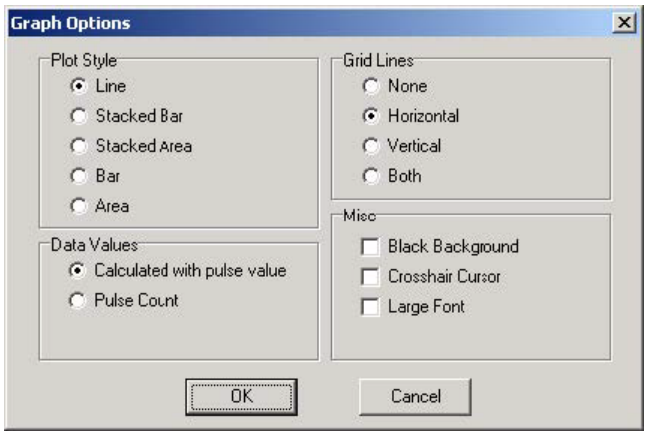


Fig. 40. Graph Viewing Options.

3. Select the Data Values (Calculated with pulse value or Pulse Count).

   NOTE: Calculated with pulse value is the default.

4. Select the Grid Lines (None, Horizontal, Vertical, or Both).

   NOTE: This is an option.

5. Select Misc. (Black Background, Crosshair Cursor, or Large Font)

   NOTE: The Black Background is used mainly for viewing purpose; Crosshair Cursor is useful in locating specific spots on a graph; and the Large Font changes font size on the profile screen.

6. Click OK, or click CANCEL to exit the dialog.

Graphing Real-Time Load Factor and Power Graphs

Connecting to a Location

1. From E-Mon Energy™ menu, click and select Hardware\Set Location from the drop-down menu. The Select Location Dialog opens.
2. From the Group drop-down list, select a Group.
3. From the Location drop-down list, select a Location you want to communicate with.
4. Click on CONNECT button. The Access window opens.

   NOTE: The Group and Location displays in the window's bar/status area

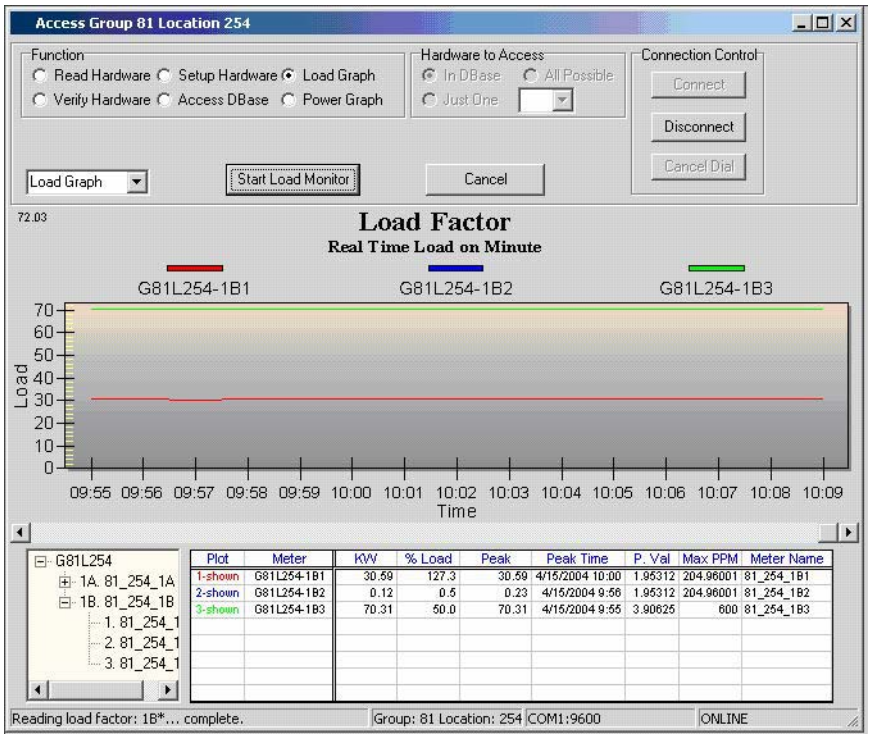


Fig. 41. Load Factor Graph – Real Time.

Load Factor Graph

1. Click Load Graph, the Load Factor graph displays.
2. From the Access Device Explorer list box (light green background), drill down and right-click on the Recorder ID, and click on GRAPH THIS DEVICE. The Statistic Graph will populate with the meter information.
3. Click START LOAD MONITOR. The Load Factor graph will display real time load in minutes. The initial graph will have the most recent 15 minutes of data points. Thereafter, the graph will refresh every minute with the latest load.
4. Click Cancel to exit the graph.

Load Monitor Graph

1. Click on Power Graph. The graph below switches to a Phase Voltage graph in real-time.
2. Select a meter ID from the "Hardware to Access" drop-down box. Note, the device must be capable of monitoring power conditions, e.g. voltage, amperage, frequency, phase angle, power factor, kW load, kVA load, kVAR load. Hardware such as Class 3000 and MeterSmart 5000 is capable of monitoring power conditions.
3. Click START POWER MONITOR. The graph will display real time data in one second refreshing rate.

4. Click Cancel to exit the graph.

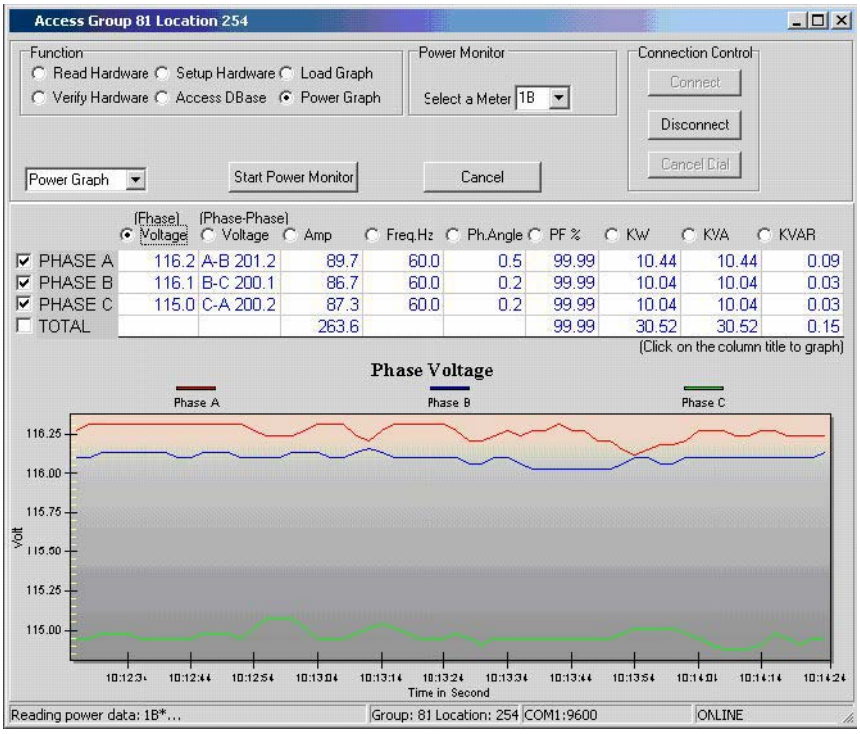


Fig. 42. Phase Voltage Graph – Real Time.

Creating a Virtual Meter

Location Tab

1. Select Database\Location from the drop-down menu or click on Location tab in the Database window.
2. Select a Group from the Device Explorer (i.e. Tuesday).

