Meter Site Manager 2

Version 1.4.0.0

Product Manual

Revision 1.10

Disclaimer

This documentation is provided for information purposes. TEC makes no warranty of any kind with regard to this material, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. TEC shall not be liable for errors, omissions, or inconsistencies which may be contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of the material. Information in this document is subject to change without notice and does not represent a commitment on the part of TEC.

Table of Contents

Contacting Powermetrix 4
Release Notes 5
1 System Requirements 9
2 Installation 10
2.1 Windows XP 10
2.2 Windows 7 (32-bit) 12
2.3 Windows 7 (64-bit) 13
2.4 Updating (all Operating Systems) 15
3 Creating a Master Database 16
4 Upload Data From the PowerMaster® to the PC 19
4.1 Upload Data From a USB Flash Drive 22
5 Download Data from the PC to the PowerMaster® (Creating a Route) 25
5.1 Erase Data from the PowerMaster® 28
6 Merging Backup Databases into the Master Database 29
6.1 Merging a Single Backup Database 29
6.2 Merging Multiple Backup Databases with the “Batch Merge Process” 31
7 Generating Reports 32
8 Deleting Test Data from the Master or Backup Database 34
9 Database Tables 37
9.1 Edit or Create a Site 39
9.2 Edit or Create a Test Setup 40
9.3 Edit or Create a Phantom Load Setup 41
10 Import/Export an ODBC Database 43
10.1 Export to Microsoft Access 43
10.2 Import from Microsoft Access 44
10.3 Export to Microsoft SQL Server 2005 44
10.4 Import from Microsoft SQL Server 2005 45
11 Export/Import .txt or .csv Files 46
11.1 Export to .txt or .csv files 46
11.2 Import .txt or .csv files 47
12 Preferences 49
13 FAQ’s 51
14 Appendix 1 - Database Columns (v1.12) 53

Contacting Powermetrix

Technical Support

For technical support, please contact the factory at (865) 218-5838 (877-966-5851 toll free) and ask for “Powermetrix Technical Support.” You may alternatively email Powermetrix at help@powermetrix.com. The support staff will answer questions about the operation and care of your equipment, assist you in troubleshooting a problem, and help you overcome common application difficulties whenever possible. If it becomes necessary for your equipment to be returned to us for any reason, you will be issued an RMA number during the technical support contact.

Updates

Updates will be available at the PowerMaster® Support website at no charge. Contact technical support for a username and password. Please note that all previous versions of Meter Site Manager 2 must be uninstalled before updating. Refer to Section 2.4 for further instructions.

Feedback

Powermetrix depends on information from our customers to continue the attributes of quality, dependability, and simplicity associated with our products. We invite you to contact our Technical Support office.

Release Notes

Product:	Meter Site Manager 2
Version:	1.4.0.0
Release Date:	6/30/11
Manual Version:	1.10

What's New

1. Fixed a bug in Summary of Last Test report. If the CT test performed was Burden Only, the report would incorrectly display as Burden + Ratio.
2. Fixed a bug in Summary of Last Test report. If only CT tests were present, the Phantom Load test results would not display.
3. Added function to import Microsoft Access and SQL Server 2005 databases.
4. Added database tables UserFieldNames and UtsFieldNames to store information read from the PowerMaster.xml file concerning the user fields.
5. Added the MasterTestRecord user fields to Summary of Last Test report.
6. Added the ability of the user fields to only display when modified.
7. Added all available Phantom Load test results to Summary of Last Test report.
8. Added the control of copying and pasting the directory path in the Backup Database Directory in Preferences.
9. Added more exception handling for errors not caught.
10. Changed the TestDate field in the database site list to display the latest test date for the most recent revision.
11. Changed the database merge between a Master and Backup to update any existing row from one database to another.
12. Removed the "Test Setup Editor" item from the Tools menu.
13. Updates database from 1.11 to 1.12.

Known Issues

1. Does not have a user interface in the database tables to edit custom field names.
2. Need ability for multiple users to view the database while simultaneously being edited by another user.
3. In the Site Editor, the label headers for Meter, CT, and PT are not aligned.
4. Cannot view data trends.
5. Sites that are "marked" in the database list will lose the denotation when columns are sorted.
6. No search function.
7. Some service types incorrectly calculate Neutral when averaging Sys PF in the Basic Test Data report.
8. Element tests in the Phantom Load test results always display "ABC".

The following are changes which were included in Release 1.2.0.0

1. Added ability to import/export a formatted .csv or .txt file into database table(s).
2. Added ability to export the database into an ODBC database (Access) or a SQL Server 2005 database.
3. Added “Site Report” for details about the site, meter, CT, etc. Double click the SiteID under “Tests” to generate the report.
4. Added fields in Meter table to allow specifications for IEC meters.
5. Added “57.7V” and “220V” to Phantom Load Setup for Voltage.
6. Added ability to support 64-bit operating systems.
7. Added changes to the database to allow 10 characters for the Load Box labels (LoadTypeCodes).
8. Added a shortcut to the Site Editor (under Edit)
9. Fixed a bug in PT Editor. Nameplate Ratio now allows decimals.
10. Fixed a bug in the editors. When the user closed the window (as opposed to Cancel), any changes made were automatically saved regardless if it was intended.
11. Fixed a bug in Test Setup. When the user made an override in the test setup changing energy test mode (Whr, VARhr, or VAhr), the displayed data would default to the saved energy test mode. The data now displays the energy mode active during the test.
12. Fixed a bug in the Demand Test report. The total interval data for Wh/h, VARh/h, and VAh/h are now averaged.
13. Fixed a bug in the Demand Test report. When intervals would exceed the first page, the data would not display. It now displays the information correctly on the second page (and up to the third if meter trend data is present).
14. Fixed a bug in the Phantom Load Test Sequence Summary report. When data would exceed the first page, the data would not display. It now displays the information correctly on the second page and beyond.
15. Increased the visible width in the Customer Load Meter Test Report for Meter and Actual.
16. When changing the master database, it now automatically refreshes the screen.
17. Updates database from 1.10 to 1.11

The following are changes which were included in Release 1.1.0.1

1. Added ability to import and export a formatted .csv or .txt file into database table(s
2. Added ability to delete test data.
3. Added a user interface in Site Editor to enter the new 60 custom fields.
4. Added a feature when the application closes the database now compresses automatically saving storage space on both the PC and the analyzer. When data is deleted from the database this will greatly reduce database size.
5. Added manual feature (Tools, Compact Master Database) to allow optimal compression of the database after data is deleted.
6. Added the ability to multi disable/enable components in the database table editors via Ctrl-right click.

7. Fixed a bug when viewing the harmonics report for service types S003F02 and S009F06.
8. Fixed a bug for Test Date. The bug caused the test date to disappear when a revision was made.
9. Fixed a bug in the Integrated Site Test editor. The bug would not allow the user to select other demand intervals.
10. Fixed a bug in the Meter Editor. The bug saved "5" minute intervals by default.
11. Fixed a bug when viewing the Meter Trend report for service type S009F06.
12. Fixed the resolution for "Pulses Expected" on meter test reports.
13. Increased the visible field width of Primary Voltage in the Site Editor.
14. Made "60Hz" the default when creating/editing a meter in Meter Editor.
15. Added "347V" entry when creating/editing a meter in Meter Editor.
16. Changed copyright date to 2010.
17. FUNCTION CHANGE: The user will now be required to double-click the test data to run reports (as opposed to single-click).

The following are changes which were included in Release 1.0.0.1

1. Upgraded the database to support the new database for PowerMaster® version software 1.0.0.23.

The following are changes which were included in Release 0.0.7.0

1. Added database synchronization feature. The user can now download a "route" into the PowerMaster® using sites in the master database. The user can also send a blank database down to the PowerMaster® to erase the existing one.
2. Added an icon to the master database (king) and backup database (pawn) to better differentiate the two.
3. Added check boxes next to the sites in the master database for selection to be downloaded into the PowerMaster®.
4. Added the ability to create, edit, and delete sites in the master database. This also includes the Test Editor and Phantom Load Setup.
5. Fixed the ability to open the application twice.
6. Added message prompt when the master database is being viewed by another user.

The following are changes which were included in Release 0.0.6.0

1. Created the function and interface for the master database. Users can now create a master database to store all information in one place.
2. Added a merge and batch merge feature to allow users to easily merge all backup databases into the master database.
3. Added support tables for the metering components (AMR, meter, CT, PT). The user can now create, edit, and delete metering components within Meter Site Manager rather than the PowerMaster® exclusively.
4. After creating the master database, it will open as a default action at bootup.

5. Added a selection of how many database backups the user can select. Selections are 10, 5, 3, or 1. The user is prompted when the backups exceed the current selection.
6. Removed “Percent Registration” from the site view until a fix in the PowerMaster® application is added. The registration never displayed.

The following are changes which were included in Release 0.0.5.0

1. Added support for Guatemala regional Windows settings.
2. Added support for reduced administrative rights (data must be downloaded first with full administrative rights, then the user can be reduced down afterward).
3. Added two breaks at the bottom of the communication log to better display “Backup complete”.
4. Improved the communication process so the user does not have to close the application before downloading again after a fail occurs.

The following are changes which were included in Release 0.0.3.0

1. Added the ability to display revisions (or changes) to the database.
2. Fixed the parallelogram title from “Meter Accuracy” to “Accuracy Parallelogram”.
3. Fixed minor issues with display pairs on non-Blondel service types.
4. Organized the test results to the appropriate Site ID. This allows the user to click on the Site ID to display the associated test data. In version 0.0.2.0, all the test data for all Site ID’s were together.

The following are changes which were included in Release 0.0.2.0

1. Fixed issue with incorrectly displaying energy data instead of power data when Basic Test Data is saved.
2. Added a window to display to the user when a report is generating

1 System Requirements

PowerMaster®

Main Application: 1.0.0.28

Windows CE (BSP): 2.2.1.0.100312or higher

PC Hardware

Memory: Min 64 MB of RAM

Hard Disk: Min 210 MB of available hard disk space

Display: Super VGA (1024 x 768) or higher-resolution monitor with 256 colors

Peripherals: Mouse or compatible pointing device & keyboard

PC Software

Operating System: Windows XP or Windows 7

Microsoft ActiveSync 4.5 (for Windows XP users)

Microsoft Mobile Device Center 6.1 (for Windows 7 users)

Microsoft SQL Server Compact 3.5

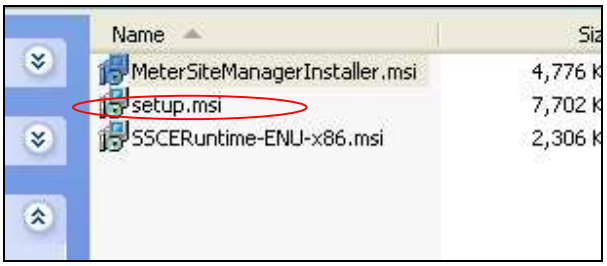
Microsoft .NET Framework 3.5 SP1

2 Installation

2.1 Windows XP

Microsoft ActiveSync 4.5 (Windows XP SP2 only)

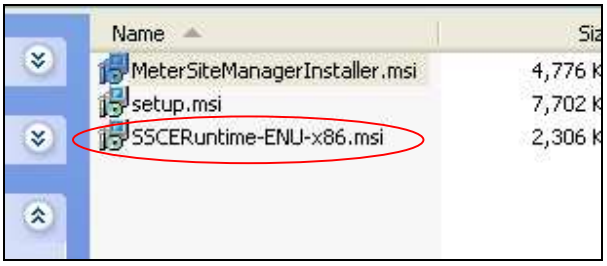
Before installing Meter Site Manager, Microsoft ActiveSync 4.5 must be installed first. Open the "WinXP" folder.



1. Double click the "**setup.msi**" file. Click "Run" to start installation
2. Click "Next"
3. Accept the terms and agreement. Click "Next".
4. Enter your name and organization (optional). Click "Next".
5. Click "Next".
6. Click "Install".
7. Click "Finish" to complete installation.

Microsoft SQL Server Compact 3.5

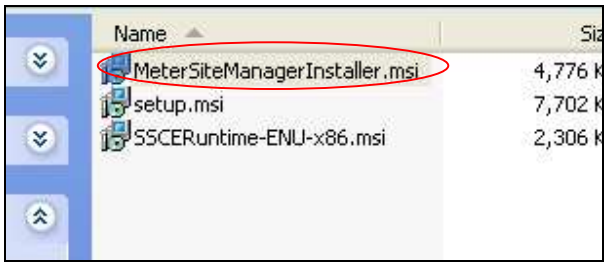
After installation of Microsoft ActiveSync 4.5, Microsoft SQL Server Compact 3.5 must be installed. Open the "WinXP" folder.



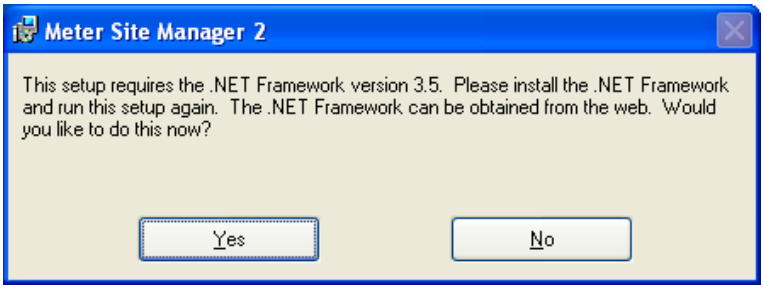
1. Double click the "**SSCERuntime-ENU-x86.msi**" file. Click "Next" to begin installation.
2. Accept the terms and agreement. Click "Next".
3. Click "Install".
4. Click "Finish" to complete installation.

Meter Site Manager Application

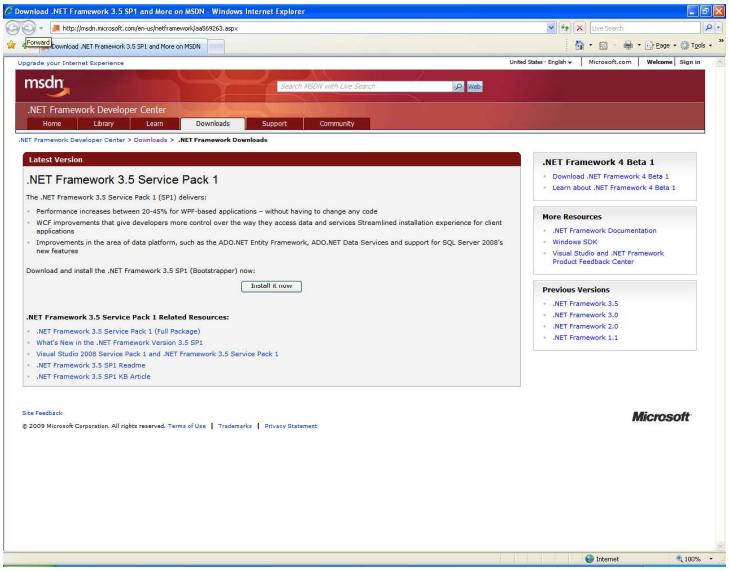
After installation of Microsoft ActiveSync 4.5 and Microsoft SQL Server Compact 3.5, Meter Site Manager can now be installed.



1. Double-click the "**MeterSiteManagerInstaller.msi**" file.
2. If .NET Framework 3.5 is not installed, the user is prompted to visit a download site. Click "Yes". If the user has .NET Framework 3.5 installed, skip to step 10.

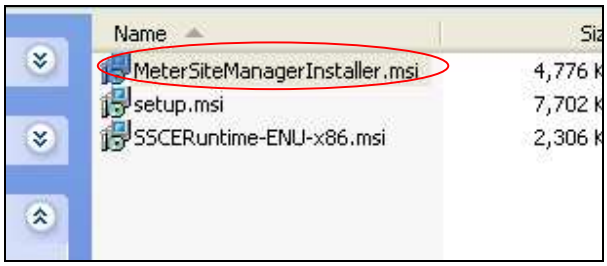


3. On the webpage, click "Install it now".



4. After downloading, close all other applications. Double click the "dotnetfx35setup.exe".
5. Accept the terms and agreement. Click "Install".
6. Installation will begin. This will take several minutes.
7. After installation is complete, press "Exit" to finish.

8. Click “Restart Now” to reboot the computer.
9. After boot up, double-click the “**MeterSiteManagerInstaller.msi**” file.

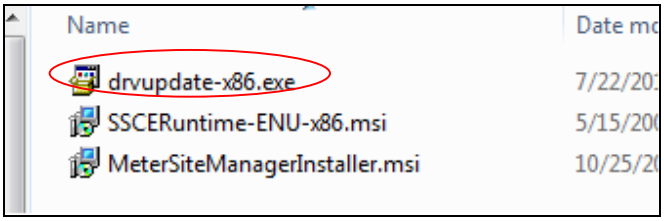


10. Click “Next” to continue.
11. Select “Everyone”. Click “Next”.
12. Click “Next”.
13. Click “Close” to complete installation.

2.2 Windows 7 (32-bit)

Microsoft Mobile Device Center 6.1

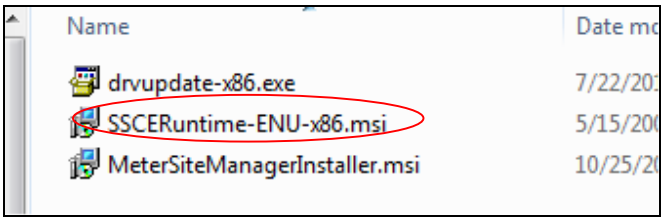
Before installing Meter Site Manager, Microsoft Mobile Device Center 6.1 must be installed first. Open the “Win7_32bit” folder.



1. Double click the “**drvupdate-x86.exe**” file.
2. After installation, the driver will claim to not install correctly. Once the PowerMaster is first connected, the driver will then install completely.

Microsoft SQL Server Compact 3.5

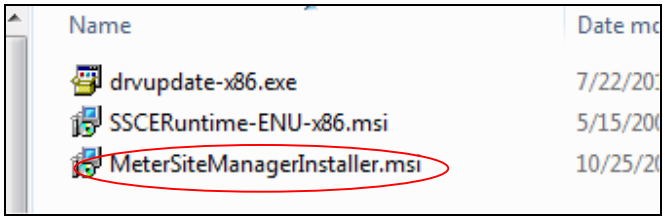
After installation of Microsoft Mobile Device Center 6.1, Microsoft SQL Server Compact 3.5 must be installed. Open the “Win7_32bit” folder.



1. Double click the “**SSCERuntime-ENU-x86.msi**” file. Click “Next” to begin installation.
2. Accept the terms and agreement. Click “Next”.
3. Click “Install”.
4. Click “Finish” to complete installation.

Meter Site Manager Application

After installation of Microsoft Mobile Device Center 6.1 and Microsoft SQL Server Compact 3.5, Meter Site Manager can now be installed.

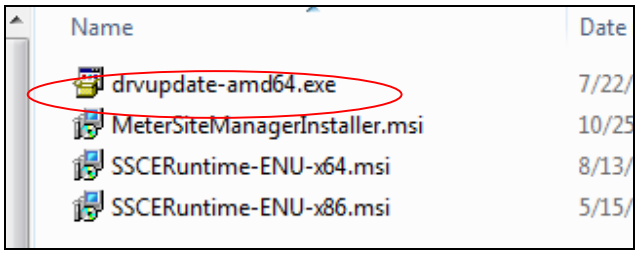


1. Double-click the “**MeterSiteManagerInstaller.msi**” file.
2. Click “Next” to continue.
3. Select “Everyone”. Click “Next”.
4. Click “Next”.
5. Click “Close” to complete installation.

