

MET/TRACK® **Software**

Version 7.3

Users Manual

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Introduction

This manual describes the asset management functions included in Fluke MET/TRACK[®] Software. All the other applications that make up the software are dependent on the inventory and event records for each asset stored in the database.

When an automated calibration is done, the Run Time application automatically records the event in the database. However, MET/TRACK can be used to record calibration or maintenance events manually. Many companies send instruments out to third party calibration service providers, but still need to track their calibration, repair and location status. MET/TRACK is designed to accommodate this type of customer as well as the customer that calibrates all instruments in house.

Safety Information

Calibration systems may generate or measure dangerous voltages as required by the instrument calibration process. Both the operator and the procedure writer must be aware of possible hazards.

Warning

To prevent possible electrical shock, fire, or personal injury:

- **Never use a screen saver when using the Run Time or Procedure Editor applications. Screen savers will hide the high voltage safety symbol. The Run Time and Editor programs control test instruments and can cause them to output dangerous voltage levels. The high voltage safety symbol indicates when dangerous voltage is present.**
- **Use interconnect wiring and adapters rated for the highest voltage and current levels carried.**
- **Never touch exposed conductive portions of signal interconnect wiring, even after instruments have been turned off.**

- **Only touch the insulated portion of a connector. First disconnect the interconnect wiring at the source, then at the measurement side.**
- **Always use insulated adjustment tools.**
- **If the calibration program is abnormally terminated, verify that the front panels of source instruments indicate standby mode.**
- **When writing procedures, make sure that procedures minimize the time during which dangerous voltages are applied.**

How to Contact Fluke

To contact Fluke, call one of the following telephone numbers:

- Technical Support USA: 1-800-44-FLUKE (1-800-443-5853)
- Calibration/Repair USA: 1-888-99-FLUKE (1-888-993-5853)
- Canada: 1-800-36-FLUKE (1-800-363-5853)
- Europe: +31 402-675-200
- Japan: +81-3-3434-0181
- Singapore: +65-738-5655
- Anywhere in the world: +1-425-446-5500

Or, visit Fluke's website at www.fluke.com.

To register your product, visit <http://register.fluke.com>.

To view, print, or download the latest manual supplement, visit <http://us.fluke.com/usen/support/manuals>.

Basic Database Operations

Data entry tasks are usually performed by operators, but the administrator should be familiar with these applications, too. Becoming expert in all of the applications and utilities can help administrators perform any needed customization more efficiently, and better prepare them to provide training and guidance to data entry and managerial users.

This manual covers tasks related to entering all data. Note that any interaction with the database requires the database engine to be running.

Starting an Application

To connect to the database, proceed as follows:

1. Make certain that the Calibration Data Engine is running. On networked systems, the Data Engine runs on the server.
2. On a single workstation system (not networked), the data engine icon should be minimized on the task bar. It is not necessary to start a Requester on a stand-alone workstation.
3. If the Data Engine is not running, start it. Go to the Start menu, open Fluke Metrology Software, and select Calibration Data Engine.
4. When the **MET/TRACK** application starts, a dialog box appears and prompts you for a **user ID** and **password**. If no user names or passwords have been assigned, use the default user name **fluke** and the password **fluke** and press **ENTER**. If a user name and password have been assigned use those.
5. As shipped, the database has four valid user names and passwords:

User Name	Password
FLUKE	FLUKE
FLUKE0	FLUKE0
FLUKE3	FLUKE3
MT	MT

The MT password is the SYSTEM ADMINISTRATOR Password. The only default passwords allowed for data entry are USER passwords. See the *Fluke Metrology Software Users Manual* for instructions and additional information on password changes and management.

Setting User Preferences

Before adding any records, set the User Preferences.

1. From the **Tools** menu, select **Preferences**.
2. Set user **Preferences** or place/remove a checkmark next to the screens that will be needed to enter complete records. You can set the following Preferences:
 - Position of the **Toolbar**
 - View or Hide the **Status Bar** that details the User Name, Desktop selection, Data Source Name, Date and Time as well as the program status.
 - **Regional Settings** allow you to change PC settings like Time, Date, Language, Number and Currency settings.

- Enable **Search Browse** feature. You can turn off the dropdown fields on the Search Engine screen (CTRL-F). If the database has a lot of records, consider turning off this feature to avoid long load times. When the feature is turned off, the dropdown entry fields act like text boxes. To retrieve multiple records, use the wildcard search feature by entering strings such as FL% or FL? to retrieve all records starting with FL.
- Enable **Customer** menus. Uncheck this item if you do not need to maintain customer data and customer Inventory assignment.
- Enable **Maintenance** menus. Uncheck this item if you do not need to record and track asset maintenance records.

Setting Fonts and Field Colors on the Desktop

Required Fields and fields containing a Default Value will have a different background from the other fields on a form. These colors are selected when a user **Desktop** is customized. Desktop settings can be created and edited under the **Setup** menu. Figure 1 illustrates customization in MET/TRACK.

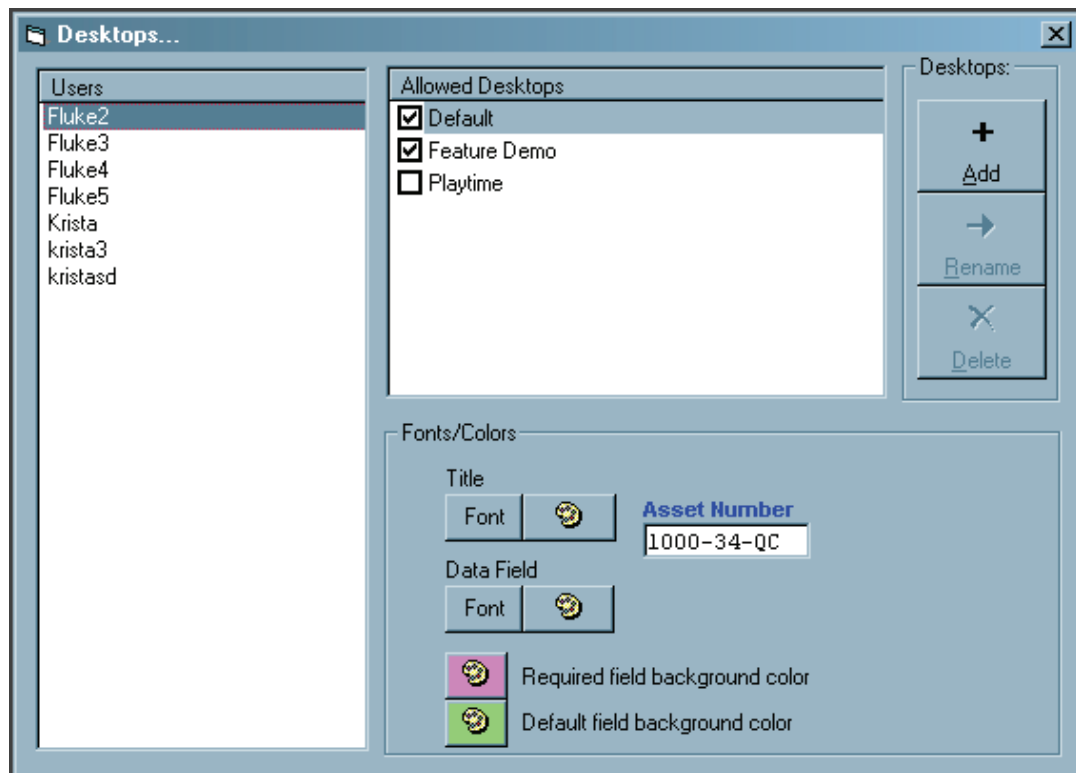


Figure 1. Fonts and Field Colors

zv834s.bmp

To change the font:

1. Click one of the Font selection buttons to open a list of fonts installed on the PC. The style selection displays as shown in Figure 2.

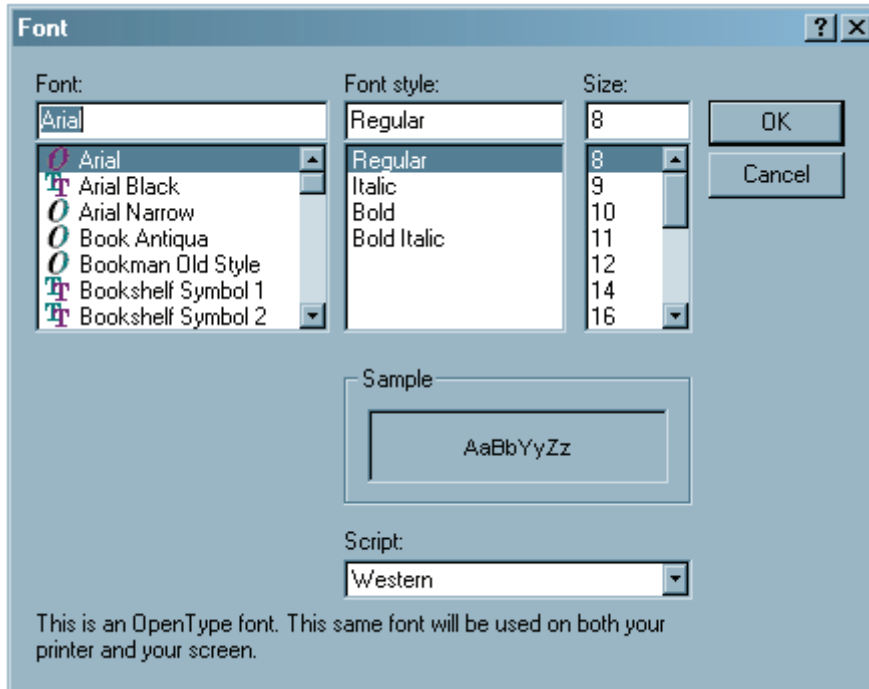


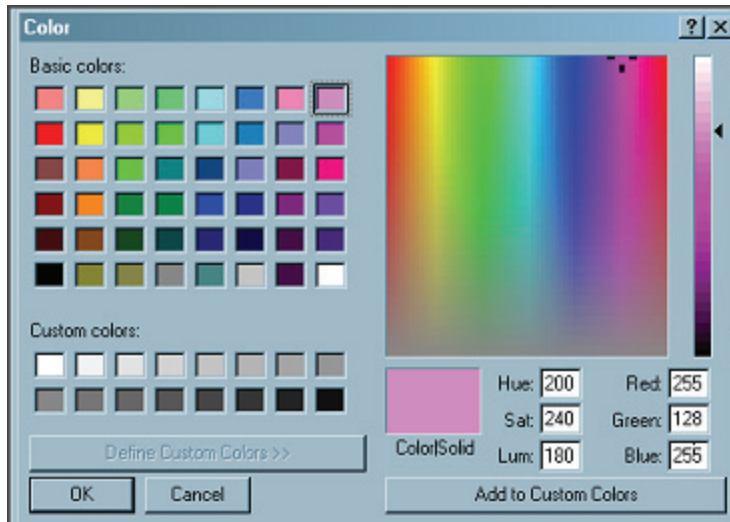
Figure 2. Font Selection

zv835s.bmp

2. Pick the font.
3. Click **OK**.

To select a color palette:

1. Click a color palette to open the color chart (see Figure 3).
2. Choose a color for **Required** fields and for **Default** fields.
3. Make sure that selected colors are not too dark, or the text will not be legible.



zv836s.bmp

Figure 3. Color Selection

MET/TRACK Database Backup

You may opt to create a desktop shortcut to DBBACKUP.EXE (made by Sybase) for your database backup. This utility is found at:

`%PROGRAMFILES%\Fluke\METBASE\SQL Anywhere 11\BIN32`

To create the shortcut, drag the executable onto the Desktop and press the ALT key when releasing. Update the required target line by right-clicking the newly created icon, choose Properties from the menu, and enter the following information on the target line (see Figure 4):

- Path to the backup program, for example, if this is a stand-alone system:
`%PROGRAMFILES%\Fluke\METBASE\SQL Anywhere 11\BIN32\dbbackup.exe`
- -x, the flag to reset the log file
- -y, the flag to proceed without confirmation (this can be safely omitted if a confirming user prompt is required)
- -c, the flag denoting that commands follow
- uid=mt, the required user logon
- pwd=mt, the required administrator password or user defined mt level password. dbf=the path to the database, for example:
`dbf=%PROGRAMDATA%\Fluke\METBASE\metbase.db`
- c:\ the path to the back up directory, for example, c:\backup

The finished target line will look something like this:

```
"%PROGRAMFILES%\Fluke\METBASE\SQL Anywhere  
11\BIN32\dbbackup.exe" -x -y "-cuid=mt; pwd=mt; dbf=  
%PROGRAMDATA%\Fluke\METBASE\metbase.db" c:\backup
```

Note

On 64-bit Windows, the environment variable for the program files directory is called %PROGRAMFILES(x86)% instead.

Before executing the backup, stop the database server via the Stop Calibration Data Engine shortcut.

On Windows 7 and Vista, right-click the shortcut and select Run as administrator, when executing the backup.

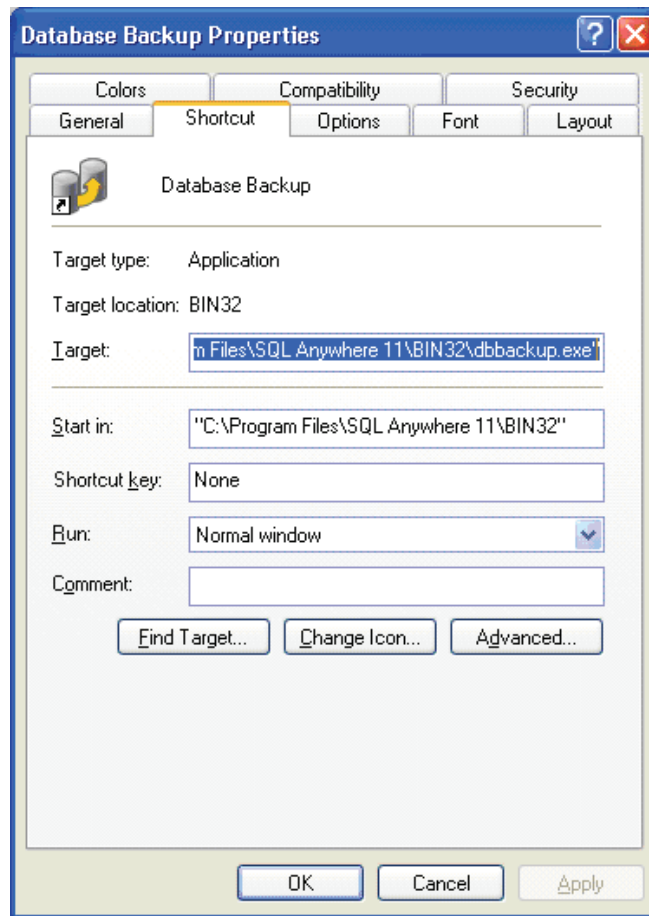


Figure 4. Database Backup Properties

dbbackshortcut.bmp

Entry Tools and Screen Navigation

Toolbar Definitions



Add Record Toolbar

zv300s.bmp

Use these tools to:

- Add Inventory Records
- Add Calibration Records
- Add Location Records
- Add Maintenance/Repair Records
- Add Customer Records



Edit Record Toolbar

zv301s.bmp

Use these tools to:

- Edit Inventory Records
- Edit Add Calibration Records
- Edit Add Location Records
- Edit Add Maintenance/Repair Records
- Edit Add Customer Records



Search Toolbar

zv302s.bmp

Use the Search Toolbar to find an asset using a single search field.

Navigating Browse Screens

The Browse screen in Figure 5 displays when a search is done. The browse screens contain basic information about an asset and its related history. Browse screens act as paths to the entry screens as well.

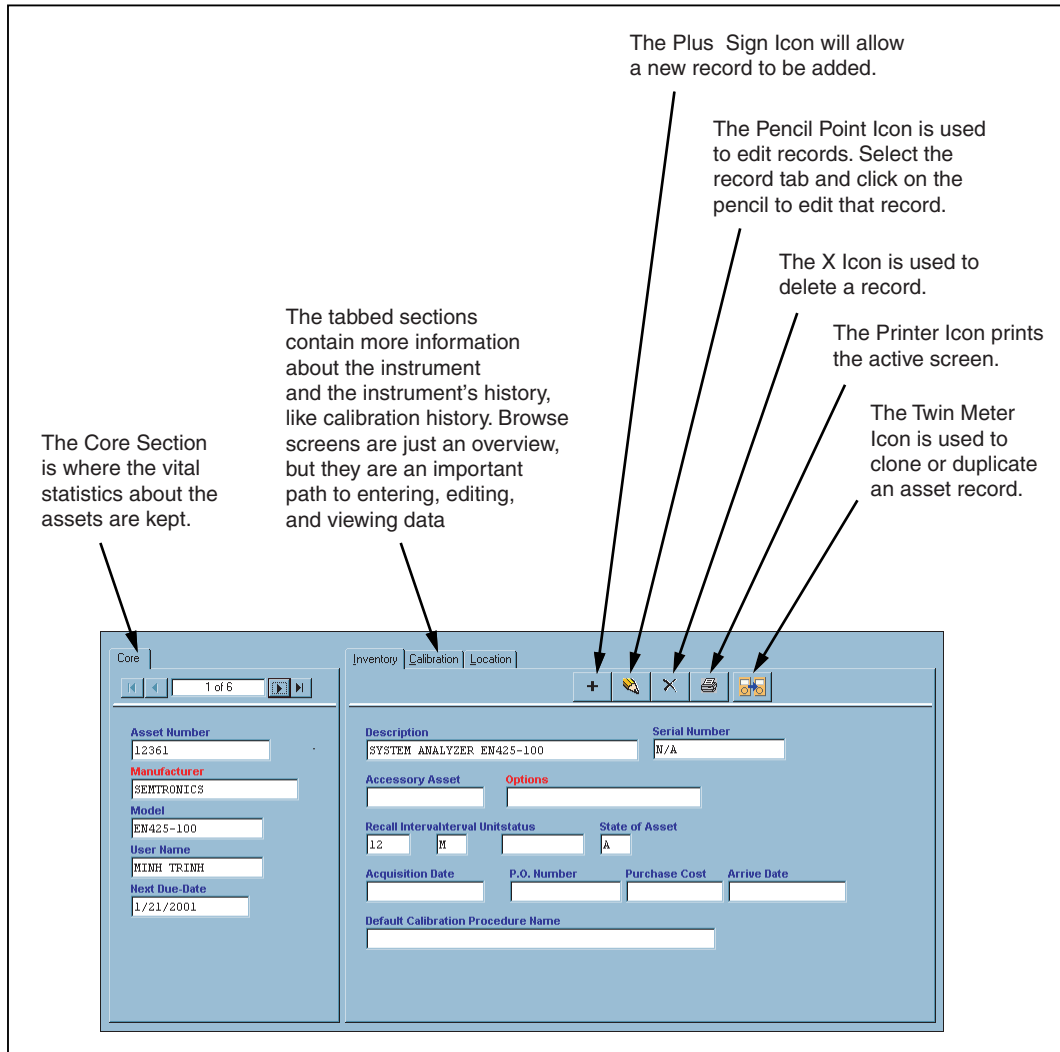


Figure 5. Parts of a Browse Screen

ii300f.eps

Navigating Entry/Edit Screens

Entry and Edit Screens can be customized by the System Administrator and their appearance will vary from installation to installation. There are many types of special fields in MET/TRACK. Most special fields are designated by a color either in the field background, or the title, or in an adjacent line. Figure 6 is an overview of a typical Inventory Entry/Edit screen.