3. Click on the Panel Action“+” button to add a new location.

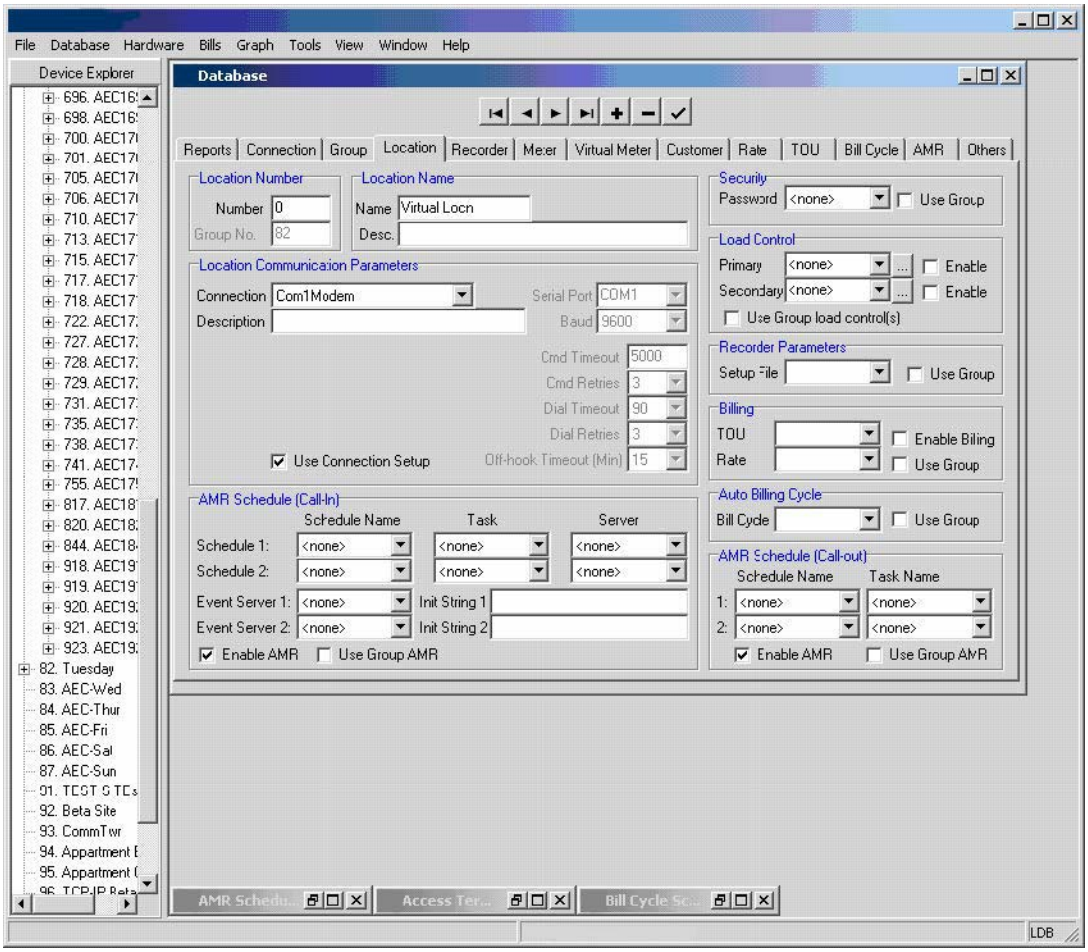


Fig. 43. Virtual Location.

Location Number and Name

4. In the Location Number type “0.”

   NOTE: Location “0” is required for Virtual Meters.

5. Tab across, type a Location Name.
6. Click on “√” button to accept/save the location record.

Update the Device Explorer

7. Click the DEVICE EXPLORER button, to refresh the directory.

   NOTE: You will notice that the Location Number “0” and Name have been added under the Group Name.

Creating a Virtual Recorder

1. Select the Virtual Location from the Device Explorer.
2. Click on Recorder Tab, and click on the Panel Action “+” button to add a new recorder.

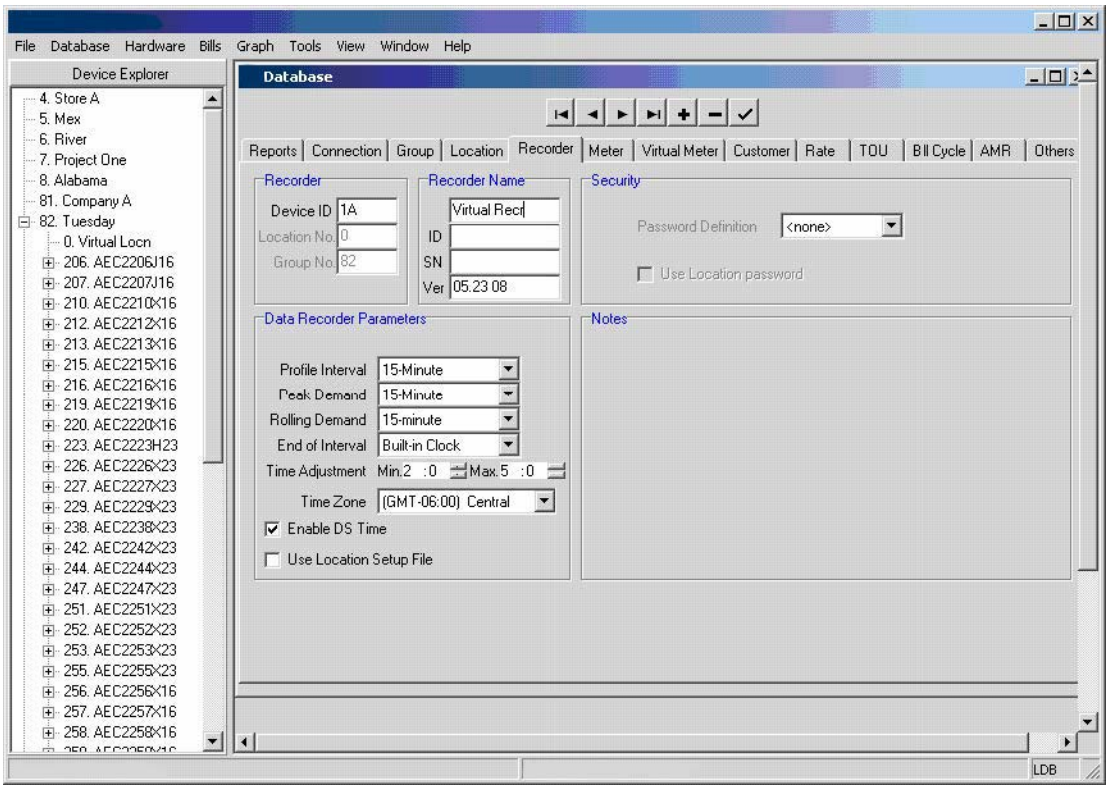


Fig. 44. Virtual Meter Recorder.

Recorder ID and Name

3. Type in a Device ID (1A-1Z, 2A-2Z, ₴.8A-8Z). Note: This field is required and must be unique within each location.
4. Tab across, and type a Recorder Name
5. Click on "√" button to accept/save the recorder record.

Update the Device Explorer

6. Click the DEVICE EXPLORER button, to refresh the directory.

   NOTE: You will notice that the Device ID and Name have been added under the Location Name

Creating a Virtual Meter

1. Select a Virtual Recorder from the Device Explorer.
2. Click on Virtual Meter tab, and click on the Panel Action"+" button to add a new meter.

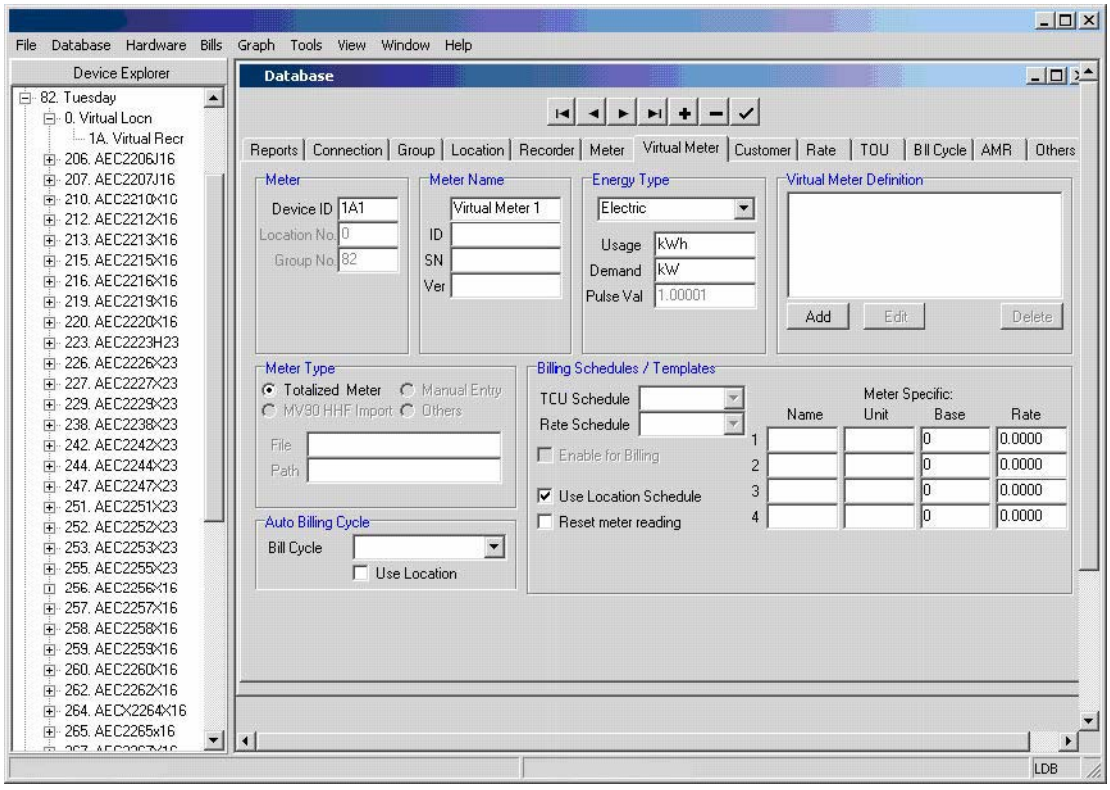


Fig. 45. Virtual Meter Tab.