2.3 Windows 7 (64-bit)

Microsoft Mobile Device Center 6.1

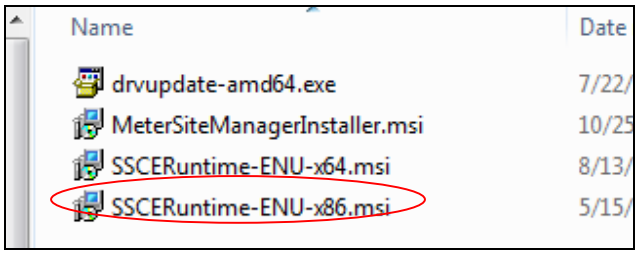
Before installing Meter Site Manager, Microsoft Mobile Device Center 6.1 must be installed first. Open the “Win7_64bit” folder.



1. Double click the “**drvupdate-amd64.exe**” file.
2. After installation, the driver will claim to not install correctly. Once the PowerMaster is first connected, the driver will then install completely.

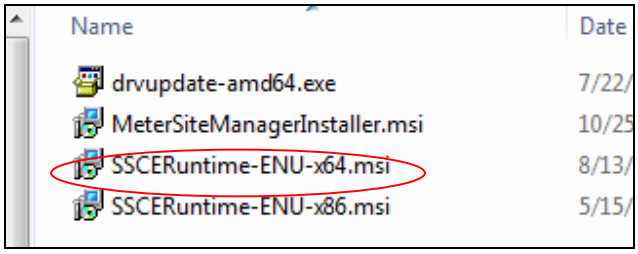
Microsoft SQL Server Compact 3.5

After installation of Microsoft Mobile Device Center 6.1, Microsoft SQL Server Compact 3.5 (32-bit) must be installed. Open the "Win7_64bit" folder.



1. Double click the "**SSCERuntime-ENU-x86.msi**" file. Click "Next" to begin installation.
2. Accept the terms and agreement. Click "Next".
3. Click "Install".
4. Click "Finish" to complete installation.

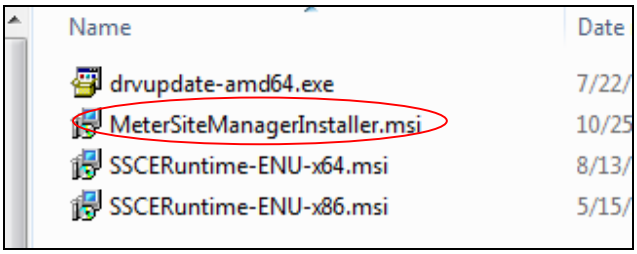
After installation of Microsoft SQL Server Compact 3.5 (32-bit), Microsoft SQL Server Compact 3.5 (64-bit) must be installed. Open the "Win7_64bit" folder.



5. Double click the "**SSCERuntime-ENU-x64.msi**" file. Click "Next" to begin installation.
6. Accept the terms and agreement. Click "Next".
7. Click "Install".
8. Click "Finish" to complete installation.

Meter Site Manager Application

After installation of Microsoft Mobile Device Center 6.1 and Microsoft SQL Server Compact 3.5, Meter Site Manager can now be installed.



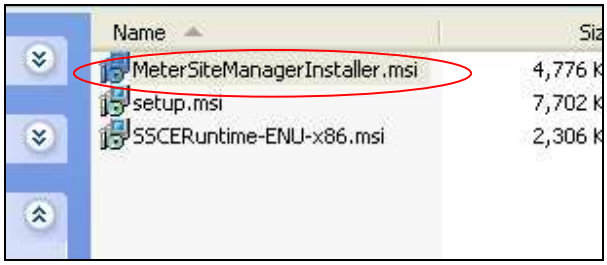
1. Double-click the "**MeterSiteManagerInstaller.msi**" file.

2. Click “Next” to continue.
3. Select “Everyone”. Click “Next”.
4. Click “Next”.
5. Click “Close” to complete installation.

2.4 Updating (all Operating Systems)

Before updating Meter Site Manager 2, the previous version must be uninstalled first. Do the following:

1. Click Start, Control Panel
2. At the Control Panel, click “Add or Remove Programs”
3. Find “Meter Site Manager 2” in the list, and click “Remove”
4. After uninstalling the previous version of Meter Site Manager 2, open the “MeterSiteManager2” folder. Double click “MeterSiteManagerInstaller.msi”. Ignore all other files.



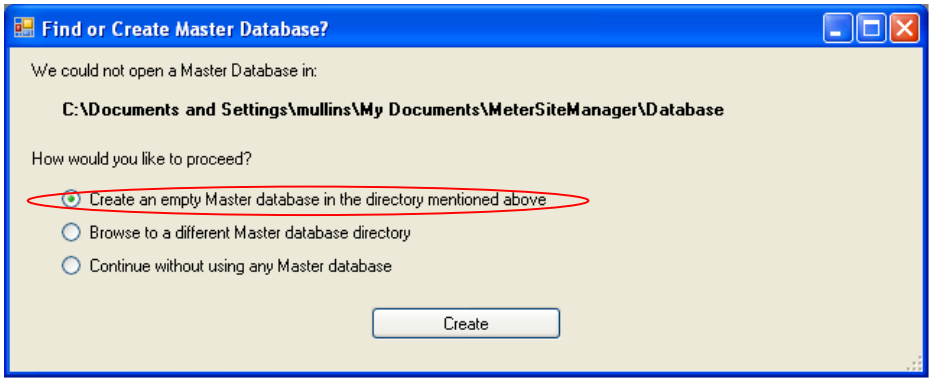
5. Install as normal (see “Meter Site Manager Application” under Section 2 for further instructions).

3 Creating a Master Database

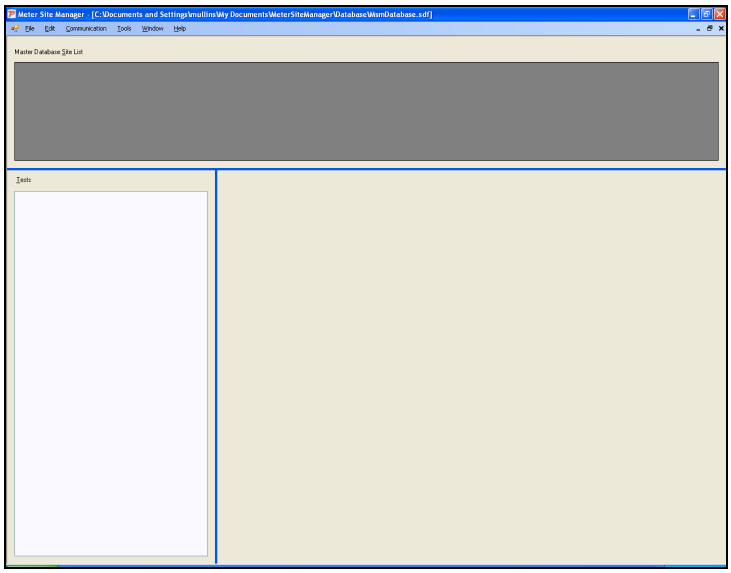
At bootup, the user is prompted to create a master database to store all data uploaded from the PowerMaster®. The user has the option to store the master database on a hard drive or a network drive. It is recommended that the user creates ONE master database on the hard drive OR network drive; not both. The user can always change the master database directory path at any time (File, Change Master Database Directory…"). Below are the steps involved in creating the master database:

Storing the Master Database on a Hard Drive (C:)

1. At the user prompt, select "Create an empty Master database in the directory mentioned above" to create the master database on the user's hard drive. Click "Create".

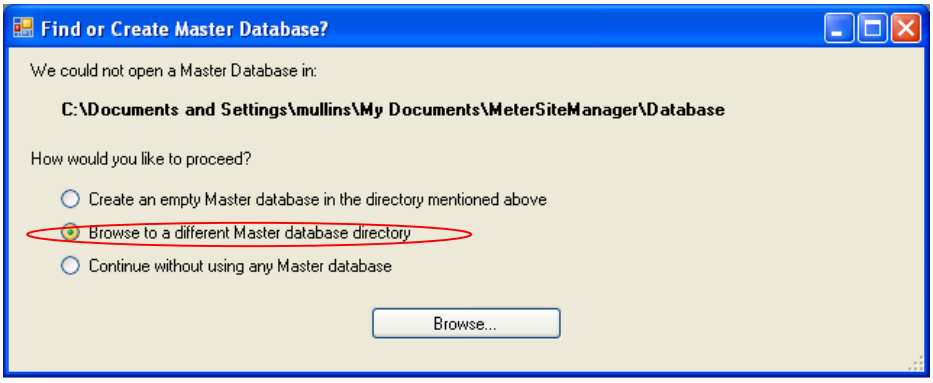


2. After the master database is created, the main screen in Meter Site Manager will display noting the blank database. If the user has any backup databases that need to be merged into the master database, see "Merging Backup Databases Into the Master Database".

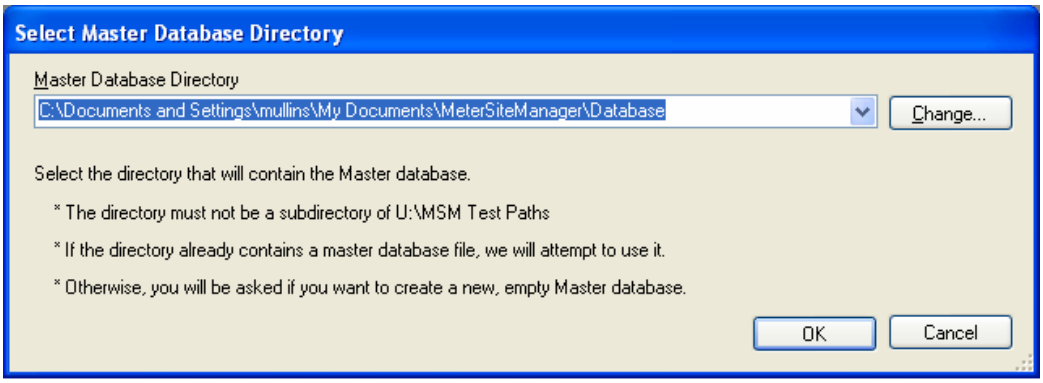


Storing the Master Database on a Network Drive

1. At the user prompt, select “Browse to a different Master database directory” to create the master database on the user’s network drive. Click “Browse”.

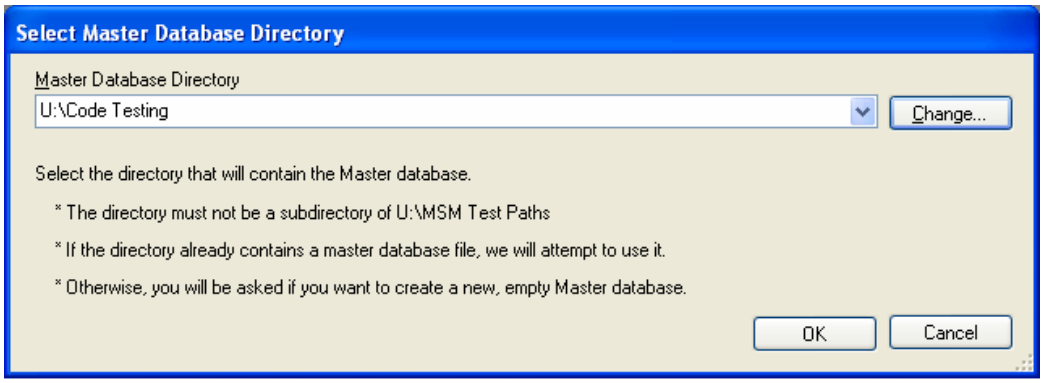


2. Click “Change” to browse and set the master database directory. Please note that the Master Database cannot be stored in a subdirectory of the “Database Backup Directory” (found in Preferences).

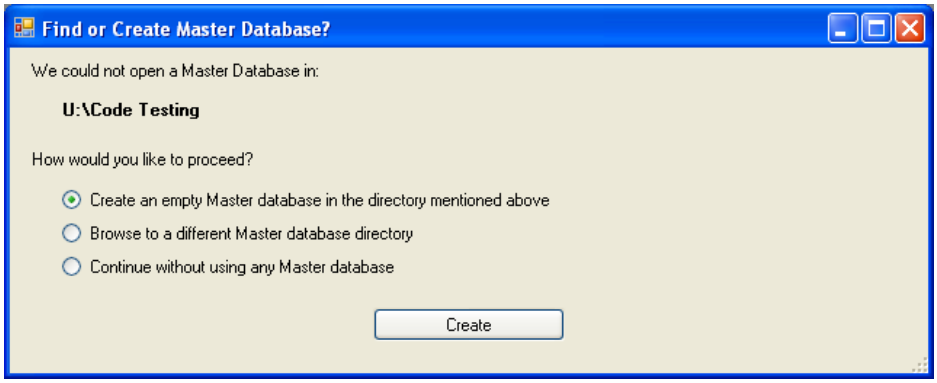


3. Browse the network directory. If needed, click “Make New Folder” to create a separate folder for the network directory. Click “Ok” when complete.

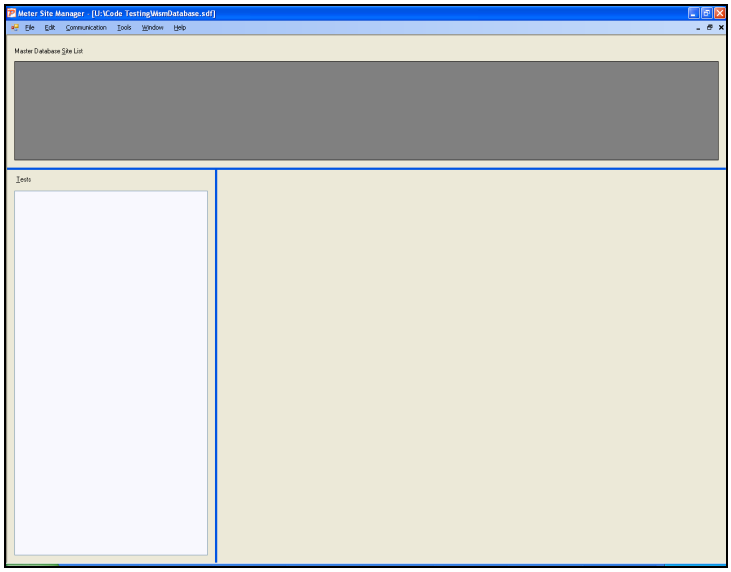
4. After selection of the directory, press “Ok”.



5. Click “Create” to complete the process.



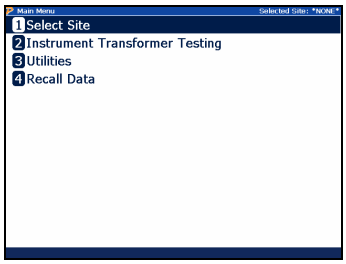
6. After the master database is created, Meter Site Manager will display the blank database. If the user has any backup databases that need to be merged into the master database, see “Merging Backup Databases into the Master Database”.

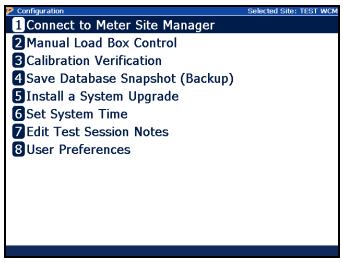


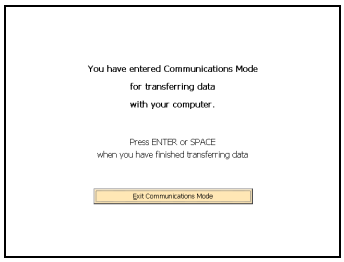
4 Upload Data From the PowerMaster® to the PC

1. Open Meter Site Manager by double-clicking “Meter Site Manager 2” icon on the desktop.

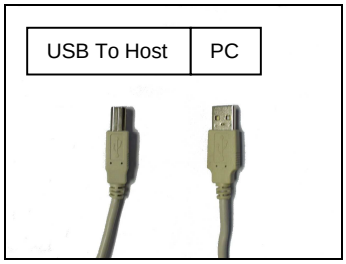
2. When at the Main Menu on the PowerMaster®, select “Utilities” then “Connect to Meter Site Manager” (for Main Applications 1.0.0.15 and below, simply remain at the Main Menu).





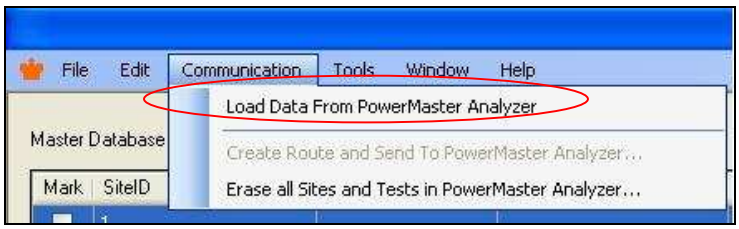


3. Use the USB cable to connect to the PC.

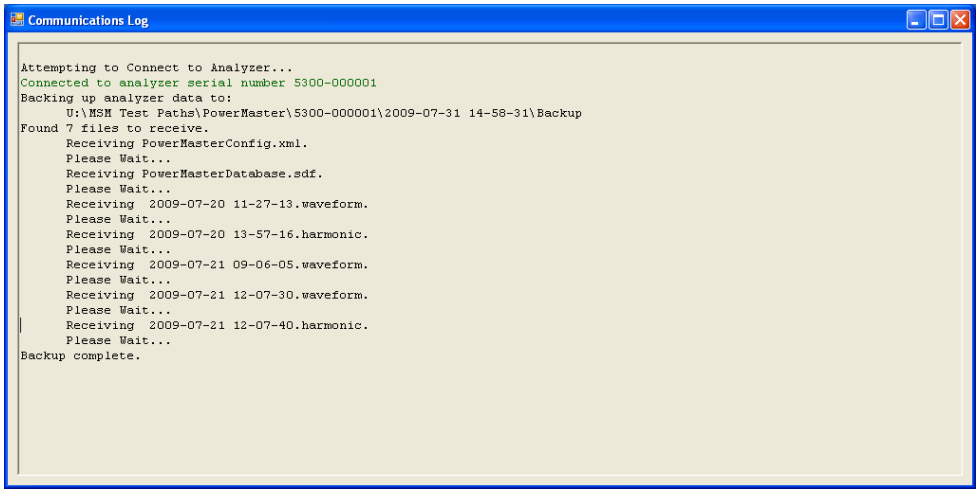


4. Wait for the sync icon in the system tray to turn green. You may see a window asking if you want for set up a 'partnership'. Say NO.