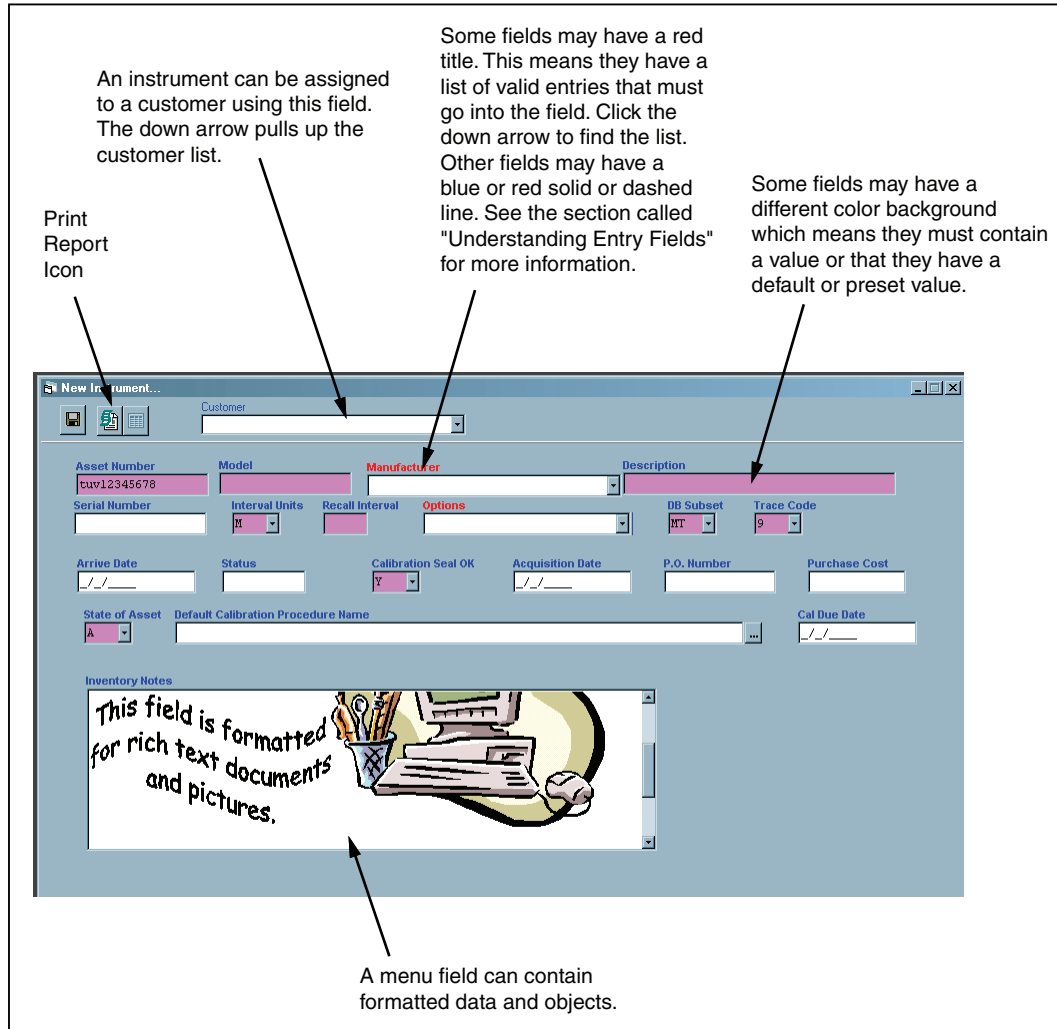


Figure 6. Parts of an Entry/Edit Screen

ii301f.eps

Adding a New Asset to the Database

Creating the Inventory Record

To create an inventory record:

1. Log into the **MET/TRACK** application using the instructions found earlier in this chapter.
2. From the menu, select **Add**, then **Inventory Record** or use the toolbar. There are two main toolbar sections, **Add** and **Edit**. The **Add** tools are preceded by a plus sign. The tool tip or function of each tool displays as the cursor passes over it. The next dialog box asks for a new asset number, see Figure 7.
3. Type in a unique number or alpha-numeric combination that is not already in use as an asset number. The systems will not take a number that is already in use. Several methods are available to search for asset numbers:
 - Select the down arrow to browse through the list.
 - Type **?** to bring up the whole list.
 - Select **Last+** to find the last asset added.
 - Select **Max+** to find the highest number, or alpha-numeric value added. Then select **Increment+** to go to the next, unused number.
 - Once the value is entered, click the to save the number and continue adding the record.

The screenshot shows a 'New Instrument...' dialog box with the following fields and values:

Customer											
Asset Number	tuv123410	Model	123	Manufacturer	Fluke	Serial Number	123890				
Description		Recall Interval		Interval Units	M	Options	None	Trace Code	9		
Arrive Date	8/1/2002	Status	OK	Calibration Seal OK	Y	P.O. Number		Price		DB Subset	MT
State of Asset	A	Default Calibration Procedure Name									
Inventory Notes											


Figure 7. New Instrument Inventory Form

zv303s.bmp


Assigning a New Asset to a Customer


If the asset belongs to a customer it can be assigned to that customer from the entry screen. The **Customer** selection box will be visible on the toolbar if the customer screen view has been enabled. If not, it can be enabled now.

To assign a new asset:

1. Select the **Tools** menu.
2. Select the **Preferences** menu item and put a check mark next to **Enable Customer Menus**. The entry form must be closed and re-opened to enable changes.
3. When the **Customer** selection field is visible, click the dropdown arrow and select the appropriate customer from the list.
4. Click  when all the required fields are populated, or at least those with a different colored background. Once the asset has been saved the **Clone** button appears.

Using the Clone Feature

The clone feature allows you to duplicate “like” inventory records easily and quickly. The **Clone** button is the twin meter icon, . To clone a record:

1. Assign a new asset number in the Clone Asset dialog box, see Figure 8.
2. Click the .

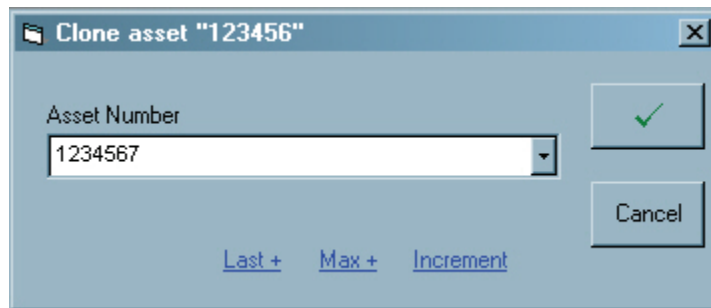


Figure 8. Clone Asset

zv304s.bmp

The **New Instrument** screen will reappear with the same information that was entered for the previous instrument, with two exceptions:

- The **Asset Number** will be the new one entered in the **Clone Asset Number** dialog box.
 - The serial number field is blank and ready to accept a new value.
3. Type in a new serial number.

4. Click .

Understanding Entry Fields

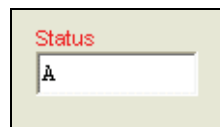
By default, the **Inventory Screen** and the various **History Screens** have required fields. A required field must contain an entry. These fields will be a different color from the non-required fields. Fields with default values are designated also by a different color. A field with a default is often, but not always, a required field as well. The default value is one set by the System Administrator and is usually the most logical entry for the field. The field colors and default values are set when the System Administrator creates or customizes the user **Desktops**.

There can be other specially designated fields on forms. These fields usually require the user to choose an entry from a prefabricated list. These lists can be simple **Pick Lists**, which have a list of suggested, but not required values or **Required** simple **Validation** or **Linked Validation** lists. A **Pick List** is marked with a solid blue line and dropdown arrow. A user can make an entry in this field that is not on the **Pick List** or choose a value from the list. Those fields that require a value from a **Required Validation List** have the required field background color and a dropdown arrow. An example of a Required Validation Field is shown in the next figure. These fields must contain a value that is on the **Required Validation List**.



zv305s.bmp

If the field is the **Root field** of a **Linked Validation** it too will look like the previous figure. The **Root Field** is the main field which determines the value of all other fields in the Link. It also requires an entry that is on the list. If marked by a dashed red line to the far right of the field, it is a **Secondary Field** in a **Linked Validation** whose value relies entirely on that of the **Root** field to which it is linked. No data can be entered directly into this field from the MET/TRACK user entry screens. A **Merge** field is designated by a red title.



zv837s.bmp

The use of special types of entry fields automates the entry process by providing lists of preselected values or default values. Their use ensures consistent data entry that is easier to manage and maintain.

Recording Events

Each time an asset is calibrated, repaired, or relocated, information is gathered and entered into the database by way of the Calibration, Maintenance, and Location forms. For calibration and repair events, the Results form may also need to be updated.

Every event must be unique. Because the event's date and time are core fields, their function cannot be customized. The system assigns unique ID tags based on the date, time, and event type. To ensure the uniqueness of these ID tags, the system will not allow their duplication.

Recording Location Events

To record a Location Event:

1. Log into the MET/TRACK application using the instructions found earlier in this chapter. Select **Add** then **Location Record** or use the toolbar.

By default, the **Asset Number** dialog box displays the number of the asset currently being entered.

2. Accept the default or type in a new value. The **New Location Record** screen appears.

As in the Inventory Screen, there are some required fields.

3. Enter data into the fields. Pay close attention to those that require values.
4. Save the record.

Recording Maintenance and Repair Events

To record Maintenance and Repair events:

1. Follow the steps above to add a Maintenance or Repair event.

The maintenance date automatically defaults to the current date and the **Interval** and **Interval Units** fields default to the same values as those setup in the Inventory Record. The **Interval** and **Interval Units** can be changed in this screen to calculate the **Due Date**. The **Due-Date** and **Due Time** fields are calculated and cannot be changed by directly typing a new date into the field.

2. Use the **Tab** key to move from field to field. The **Maintenance Type** field is a validated field.
3. Enter or select a value for all required fields that do not have a default value and save the record.

Recording a Calibration Event

Each time an asset is calibrated, information can be gathered and entered into the database either automatically (as a direct consequence of running a MET/CAL procedure), or manually.

1. Log into the MET/TRACK application.
2. Select **Add** then **Calibration Record**, or use the toolbar.
3. Use the default asset number in the **Asset Number** dialog box, or type in a new one, or select the dropdown arrow to search for the correct asset number.
4. Click the **Okay** button and the **New Calibration Record** dialog box opens, see Figure 9.

New Calibration Record...

Cal-date: 09/05/2002 Cal-Time: 15:02:50 Pass: Y Due-Date: / / Due-Time: :.:.

Work Order: Temp: 23.0 Humidity: 45 Interval: 12 Interval Units: M Failed Tests: Marginal Tests:

Calibration Procedure Used: ... ⚡

Comment:

User Defined: 9/5/2002

Standards Used:

Asset Number	Standard

Asset Number: 1000 Manufacturer: Fluke Model: 185

Buttons: Last Used Any Used STD SEG STD Table

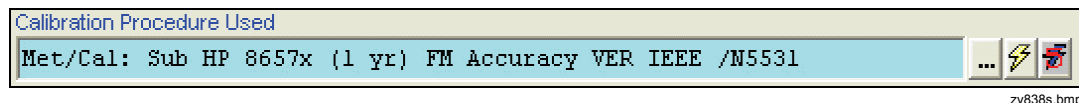
Figure 9. New Calibration Record Form

zv306s.bmp

Some of the fields are already populated, the **Cal-date** field displays the current date, and the **Pass** field has a default value of Y for “Yes”. The **Temp** and **Humidity** fields and the **Cal-Time** field may also be populated. This varies by installation because default values are set by the Administrator.