Meter ID and Name

3. Type in a Device ID (1A1-1A8, 1B1-1B8, ...8A1-8A8, 8Z1-8Z8).

   NOTE: This field is required and must be unique within each location.

4. Tab across, and type a Meter Name.

Virtual Meter Definition

5. In the Virtual Meter Definition list box, click the ADD button. The Virtual Meter dialog opens.
6. From the Select Meter Node directory tree, drill-down and select the meter you want as an example. The Meter fields on the right will populate with the meter profile.
7. Click OK. The meter will display in the in the Virtual Meter Definition list box.

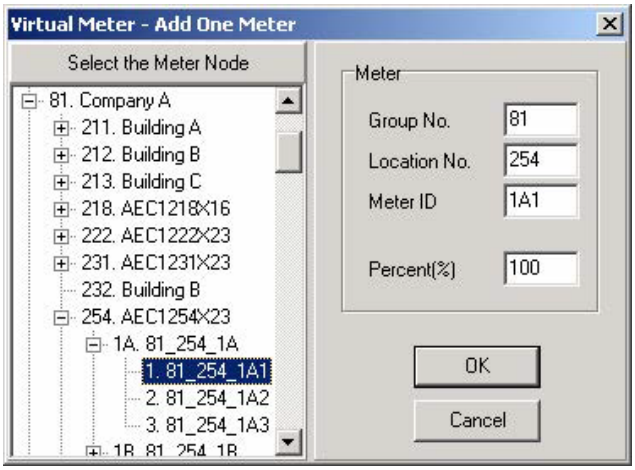


Fig. 46. Virtual Meter – Add One Meter Dialog.

8. Ensure the check box next to the meter is checked. Repeat the steps again to add additional meter(s).

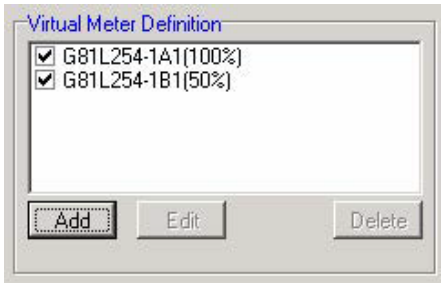


Fig. 47. Virtual Meter Definition Dialog.

9. From the Meter Tab, click on "√" button to accept/save the meter record.

Update the Device Explorer

10. Click the DEVICE EXPLORER button, to refresh the directory.

    NOTE: You will notice that the Device ID and Name have been added under the Recorder Name

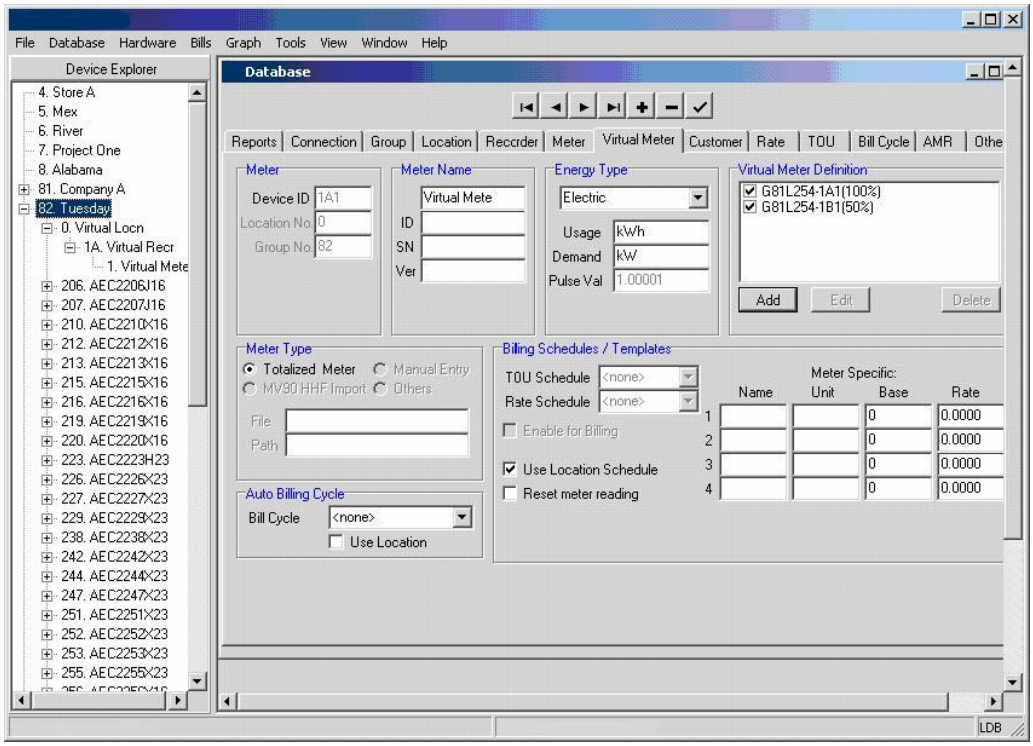


Fig. 48. Virtual Meters.

Generate Virtual Meter Profile

1. Select Hardware\Generate Virtual Meter Profile from the drop-down. The Load Profile graph displays.
2. Select the virtual meter location from the Device Explorer.
3. Click on Generate Profile. E-Mon Energy™ will generate the profile data for the virtual meter. If the virtual meter contains multiple meters; the virtual meter profile will be generated up to the oldest data of the meters. You may generate virtual meter profile manually by specifying the date/time for start and end periods.

Adding a Customer

Customer Tab

1. Select Database\Customer from the drop-down menu or click on the Customer tab in the Database window.
2. Click on the Panel Action "+" button to add a new customer.

Customer ID and Description

3. Type in a Customer ID (1...9999999). Note: This field is required and must be unique.
4. Tab across and type in a Description for the customer.

Customer Address (Optional)

5. Tab down and type in customers:
   - Name (1,2)
   - Address (1,2)
   - City
   - State
   - Zip
   - Phone No.
   - Fax No.
   - Email.
   - Account Open (Format: mm/dd/yyyy)

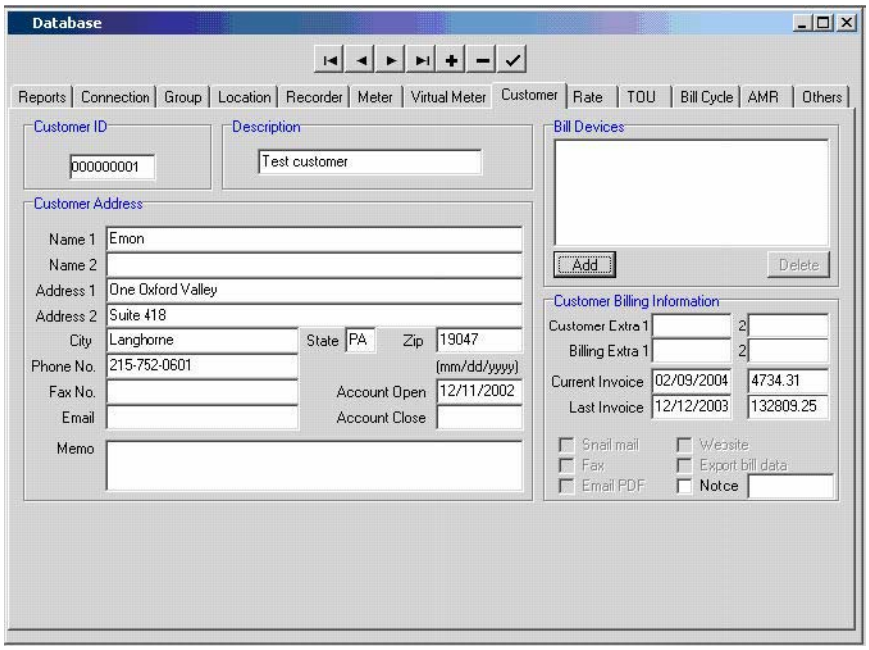


Fig. 49. Customer Tab.

Bill Devices

6. Check the Bill Devices that applies to the customer. Uncheck devices that do not apply to the customer.
7. To add a Bill Device, click on ADD button the Customer Bill Devices window opens.