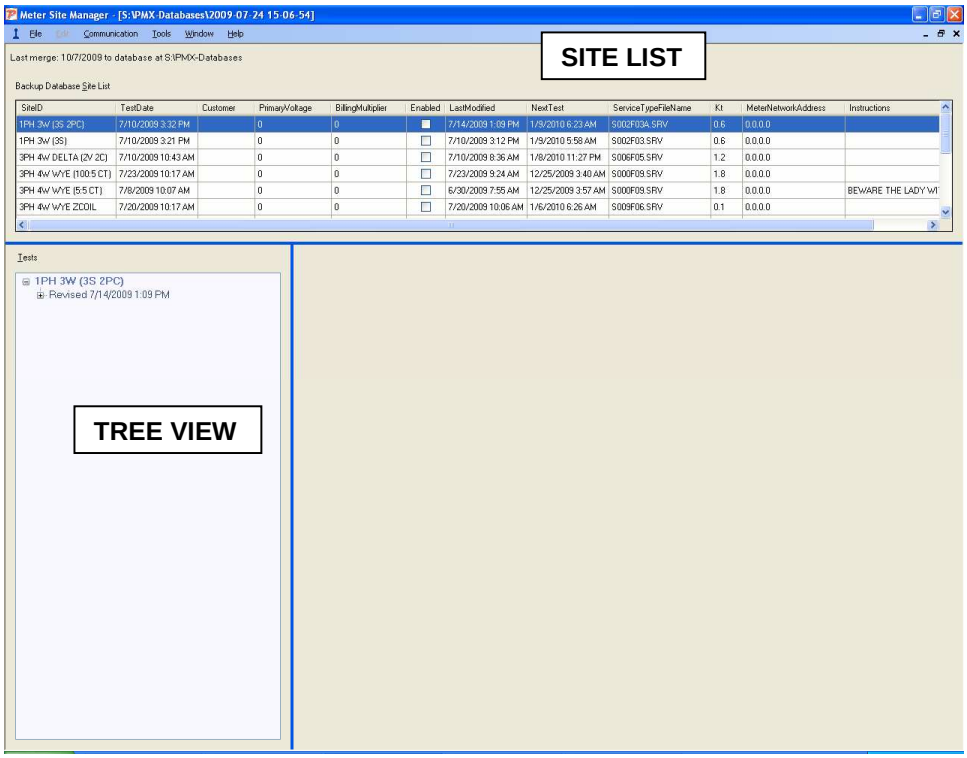
5. In Meter Site Manager 2, click on “Communication”, then on “Load Data from PowerMaster Analyzer.”



6. Messages will appear in a separate window to indicate what is taking place. Transferring the PowerMasterDatabase.sdf file will take several minutes.

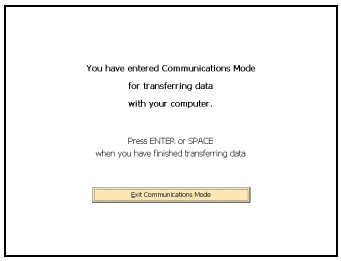


7. Once the database has transferred, Meter Site Manager 2 will try to open it and automatically merge it into the master database. You will see a Site List at the top off the screen, and a Tree View of the data in the database in a panel at the left.



WARNING: Data trends are not transferred at the same time as the database. If you have data trend saved to USB or SD card memory devices, do not wipe them out after transferring the database, or you will lose data!

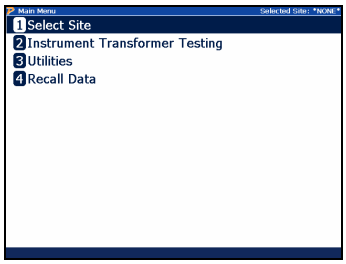
8. After download is complete, press ENTER or SPACE on the PowerMaster to reboot or simply power off by pressing “ON” if complete.



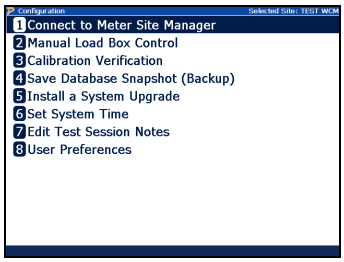
4.1 Upload Data From a USB Flash Drive

NOTE: This feature applies to PowerMaster® units with a Main Application of 1.0.0.14 or higher.

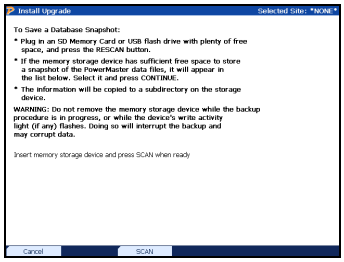
1. When at the Main Menu on the PowerMaster®, press #3 to enter the “Utilities” Menu.



2. In the Utilities Menu, press #4 (Save Database Snapshot (Backup)).

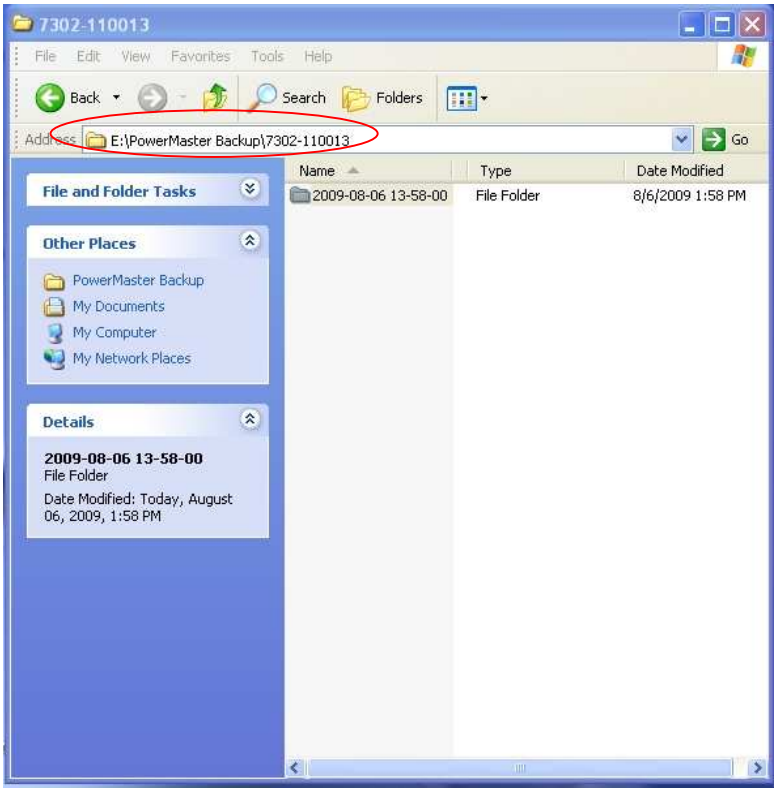


3. Insert a USB Flash drive into one of the PowerMaster®’s USB Peripherals. For further instructions, refer to the PowerMaster® User Manual (“Save a Database Backup”).

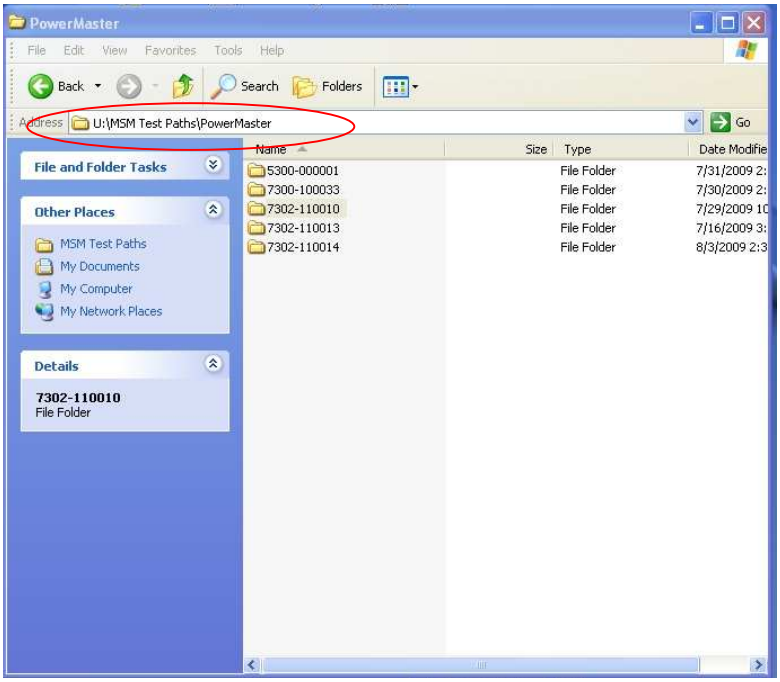


4. After the backup completes, insert the same USB Flash drive into a PC or laptop.

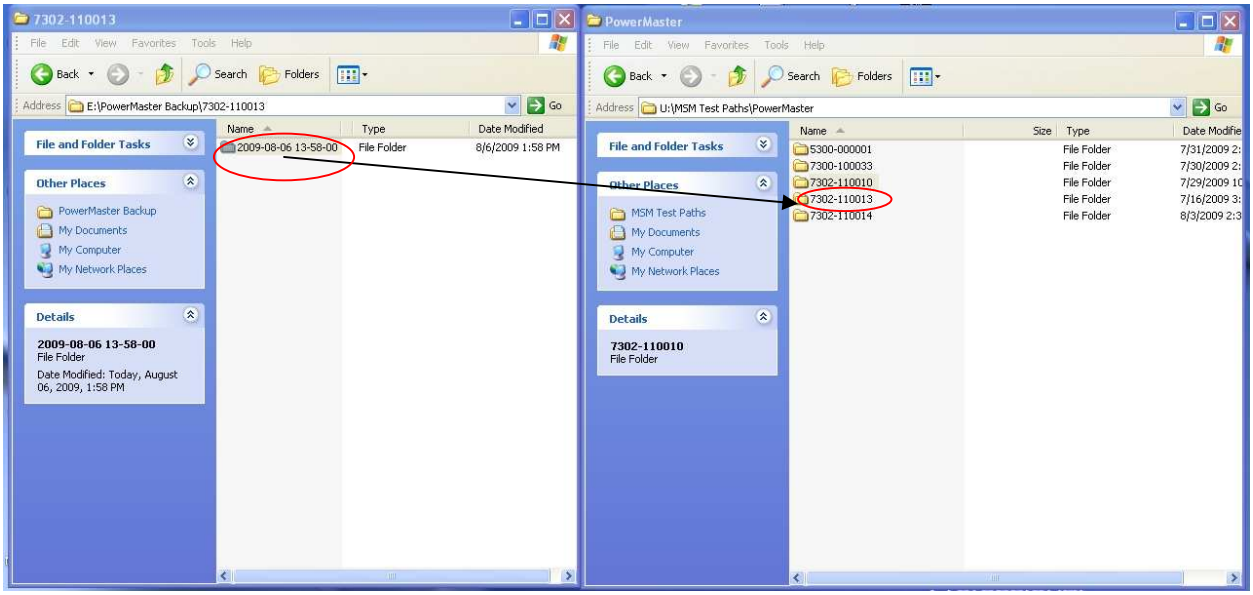
5. Viewing the directory in the USB Flash drive, double-click the “PowerMaster Backup” folder. Under the serial number, view the time/date stamp of the database.



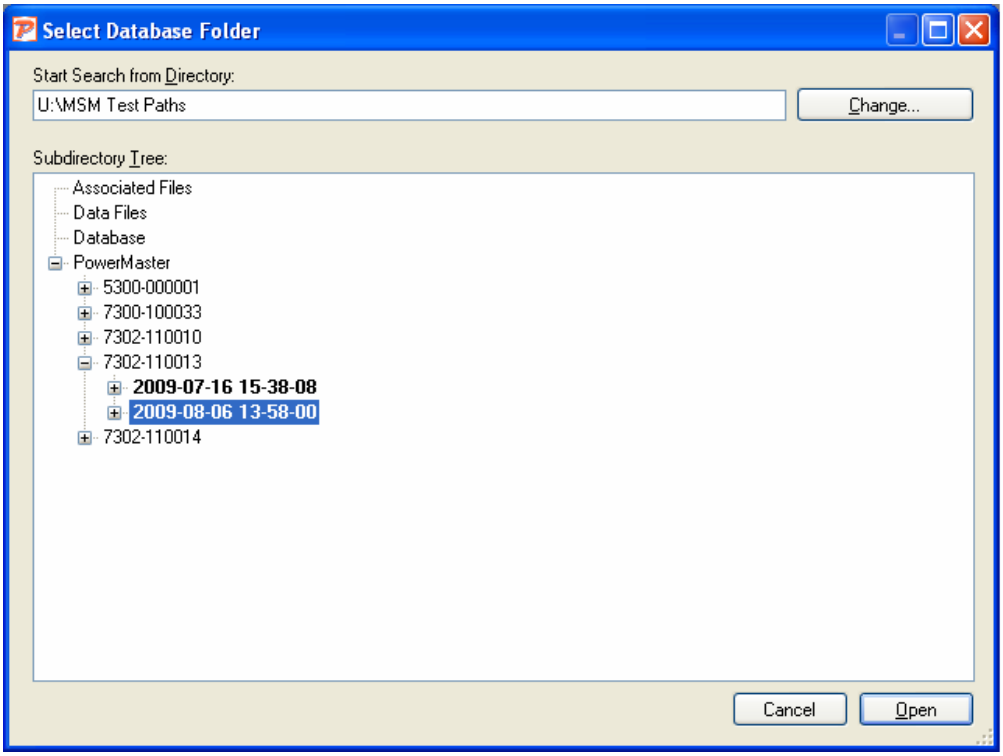
6. Open the PowerMaster® Database Path directory in another window.



7. Drag (or copy and paste) the database from the USB Flash drive into the PowerMaster® Database Path directory for the correct PowerMaster® serial number.



8. In Meter Site Manager 2, click File, Open to browse and view the database files.

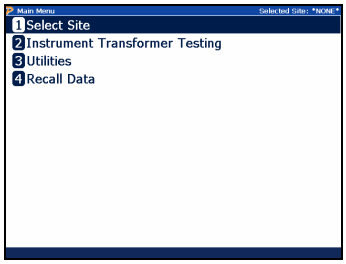


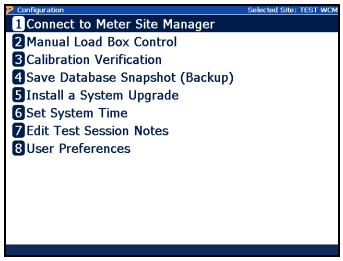
5 Download Data from the PC to the PowerMaster® (Creating a Route)

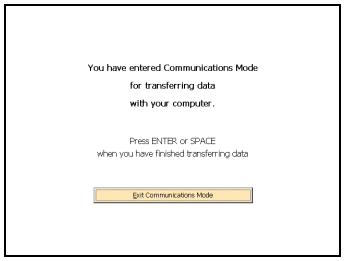
When the user desires to create a list of sites to test in the field, the database must be downloaded into the PowerMaster®. This process will allow the user to select sites that are currently in the Master Database (via check boxes) for download. This process will also synchronize the Master Database to the PowerMaster®, which may include newly created metering components (CT, PT, Meter, AMR), test setups, Phantom Load Setups, new sites, and even historical test data.

1. Open Meter Site Manager by double-clicking “Meter Site Manager 2” icon on the desktop.

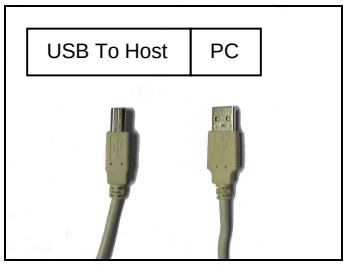
2. When at the Main Menu on the PowerMaster®, select “Utilities” then “Connect to Meter Site Manager” (for Main Applications 1.0.0.15 and below, simply remain at the Main Menu).







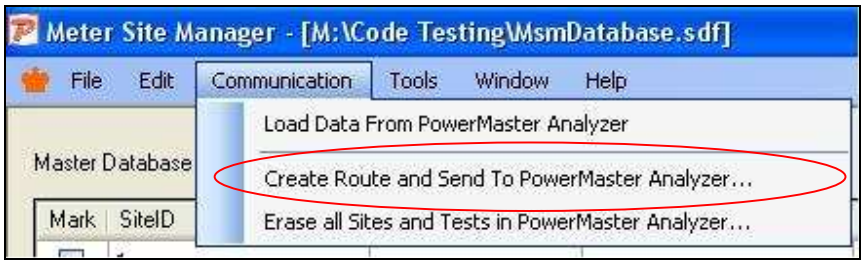
3. Use the USB cable to connect to the PC.



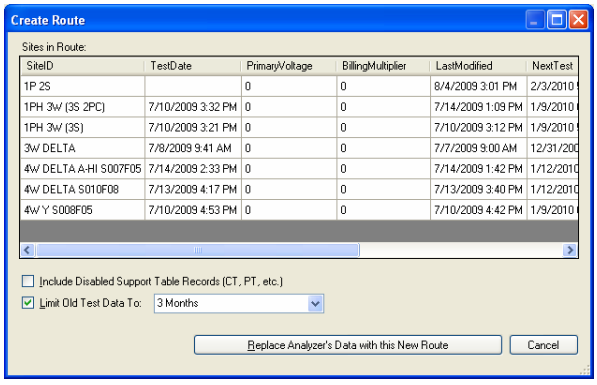
4. Wait for the sync icon in the system tray to turn green (Windows XP).

5. At the Master Database (king icon), select the desired site(s) you wish to download into the PowerMaster®.

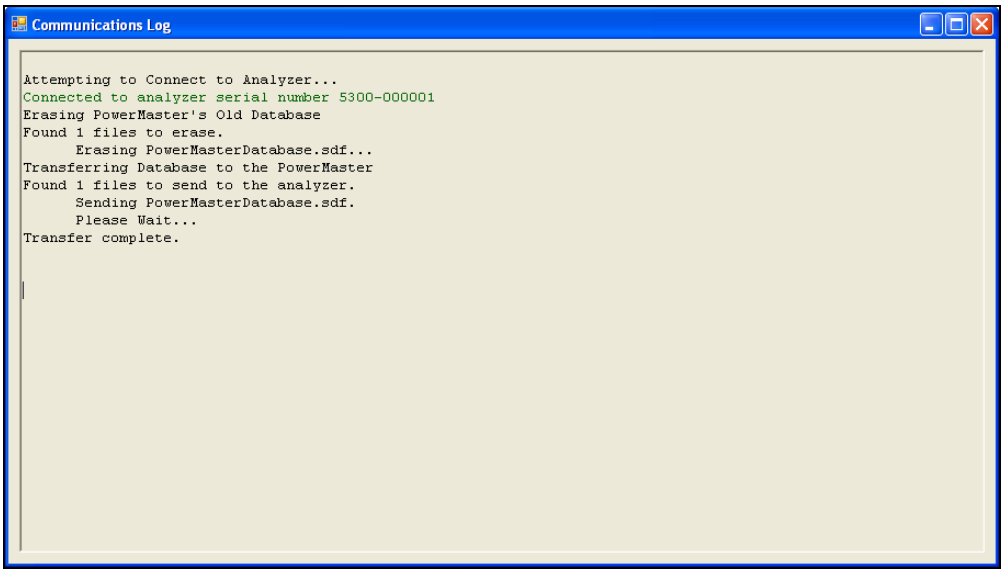
6. After selection, click Communication, “Create Route and Send to PowerMaster Analyzer...”



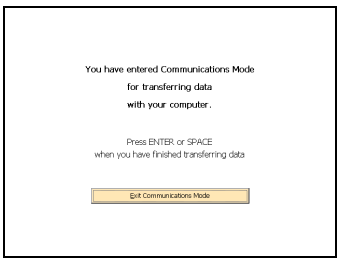
7. Verify the route is correct. The user can also select to download historical test data for each site (3, 6, 12, or 24 months in the past). If no historical test data is needed, select “0 Months”. When ready, click “Replace Analyzer’s Data with this New Route.”



8. Messages will appear in a separate window to indicate what is taking place. Transferring the PowerMasterDatabase.sdf file will take several minutes.



9. After download is complete, press ENTER or SPACE on the PowerMaster to reboot or simply power off by pressing “ON” if complete.