There are some tool buttons to the right of the **Calibration Procedure Used** field. The button with three horizontal dots will take the user to the **Met/Cal Procedure List** so an appropriate **Procedure Name** can be selected. The second button has a lightning bolt. This selection will take the user to the **Run-Time Application** to run the calibration procedure for this instrument. If this selection is made the remainder of the **Calibration Record** will be completed by the Run-Time application.

When adding a new calibration record and if the 5500/CAL Run Time is installed, a second lightning bolt button with a 5 drawn over it is available to calibrate the current asset using the 5500/CAL Run time.



5. To complete the entry of the **Calibration Record**, input the **Standards Used** information.
6. Tab or click in the field below the Standards Used description box. This field is marked by a dropdown arrow.
7. Select the arrow to bring up a list of all instruments in the system.
8. Select the instrument, or choose one of the following. The choices for Standards Used are:
 - **Selection**
 - **Last Used**
 - **Any Used**
 - **Standards (STD) Segregate**
 - or anything from the **Standards Table**

The **Standards Table** shown in Figure 10 is a compilation of all the instruments that have ever been used as a **Standard** in a procedure, or any that have been listed in a manually-entered **Calibration Record**.

Asset #	Standard
<input type="checkbox"/> ASSETNUM #1	Datron, 4000A, InvCmnt #1
<input type="checkbox"/> ASSETNUM #10	Datron, 4808, InvCmnt #10
<input type="checkbox"/> ASSETNUM #11	Datron, 9000, InvCmnt #11
<input type="checkbox"/> ASSETNUM #12	Datron, 9100, InvCmnt #12

Buttons: Last Used, Any Used, STD SEG, STD Table

zv307s.bmp

Figure 10. Standards Used Table

The **Standards Used** must be in the database and must have a current **Calibration Record**.

Note

*An Asset by the name of **Fluke Corporation** was added to the database shipped with the software. This, no-cal-required asset can be used as the designated standard if instruments are being sent back to a **Fluke** service center for calibration. Any Calibration Service Provider can be added in this manner to use as a standard. This is a better audit trail than a blank field.*

Note

*The **Due-Date**, calculated with the **Cal-Date**, **Interval** and **Interval Type** (12 M for 12 Months, for example) is filled in, automatically. The Cal-Date defaults to today's date. The Cal Date can be changed in most cases. The system administrator can set the maximum age a cal record can have to be added by certain user levels. For example, a calibration that was done three months ago cannot be entered into the system by a level 3 user if the maximum age of the record is 30 days and the only user that has override permissions is a level 5 user. The **Cal-Due Date** is calculated and cannot be changed by directly typing into the field.*

9. When the **Calibration Record** is complete, click .

The application validates a standard for the event only if that standard's calibration due date has not yet arrived. In the case of assets that require calibration according to number of uses, a calibration due date is not assigned until that number of uses has elapsed. Then, that date becomes its due date. In other words, it becomes immediately due for calibration on the date that it exceeds its number of uses setting.

If calibration time has been suppressed as a core field, it means that a given asset would not be able to be re-calibrated on the same day. Doing so would violate the rule that each calibration event must be uniquely identified, since the database uses Asset Number, Cal Date, and Cal Time as the unique identifier for each cal event.

This may be completely appropriate in some situations, or it may be a hindrance. Only the individual administrator can make that determination, because conditions and requirements vary.

Entering Calibration Results Into the Database

There are two methods that can be used to enter calibration results data into the database:

- The Text Editor method will store the results data in a single field, C2501. Text can be copied and pasted into the results field from any text editor or text document.
- Each piece of data is stored in a separate field. This method of recording results, called Full Results, provides a grid entry format with pre-set column headings for each type of results data.

Entering Results Using a Text Editor

The **Results Form** is tied to each unique Calibration event. The form can only be edited when the corresponding calibration record is open for editing. The Results Form is used as a plain text editor like Notepad. All test results and other applicable data are typed free form into the record.

Using the Results form in this way will store all results in a single database field, **C2501**. Since this is a text field, text documents can be pasted in from other applications. The standard Windows **Copy (Ctrl+ C)** and **Paste (Ctrl+ V)** commands will work in this application.

To enter calibration results from the **New Calibration Record** entry screen, select the **Enter Calibration Results** button from the toolbar on the record being entered. Enter the information by typing or using Copy and Paste functions. The results are saved with the calibration record.

To enter calibration results on a Calibration Record that has already been created, access the Calibration Results editor from a Browse Screen, Menu or Toolbar. Select the Enter Calibration Results button from the toolbar and follow the same procedure as shown above. Again, saving the main Calibration Record will save the results.

When a MET/CAL or 5500/CAL Runtime Procedure stores calibration results, it can generate a line of results data for each test. The file named RSLT_DB.FRM formats these lines and stores them into the database field C2501 as well.

To learn more about how RSLT_DB.FRM is formatted, look in the MET/CAL help files in **%PROGRAMDATA%\Fluke\Help**, under “Overview of Tolerance Computations.”

Note

Form files are stored in the FormFiles subfolder of the METBASE Shared folder (default path is %PROGRAMDATA%\Fluke\METBASE\Shared).

Entering Results using the Full Results Grid

The Full Results Grid is a series of fields that contain detailed test information. Unlike the data stored in C2501, data stored using the Full Results Editor stores each critical piece of data in a separate field. The specific details make up the columns and the individual tests make up the rows of the grid.

To access the Full Results editor from a **New Calibration Record**, a **Browse Screen** or an **Edit Screen**:

1. Select the **Full Results** button from the toolbar on the record.

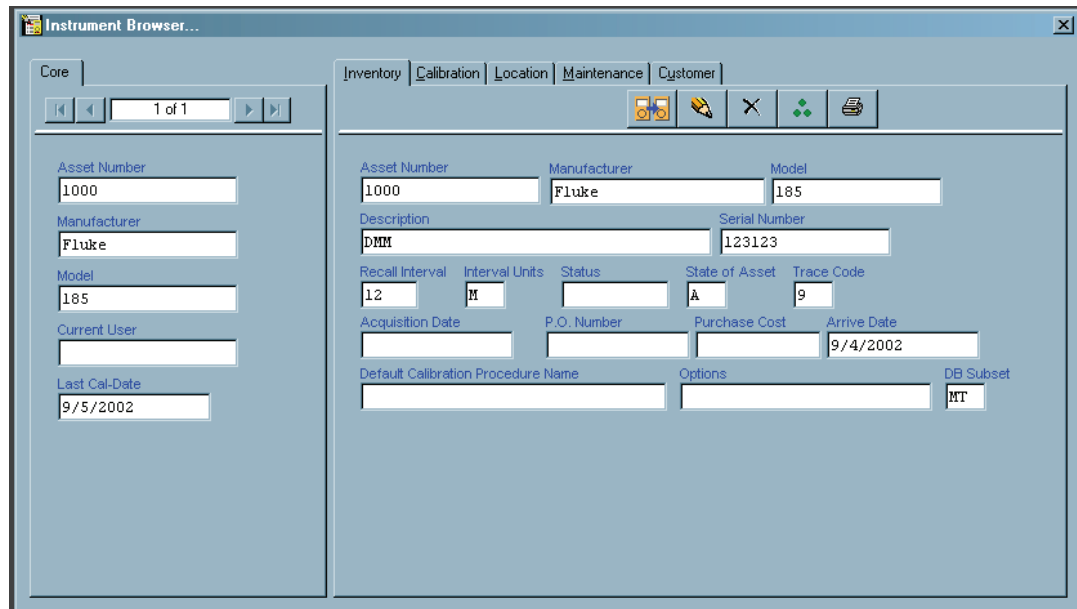
For information on the field headings, their intended use and acceptable values, refer to Results Table documentation in the Manuals Folder in %PROGRAMDATA%\Fluke\Help.

2. When done, select **OK**.

Editing Records

Records can be edited from the **Edit** tools on the **Toolbar**. The **Edit** tools are similar to the **Add** tools. Where the **Add** tools have a plus sign, the **Edit** tools have a pencil point. To edit a record:

1. Select the tool for the type of record to be edited. The **Edit Inventory**, **Calibration**, or **Location** dialog box opens (see Figure 11).



zv309s.bmp

Figure 11. Edit Record Dialog Box

2. Select the default asset number in the **Asset Number Selection** box, or browse with the dropdown arrow, or type in the asset number to edit.
3. To make changes, select the field and type in the changes.

Note

If the field is grayed out, it cannot be edited by the user. The Entry and Edit (or update) permissions for each field are set by the Administrator when configuring field properties.

If the field to edit is designated by a solid or dashed line, dropdown arrow, or red title, it is a specially configured field that may have to be edited in another way. A field with a Required Validation List or the Root Field in a Linked Validation has a dropdown arrow. A suggested Pick List is marked with a solid blue line and dropdown arrow. If a field is marked by a dashed red line to the far right of the field, it is a member of a Linked validation that cannot be edited by typing in the field from this edit screen. A Merge field is also designated by a red title, but no dropdown list.

Editing Validated Fields or Merge Data in Records

To edit a validated field or merge data:

1. With the record open, select the **Tools** menu. The additional editing choices are Edit User Validation List and Edit Merge Data. User Tables can also be edited from the Tools menu.

The **Validation Editor** appears if you have sufficient editing permissions set by the System Administrator. If you do not have sufficient permission, the Edit choices will not be available from the Tools menu.

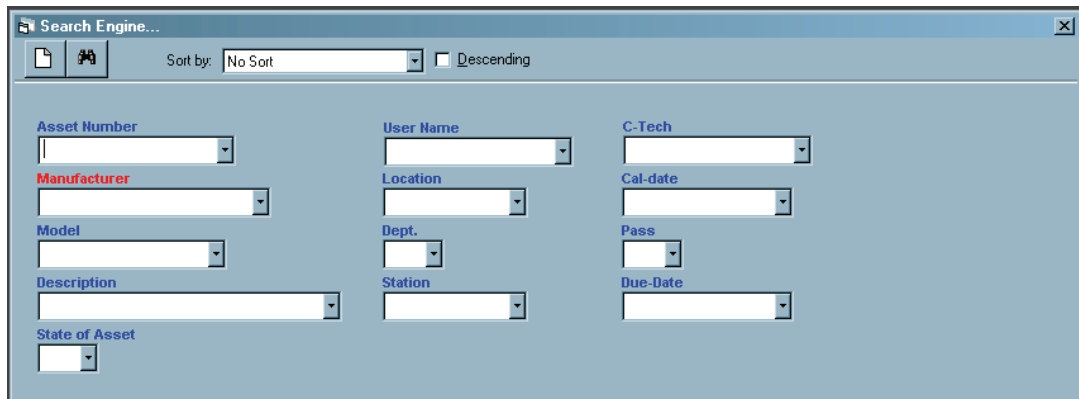
2. Select the **Validation** field or the **Merge** field. The only field the edit function can be accessed from is the Root field. The Selected Validation list, Linked Validation grid, or Merge Table displays.
3. Make changes and close the Validation editor.
4. Save the record. Saving the record will save any changes made to Validation or Merge data. Only an Administrator can choose to drop Linked Validation Tables, Merge Tables, or simple Validation lists from the database.