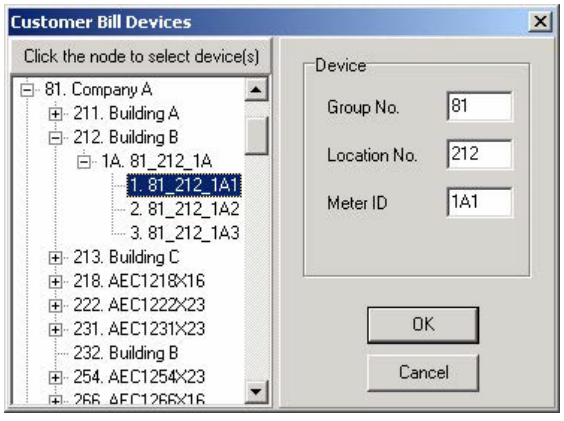


Fig. 50. Customer Bill Devices Dialog.

8. From the Customer Bill Device Directory, right click and drill down to the actual device.
9. Click and select the device you want to add.
10. Click OK. The device now displays in the Bill Devices list box.

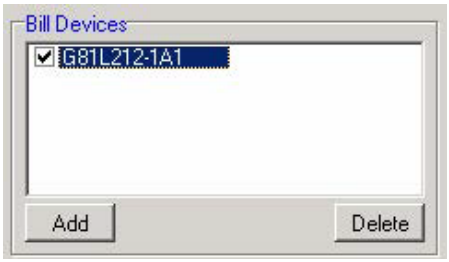


Fig. 51. Bill Devices.

11. To assign the device to the customer, ensure the check box next to the device is checked. The device is now added to the customer.
12. To delete a device from the list box, click on the one you want to delete. Click the DELETE button.
13. Click on "√" button to accept/save the customer record.

Setting Up a Customer's Billing Statement

E-Mon will provide billing templates (Rate Template File) to use with the rate table. E-Mon Energy™ billing templates are a variety of time-of-use (TOU) and tiered billing structures. If you are using a specific or unique

utility rate structure, then E-Mon can customize the billing template to automatically calculate your rate profile. Note: See E-Mon Energy User Manual for details.

Selecting Rate Table/Adjustments

1. Select Database\Rate Schedule from the drop-down menu or click on the Rate tab in the Database window.
2. Click on the Panel Action "+" button, to add a new Rate Table.

Rate Name

3. Type in a Rate Name. Note: This field is required and must be unique.
4. Tab across and type in a Description for the Rate Table.

Rate Definition

5. Select a Rate Template File from the drop-down list.

   NOTE: This can be a standard E-Mon Energy template or your customized rate template file.

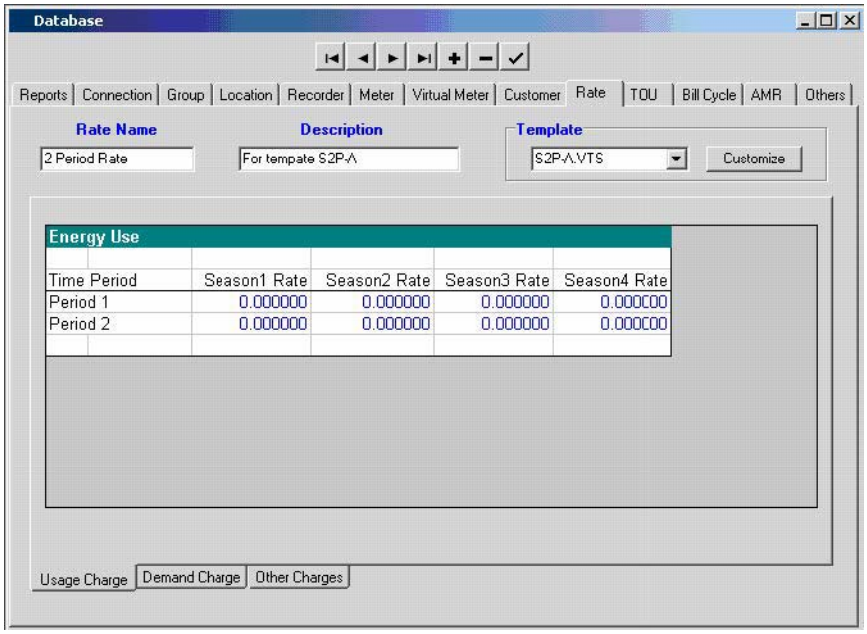


Fig. 52. Rate Tab.

6. Click on the Usage Charge tab, at the bottom of the panel.

7. Within the Energy Use grid, type in each energy rate, based on per time period and per season.

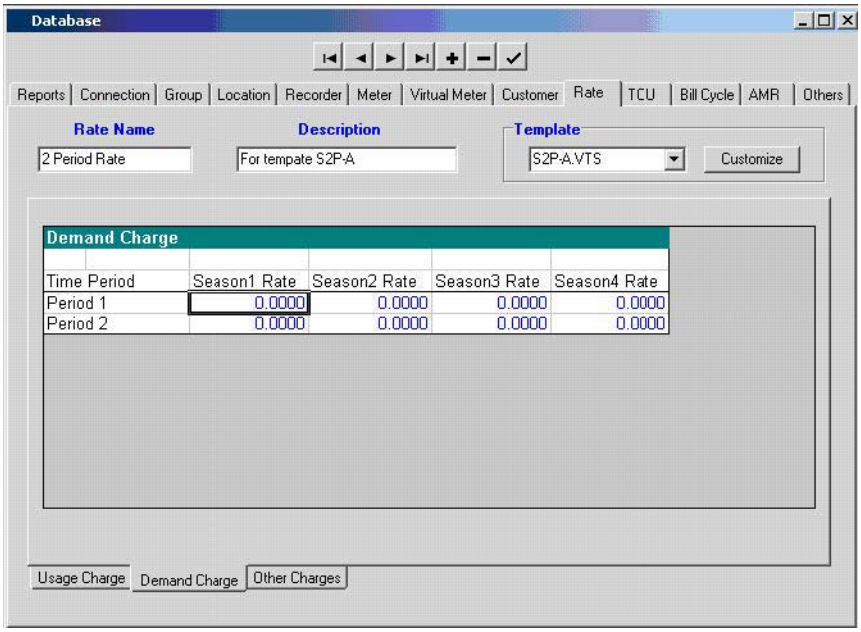


Fig. 53. Rate Tab –Usage Charge.

8. Click on the Demand Charge tab, at the bottom of the panel.

9. Within the grid, type in the cell the season rate, the sum of all period charges.

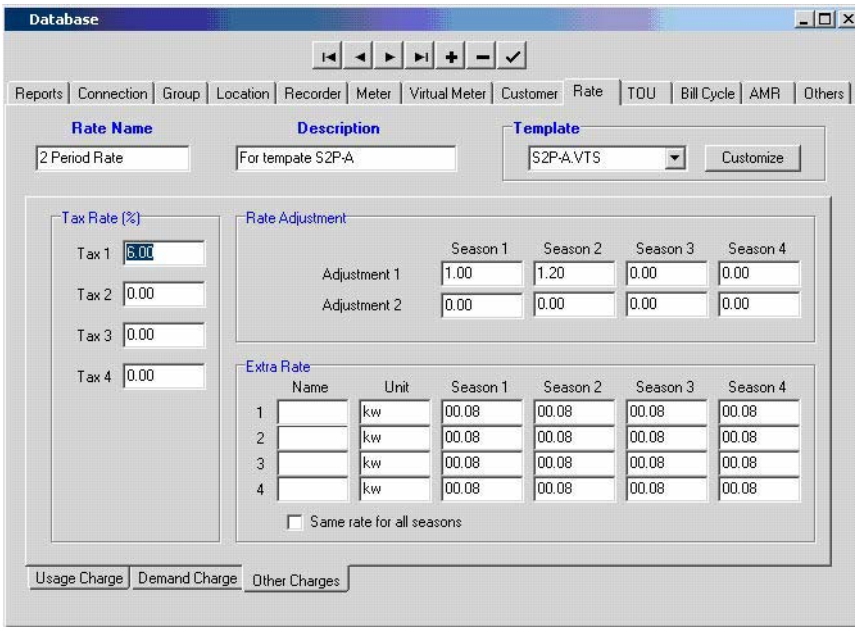


Fig. 54. Rate Tab – Demand Charge.

10. Click on the Other Charges tab, at the bottom of the panel.

11. Under the Tax Rate (%), type in a tax rate percentage(s) (i.e. 6% is shown).

NOTE: Four different Tax fields are provided to allow for tax adjustments based on rates.

12. From the Rate Adjustment, under Season 1, Adjustment 1, type in the energy cost adjustment rate for the season. (e.g. Season 1 = Fall, Season 2 = Winter).

NOTE: E-Mon Energy™ provides two Adjustment fields per season.

13. If you use a customized bill form, type in the Name, Unit, Season (1,2,3,and 4) based on your rate schedule.

    NOTE: Only enter information into those fields if you have a customized bill form

    OR

14. If you use the same rates for all seasons, check "Same Rate for all seasons."
15. Click on "√" button to accept/save the rate record.