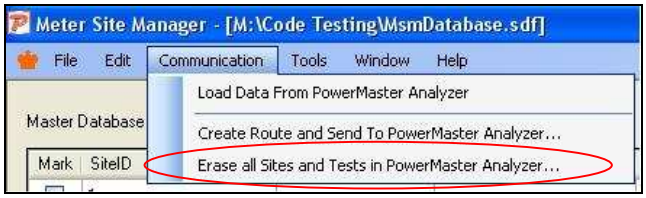


5.1 Erase Data from the PowerMaster®

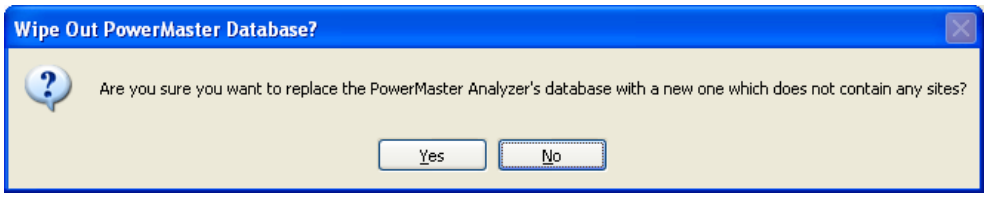
Since data cannot be deleted in the PowerMaster®, Meter Site Manager 2 gives the user the ability to delete all existing sites and test data in the PowerMaster database. This process simply replaces the existing database with a blank database. This process will also synchronize the Master Database to the PowerMaster®, which may include newly created metering components (CT, PT, Meter, AMR), test setups, and Phantom Load Setups

1. Follow steps 1-4 in Section 5.

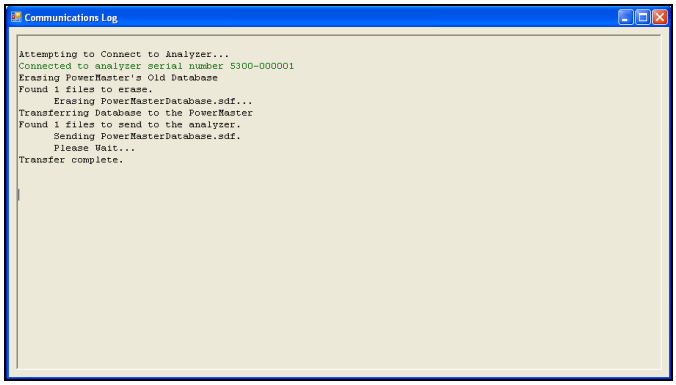
2. Click Communication, “Erase all Sites and Tests in PowerMaster Analyzer...”



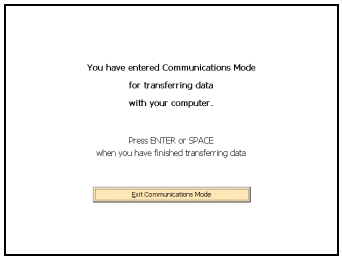
3. Click “Yes” to confirm.



4. Messages will appear in a separate window to indicate what is taking place. Transferring the PowerMasterDatabase.sdf file will take several minutes.



5. After download is complete, press ENTER or SPACE on the PowerMaster to reboot or simply power off by pressing “ON” if complete.

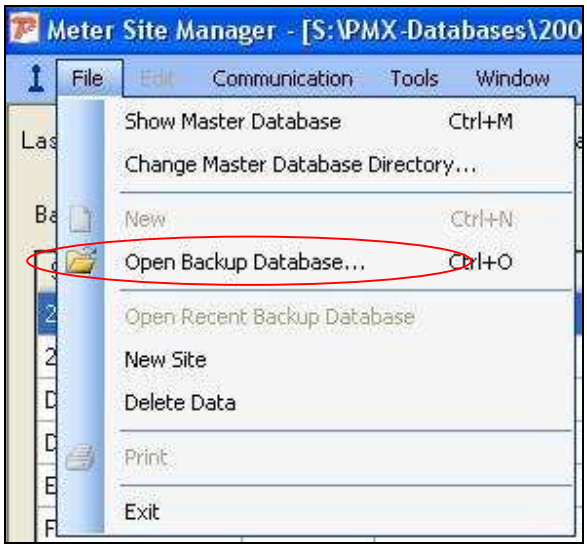


6 Merging Backup Databases into the Master Database

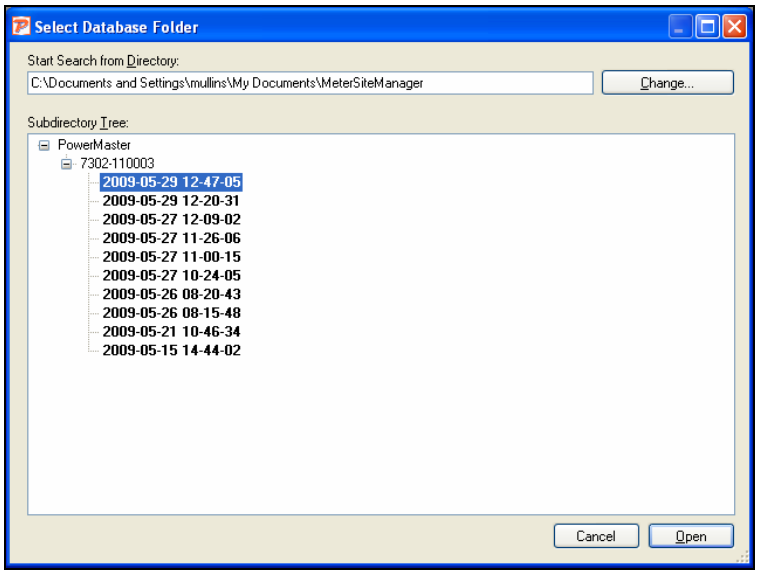
Using Meter Site Manager 2 version 1.05 and below, only backup databases were created at the time of upload. In versions1.06 and above, the user now has the ability to store a single master database for all records. After the master database is created, each upload from the PowerMaster® will automatically be merged into the master database. The following describes the two methods on how to merge all of the backup databases into a single master database.

6.1 Merging a Single Backup Database

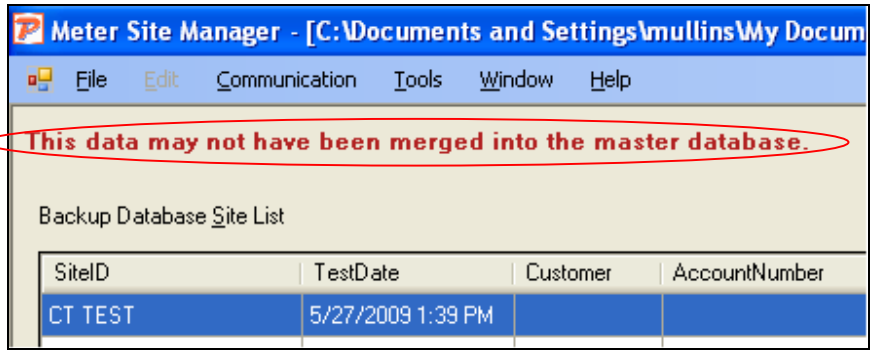
1. Click File, Open Backup Database.



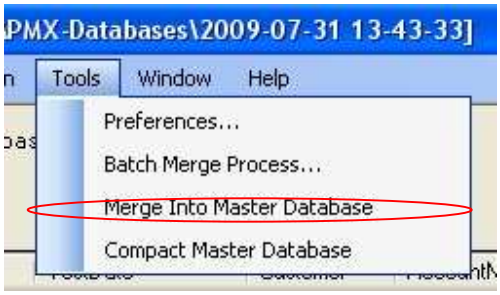
2. Browse the default directory (located in Preferences). To browse elsewhere, click "Change". Expand the directory until a time/date stamp appears (in bold). Click "Open" to open the backup database.



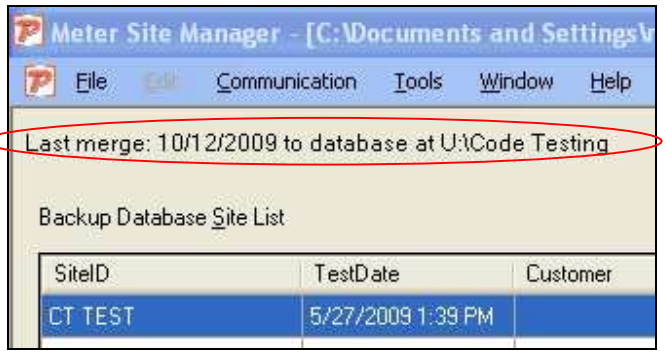
3. Once opened, note the database has not been merged into the master database.



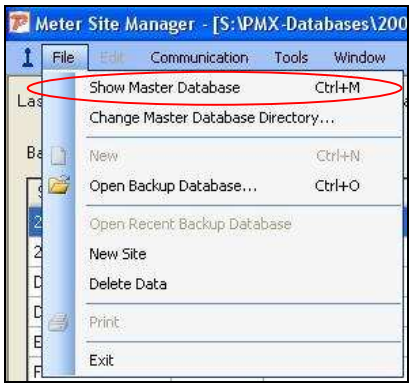
4. To merge this database, click Tools, Merge Into Master Database.



5. After the merge process, the backup database will reflect the merged changes.



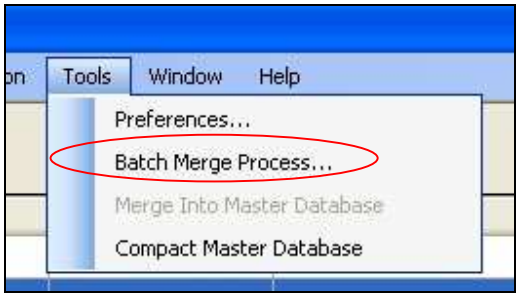
6. To view the master database with the reflected changes, click File, Show Master Database.



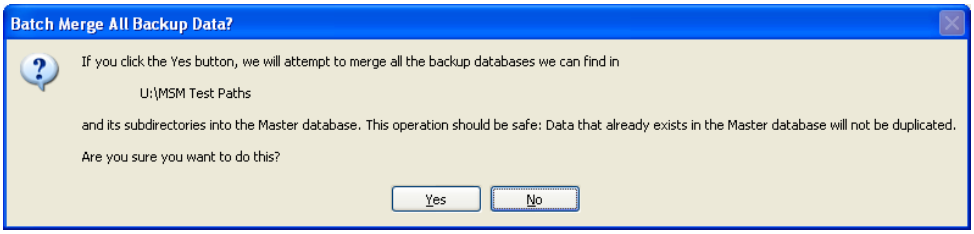
6.2 Merging Multiple Backup Databases with the “Batch Merge Process”

This process will merge all backup databases in the default Database Backup Directory (see Preferences). This easy-to-use process is highly recommended if there are many backup databases that need to be merged.

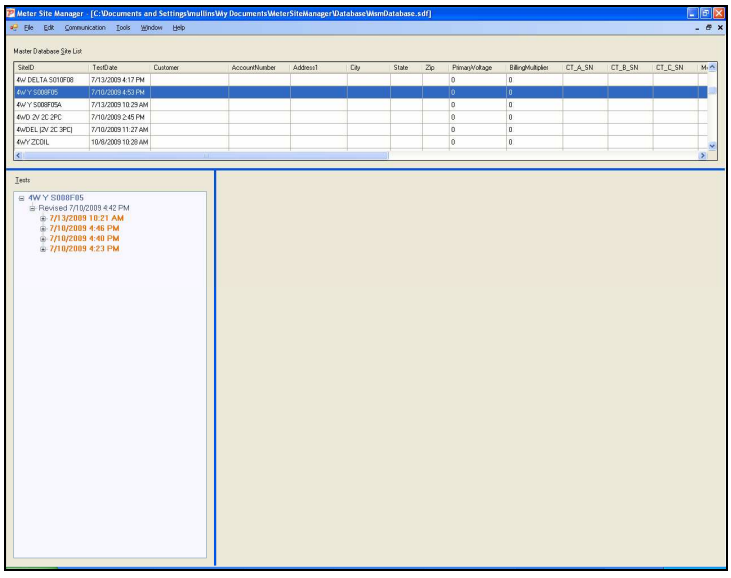
1. To begin, click Tools, Batch Merge Process…



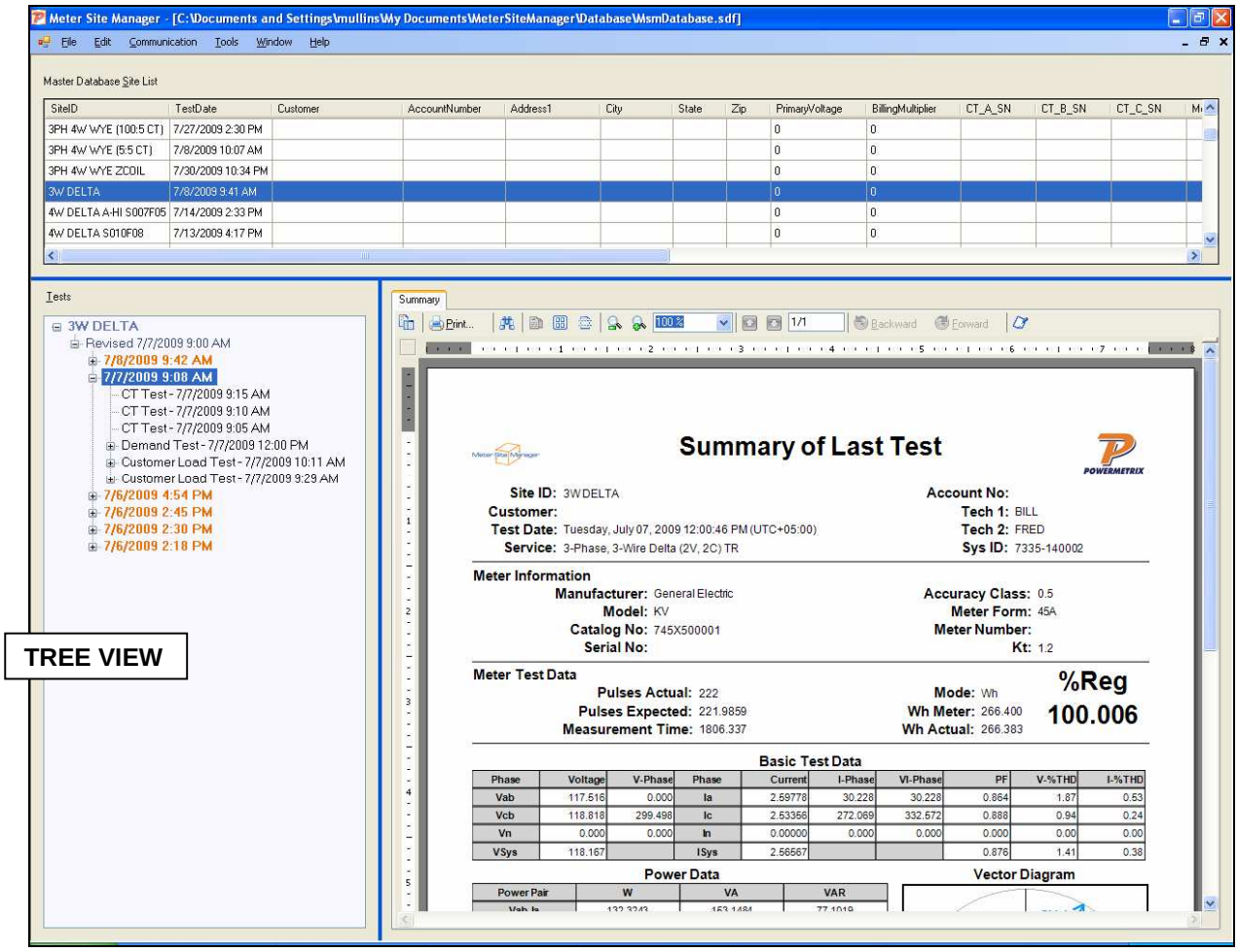
2. The user is prompted to verify if they want to continue. If ok, click Yes.



3. After the merging process, the master database will automatically display.

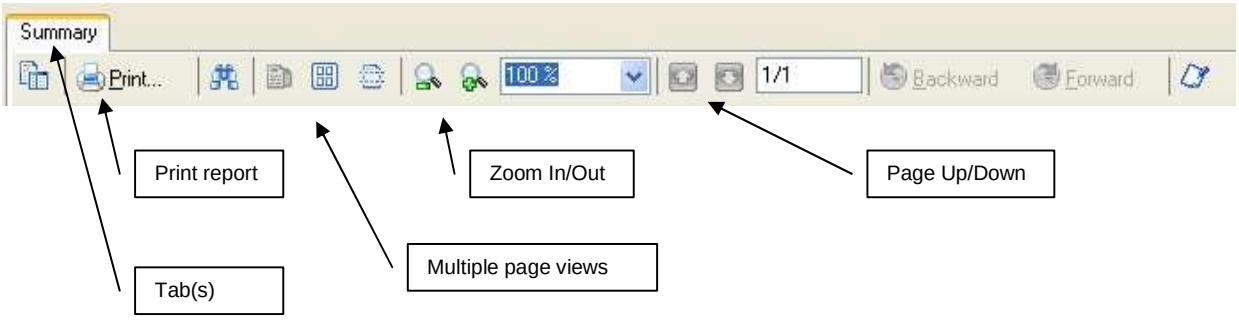


7 Generating Reports



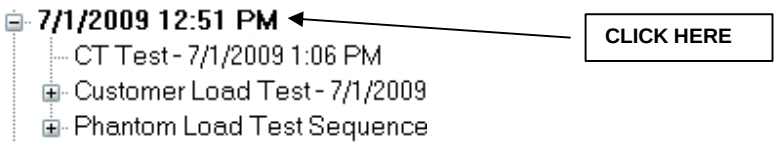
1. In the tree view at the left, expand the list by clicking on the +.
2. Generate the report by double-clicking on the name of the test.
3. Click the Print icon on the report header to print.

Report Header

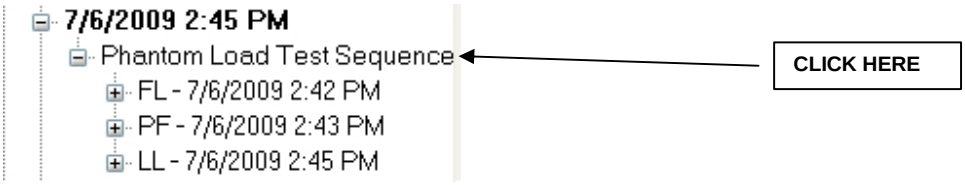


Summary Reports

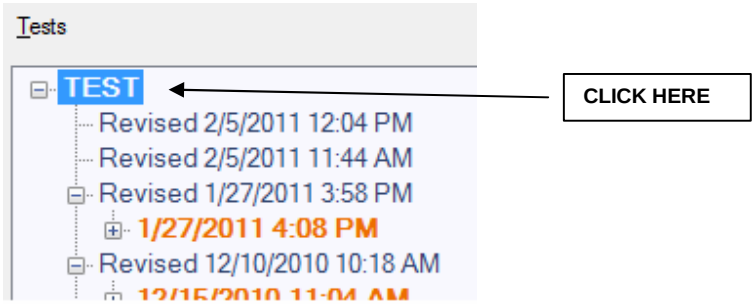
1. **Summary of Last Test**: This report includes the customer load meter test, CT test (at 0 burden), and the phantom load meter test. This report will display the LAST test acquired according to the time/date stamp.



2. **Phantom Load Test Sequence Summary**: This report gives the user a summary of all phantom load meter tests that were performed in the test sequence (up to 16 tests).



3. **Site Report:** This report gives the user information about the site exclusively. This includes customer name, address, account number, etc. It also includes the information about the associated Meter, CTs, PTs, and AMR. Any custom fields entered in the Site Editor will display here as well.