Browsing the Data

Using the Search Screen

The MET/TRACK application allows users to view information in the database and reports.

1. Log into the MET/TRACK application.
2. Select **Search** and then select the Search Engine. The **Search Engine** dialog box opens, see Figure 12. Dropdown arrows are part of each field. To turn off auto-populating the dropdown fields with database data, go to **Tools, Preferences, Enable Search Browse** and uncheck it.



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Figure 12. Search Engine Dialog Box

3. Choose the **Asset Number** field to browse and click the dropdown arrow.
4. Select an asset number. Any field or combination of fields can be searched. The search can be very general or very specific.
5. Click the **Search** button represented by the pair of binoculars.

If an asset meets the selected criteria, the **Browse Screen** displays the basic information about the asset.

The Browse Screens

The **Instrument Browser** dialog box is divided into sections. The **Core** section displays the vital statistics of the asset. The tabbed sections display **Inventory** data, **Calibration** data, and **Location** data. Each section of the dialog box can be customized by the System Administrator. Fields can be added or suppressed. Field headings, font type, and field lengths can be changed. Screens should be customized to meet the requirements of each company.

The **Inventory** data is unique for each asset. The **Calibration** and **Location** data is historic and since it changes with each event, a new record is created each time. For this reason the Calibration and Location Screens have back and forward arrows to make finding a specific record easier. Figure 13 shows the **Inventory** tab. The tool bar functions allow you to add and edit records.

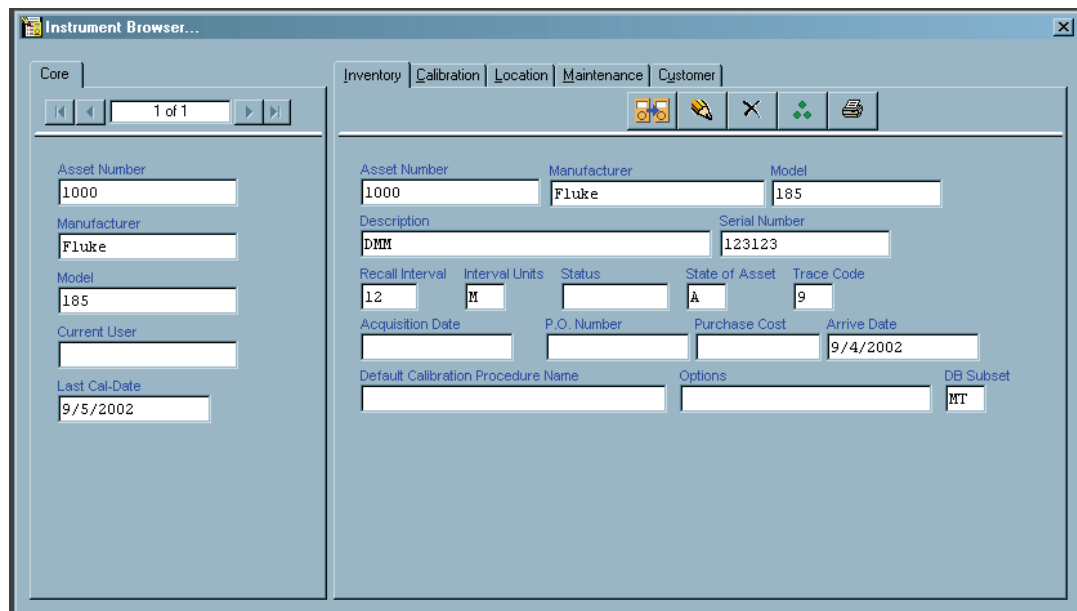


Figure 13. Instrument Browser Dialog Box

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Using the Browse Toolbar

The browse toolbar can do a basic search on a single **Field** and **Value**. A user may want to find an asset from a group of assets just entered. Maybe that group of assets all had the same **Manufacturer**.


1. From the **Browse** toolbar select I4202, Manufacturer.

2. Locate and select a **Value** from the pull-down list by selecting the dropdown arrow and highlighting a specific Manufacturer or by typing the name of a Manufacturer to locate. The system will search based on the first few characters typed. For example, typing F followed by L will bring up the name Fluke.
3. When the Field and Value browse fields are populated, select the Search tool, (the pair of binoculars).



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The system will bring up all assets in the database that meet the selected criteria. If more than one item meets the criteria there will be search arrow keys in the **Core** tab. When in the data browser screen, the left and right arrow keys move one record at a time. If the CTRL is held down, each left and right arrow click moves through 10% of the records.

4. Continue to scroll through the list to find the record.
5. Click the Search menu to access the Search Engine.
6. Choose the Manufacturer field to browse and click the dropdown arrow. Select a manufacturer from the list. Any field or combination of fields can be searched. The search can be very general or very specific.
7. Click .
8. If an asset meets the selected criteria, the **Instrument Browser** displays the basic information about the asset.
9. If more than one asset meets the specified criteria, scroll through the records using the right and left arrow keys, or scroll 10 records at a time by holding down the Ctrl key and using the right and left arrows.

Editing a Record from the Browse Screen


1. Locate an asset using the **Search** engine. As mentioned earlier, the types of screens available for editing with the **Instrument Browser** are seen as tabs on the **Browse Screen**.
2. Select the tab that corresponds with the record to be edited.
3. Select the **Edit** tool from the toolbar, the button that looks like a pencil. The **Edit Inventory** or **Calibration, Location, Maintenance** or **Customer** screen displays depending on the record type selected and the record types enabled in the **Preferences** settings.
4. Select a field and type in the changes.

5. Save the record.

Deleting a Calibration Record

⚠ Caution


Deleting a calibration irretrievably removes information from the database.

Only level 4 and 5 operators can delete records from the database. To delete a calibration event, view it on the **Calibration Form** and click .

Purging an Asset

⚠ Caution

Purging an asset irretrievably removes information from the database.

Only level 4 and 5 operators can purge records from the database. It is not possible to purge an asset that is used as a standard. To purge an asset, view it on the **Inventory** form and click .

Special Functions of the MET/TRACK Tools Menu

Additional special functions are accessed within the Tools menu. These special functions allow the user to **Edit User Tables**, **Combine Calibrations**, **Change Asset Number**, **Change Password** and access additional **Fluke Metrology Software** applications.

Editing User Tables

To edit user tables, two conditions must be met:

- One or more user tables have been created by the System Administrator.
 - The current user has security permission to edit user tables.
1. Select the User Table to edit. Figure 14 shows the Parts List table editor.

ID	Name	Description	Cost	Qnt	Min Qnt	Order Date	Vendor
11213	Screw	Screw	\$0.05	25	5	1/12/2001	Screwmaster
43141	Bolt	Steel Bolt	\$0.67	2	1	2/3/2004	The Bolt Group
23	Housing	Aluminum Housing	\$5.23	1	1	12/3/2003	Fasteners R Us
177178	Pin	Pin (head sold separately)	\$0.01	122	100	4/1/2001	The Party Store

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Figure 14. Parts List Table

2. Make any changes and close the editor. Changes save automatically.

Combining Calibration Events

MET/CAL offers an advanced feature to combine calibration events. This feature is useful when a calibration event is split into several parts or over more than one day.

1. From the **Tools** Menu in the **MET/TRACK** application, select **Combine Calibrations** to open the dialog box shown in Figure 15.

Order	Cal-date	Cal-Time	Pass	Found/Left	Calibration Procedure Used
	9/21/2004	10:40:09	Y		VENDOR PROVIDED
	7/2/2002	17:19:48	Y		VENDOR PROVIDED
	1/1/1999	14:38:03	Y		VENDOR PROVIDED
	7/8/1996	15:00:00	Y	FOUND-LEFT	VENDOR PROVIDED
	4/10/1996	23:00:00	Y	FOUND-LEFT	VENDOR PROVIDED
	1/11/1996	11:00:00	Y	FOUND-LEFT	VENDOR PROVIDED
	10/14/1995	06:30:00	Y	FOUND-LEFT	VENDOR PROVIDED
	7/18/1995	12:00:00	Y	FOUND-LEFT	VENDOR PROVIDED
	4/20/1995	14:20:00	Y	FOUND-LEFT	VENDOR PROVIDED
	1/24/1995	19:59:00	Y	FOUND-LEFT	VENDOR PROVIDED
	10/28/1994	08:00:00	Y	FOUND-LEFT	VENDOR PROVIDED
	8/1/1994	10:30:00	Y	FOUND-LEFT	VENDOR PROVIDED

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Figure 15. Combine Calibrations Dialog Box

2. Enter the Asset Number of the calibration events being combined and how many days old the calibration events can be.

3. Click the **Update List** button.
4. Decide which record is the first in the series, second, and so on.
5. Number them in the boxes provided by clicking into the box, in order, or highlighting the entire record and typing in the correct number.
6. To change the order, click the **Clear Order** button and start over.
7. Click the **Combine** button. Tell the system to Re-Assign the Pass Field or not to do so. Follow the on-screen prompts.

There will now be another record in the database that is a combination of the selected records. One Calibration Certificate and one Calibration Report can now be printed reflecting data from all the combined records.

- The asset's most recent calibration event is used as the root summary for creating the new event, even if it was not selected in the order. The feature assumes it will be selected.
- If any one of the calibration events is a FAIL, the new combined record is a FAIL.
- In general, all of the values from the most recent calibration are used as the values in the new summary.
- The following fields are summed up from all the selected calibration events: 2350, 2351, 2352, 2353, 2324, and 2328.
- Standards are combined from all events.
- All standards must be in cal on the date of the most recent calibration event.
- The results are combined in the order specified.
- The operator has the option of deleting the original individual calibrations from the database.

Changing an Asset Number

The Asset Number is the unique identifier for each Inventory record. Changing the Asset Number on an Inventory record will affect all related records. The Change Asset Number tool ensures that all related records and the history are updated properly.