Creating a TOU Schedule and Time Periods

TOU Schedule Tab

1. Select Database\TOU Schedule from the drop-down menu or click on the TOU tab in the Database window.
2. Click on the Panel Action"+" button to add a new TOU schedule.

TOU Name

3. In the TOU Schedule Name field, type a Name for the Schedule.

   NOTE: This field is required and must be unique.

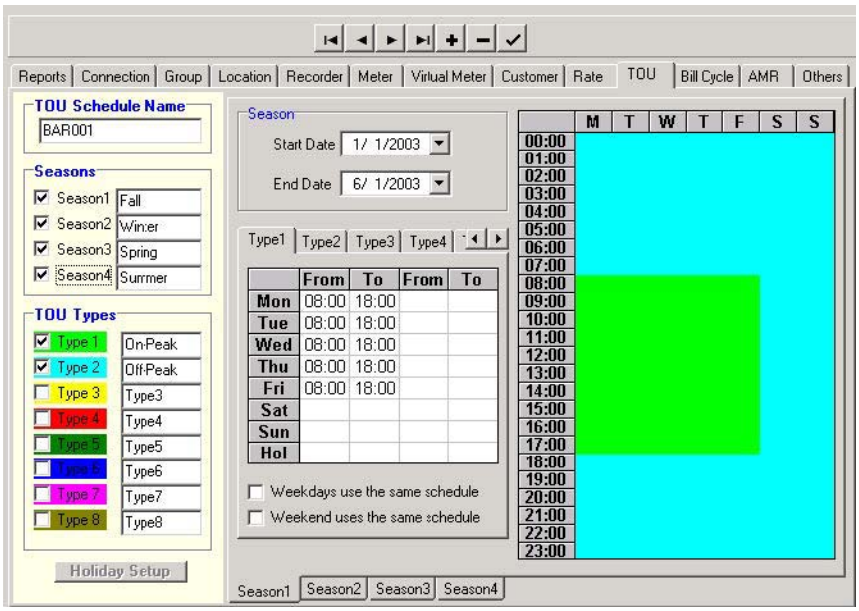


Fig. 55. TOU Tab

Seasons

4. Click on Season 1, type in the Name for Season 1. If your TOU requires multiple seasons, repeat the steps for Season 2, 3, and 4.

   NOTE: E-Mon Energy™ supports up to 4 seasons.

TOU Type

5. 5. Click on Type 1, type in the period names (e.g. On-Peak, Off Peak). If your TOU requires multiple periods, repeat the steps for Type 2, 3, 4, 5, 6, 7, and 8.

   NOTE: E-Mon Energy supports up to 8 periods.

Season

6. Under Season, select Type 1, Season 1 Tab.

7. Type in or select from Calendar, a Start Date and End Date for Type1, Season 1 schedule.

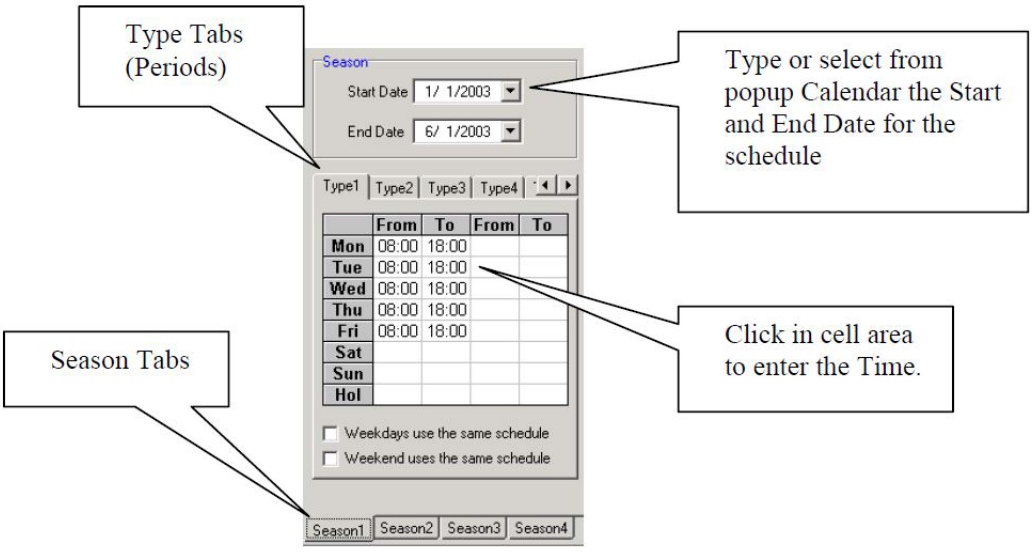


Fig. 56. Schedule Setup Group.

8. In the From\Mon cell, type in the starting time for Monday.

   NOTE: The schedule uses military time. (e.g. 13:00 = 1:00 PM)

9. In the To\Mon cell, type in the time the schedule will stop on Monday.

10. Repeat the same steps for each day of the week, up to the last day for the schedule.
11. If you want to run this schedule on the weekdays, click Weekdays use the same schedule.
12. If you want to run this schedule on the weekends, click Weekends use the same schedule.

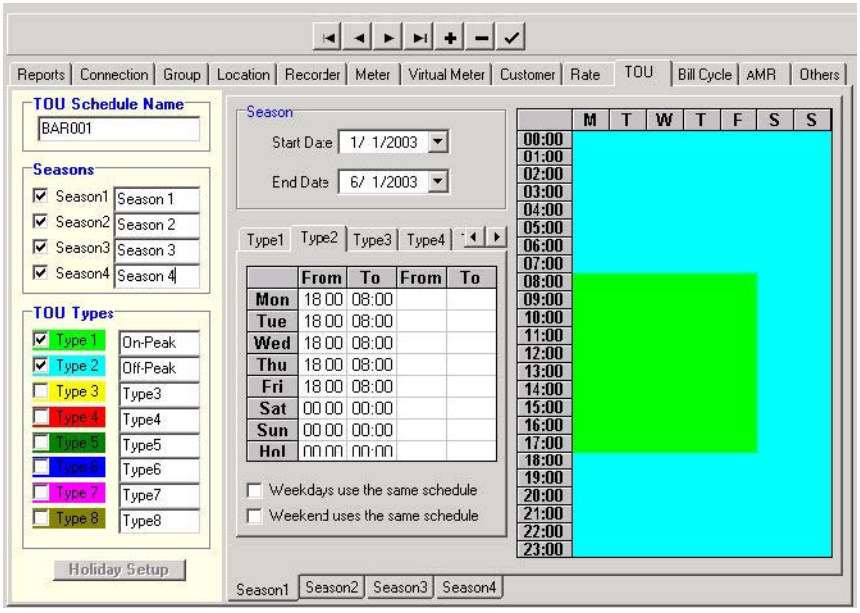


Fig. 57. TOU Schedule View.

13. Repeat the Steps 6 to 12 again for each Type and Season tabs that applies to the TOU type and Seasons entered.

14. Click on "√" button to accept/save the TOU schedule record. The Time/Day of the Week graph displays the day and time frame related to the Type and Season schedule.

Setting up an Automatic Bill Cycle

Bill Cycle Tab

1. Select Database\Bill Cycle from the drop-down menu or click on the Bill Cycle tab in the Database window.
2. Click on the Panel Action "+" button, to create a new Bill Cycle.

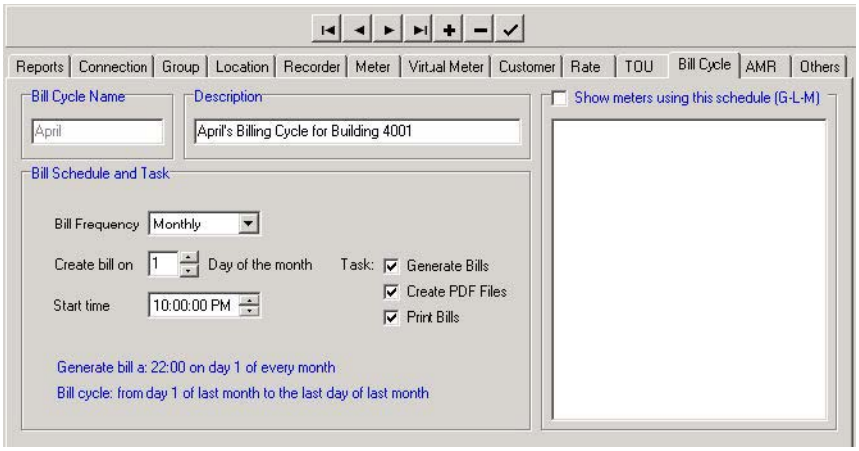


Fig. 58. Bill Cycle Tab.

Bill Cycle Name

3. Type in a Bill Cycle Name. Note: This field is required and must be unique.
4. Tab across and enter a Description for the Bill Cycle.