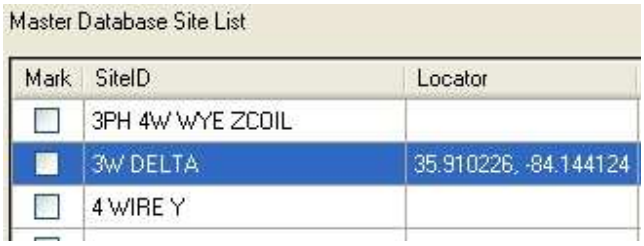


8 Deleting Test Data from the Master or Backup Database

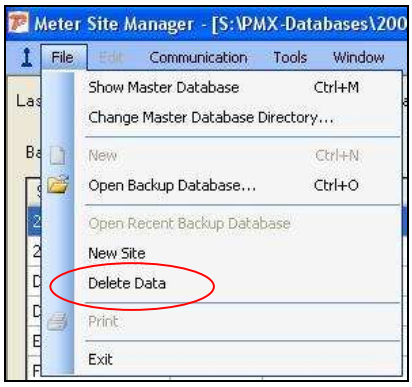
Deleting data in the database refers to removing undesirable data collected in the field by the PowerMaster®. The user can delete a single test, a group of tests within a session, or the entire site with any associated tests.

Deleting an Entire Site and Test Data

1. Select the site in the database list.



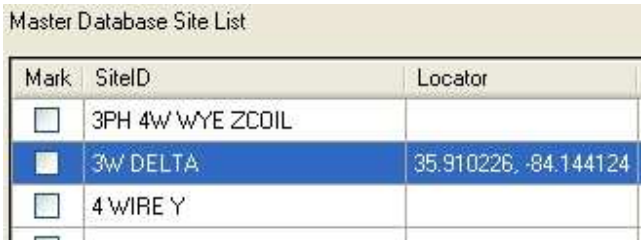
2. Click File, Delete Data.



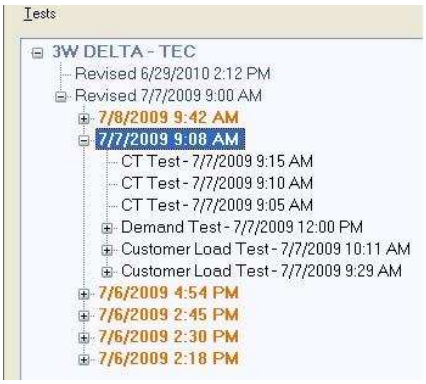
3. Confirm by clicking “Yes”.

Deleting a Group of Test Data by Test Session

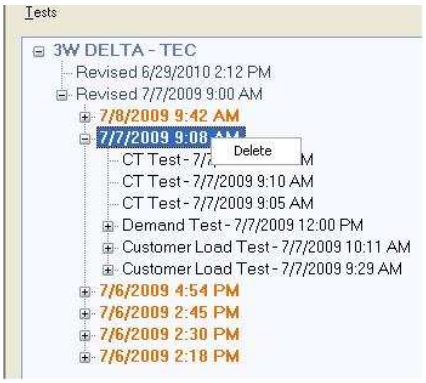
1. Select the site in the database list.



2. In the tree view, click the desired date.



3. Right click, Delete.

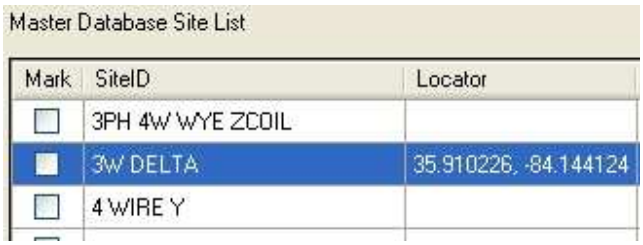


4. Confirm by clicking “Yes”.

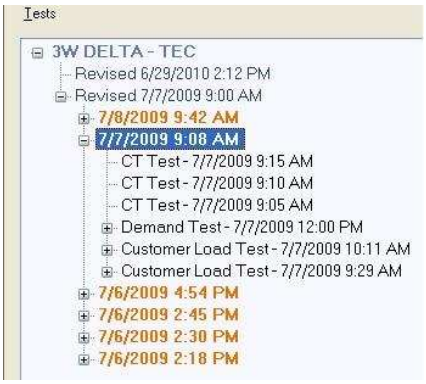
Deleting a Single Test

Note that some data are dependent on others. For example, the Basic Test Data is dependent on the Customer Load Test. When attempting to delete the Basic Test Data first, the user will be warned that the Customer Load Test must be deleted first.

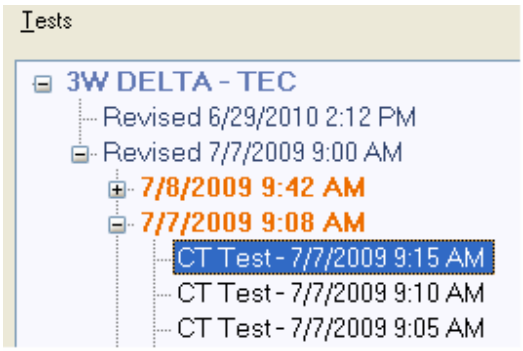
1. Select the site in the database list.



2. In the tree view, click the desired date.

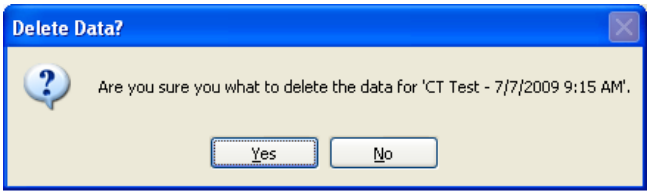


3. Click the desired test to be deleted.



4. Right click, Delete.

5. Confirm by clicking “Yes”.

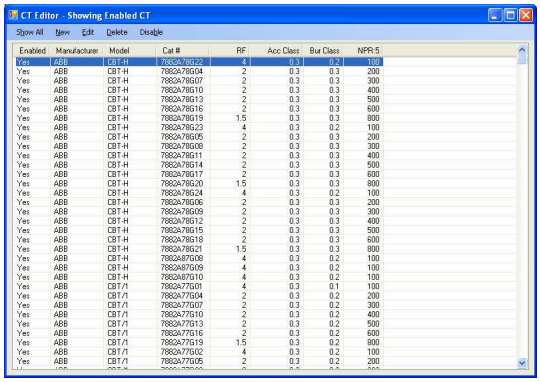


9 Database Tables

The user has the ability to create, edit, or delete metering components (AMR, CT, PT, Meter) in the database. They also have the ability to enable or disable the component. It is recommended to disable components that the user does not use. To access the database tables, click Edit.

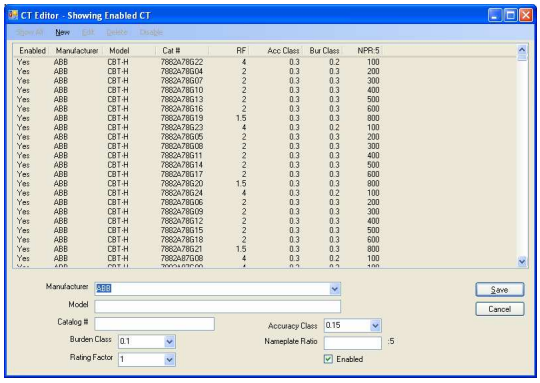
Viewing the Table

The user can scroll through the table to view all the items in the database. If an item is grayed out for New, Edit, Delete, and Disable, the item is currently being used in a site. The user can also click on the column header (ex. Model) and sort the entire table. If the user wants to view all enabled and disabled items, simply click “Show All” at the top menu.



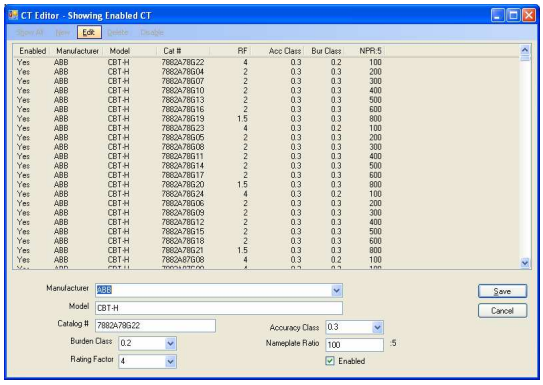
New

To create a new item in the database, click New at the top menu. Enter selections as desired, and press Save to complete.



Edit

To edit an item in the database, click Edit at the top menu. Change selections as desired, and press Save to complete.

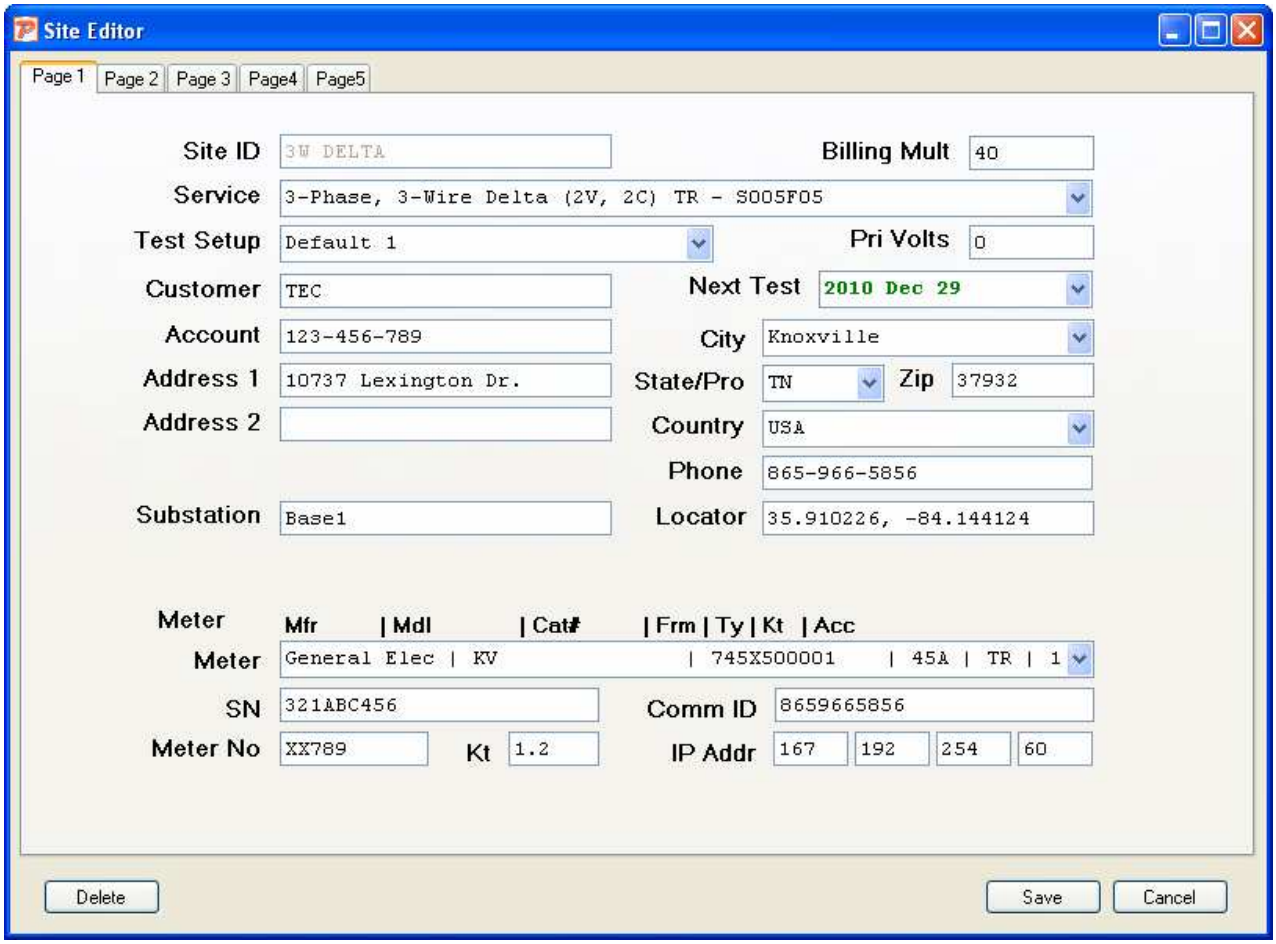


Enable/Disable

To prevent hundreds of items that will unnecessarily display in the PowerMaster® database, the user can disable components. It is recommended that items not normally used should be disabled. To do this, select the item in the database table and click “Disable” at the top menu. To disable multiple entries, hold Ctrl and right click all components. Then click “Disable”.

9.1 Edit or Create a Site

To edit a site, first select a site in the Master Database list (highlighted below). Then, click Edit, Edit Site. All fields can be edited (except "Site ID"). Once complete, click "Save."



Entering a Meter, CT, PT, or AMR

Click inside the selection box. Once selected, a button will appear at the bottom of the tray (ex. "Meter Editor"). If the metering component cannot be found in the drop-down box, click the button to enter the database table (see Section 8, New). Click New to create a new component. After the additions are made, click Save to complete. Close the window. The user can now select the new component in the Site Editor's drop-down box.

Deleting a Site

Deleting a site can be done when there is no test data associated with it. If there is any test data, the user cannot delete the site from the database.

Create a New Site

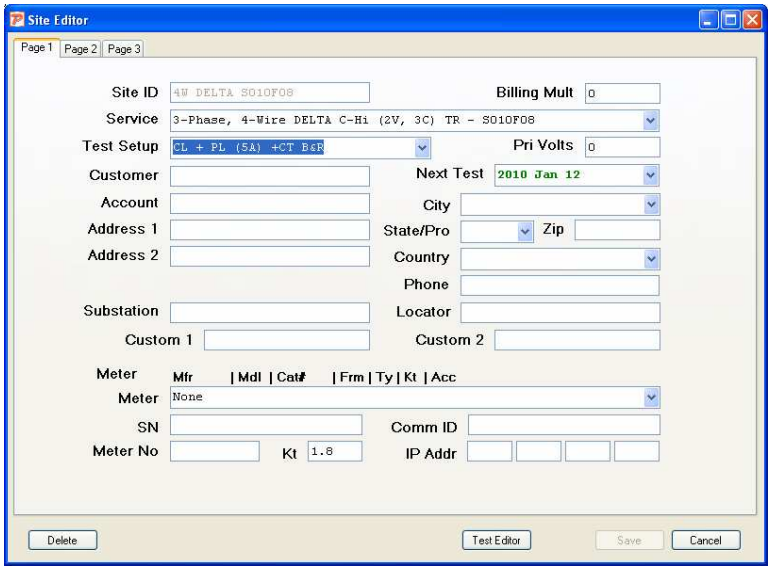
To create a new site, click File, New Site. After the additions are made, click Save to complete.

9.2 Edit or Create a Test Setup

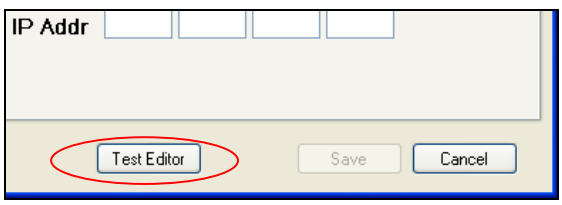
Test Setups are used in Integrated Site Test for the PowerMaster®. They are step-by-step procedures that guide the user through the testing process. This process eliminates mistakes and simplifies the entire testing procedure. Please note that “Default 1” and “Default 2” setups cannot be edited or deleted.

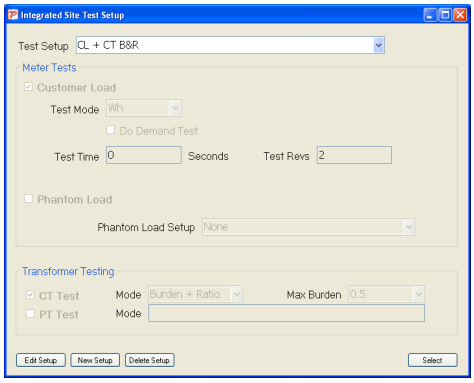
1. Click Edit, Edit Site

2. In the Site Editor, select “Test Setup.”

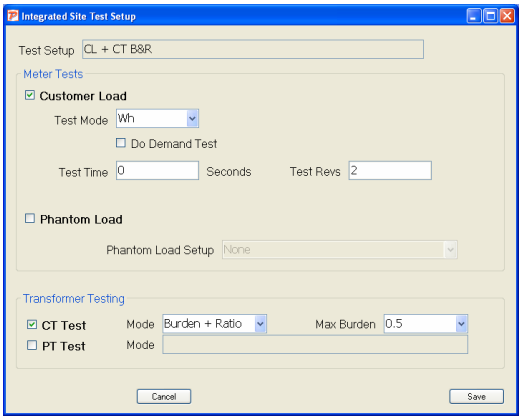


3. In the bottom tray, click “Test Editor.”

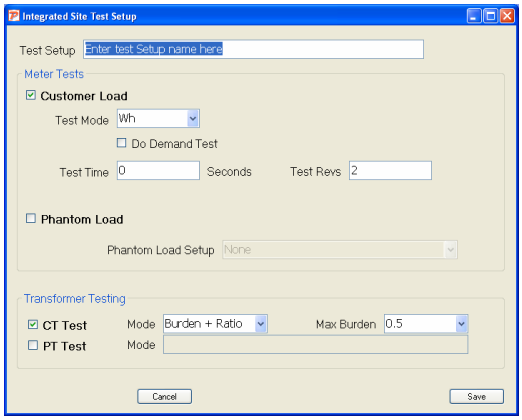




4. In the “Integrated Site Test Setup,” click Edit Setup to make changes or New Setup to create a new test setup.



Edit Setup



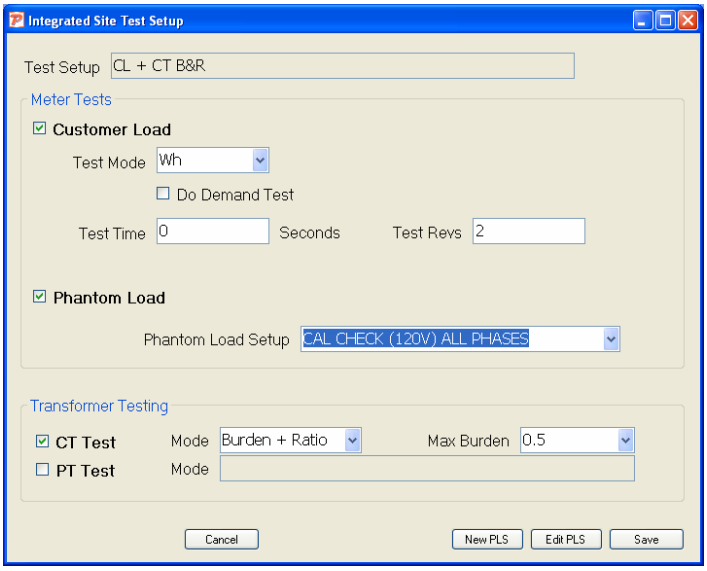
New Setup

5. After changes are made, click Save to complete. The setup will now be available in the “Test Setup” drop-down box in Site Editor.