1. From the **Tools** menu, select **Change Asset Number**.
2. Type in the asset number to change, or select it from the dropdown. The asset list also shows the Manufacturer and Model to assist in selecting the correct asset.

3. Type in the new asset number and click **OK**. A confirmation dialog box appears before the change is applied.

Changing a User Password

⚠ Caution

Once a user password is changed by the user it cannot be recovered if lost.

In the Initial User Setup, the Administrator can give a user permission to change his or her own user password at will. If this permission is granted, the Change Password tool is accessed from the **Tools** menu. If the choice is grayed-out on the **Tools** menu, no such permission was granted.

1. Select the **Change Password** item from the Tools menu.
2. Type in the old password.
3. Type in the new password.
4. Type in the new password again.
5. Click the **Change** button.

Accessing Other Applications from the Tools Menu

Other applications can be launched directly from within MET/TRACK. These are set up in **metcal.ini** and appear at the bottom of the tools menu. A maximum of 40 tools can be set up.

Automated Data Entry

For adding large amounts of data to the MET/BASE database, data importation is preferred to manual entry. Likewise, for routine, scheduled data transfer, such as importing calibration history information stored in data files. Data can be imported from ASCII files that have been properly formatted. The customizations and dependency rules set up for manual entry apply to the import as well.

You can use this tool to migrate data from another application to MET/TRACK. Sound knowledge of MET/TRACK and the MET/BASE database structure are required to properly map the fields for migration.

Data Import from an Existing Database

To import your metrology data into MET/BASE, it has to be formatted to be processed by the import tool, **imp.exe**. The tool can be run as a stand-alone with command-line arguments or via MET/TRACK from the Data Importation menu item in Tools. By default, **imp.exe** is installed in the **%PROGRAMFILES%\Fluke\METTRACK** folder.

The import data must be in plain ASCII format with no hidden or special control characters. The field values in the file must have a consistent field delimiter. It is best to choose a character that is not usually found in database data, such as a semi-colon or pipe. The available choices of delimiter may depend on the old export system.

To import data via MET/TRACK:

1. Select **Data Importation** from the Tools menu.
2. Locate your data file in the file open dialog box.
3. Specify the data field delimiter. A sample line from your file displays for assistance as shown in Figure 16.

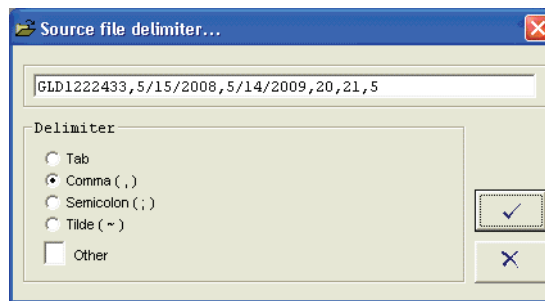
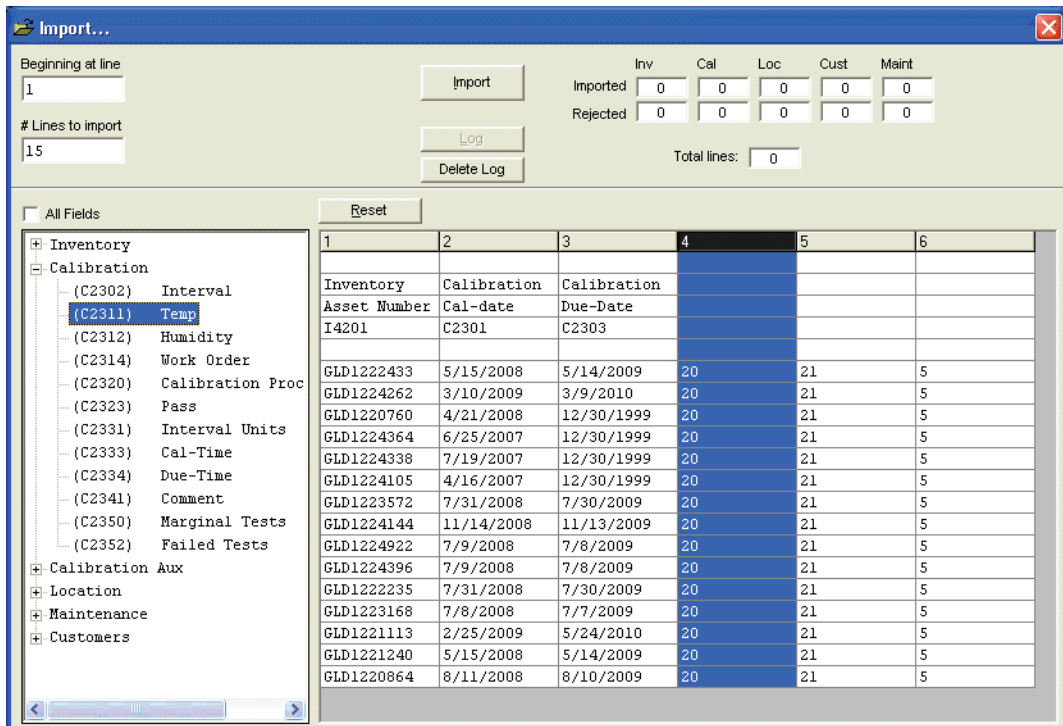


Figure 16. Data Field Delimiter

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Figure 17 is the **Import** dialog box that shows your file data in a grid.

4. Designate a table field from the tree to each column of data.



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Figure 17. Import Data Dialog Box

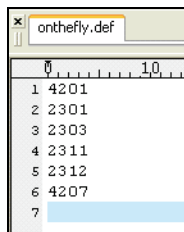
- Once all columns are assigned, click **Import** to update MET/BASE with your data.
- After the *Import operation completed* confirmation message is acknowledged, click **Log** to view any errors found during the import. If data records were rejected during the import, the log will open automatically. See the following error log for an example:

```
Error on line 1: Data: 5 in not valid for field: I4207
Error on line 2: Data: 5 in not valid for field: I4207
Error on line 3: Data: 5 in not valid for field: I4207
```

The log file, **imp_log.txt**, is located in the **%PROGRAMDATA%\Fluke\METTRACK** folder.

Data rejected during an import is stored in a file named **imp_redoxx.txt**, where *xx* indicates an ordinal that is automatically increased with each file created. The redo files are stored in the **%PROGRAMDATA%\Fluke\METTRACK** folder.

Imp.exe requires a definition file that designates the columns (from left to right) in the data file, from top to bottom. When an import is initiated from MET/TRACK, the definition file is automatically created in the background from the table fields chosen on the import dialog.



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In this example, the data columns are: 4201, 2301, 2303, 2311, 2312 4207.

```
GLD1222433,5/15/2008,5/14/2009,20,21,5  
GLD1224262,3/10/2009,3/9/2010,20,21,5  
GLD1220760,4/21/2008,12/30/1999,20,21,5
```

When using Imp.exe stand-alone, with command line parameters, the DEF file must be created manually and passed into the call to the tool.

Supported command line parameters for imp.exe are:

```
-l          for connection string  
-def       for definition file (columns)  
-src       for data file  
-deli     for data delimiter, defaults to comma, use \t for tab  
-uppercase for making strings uppercase, default is false
```

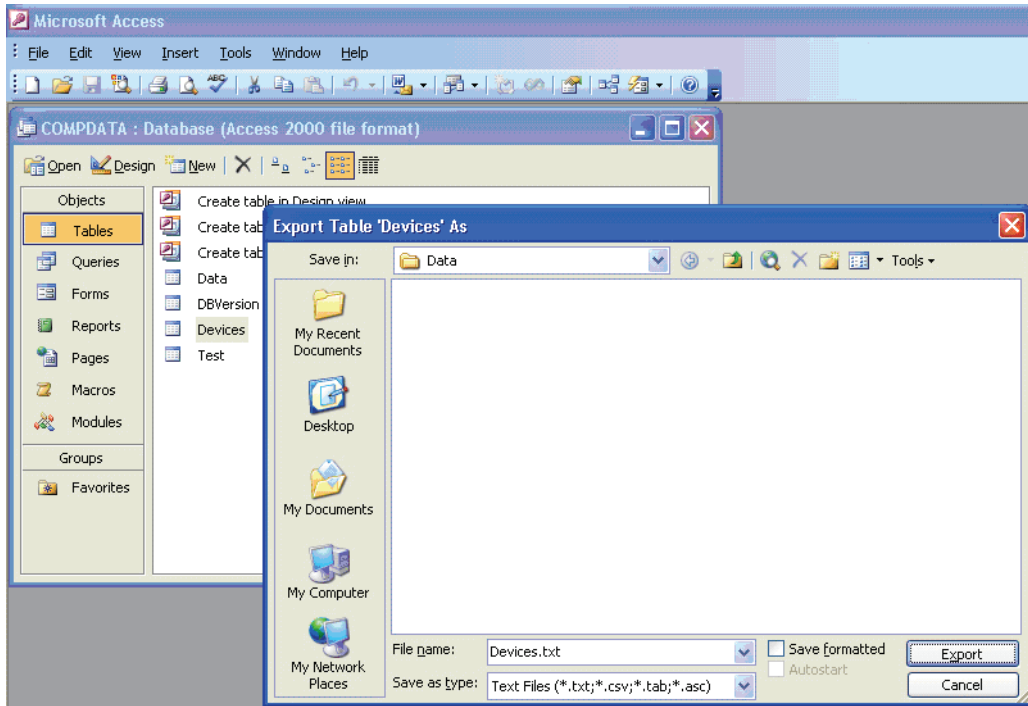
Sample call:

```
Imp.exe -l dsn=CalData;uid=fluke;pwd=fluke -deli | -def c:\MyDefs.def -  
src c:\MyData.dat
```

Data Migration Step-by-Step

To migrate data:

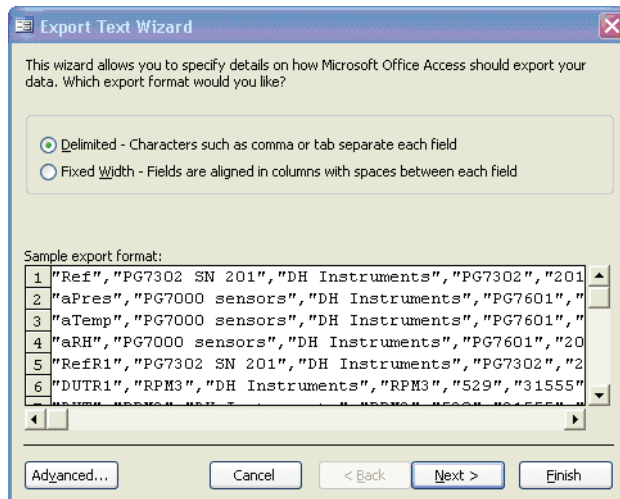
1. Determine which data to export from the existing database system and how it maps to MET/BASE.
2. Export the data from your database using SQL queries, or tools provided by the database manufacturer (see Figure 18).