Bill Cycle Definition

5. From the Bill Schedule and Task group, select Bill Frequency from drop-down list (Manual, Monthly or Weekly).
6. Click on ▲ up ▼ down arrows to adjust the Day of the Month, to create the bill on.
7. Click on ▲ up ▼ down arrows to adjust the Start Time, to begin generating the bill.
8. Chick on the Task for the Bill Cycle – Generate Bills, Create PDF Files, Print Bills.
9. Click on "√" button to accept/save the Bill Cycle record.

Auto Bill Cycle Setup

1. Utilizing the Bill Cycle for Group or Location by selecting the Group or Location tab, under Auto Billing Cycle group box, select the name of the bill cycle from the drop-down list.

   NOTE: This enables E-Mon Energy™ to automatically generate billing statements.

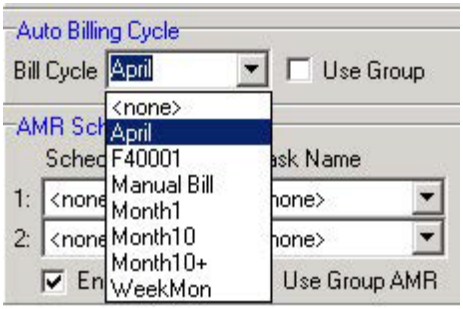


Fig. 59. Auto Bill Cycle Setting

2. Click on "√" button to accept/save the record.

Meters using the Bill Cycle

1. Click on Bill Cycle tab, and click on Show meters using this schedule. A processing message displays querying the database for the group/location of the meters and refreshes the list box.

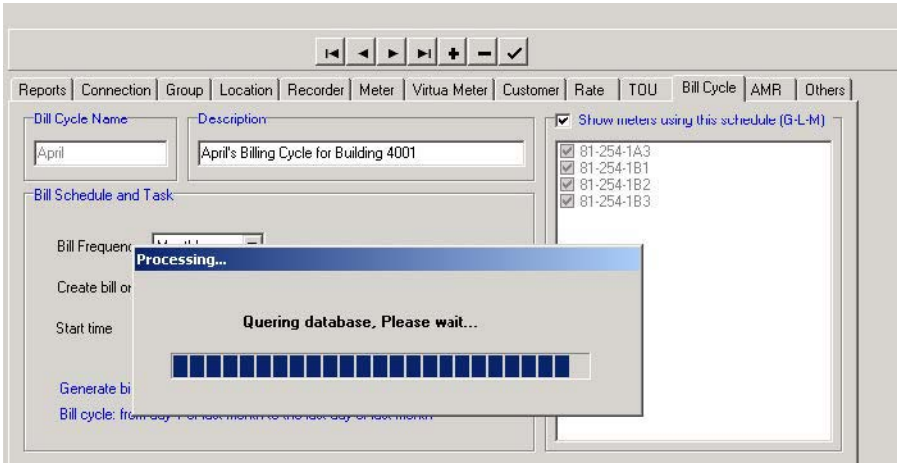


Fig. 60. Query Database for Meters.

Auto Bill Cycle Scheduler

1. From E-Mon Energy™ menu, select View/Bill Cycle Scheduled Task.
2. Ensure that the checkbox is checked for the Enable Auto Bill Cycle and click on the REFRESH LIST button. The list will refresh with the new Bill Cycle added.

NOTE: By default the Auto Bill Cycle window is always running in a minimized mode. If you wish to temporarily disable the Auto Bill generation, uncheck the Enable Auto Bill Cycle.

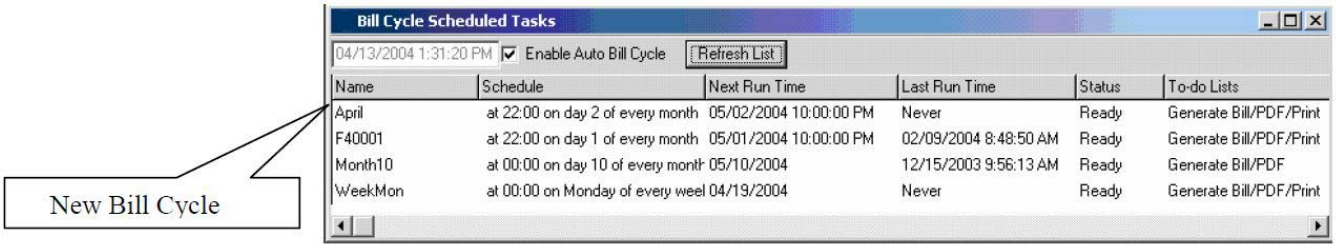


Fig. 61. Auto Bill Cycle List.

Setting Up a Billing Schedule/Template

Bill Cycle Tab

1. Select Database\Meter from the drop-down menu or click on the Meter tab in the Database window.
2. From the Device Explorer, drill-down and click on a meter.
3. In the Bill Schedules/Templates group box, click on Enable for Billing.
4. From the TOU Schedule drop-down list, select a schedule.
5. From the Rate Schedule drop-down list, select a rate schedule.
6. In the Auto Billing Cycle group box, select a Bill Cycle from the drop-down list.

7. Click on "√" button to accept/save the Bill Cycle record.

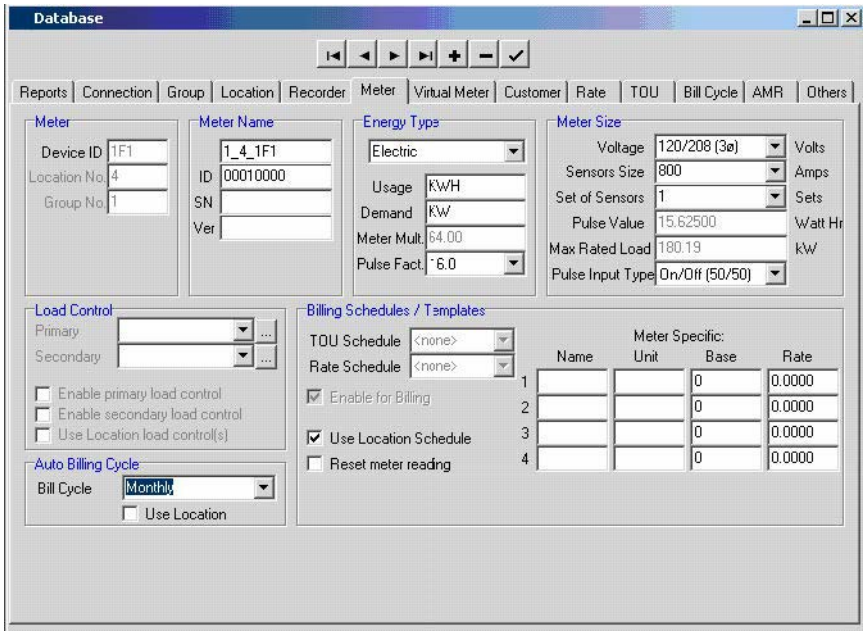


Fig. 62. Assigning Bill Cycle.

Generating Meter Readings/Bills

1. From E-Mon Energy™ menu, select Bills\Generate Bills. The Get Consumption for Billing dialog will open.

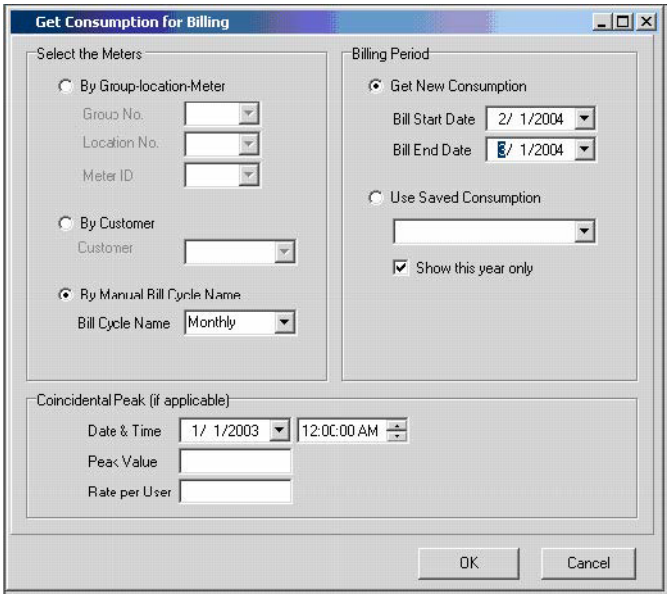


Fig. 63. Get Consumption for Billing Dialog.

Generate Consumption Options

There are options of generating bills:

- By Group, Location, and Meter – select a particular group, location, or meter.
- By Customer – select a customer which can have multiples bills to generate.
- By Manual Bill Cycle Name – select a predefined set of customers/meters to generate.

In this guide, we will use By Manual Bill Cycle Name.