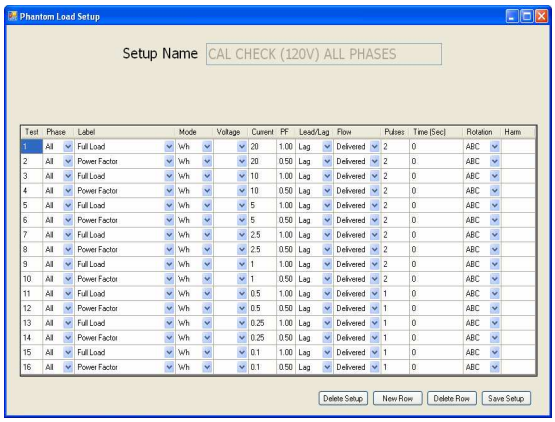
9.3 Edit or Create a Phantom Load Setup

The Phantom Load Setups (PLS) are pre-programmed test procedures to test a meter under known conditions. These setups are also used in Integrated Site Test for the PowerMaster®. Please note that “ANSI 5.0 AMP FL, LL, PF” and “ANSI 2.5 AMP FL, LL, PF” setups cannot be edited or deleted.

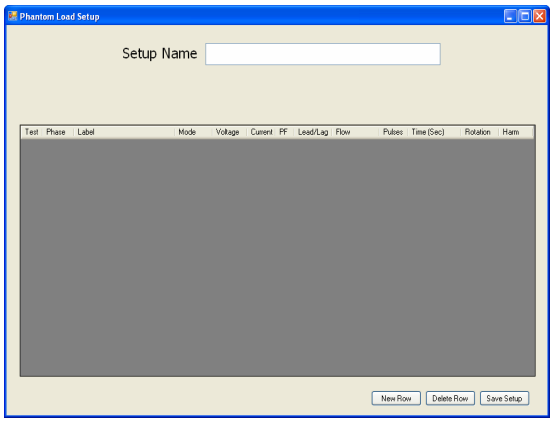
1. Follow steps 1-4 in Section 8.2 (“Edit or Create a Test Setup”).
2. In Integrated Site Test Setup, select “Phantom Load Setup” (Phantom Load must be checked).



6. Click Edit PLS to make changes or New PLS to create a new test setup.



Edit PLS

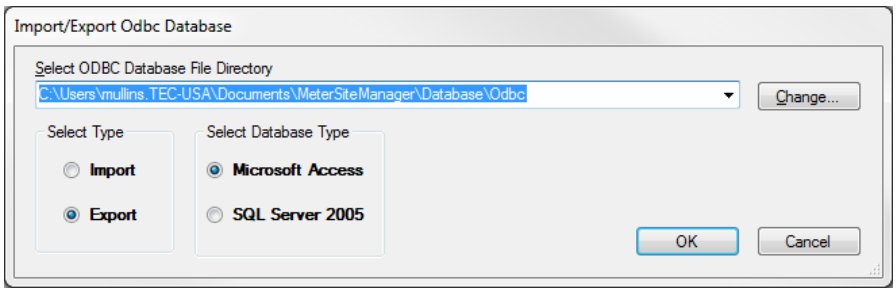


New PLS

7. After changes are made, click Save Setup to complete. The setup will now be available in the “Phantom Load Setup” drop-down box in Site Editor.

10 Import/Export an ODBC Database

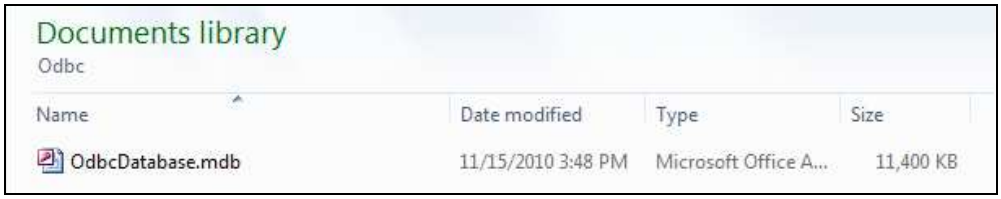
The database for Meter Site Manager 2 (“MsmDatabase.sdf”) is a compact SQL Server database that is designed for mobile devices. This type of database does not have open connectivity and does not allow the use of typical tools accessible to most database administrators. To combat this, Meter Site Manager 2 allows the user to import/export to an ODBC database via Microsoft Access or SQL Server 2005. This can help the database administer export pertinent information into a corporate database with minimal customization and programming. Any master (MsmDatabase.sdf) or backup (PowerMasterDatabase.sdf) database can be exported or imported into.



10.1 Export to Microsoft Access

1. Open the desired .sdf database in Meter Site Manager 2. By default, the Master database is open. Any backup databases can be opened via File, Open Backup Database…
2. Click Tools, Import/Export an ODBC database…
3. Select the database output directory in the drop-down box or click “Change” to browse to another directory.
4. Select “Microsoft Access” as the database type.
5. Click OK.
6. If an ODBC database does not exist, select “Create an ODBC database…”. If an ODBC database was created previously and you wish the data to be merged, click “Browse to a different ODBC database directory” and locate the existing database.

7. After export, the Access database can be found in the directory that was created. Double click the .mdb file to open with Microsoft Access.



10.2 Import from Microsoft Access

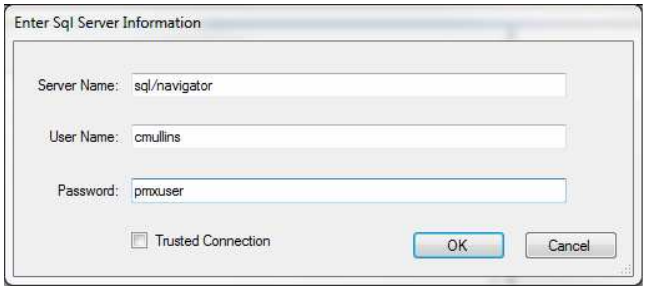
If an Access database (.mdb) is formatted correctly for the .sdf database, Meter Site Manager 2 can import this file. Each import will update the change(s) to the database.

1. Open the desired .sdf database in Meter Site Manager 2. By default, the Master database is open. Any backup databases can be opened via File, Open Backup Database…
2. Click Tools, Import/Export an ODBC database…
3. Click “Import” for Select Type, and Microsoft Access for Select Database Type
4. Select the database directory in the drop-down box or click “Change” to browse to another directory.
5. Click OK.

10.3 Export to Microsoft SQL Server 2005

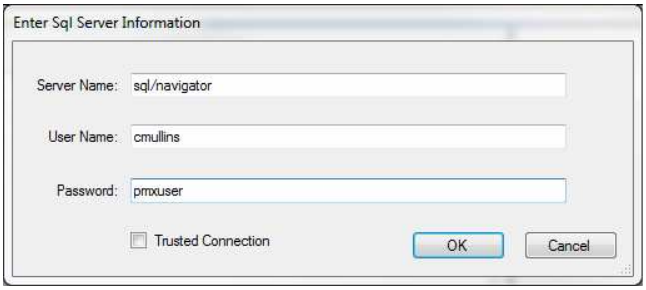
1. Open the desired .sdf database in Meter Site Manager 2. By default, the Master database is open. Any backup databases can be opened via File, Open Backup Database…
2. Click Tools, Export data to an ODBC database…
3. Select the database output directory in the drop-down box or click “Change” to browse to another directory.
4. Select “SQL Server 2005” as the database type.
5. Click OK.
6. If an ODBC database does not exist, select “Create an ODBC database…”. If an ODBC database was created previously and you wish the data to be merged, click “Browse to a different ODBC database directory” and locate the existing database.

7. When prompted, enter the server name, username, and password. If no username and password is required, select “Trusted Connection”. Click OK to continue.



10.4 Import from Microsoft SQL Server 2005

1. Open the desired .sdf database in Meter Site Manager 2. By default, the Master database is open. Any backup databases can be opened via File, Open Backup Database…
2. Click Tools, Import/Export an ODBC database…
3. Click “Import” for Select Type, and SQL Server 2005 for Select Database Type.
4. Select the database directory in the drop-down box or click “Change” to browse to another directory.
5. Click OK.
6. When prompted, enter the server name, username, and password. If no username and password is required, select “Trusted Connection”. Click OK to continue.

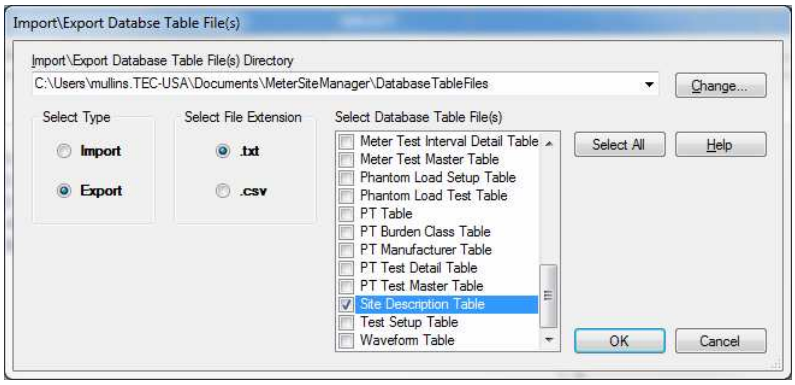


11 Export/Import .txt or .csv Files

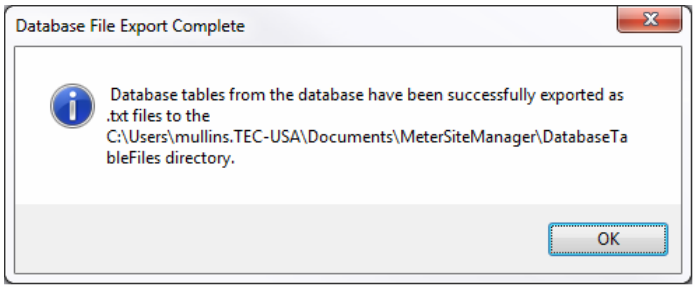
The Meter Site Manager 2 software allows the user to export the database tables to a flat file (.txt or .csv). It also allows flat files to be imported, granted they are formatted exactly as the exported files. For an overview of the database columns, go to Appendix 1.

11.1 Export to .txt or .csv files

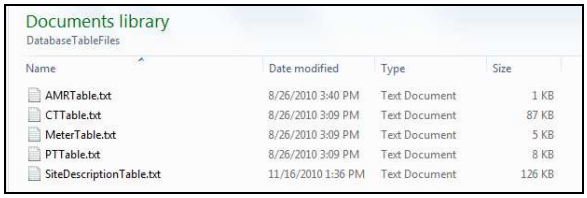
1. Open the desired .sdf database in Meter Site Manager 2. By default, the Master database is open. Any backup databases can be opened via File, Open Backup Database…
2. Click Tools, Import/Export Database Table Files…
3. Select the file output directory in the drop-down box or click “Change” to browse to another directory.
4. Select “Export”. Select the desired extension (.txt or .csv). Then, select the desired table(s) to be exported. If all tables are to be exported, click Select All. Click OK to continue.



5. Click OK to complete.



6. After export, the file(s) can be found in the directory that was created. Double click the file to open in Notepad (.txt) or Microsoft Excel (.csv) to review.

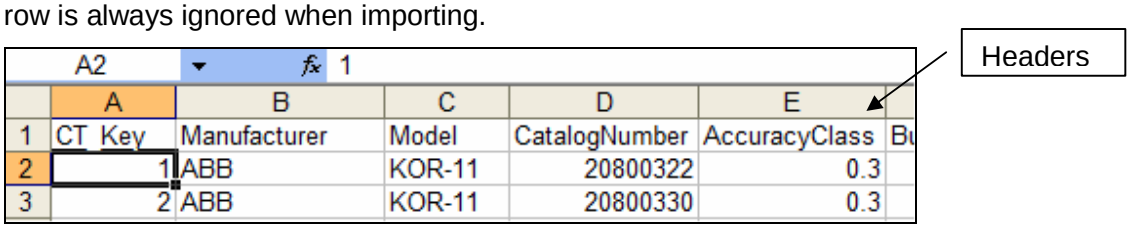


11.2 Import .txt or .csv files

WARNING: Verifying all database keys that correspond to multiple tables is critical when importing .txt or .csv files into the Meter Site Manager 2 database. Not doing so will cause database corruption that is beyond repair. Powermetrix will not be held responsible for any lost or corrupted data when importing. It is highly recommended that a database backup is made before importing any files.

Generating and formatting an import file

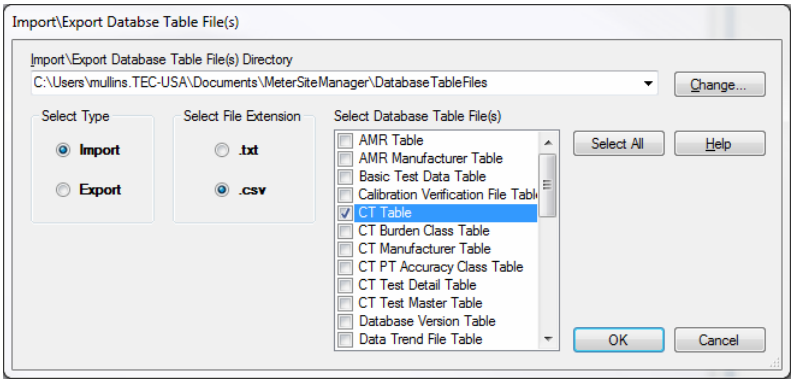
1. Follow Section 11.1 to export a desired table (.csv file recommended) to review the formatting structure.
2. Once the formatting structure is reviewed, open Microsoft Excel.
3. In the first row, the user may enter headers for each column of data. Otherwise, the first row is always ignored when importing.



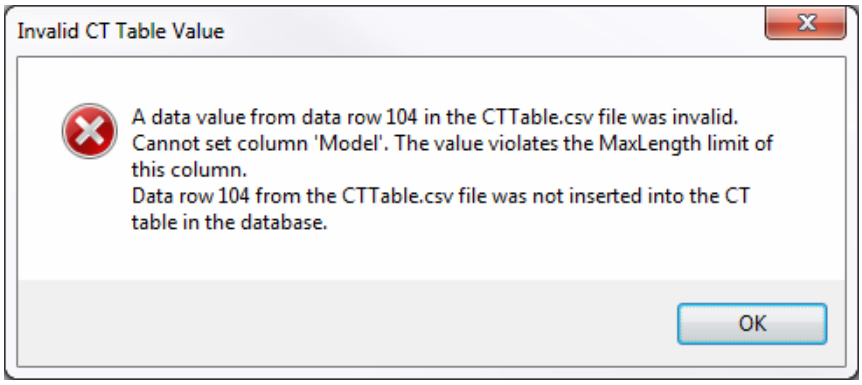
4. In the following rows, enter all necessary information. Review Appendix 1 for column field characteristics (data type, max length, nullable, etc.).
5. Once all information is entered, click File, Save As. Enter the filename EXACTLY the same as the formatted table name in step 1 (ex. CTTABLE.csv). Save the file as a "CSV (Comma delimited) (*.csv)" extension. Click Save.

Importing a formatted file

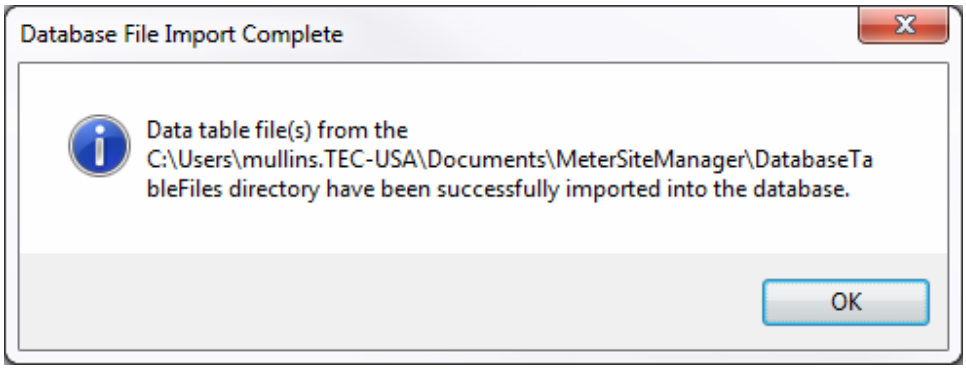
1. Open the desired .sdf database in Meter Site Manager 2. By default, the Master database is open. Any backup databases can be opened via File, Open Backup Database…
2. Click Tools, Import/Export Database Table Files…
3. Select the formatted file(s) directory in the drop-down box or click "Change" to browse to another directory.
4. Select "Import". Select the desired extension (.txt or .csv). Then, select the desired table(s) to be imported. If all tables are to be imported, click Select All. Click OK to continue.



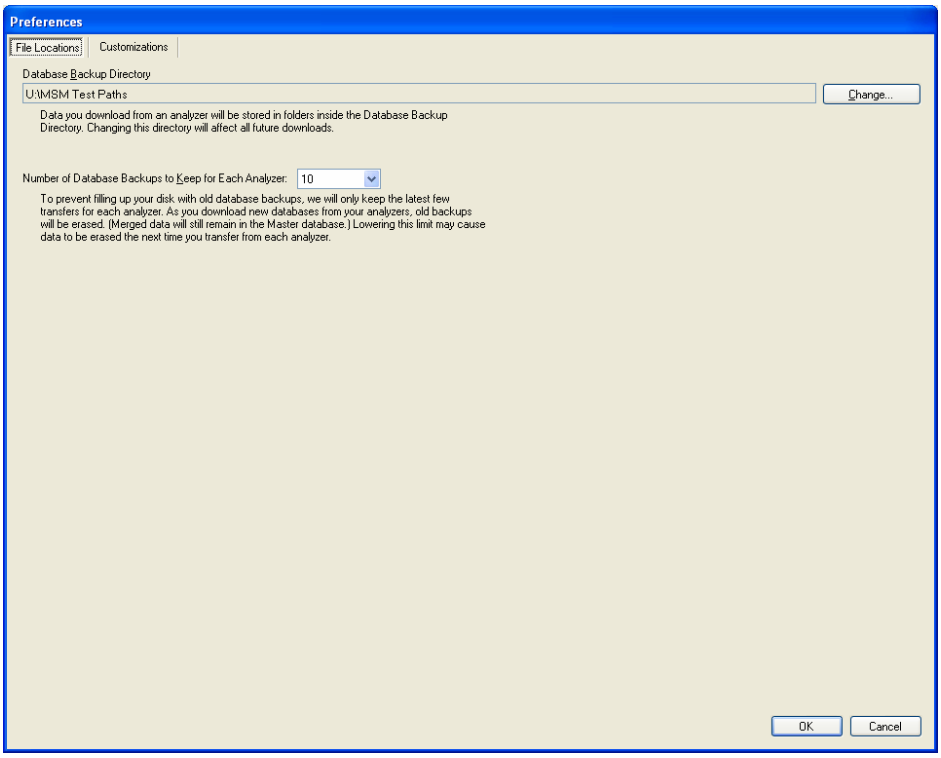
5. Click OK to close any error messages that display. The message notes to the user what action is taken in the import process. The user can go back and edit the file to correct any errors to fully complete the import.



6. Once the import process is complete, click OK to finish.



12 Preferences



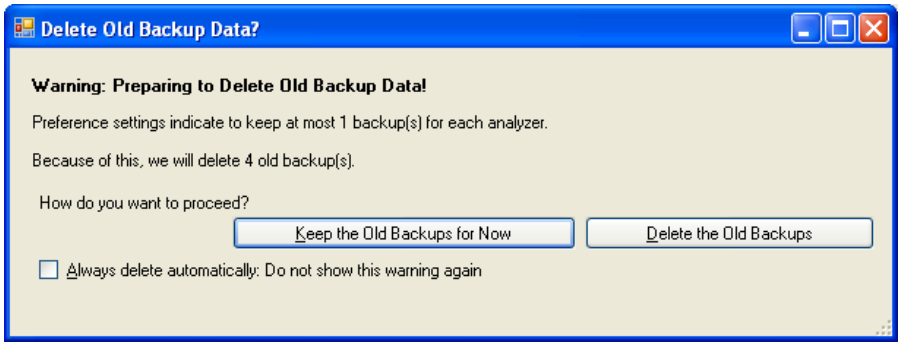
*Accessed by clicking Tools, Preferences

Database Backup Directory

This directory is where the PowerMaster® will download all acquired data to be stored. To change the directory path, click “Change”. Browse to the desired directory path (including network paths), and click OK to accept. Click OK once more at the bottom of the Preferences screen to save the directory path. The new directory path is applied to the next download from the PowerMaster®.