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Figure 18. Data Export Tool

3. From the Export Wizard, choose the type of export for data (see Figure 19).



zv843s.bmp

Figure 19. Export Text Wizard

4. Choose a delimiter that is not found in your data (see Figure 20).

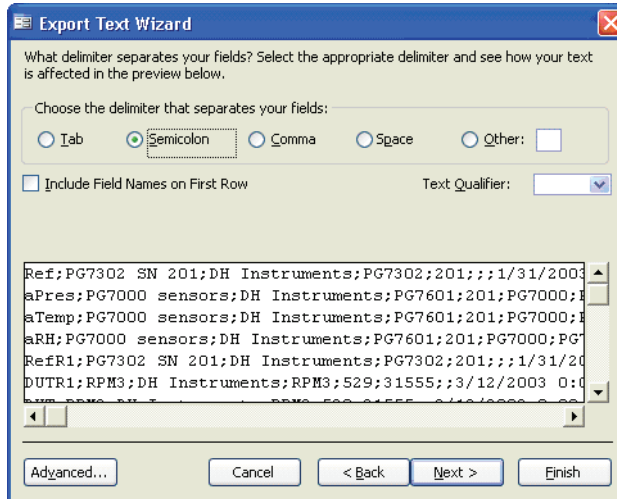


Figure 20. Select Delimiter Dialog Box

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Depending on the mandatory fields set up in MET/TRACK, you might need to add extra columns to your exported data file. Use a text editor for that purpose. Tools such as UltraEdit[®] provide a column mode that allows you to type data into multiple rows simultaneously (see Figure 21).

If any records are rejected during the import, the log file will automatically open in your default text editor. If a mandatory field was missed, go back to step 3 and repeat the process.

Partially rejected data can be re-imported from the `imp_redoxx.txt` file, see Figure 22, created for each import run. `xx` indicates the number in sequence. When all data has been imported successfully, both the newest `imp_redoxx.txt` and the `imp_log.txt` files should be empty.

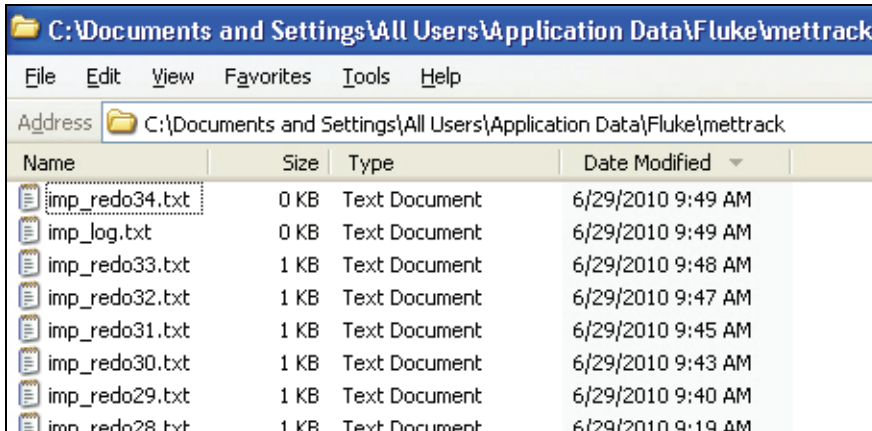


Figure 22. Import Redo File

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Database Reports

Running Reports

Reports in MET/TRACK can be run from the Reports menu with the **Run Installed Report** or **Run Any Report** function. Installed reports are a subset of all reports found in the Reports directory (defined in `metcal.ini`, `report_dir`).

Fluke Metrology Software includes many of the standard reports generally used by a calibration lab. Reports can be custom written or modified from Crystal Reports or quickly created using Quick Reports.

Creating a New Report

To use Quick Reports:

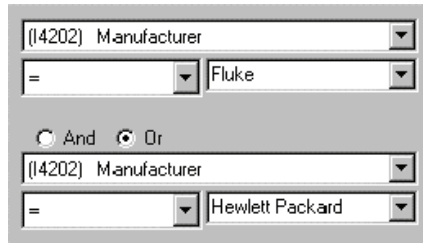
1. Select **Quick Reports** from the Reports menu.
2. Click **Report Title** and type a new Title for the report.
3. Click **Report Caption** to add a caption.
4. Select the **Columns** tab.

5. Choose fields to add to the report by clicking on the plus sign next to the table and then double-clicking the field. Watch as the report starts to materialize. By default, the outline only lists columns that are visible on MET/CAL forms. This means that fields that have been suppressed are not listed. To show all columns, suppressed or not, click the **All Fields** check box. This will reset the report and list all MET/CAL columns in the outline.
6. Continue adding columns until all the necessary fields are displayed on the report.
7. Select the **Limits** tab to choose the type of data to print. Select data that falls within a certain date or a certain department or calibrated by a certain technician. Up to three sets of limits can be set. For example, only print those records where the manufacturer's name is equal to Fluke, or print all records except those in a particular department. Set limits to provide just necessary information.
8. Choose the field, (column), then the limit type, then the limit value. The limit types and their corresponding symbols, as well as some examples of limiting record selection are shown below:

Symbol	Definition
=	Equal to
<>	Is not equal to
>	Is greater than
>=	Is greater than or equal to
<	Is less than
<=	Is less than or equal to
Begins with	Begins with the criteria entered
Ends with	Ends with criteria entered
Is Nothing	The field is blank
Is Something	The field contains a value, any value

Setting Multiple Conditions

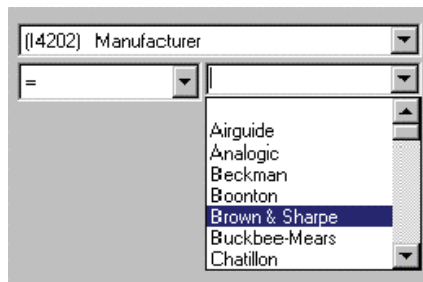
In this example, two manufacturers are included in the limiting criteria. With these settings, the report will print a record if the manufacturer's name is equal to Fluke or if the manufacturer is equal to Hewlett-Packard. The limit value is not case sensitive. FLUKE, fluke or Fluke will all return the same report information.



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Selecting the Limit Value From a List

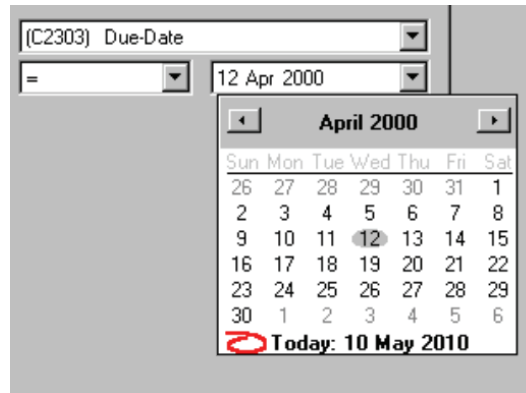
Quick Reports generates a list of database information automatically that may be used to set a limit. This is helpful if the exact spelling or value is unknown. Selecting from a list is easy and keeps errors to a minimum. There is a down arrow to the right of the **Limit Value** list box. When it is clicked, Visual Reports generates a list of values for that column and adds them to the list. Scroll through the list to find the value to use to limit the report. Then press **Enter**. In the following example, a list of manufacturer's names from the database has been added to the list.



zv318s.bmp

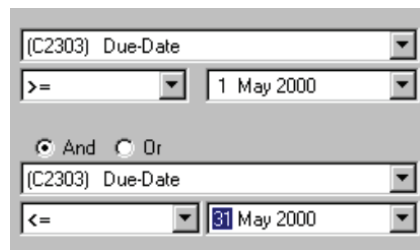
The date control feature makes date selection easy. To limit the sort value:

1. Use the arrow keys to select a date or click the down arrow to display a calendar.
2. Select a date from the calendar by clicking it with the mouse.



zv319s.bmp

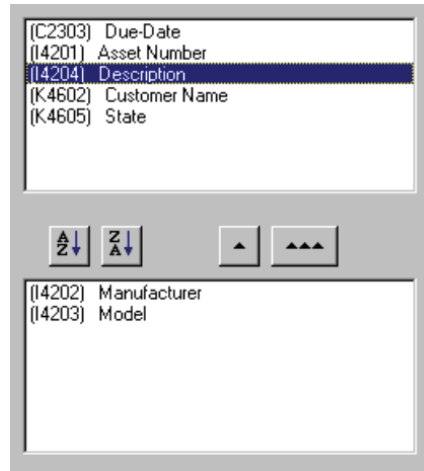
In the next example, the report prints if the due-date is between two dates. The report includes assets due for calibration during the month of May in the year 2000. This is how the dates for a recall report are set.





zv320s.bmp

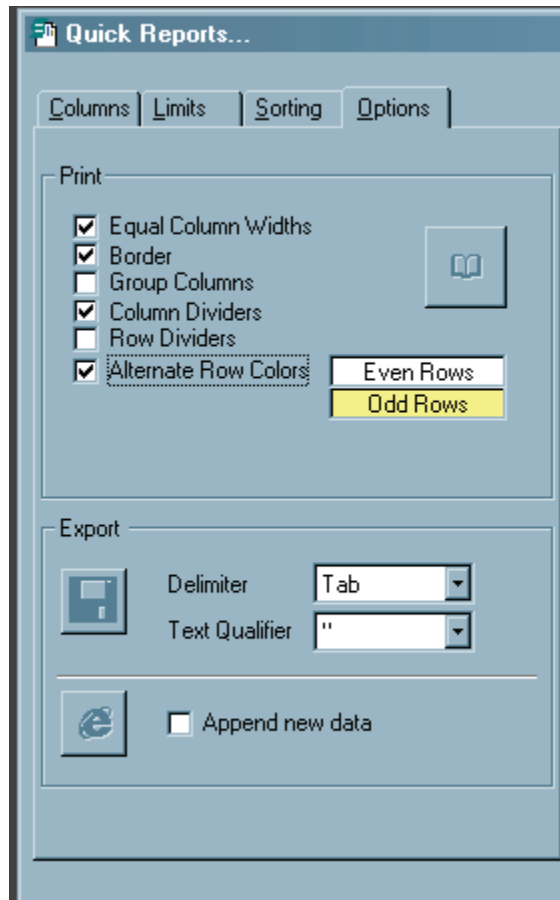
3. Continue selecting **Limit** criteria to narrow or broaden a selection.
4. Check the **Most Recent Records Only** check box for the last Calibration done and the current Location, or leave it unchecked for all records.
5. Check the **Active Assets Only** check box to select only active assets, or leave it unchecked for all records.
6. Select the **Sorting** tab.