2. 2. From Select the Meters group box, click on By Manual Bill Cycle Name and select a Bill Cycle Name from the drop-down list.
3. 3. From the Bill Period group box, click on Get New Consumption.
4. 4. Click on the drop-down arrow next to the Bill Start Date field, and select the month, day, and year.
5. 5. Click on the drop-down arrow next to the Bill End Date field, and select the month, day, and year.
6. 6. Click OK. The Meter Consumption for Billing spreadsheet opens.

Consumption Report(s)

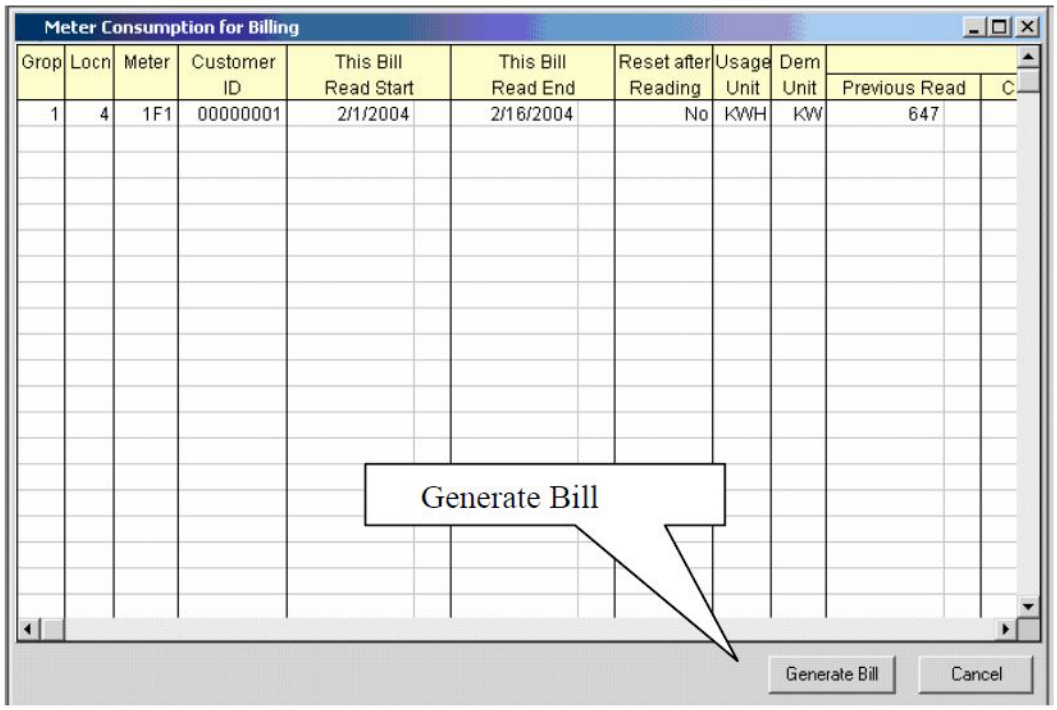


Fig. 64. Meter Consumption for Billing (spreadsheet View 1).

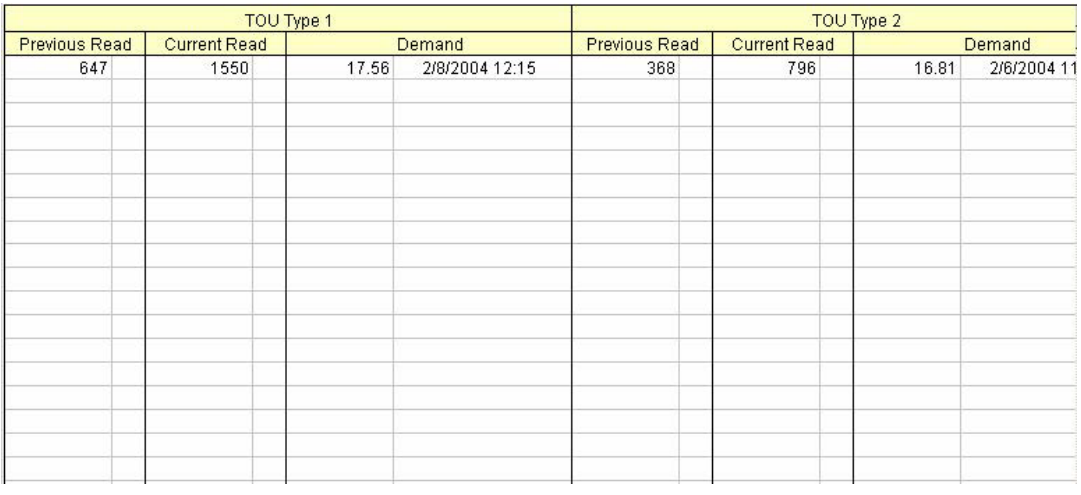


Fig. 65. Meter Consumption for Billing (spreadsheet View 2).

Generate Bills

7. Click on GENERATE BILL button. A Summary Sheet will open listing the customer IDs, name, total meters, total usage, total demand, and bill total.

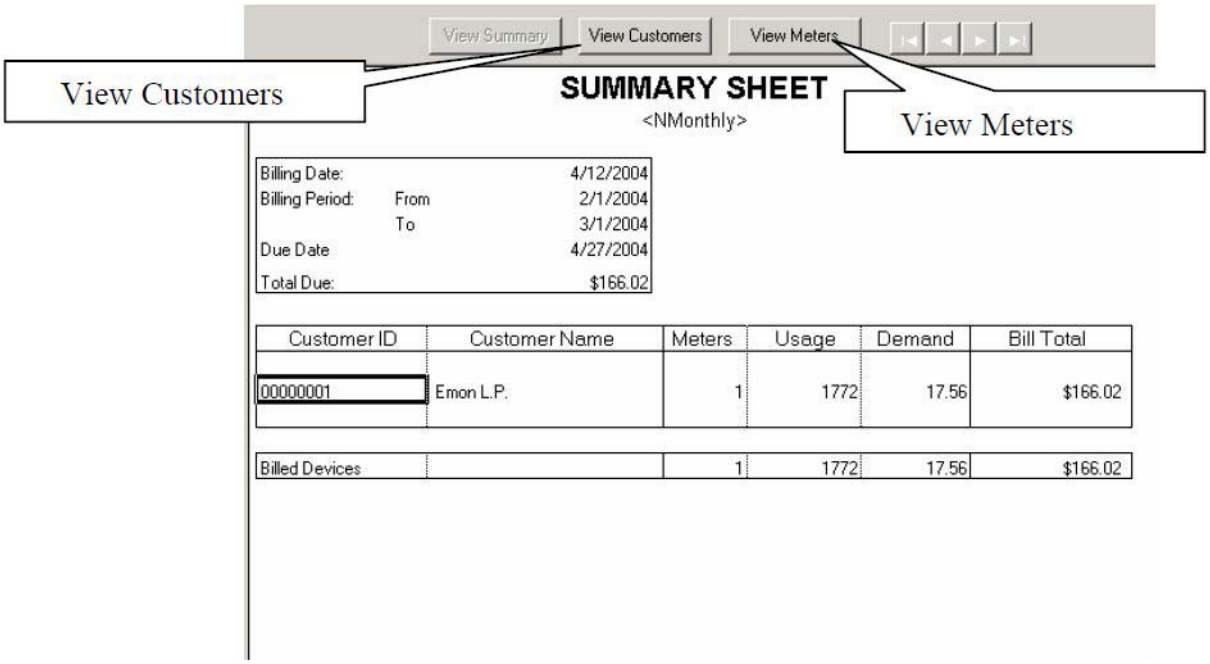


Fig. 66. Summary Sheet.

Customer Billing Statement Summary

8. Click on VIEW CUSTOMERS button. The Customer Summery will open listing the meter name, usage, demand, and bill total. Note: a customer can have multiple billing statements. e.g. gas bill, electric bill, water bill, etc.