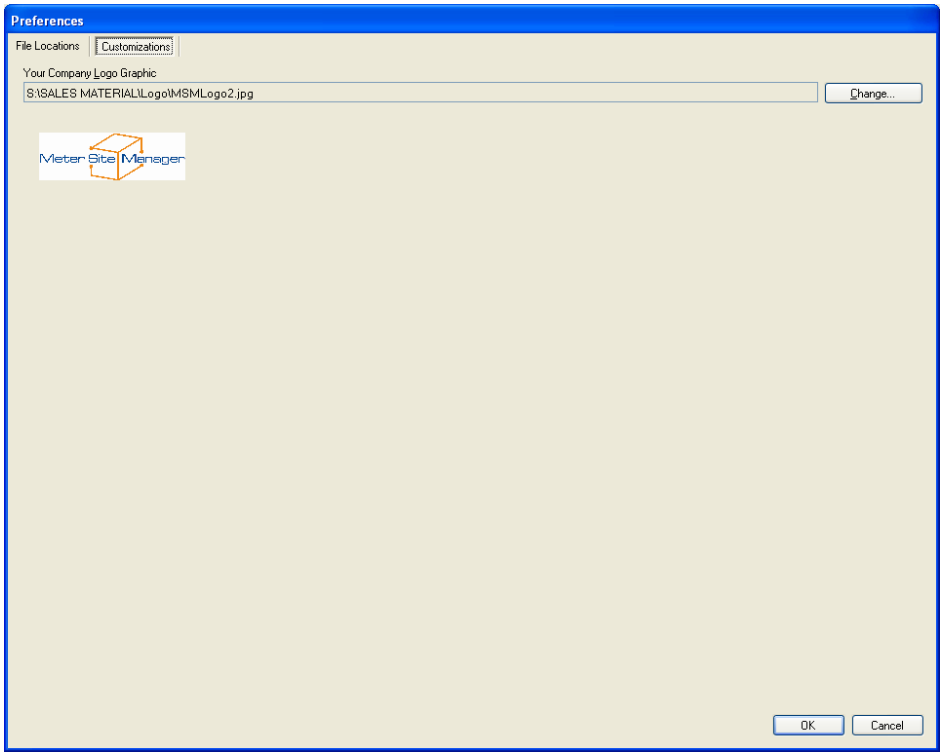
Number of Database Backups to Keep for Each Analyzer

Meter Site Manager 2 will create a backup of the PowerMaster® database each time it is uploaded. To prevent from unnecessary disk space to be taken up, the user has the option of selecting how many database backups they desire to store. The user can select from 10 (default), 5, 3, or 1. When the user exceeds the selected database backups, the following dialog will display:



The user has the option to keep the backups until prompted at the next upload (“Keep the Old Backups for Now”) or to delete the backups immediately (“Delete the Old Backups”). Before a choice is made, the user also has the option to select to automatically delete the backups according to the Preferences (“Always delete automatically: Do not show this warning again”).

Customizations



*Accessed by clicking Tools, Preferences, Customizations

Your Company Logo Graphic

Meter Site Manager 2 offers a feature that allows the user to add a company logo to all reports. To select a company logo, click “Change”. Browse to the desired image (.bmp or .jpg), and click OPEN to accept. A preview of the image will display. Click OK at the bottom of the Preferences screen to save the image. Close Meter Site Manager 2 and reopen to make the changes effective.

13 FAQ's

Where are the backup databases located?

The default directory is "C:\Documents and Settings\My Documents\MeterSiteManager". This path can be changed by using Tools, Preferences.

How do I open a database?

When you open Meter Site Manager, click File. Click "Open Backup Database" or "Open Recent Backup Database".

How do I view a report?

Select a site in the site database in the top window. In the tree view to the left, double-click on the test results underneath the time/date stamp. The report is automatically generated (this may take several seconds).

How do I print a report?

After the report is generated (from above), click on the Print icon in the report header.

Can I print to PDF?

Yes, if you have a pdf creator installed. There are many free pdf creators found on the web. Powermetrix recommends PDFCreater.

I can't communicate with the PowerMaster®. What's wrong?

1. Verify the PowerMaster® is powered on.
2. Verify the PowerMaster® is in Connect Mode (Utilities, Connect to Meter Site Manager) (for Main Application V1.0.0.16 or higher)
3. Disconnect the USB cable from the PowerMaster® and re-connect. This will re-establish communications between the PowerMaster® and ActiveSync.
4. Verify no other devices are connected and using ActiveSync at this time.

How do I view the harmonic details?

The details are located on another tab. In the report header, click the tab "Harmonic Details".

I don't have full administrative rights on my computer. Can I still use this software?

Yes. Install and run the application as normal. Before your first download, your IT professional must grant you full administrative rights. After the first download is complete, your IT professional can reduce your rights back to normal.

If I merge a backup database into the Master database more than once, will it create duplicate data?

No. During the merge process, the application goes through each database entry and looks at data changes. If data changes exist, it writes to the database. Otherwise, the process ignores the existing entry and moves to the next one until complete.

What's the difference between "uploading" and "downloading"?

When you want to send data to the PC from the PowerMaster®, we consider this to be "uploading". When you want to send data to the PowerMaster® from the PC, we consider this to be "downloading".

When creating a route, what is the option "Include Disabled Support Table Records (CT, PT, etc.)"?

When a route is created in the PowerMaster® , the Master Database is also synchronized to the PowerMaster® database. The metering components that are "disabled" will also be downloaded as well. By default, Meter Site Manager 2 only downloads metering components that are "enabled" to prevent unnecessary memory allocation. Refer to Section 8 for further details on Enable/Disable.

What does the function "Compact Database" do?

When deleting data, the size of the database remains the same. Fortunately, when Meter Site Manager 2 is closed, it automatically compresses the database to accommodate any data deletion. If the user wants to do an optimal compression, the user can manually compress the database by clicking Tools, Compact Database to save another 5% approximately in size.

How do I synchronize my changes from my Master database to the PowerMaster®?

How do I know what version of software I'm using?

Click Help, About.

14 Appendix 1 - Database Columns (v1.12)

Table Name	Column Name	Data Type	Char Length	Is Nullable
AMR	AMR_Key	bigint		N
AMR	Manufacturer	nvarchar	32	Y
AMR	Model	nvarchar	16	Y
AMR	CatalogNumber	nvarchar	15	N
AMR	Enabled	bit		Y
AMR	LastModified	datetime		Y
AMRManufacturer	Manufacturer	nvarchar	32	N
AMRManufacturer	Address1	nvarchar	64	Y
AMRManufacturer	Address2	nvarchar	64	Y
AMRManufacturer	City	nvarchar	50	Y
AMRManufacturer	State	nvarchar	2	Y
AMRManufacturer	Zip	nvarchar	10	Y
AMRManufacturer	Contact	nvarchar	32	Y
AMRManufacturer	ContactPhone	nvarchar	16	Y
AMRManufacturer	Country	nvarchar	6	Y
AMRManufacturer	LastModified	datetime		Y
AMRManufacturer	WebSite	ntext	536870911	Y
BasicTestData	BasicTestData_Key	bigint		N
BasicTestData	MasterTestRecord_Key	bigint		N
BasicTestData	MeterTestMaster_Key	bigint		N
BasicTestData	RecordDateTime	datetime		N
BasicTestData	Frequency	real		N
BasicTestData	VDesignator_A	nvarchar	4	Y
BasicTestData	VDesignator_B	nvarchar	4	Y
BasicTestData	VDesignator_C	nvarchar	4	Y
BasicTestData	IDesignator_A	nvarchar	4	Y
BasicTestData	IDesignator_B	nvarchar	4	Y
BasicTestData	IDesignator_C	nvarchar	4	Y
BasicTestData	VRMS_A	real		Y
BasicTestData	VRMS_B	real		Y
BasicTestData	VRMS_C	real		Y
BasicTestData	VRMS_N	real		Y
BasicTestData	IRMS_A	real		Y

BasicTestData	IRMS_B	real		Y
BasicTestData	IRMS_C	real		Y
BasicTestData	IRMS_N	real		Y
BasicTestData	VPhase_A	real		Y
BasicTestData	VPhase_B	real		Y
BasicTestData	VPhase_C	real		Y
BasicTestData	IPhase_A	real		Y
BasicTestData	IPhase_B	real		Y
BasicTestData	IPhase_C	real		Y
BasicTestData	PF_A	real		Y
BasicTestData	PF_B	real		Y
BasicTestData	PF_C	real		Y
BasicTestData	Watts_A	real		Y
BasicTestData	Watts_B	real		Y
BasicTestData	Watts_C	real		Y
BasicTestData	VA_A	real		Y
BasicTestData	VA_B	real		Y
BasicTestData	VA_C	real		Y
BasicTestData	VAR_A	real		Y
BasicTestData	VAR_B	real		Y
BasicTestData	VAR_C	real		Y
BasicTestData	Q_A	real		Y
BasicTestData	Q_B	real		Y
BasicTestData	Q_C	real		Y
BasicTestData	VTHD_A	real		Y
BasicTestData	VTHD_B	real		Y
BasicTestData	VTHD_C	real		Y
BasicTestData	ITHD_A	real		Y
BasicTestData	ITHD_B	real		Y
BasicTestData	ITHD_C	real		Y
BasicTestData	VSys	real		N
BasicTestData	ISys	real		N
BasicTestData	WattsSys	real		N
BasicTestData	VASys	real		N
BasicTestData	VARSys	real		N
BasicTestData	QSys	real		N
BasicTestData	VMode	nvarchar	6	N
BasicTestData	IMode	nvarchar	6	N

BasicTestData	WMode	nvarchar	6	N
BasicTestData	VAMode	nvarchar	6	N
BasicTestData	VARMode	nvarchar	6	N
BasicTestData	VARSysMode	nvarchar	6	N
BasicTestData	PFMode	nvarchar	6	N
BasicTestData	DataMode	nvarchar	6	N
BasicTestData	Connection View	bit		N
CalibrationVerificationFile	CalibrationVerificationFile_Key	bigint		N
CalibrationVerificationFile	DateTime	datetime		N
CalibrationVerificationFile	TestMode	nvarchar		N
CalibrationVerificationFile	FileName	nvarchar		N
CT	CT_Key	bigint		N
CT	Manufacturer	nvarchar	32	N
CT	Model	nvarchar	16	N
CT	CatalogNumber	nvarchar	15	N
CT	AccuracyClass	nvarchar	6	N
CT	BurdenClass	real		N
CT	NameplateRatio	smallint		N
CT	RatingFactor	real		N
CT	Enabled	bit		N
CT	LastModified	datetime		N
CTBurdenClass	BurdenClass	real		N
CTManufacturer	Manufacturer	nvarchar	32	N
CTManufacturer	Address1	nvarchar	64	Y
CTManufacturer	Address2	nvarchar	64	Y
CTManufacturer	City	nvarchar	50	Y
CTManufacturer	State	nvarchar	2	Y
CTManufacturer	Zip	nvarchar	10	Y
CTManufacturer	Contact	nvarchar	32	Y
CTManufacturer	ContactPhone	nvarchar	16	Y
CTManufacturer	Country	nvarchar	6	Y
CTManufacturer	LastModified	datetime		Y
CTManufacturer	WebSite	ntext	536870911	Y
CTPTAccuracyClass	AccuracyClass	nvarchar	6	N
CTPTAccuracyClass	HighEnd	real		N
CTPTAccuracyClass	HighEndAccuracy	real		N
CTPTAccuracyClass	LowEnd	real		N
CTPTAccuracyClass	LowEndAccuracy	real		N

CTTestDetail	CTTestMaster_Key	bigint		N
CTTestDetail	Burden	real		N
CTTestDetail	PrimaryAmps	real		N
CTTestDetail	SecondaryAmps	real		N
CTTestDetail	PhaseShift	real		N
CTTestMaster	CTTestMaster_Key	bigint		N
CTTestMaster	MasterTestRecord_Key	bigint		N
CTTestMaster	DateTime	datetime		N
CTTestMaster	Phase	nchar	4	N
CTTestMaster	PrimaryProbe	nvarchar	16	N
CTTestMaster	PrimaryProbeSN	nvarchar	15	N
CTTestMaster	SecondaryProbe	nvarchar	16	N
CTTestMaster	SecondaryProbeSN	nvarchar	15	N
CTTestMaster	CTTestMode	smallint		N
DatabaseVersion	Major	int		N
DatabaseVersion	Minor	int		N
DataTrendFile	DataTrendFile_Key	bigint		N
DataTrendFile	MasterTestRecord_Key	bigint		N
DataTrendFile	DateTime	datetime		N
DataTrendFile	FileName	nvarchar	256	N
Harmonic	Harmonic_Key	bigint		N
Harmonic	MasterTestRecord_Key	bigint		N
Harmonic	MeterTestMaster_Key	bigint		N
Harmonic	DateTime	datetime		N
Harmonic	FileName	nvarchar	256	N
LoadTypeCodes	Code	nvarchar	10	N
LoadTypeCodes	Description	nvarchar	50	N
MasterTestRecord	MasterTestRecord_Key	bigint		N
MasterTestRecord	SiteID	nvarchar	32	N
MasterTestRecord	TechName1	nvarchar	32	N
MasterTestRecord	TechName2	nvarchar	32	N
MasterTestRecord	Comment	nvarchar	4000	Y
MasterTestRecord	DataFile	nvarchar	32	Y
MasterTestRecord	AnalyzerSN	nvarchar	12	N
MasterTestRecord	CalibrationDate	datetime		Y
MasterTestRecord	Created	datetime		N
MasterTestRecord	LastModified	datetime		N
MasterTestRecord	SiteRevNum	smallint		N

MasterTestRecord	TimeZoneBiasMinutes	int		N
MasterTestRecord	UTS11	nvarchar	32	Y
MasterTestRecord	UTS12	nvarchar	32	Y
MasterTestRecord	UTS13	nvarchar	32	Y
MasterTestRecord	UTS21	nvarchar	32	Y
MasterTestRecord	UTS22	nvarchar	32	Y
MasterTestRecord	UTS23	nvarchar	32	Y
MasterTestRecord	UTS31	nvarchar	32	Y
MasterTestRecord	UTS32	nvarchar	32	Y
MasterTestRecord	UTS33	nvarchar	32	Y
MasterTestRecord	UTS41	nvarchar	32	Y
MasterTestRecord	UTS42	nvarchar	32	Y
MasterTestRecord	UTS43	nvarchar	32	Y
MasterTestRecord	UTS51	nvarchar	32	Y
MasterTestRecord	UTS52	nvarchar	32	Y
MasterTestRecord	UTS53	nvarchar	32	Y
MasterTestRecord	UTS61	nvarchar	32	N
MasterTestRecord	UTS62	nvarchar	32	N
MasterTestRecord	UTS63	nvarchar	32	N
MasterTestRecord	UTS71	nvarchar	32	N
MasterTestRecord	UTS72	nvarchar	32	N
MasterTestRecord	UTS73	nvarchar	32	N
MasterTestRecord	UTS81	nvarchar	32	N
MasterTestRecord	UTS82	nvarchar	32	N
MasterTestRecord	UTS83	nvarchar	32	N
MasterTestRecord	UTS91	nvarchar	32	N
MasterTestRecord	UTS92	nvarchar	32	N
MasterTestRecord	UTS93	nvarchar	32	N
MasterTestRecord	UTS101	nvarchar	32	N
MasterTestRecord	UTS102	nvarchar	32	N
MasterTestRecord	UTS103	nvarchar	32	N
MasterTestRecord	UTS111	nvarchar	32	N
MasterTestRecord	UTS112	nvarchar	32	N
MasterTestRecord	UTS113	nvarchar	32	N
MasterTestRecord	UTS121	nvarchar	32	N
MasterTestRecord	UTS122	nvarchar	32	N
MasterTestRecord	UTS123	nvarchar	32	N
MasterTestRecord	UTS131	nvarchar	32	N

MasterTestRecord	UTS132	nvarchar	32	N
MasterTestRecord	UTS133	nvarchar	32	N
MasterTestRecord	UTS141	nvarchar	32	N
MasterTestRecord	UTS142	nvarchar	32	N
MasterTestRecord	UTS143	nvarchar	32	N
MasterTestRecord	UTS151	nvarchar	32	N
MasterTestRecord	UTS152	nvarchar	32	N
MasterTestRecord	UTS153	nvarchar	32	N
MasterTestRecord	UTS161	nvarchar	32	N
MasterTestRecord	UTS162	nvarchar	32	N
MasterTestRecord	UTS163	nvarchar	32	N
MasterTestRecord	UTS171	nvarchar	32	N
MasterTestRecord	UTS172	nvarchar	32	N
MasterTestRecord	UTS173	nvarchar	32	N
MasterTestRecord	UTS181	nvarchar	32	N
MasterTestRecord	UTS182	nvarchar	32	N
MasterTestRecord	UTS183	nvarchar	32	N
MasterTestRecord	UTS191	nvarchar	32	N
MasterTestRecord	UTS192	nvarchar	32	N
MasterTestRecord	UTS193	nvarchar	32	N
MasterTestRecord	UTS201	nvarchar	32	N
MasterTestRecord	UTS202	nvarchar	32	N
MasterTestRecord	UTS203	nvarchar	32	N
Meter	Meter_Key	bigint		N
Meter	Manufacturer	nvarchar	32	N
Meter	Model	nvarchar	16	N
Meter	CatalogNumber	nvarchar	15	N
Meter	AccuracyClass	real		N
Meter	Type	nvarchar	2	N
Meter	Class	smallint		N
Meter	TestAmpsHi	real		N
Meter	TestAmpsLo	real		N
Meter	MeterForm	nvarchar	4	N
Meter	Voltage	real		N
Meter	Frequency	real		N
Meter	DemandPeriod	real		N
Meter	Enabled	bit		N
Meter	LastModified	datetime		N

Meter	Kt	real		N
Meter	Imax	real		Y
Meter	I_n	real		Y
Meter	Ist	real		Y
Meter	Style	int		Y
MeterAccuracyClass	AccuracyClass	real		N
MeterCurrentClass	CurrentClass	smallint		N
MeterForm	MeterForm	nvarchar	4	N
MeterForm	Elements	smallint		N
MeterForm	CurrentCircuits	smallint		N
MeterForm	ExternalWires	nvarchar	2	N
MeterForm	Description	nvarchar	64	N
MeterForm	Diagram	nvarchar	64	N
MeterForm	Enabled	bit		N
MeterForm	LastModified	datetime		N
MeterForm	Comment	nvarchar	4000	Y
MeterManufacturer	Manufacturer	nvarchar	32	N
MeterManufacturer	Address1	nvarchar	64	Y
MeterManufacturer	Address2	nvarchar	64	Y
MeterManufacturer	City	nvarchar	50	Y
MeterManufacturer	State	nvarchar	2	Y
MeterManufacturer	Zip	nvarchar	10	Y
MeterManufacturer	Contact	nvarchar	32	Y
MeterManufacturer	ContactPhone	nvarchar	16	Y
MeterManufacturer	Country	nvarchar	6	Y
MeterManufacturer	LastModified	datetime		Y
MeterManufacturer	WebSite	ntext	536870911	Y
MeterTestIntervalDetail	MeterTestMaster_Key	bigint		N
MeterTestIntervalDetail	Index	smallint		N
MeterTestIntervalDetail	DateTime	datetime		N
MeterTestIntervalDetail	TimeSeconds	real		N
MeterTestIntervalDetail	MeasuredPulses	real		N
MeterTestIntervalDetail	Voltage	real		N
MeterTestIntervalDetail	Current	real		N
MeterTestIntervalDetail	W	real		N
MeterTestIntervalDetail	VA	real		N
MeterTestIntervalDetail	VAR	real		N
MeterTestIntervalDetail	PF	real		N

MeterTestIntervalDetail	PercentRegistration	real		N
MeterTestIntervalDetail	Label	nvarchar	100	N
MeterTestMaster	MasterTestRecord_Key	bigint		N
MeterTestMaster	MeterTestGroup_Key	bigint		N
MeterTestMaster	TestIndex	smallint		N
MeterTestMaster	MeterTestMaster_Key	bigint		N
MeterTestMaster	TimeTestBegan	datetime		N
MeterTestMaster	TimeTestSaved	datetime		N
MeterTestMaster	PhantomLoadSetup_Key	bigint		N
MeterTestMaster	EnergyTestMode	smallint		N
MeterTestMaster	TestSeconds	real		N
MeterTestMaster	PulseCount	int		N
MeterTestMaster	Kt	real		N
MeterTestMaster	ExternalPulseCount	int		N
MeterTestMaster	DemandIntervalInMinutes	int		N
MeterTestMaster	UserInternalPulser	int		N
PhantomLoadSetup	Name	nvarchar	32	N
PhantomLoadSetup	CreationDate	datetime		N
PhantomLoadSetup	CustomSetup	bit		N
PhantomLoadSetup	LastModified	datetime		N
PhantomLoadSetup	PhantomLoadSetup_Key	bigint		N
PhantomLoadTest	TestIndex	tinyint		N
PhantomLoadTest	Phase	nvarchar	3	N
PhantomLoadTest	Label	nvarchar	8	N
PhantomLoadTest	Voltage	nvarchar	4	N
PhantomLoadTest	Current	real		N
PhantomLoadTest	CurrentPF	real		N
PhantomLoadTest	LeadLag	nvarchar	4	N
PhantomLoadTest	Pulses	smallint		N
PhantomLoadTest	Time	real		N
PhantomLoadTest	Rotation	nvarchar	3	N
PhantomLoadTest	LastModified	datetime		N
PhantomLoadTest	EnergyTestMode	smallint		N
PhantomLoadTest	PhantomLoadSetup_Key	bigint		N
PhantomLoadTest	EnergyDeliveredOrReceived	nvarchar	3	N
PhantomLoadTest	ComplexTestFile	nvarchar	32	Y
PT	PT_Key	bigint		N
PT	Manufacturer	nvarchar	32	N

PT	Model	nvarchar	16	N
PT	CatalogNumber	nvarchar	15	N
PT	AccuracyClass	nvarchar	6	N
PT	BurdenClass	nvarchar	11	N
PT	NameplateRatio	real		N
PT	RatedVoltage	real		N
PT	Enabled	bit		N
PT	LastModified	datetime		N
PTBurdenClass	BurdenClass	nvarchar	11	N
PTManufacturer	Manufacturer	nvarchar	32	N
PTManufacturer	Address1	nvarchar	64	Y
PTManufacturer	Address2	nvarchar	64	Y
PTManufacturer	City	nvarchar	50	Y
PTManufacturer	State	nvarchar	2	Y
PTManufacturer	Zip	nvarchar	10	Y
PTManufacturer	Contact	nvarchar	32	Y
PTManufacturer	ContactPhone	nvarchar	16	Y
PTManufacturer	Country	nvarchar	6	Y
PTManufacturer	LastModified	datetime		Y
PTManufacturer	WebSite	ntext	536870911	Y
PTTestDetail	PTTestMaster_Key	bigint		N
PTTestDetail	Burden	real		N
PTTestDetail	PrimaryVoltage	real		N
PTTestDetail	SecondaryVoltage	real		N
PTTestDetail	PhaseShift	real		N
PTTestMaster	PTTestMaster_Key	bigint		N
PTTestMaster	MasterTestRecord_Key	bigint		N
PTTestMaster	DateTime	datetime		N
PTTestMaster	Phase	nchar	4	N
PTTestMaster	PrimaryProbe	nvarchar	16	N
PTTestMaster	PrimaryProbeSN	nvarchar	15	N
PTTestMaster	PTTestMode	smallint		N
SiteDescription	SiteID	nvarchar	32	N
SiteDescription	SiteRevNum	smallint		N
SiteDescription	SiteDescription_Key	bigint		N
SiteDescription	Locator	nvarchar	64	Y
SiteDescription	TestDate	datetime		Y
SiteDescription	PercentRegistration	real		Y

SiteDescription	Customer	nvarchar	50	Y
SiteDescription	AccountNumber	nvarchar	20	Y
SiteDescription	Address1	nvarchar	50	Y
SiteDescription	Address2	nvarchar	50	Y
SiteDescription	City	nvarchar	32	Y
SiteDescription	State	nvarchar	15	Y
SiteDescription	Zip	nvarchar	10	Y
SiteDescription	Telephone	nvarchar	16	Y
SiteDescription	PrimaryVoltage	real		Y
SiteDescription	BillingMultiplier	real		Y
SiteDescription	CT_A_Key	bigint		Y
SiteDescription	CT_B_Key	bigint		Y
SiteDescription	CT_C_Key	bigint		Y
SiteDescription	CT_A_SN	nvarchar	16	Y
SiteDescription	CT_B_SN	nvarchar	16	Y
SiteDescription	CT_C_SN	nvarchar	16	Y
SiteDescription	PT_A_Key	bigint		Y
SiteDescription	PT_B_Key	bigint		Y
SiteDescription	PT_C_Key	bigint		Y
SiteDescription	PT_A_SN	nvarchar	16	Y
SiteDescription	PT_B_SN	nvarchar	16	Y
SiteDescription	PT_C_SN	nvarchar	16	Y
SiteDescription	Meter_Key	bigint		Y
SiteDescription	MeterSN	nvarchar	50	Y
SiteDescription	AMR_Key	bigint		Y
SiteDescription	AMR_SN	nvarchar	16	Y
SiteDescription	Enabled	bit		Y
SiteDescription	LastModified	datetime		Y
SiteDescription	MeterNumber	nvarchar	20	Y
SiteDescription	Country	nvarchar	36	Y
SiteDescription	NextTest	datetime		Y
SiteDescription	Substation	nvarchar	32	Y
SiteDescription	CommunicationID	nvarchar	20	Y
SiteDescription	CustomField1	nvarchar	30	Y
SiteDescription	CustomField2	nvarchar	30	Y
SiteDescription	TestSetup_Key	bigint		Y
SiteDescription	ServiceTypeFileName	nvarchar	32	Y
SiteDescription	Kt	real		Y

SiteDescription	MeterNetworkAddress	nvarchar	256	Y
SiteDescription	Instructions	nvarchar	4000	N
SiteDescription	Telephone	nvarchar	50	N
SiteDescription	CustomField3	nvarchar	30	Y
SiteDescription	CustomField4	nvarchar	30	Y
SiteDescription	CustomField5	nvarchar	30	Y
SiteDescription	CustomField6	nvarchar	30	Y
SiteDescription	CustomField7	nvarchar	30	Y
SiteDescription	CustomField8	nvarchar	30	Y
SiteDescription	CustomField9	nvarchar	30	Y
SiteDescription	CustomField10	nvarchar	30	Y
SiteDescription	CustomField11	nvarchar	30	Y
SiteDescription	CustomField12	nvarchar	30	Y
SiteDescription	CustomField13	nvarchar	30	Y
SiteDescription	CustomField14	nvarchar	30	Y
SiteDescription	CustomField15	nvarchar	30	Y
SiteDescription	CustomField16	nvarchar	30	Y
SiteDescription	CustomField17	nvarchar	30	Y
SiteDescription	CustomField18	nvarchar	30	Y
SiteDescription	CustomField19	nvarchar	30	Y
SiteDescription	CustomField20	nvarchar	30	Y
SiteDescription	CustomField21	nvarchar	30	Y
SiteDescription	CustomField22	nvarchar	30	Y
SiteDescription	CustomField23	nvarchar	30	Y
SiteDescription	CustomField24	nvarchar	30	Y
SiteDescription	CustomField25	nvarchar	30	Y
SiteDescription	CustomField26	nvarchar	30	Y
SiteDescription	CustomField27	nvarchar	30	Y
SiteDescription	CustomField28	nvarchar	30	Y
SiteDescription	CustomField29	nvarchar	30	Y
SiteDescription	CustomField30	nvarchar	30	Y
SiteDescription	CustomField31	nvarchar	30	Y
SiteDescription	CustomField32	nvarchar	30	Y
SiteDescription	CustomField33	nvarchar	30	Y
SiteDescription	CustomField34	nvarchar	30	Y
SiteDescription	CustomField35	nvarchar	30	Y
SiteDescription	CustomField36	nvarchar	30	Y
SiteDescription	CustomField37	nvarchar	30	Y

SiteDescription	CustomField38	nvarchar	30	Y
SiteDescription	CustomField39	nvarchar	30	Y
SiteDescription	CustomField40	nvarchar	30	Y
SiteDescription	CustomField41	nvarchar	30	Y
SiteDescription	CustomField42	nvarchar	30	Y
SiteDescription	CustomField43	nvarchar	30	Y
SiteDescription	CustomField44	nvarchar	30	Y
SiteDescription	CustomField45	nvarchar	30	Y
SiteDescription	CustomField46	nvarchar	30	Y
SiteDescription	CustomField47	nvarchar	30	Y
SiteDescription	CustomField48	nvarchar	30	Y
SiteDescription	CustomField49	nvarchar	30	Y
SiteDescription	CustomField50	nvarchar	30	Y
SiteDescription	CustomField51	nvarchar	30	Y
SiteDescription	CustomField52	nvarchar	30	Y
SiteDescription	CustomField53	nvarchar	30	Y
SiteDescription	CustomField54	nvarchar	30	Y
SiteDescription	CustomField55	nvarchar	30	Y
SiteDescription	CustomField56	nvarchar	30	Y
SiteDescription	CustomField57	nvarchar	30	Y
SiteDescription	CustomField58	nvarchar	30	Y
SiteDescription	CustomField59	nvarchar	30	Y
SiteDescription	CustomField60	nvarchar	30	Y
TestSetup	TestSetup_Key	bigint		N
TestSetup	Name	nvarchar	32	N
TestSetup	PhantomLoadSetup_Key	bigint		Y
TestSetup	TestRevs	smallint		Y
TestSetup	DemandInterval	smallint		Y
TestSetup	TestTime	smallint		Y
TestSetup	HasCTTest	bit		N
TestSetup	HasPTTest	bit		N
TestSetup	LastModified	datetime		Y
TestSetup	HasPhantomLoadTest	bit		N
TestSetup	HasCustomerLoadTest	bit		N
TestSetup	MaxCTBurden	real		Y
TestSetup	MaxPTBurden	real		Y
TestSetup	CTTestMode	smallint		Y
TestSetup	PTTestMode	smallint		Y

TestSetup	DoCustomerLoadwithDemand	bit		N
TestSetup	SyncDemandToRealTime	bit		N
TestSetup	EnergyTestMode	smallint		Y
UserFieldNames	UserField1Name	nvarchar	32	Y
UserFieldNames	UserField2Name	nvarchar	32	Y
UserFieldNames	UserField3Name	nvarchar	32	Y
UserFieldNames	UserField4Name	nvarchar	32	Y
UserFieldNames	UserField5Name	nvarchar	32	Y
UserFieldNames	UserField6Name	nvarchar	32	Y
UserFieldNames	UserField7Name	nvarchar	32	Y
UserFieldNames	UserField8Name	nvarchar	32	Y
UserFieldNames	UserField9Name	nvarchar	32	Y
UserFieldNames	UserField10Name	nvarchar	32	Y
UserFieldNames	UserField11Name	nvarchar	32	Y
UserFieldNames	UserField12Name	nvarchar	32	Y
UserFieldNames	UserField13Name	nvarchar	32	Y
UserFieldNames	UserField14Name	nvarchar	32	Y
UserFieldNames	UserField15Name	nvarchar	32	Y
UserFieldNames	UserField16Name	nvarchar	32	Y
UserFieldNames	UserField17Name	nvarchar	32	Y
UserFieldNames	UserField18Name	nvarchar	32	Y
UserFieldNames	UserField19Name	nvarchar	32	Y
UserFieldNames	UserField20Name	nvarchar	32	Y
UserFieldNames	UserField21Name	nvarchar	32	Y
UserFieldNames	UserField22Name	nvarchar	32	Y
UserFieldNames	UserField23Name	nvarchar	32	Y
UserFieldNames	UserField24Name	nvarchar	32	Y
UserFieldNames	UserField25Name	nvarchar	32	Y
UserFieldNames	UserField26Name	nvarchar	32	Y
UserFieldNames	UserField27Name	nvarchar	32	Y
UserFieldNames	UserField28Name	nvarchar	32	Y
UserFieldNames	UserField29Name	nvarchar	32	Y
UserFieldNames	UserField30Name	nvarchar	32	Y
UserFieldNames	UserField31Name	nvarchar	32	Y
UserFieldNames	UserField32Name	nvarchar	32	Y
UserFieldNames	UserField33Name	nvarchar	32	Y
UserFieldNames	UserField34Name	nvarchar	32	Y
UserFieldNames	UserField35Name	nvarchar	32	Y

UserFieldNames	UserField36Name	nvarchar	32	Y
UserFieldNames	UserField37Name	nvarchar	32	Y
UserFieldNames	UserField38Name	nvarchar	32	Y
UserFieldNames	UserField39Name	nvarchar	32	Y
UserFieldNames	UserField40Name	nvarchar	32	Y
UserFieldNames	UserField41Name	nvarchar	32	Y
UserFieldNames	UserField42Name	nvarchar	32	Y
UserFieldNames	UserField43Name	nvarchar	32	Y
UserFieldNames	UserField44Name	nvarchar	32	Y
UserFieldNames	UserField45Name	nvarchar	32	Y
UserFieldNames	UserField46Name	nvarchar	32	Y
UserFieldNames	UserField47Name	nvarchar	32	Y
UserFieldNames	UserField48Name	nvarchar	32	Y
UserFieldNames	UserField49Name	nvarchar	32	Y
UserFieldNames	UserField50Name	nvarchar	32	Y
UserFieldNames	UserField51Name	nvarchar	32	Y
UserFieldNames	UserField52Name	nvarchar	32	Y
UserFieldNames	UserField53Name	nvarchar	32	Y
UserFieldNames	UserField54Name	nvarchar	32	Y
UserFieldNames	UserField56Name	nvarchar	32	Y
UserFieldNames	UserField57Name	nvarchar	32	Y
UserFieldNames	UserField58Name	nvarchar	32	Y
UserFieldNames	UserField59Name	nvarchar	32	Y
UserFieldNames	UserField60Name	nvarchar	32	Y
UtsFieldNames	UtsField11Name	nvarchar	32	Y
UtsFieldNames	UtsField12Name	nvarchar	32	Y
UtsFieldNames	UtsField13Name	nvarchar	32	Y
UtsFieldNames	UtsField21Name	nvarchar	32	Y
UtsFieldNames	UtsField22Name	nvarchar	32	Y
UtsFieldNames	UtsField23Name	nvarchar	32	Y
UtsFieldNames	UtsField31Name	nvarchar	32	Y
UtsFieldNames	UtsField32Name	nvarchar	32	Y
UtsFieldNames	UtsField33Name	nvarchar	32	Y
UtsFieldNames	UtsField41Name	nvarchar	32	Y
UtsFieldNames	UtsField42Name	nvarchar	32	Y
UtsFieldNames	UtsField43Name	nvarchar	32	Y
UtsFieldNames	UtsField51Name	nvarchar	32	Y
UtsFieldNames	UtsField52Name	nvarchar	32	Y

UtsFieldNames	UtsField53Name	nvarchar	32	Y
UtsFieldNames	UtsField61Name	nvarchar	32	Y
UtsFieldNames	UtsField62Name	nvarchar	32	Y
UtsFieldNames	UtsField63Name	nvarchar	32	Y
UtsFieldNames	UtsField71Name	nvarchar	32	Y
UtsFieldNames	UtsField72Name	nvarchar	32	Y
UtsFieldNames	UtsField73Name	nvarchar	32	Y
UtsFieldNames	UtsField81Name	nvarchar	32	Y
UtsFieldNames	UtsField82Name	nvarchar	32	Y
UtsFieldNames	UtsField83Name	nvarchar	32	Y
UtsFieldNames	UtsField91Name	nvarchar	32	Y
UtsFieldNames	UtsField92Name	nvarchar	32	Y
UtsFieldNames	UtsField93Name	nvarchar	32	Y
UtsFieldNames	UtsField101Name	nvarchar	32	Y
UtsFieldNames	UtsField102Name	nvarchar	32	Y
UtsFieldNames	UtsField103Name	nvarchar	32	Y
UtsFieldNames	UtsField111Name	nvarchar	32	Y
UtsFieldNames	UtsField112Name	nvarchar	32	Y
UtsFieldNames	UtsField113Name	nvarchar	32	Y
UtsFieldNames	UtsField121Name	nvarchar	32	Y
UtsFieldNames	UtsField122Name	nvarchar	32	Y
UtsFieldNames	UtsField123Name	nvarchar	32	Y
UtsFieldNames	UtsField131Name	nvarchar	32	Y
UtsFieldNames	UtsField132Name	nvarchar	32	Y
UtsFieldNames	UtsField133Name	nvarchar	32	Y
UtsFieldNames	UtsField141Name	nvarchar	32	Y
UtsFieldNames	UtsField142Name	nvarchar	32	Y
UtsFieldNames	UtsField143Name	nvarchar	32	Y
UtsFieldNames	UtsField151Name	nvarchar	32	Y
UtsFieldNames	UtsField152Name	nvarchar	32	Y
UtsFieldNames	UtsField153Name	nvarchar	32	Y
UtsFieldNames	UtsField161Name	nvarchar	32	Y
UtsFieldNames	UtsField162Name	nvarchar	32	Y
UtsFieldNames	UtsField163Name	nvarchar	32	Y
UtsFieldNames	UtsField171Name	nvarchar	32	Y
UtsFieldNames	UtsField172Name	nvarchar	32	Y
UtsFieldNames	UtsField173Name	nvarchar	32	Y
UtsFieldNames	UtsField181Name	nvarchar	32	Y

UtsFieldNames	UtsField182Name	nvarchar	32	Y
UtsFieldNames	UtsField183Name	nvarchar	32	Y
UtsFieldNames	UtsField191Name	nvarchar	32	Y
UtsFieldNames	UtsField192Name	nvarchar	32	Y
UtsFieldNames	UtsField193Name	nvarchar	32	Y
UtsFieldNames	UtsField201Name	nvarchar	32	Y
UtsFieldNames	UtsField202Name	nvarchar	32	Y
UtsFieldNames	UtsField203Name	nvarchar	32	Y
Waveform	Waveform_Key	bigint		N
Waveform	MasterTestRecord_Key	bigint		N
Waveform	MeterTestMaster_Key	bigint		N
Waveform	DateTime	datetime		N
Waveform	FileName	nvarchar	256	N