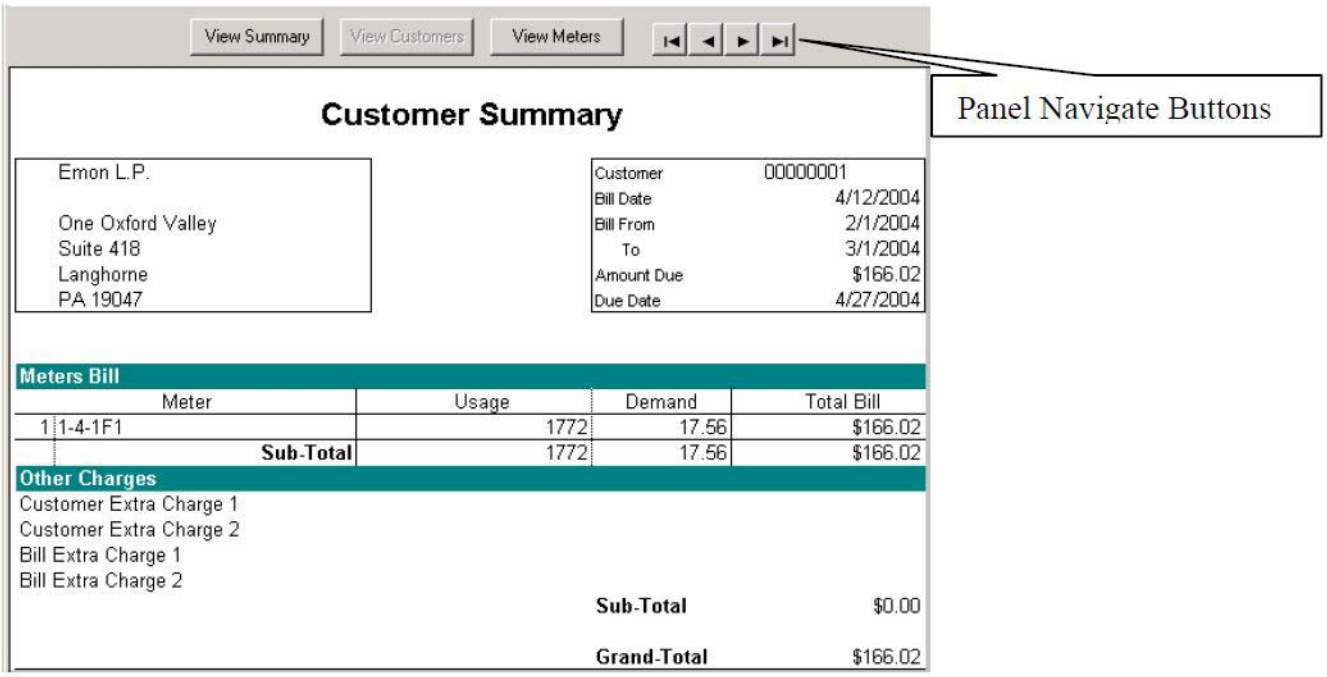
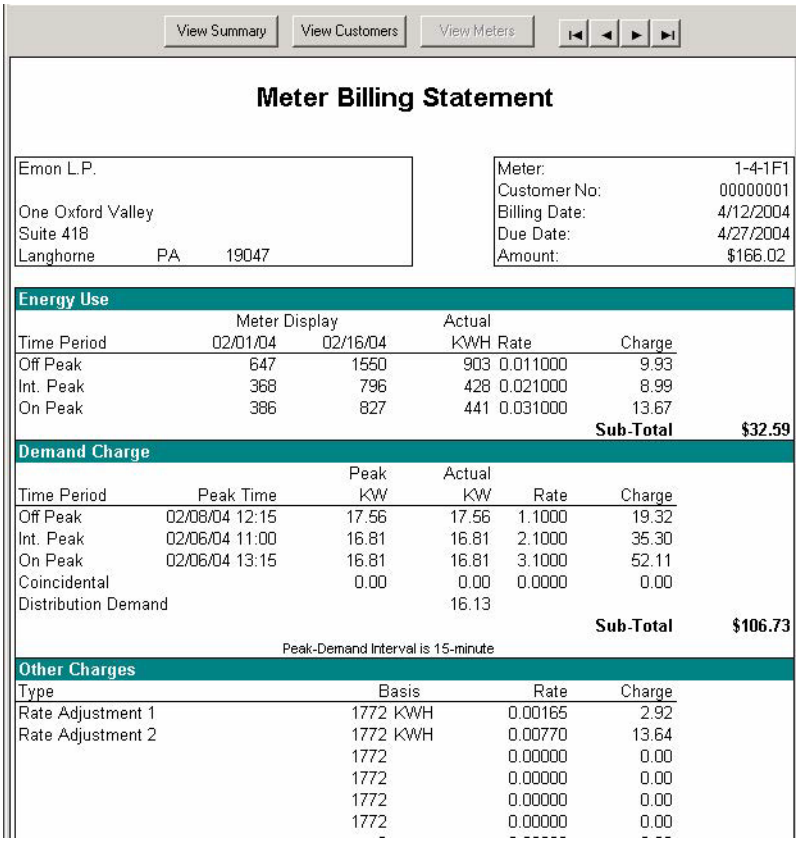


Fig. 67. Customer Summary.

Meter Billing Statement

9. Click on View Meters button. The Meter Billing Statement opens showing billing calculations.

10. The Panel Navigate Buttons will let you navigate to view different meters.



View Summary | View Customers | View Meters

Meter Billing Statement

Emon L.P.
One Oxford Valley
Suite 418
Langhorne PA 19047

Meter:	1-4-1F1
Customer No:	00000001
Billing Date:	4/12/2004
Due Date:	4/27/2004
Amount:	$166.02

Energy Use

Time Period	Meter Display 02/01/04	02/16/04	Actual KWH	Rate	Charge	
Off Peak	647	1550	903	0.011000	9.93	
Int. Peak	368	796	428	0.021000	8.99	
On Peak	386	827	441	0.031000	13.67	
					Sub-Total	**$32.59**

Demand Charge

Time Period	Peak Time	Peak KW	Actual KW	Rate	Charge	
Off Peak	02/08/04 12:15	17.56	17.56	1.1000	19.32	
Int. Peak	02/06/04 11:00	16.81	16.81	2.1000	35.30	
On Peak	02/06/04 13:15	16.81	16.81	3.1000	52.11	
Coincidental		0.00	0.00	0.0000	0.00	
Distribution Demand			16.13			
					Sub-Total	**$106.73**

Peak-Demand Interval is 15-minute

Other Charges

Type	Basis	Rate	Charge
Rate Adjustment 1	1772 KWH	0.00165	2.92
Rate Adjustment 2	1772 KWH	0.00770	13.64
	1772	0.00000	0.00
	1772	0.00000	0.00
	1772	0.00000	0.00
	1772	0.00000	0.00

Fig. 68. Meter Billing Statement.

Short Reference Guide

Connect and Read Meters

1. From E-Mon Energy™ Explorer window, click and select Hardware\Set Location from the drop-down menu.
2. From the Group drop-down list, select a Group.
3. From the Location drop-down list, select a Location you want to connect.
4. Click on Set button. The Access window opens.
5. Click on Connect button to establish connection.
6. From the Function group box, click on Setup Hardware.
7. Click on Scan Recorder to verify recorder/meter status. Verify all devices are ok.
8. From the Function group box, click on Read Hardware.
9. Click on Read Meters to take meter readings.
10. Click on Flag Status to check the status of the recorder.
11. Click on Profile Status to check the profile (interval data) storage status.
12. Click on Version/Time to check the recorder time; click on Set HW Time if need be.
13. Click on Download to transfer profile (interval data) from recorder to PC. This step may take a while to complete, depending on the number of recorders and/or days.
14. You may proceed to Verify Hardware and Verify Recorder, Meters, AMR, and TOU.
15. Click on Disconnect to terminate connection; then close the window.

Generate Bills

1. From E-Mon Energy Explorer window, click and select Bills\Generate Bills from the drop-down menu. A dialog box displays various options for generating bills, e.g. By Group-location-Meter, By Customer, By Manual Bill Cycle Name.
2. Select the Billing option.
3. Select the Billing Period

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4. Select Coincidental Peak, if applicable.
5. Click on OK. E-Mon Energy will generate consumptions, once finished the Meter Consumption for Billing window will open showing Group, Location, Meter, Customer ID, Billing Periods, Meter Readings, etc.
6. Click on Generate Bill. The Meter Consumption for Billing window minimizes; E-Mon Energy will generate bills, once finished the Bill window will open showing the Customer ID, Customer Name, Total Meters, Total Usage, Total Demand, and Bill Total.
7. Click on View Customers to view the Customer Summary sheet. Use the navigation buttons to view different customers.
8. Click on View Meters to view the Meter Billing Statement in details. Use the navigation buttons to view different meters.
9. Click on View Summary or View Customers to perform other functions as need be.
10. Select File\Print Bill to get a hard copy of the bill; or File\Save Bill to save the bill.
11. Select File\Close Bill to close.

Graph Load Profile

1. From E-Mon Energy Explorer window, click and select Graph\Load Profile from the dropdown menu. A Load Profile graph window displays a blank graph with various options.
2. In the shaded device directory, select Group, click and drill-down to the Recorder level, and then to the Meter level, if you wish to graph a single meter.
3. Right-click on the device (Recorder or Meter) and highlight, then left-click on Graph this device.
4. In the Time Period, select the From date/time and To date/time.
5. Click on Get Graph button. The statistic table refreshes with new data and the graph will display the load.
6. Use the mouse to navigate through various options, zoom in, zoom out, scroll left and right, etc.
7. Select File\Print to get a hard copy of the graph.
8. Select File\Close to close the graph window.

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