To make reports more meaningful and easier to read, you can sort the report. As columns are added to the report, each column name is added to the list of columns available for sorting. In this example, the report will be sorted first by the manufacturer's name and then by the model name.



zv321s.bmp

7. Choose the field to sort the report by and how to sort it. To sort, highlight a column in the top box. Then click the **A-Z** for an ascending sort or the **Z-A** button for a descending sort.
8. Double click to add fields to sort by. Click one of the up **arrow keys**   to remove a field from the sorting criteria. The single arrow button un-selects a column name in the sort. The triple arrow button clears all column names from the selected list.
9. Select the **Options** tab to print, preview, and export a report (see Figure 23). The check boxes determine the appearance of the report.



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Figure 23. Quick Report Options

Choices are:

Equal Column Widths – Sets all widths equal to fit on a single page.


Border – Adds a border around the report.


Group Columns – Groups like fields together as one.

Column Dividers – Places a dividing line between report columns.

Row Dividers - Places a dividing line between report rows.

Alternate Row Colors – If checked, the odd and even rows are a different color. The foreground and background colors of the rows can be set. Left-mouse click for foreground colors. Right-mouse click for background colors.

The **page setup** button  displays the setup window. Set the printer, margins and orientation.

10. Click the **preview** icon  to see what the finished report will look like.

11. Print the report by choosing the **printer** icon  to print the report.

Exporting a Report

Quick Reports can export a report to a computer file and make MET/CAL data available to other computer programs.

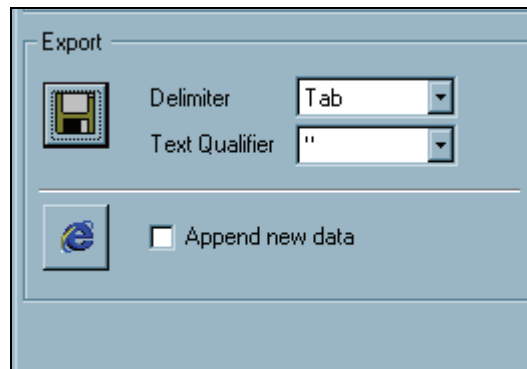
Export to a Data File

To export to a data file:

1. Select a delimiter character from the list box.
2. Select an optional text qualifier to surround the data (if necessary).
3. Click on the **Save** button. A report saved with comma delimiters and double quote qualifiers would look like this:


"1000", "Fluke", "5520A", "Multi-Product Calibrator"

This standard format is easily imported into database or spreadsheet programs.




zv327s.bmp

Export to HTML

Click HTML export icon  to export to an HTML file. This allows viewing in Netscape, Internet Explorer or other Web browsers or for enhancement Web page editors. This feature expands the ability to send reports to others. A report exported in this manner can be emailed or posted on an intranet site for public viewing.

Additional Viewing Capability

This section explains the **grid** icon  on the Report Builder screen. The grid icon displays the report in a data grid. It is similar to the Print Preview feature, but permits columns to be moved and rows grouped, sorted and organized.

Each column has a header at the top of the column. To reorganize the display:

1. Select the column header and then with the left-mouse button depressed, drag the header into the dark gray area above the column header.
2. When done, the grid groups “like” information into a single cell.

Figure 24 is the report containing Asset number, Manufacturer, Model and Description that was constructed and displayed in the grid. The “Description” column was clicked, and dragged onto the gray area. Next, the “Manufacturer” and “Model” columns were also dragged in.

The grid is reorganized to display the new view of the data. To print or view:

1. Click the icons at the top of the screen.

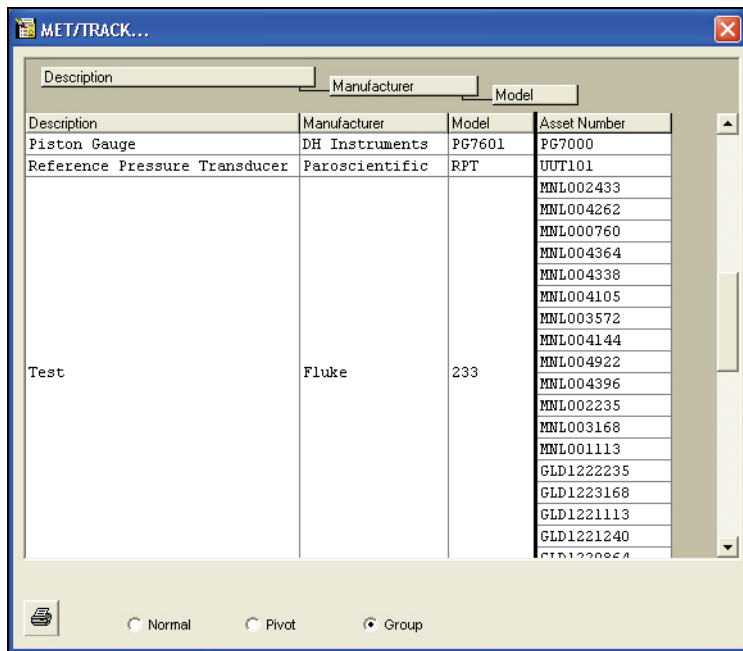


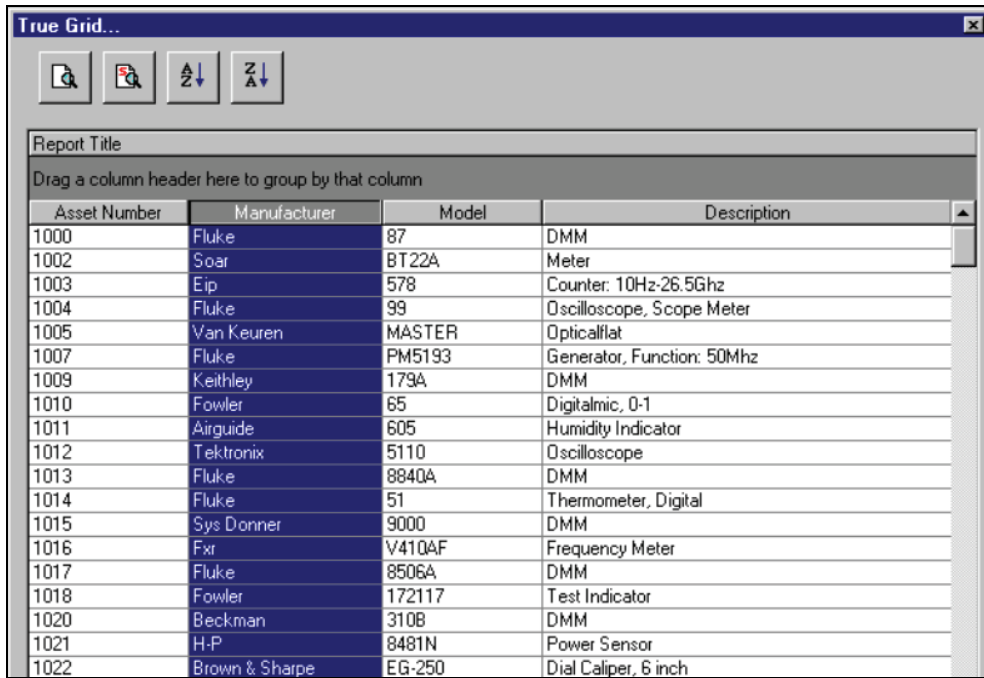


Figure 24. Data Grid View

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If the grid is not grouped, the columns can be sorted:

2. Select a column by clicking its name at the top of a column, see Figure 25.
3. Click  to sort the highlighted column in ascending order.
4. Click  to sort the highlighted column in descending order.



True Grid...

Report Title

Drag a column header here to group by that column

Asset Number	Manufacturer	Model	Description
1000	Fluke	87	DMM
1002	Soar	BT22A	Meter
1003	Eip	578	Counter: 10Hz-26.5Ghz
1004	Fluke	99	Oscilloscope, Scope Meter
1005	Van Keuren	MASTER	Opticalflat
1007	Fluke	PM5193	Generator, Function: 50Mhz
1009	Keithley	179A	DMM
1010	Fowler	65	Digitalmic, 0-1
1011	Airguide	605	Humidity Indicator
1012	Tektronix	5110	Oscilloscope
1013	Fluke	8840A	DMM
1014	Fluke	51	Thermometer, Digital
1015	Sys Donner	9000	DMM
1016	Fxr	V410AF	Frequency Meter
1017	Fluke	8506A	DMM
1018	Fowler	172117	Test Indicator
1020	Beckman	310B	DMM
1021	H-P	8481N	Power Sensor
1022	Brown & Sharpe	EG-250	Dial Caliper, 6 inch

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Figure 25. Column Sort View

5. Adjust the view using the **Pivot**, **Group**, and **Filter** radio buttons.
6. **Preview** or **Print** the report.

Hot Keys

MET/TRACK

F1	Help
Ctrl+S	Save

Adding Records

F2	Add Inventory
F3	Add Calibration
F4	Add Location
F5	Add Maintenance
F6	Add Customer

Editing Records

Shift+F2	Edit Inventory
Shift+F3	Edit Calibration
Shift+F4	Edit Location
Shift+F5	Edit Maintenance/ Repair
Shift+F6	Edit Customer
F7	Edit Validation
Ctrl+M	Edit Merge

General Functions

F12	Assign Asset to a customer
Ctrl+L	Log-on as a new user
Ctrl+O	Log-off
Ctrl+D	Select a new desktop
Ctrl+F	Search

Accessing other Applications

Ctrl+R	MET/CAL Runtime
Ctrl+E	MET/CAL Editor
Ctrl+U	5500/CAL Run Time
Ctrl+I	5500/CAL Editor
Ctrl+T	MET/CAL LITE

Reports

Ctrl+P	Run Installed Reports
Ctrl+Q	Quick Reports

MET/CAL Editor

F1	Help
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File Commands

Ctrl+N	New
Ctrl+O	Open Procedure...
Ctrl+S	Save Procedure
Alt+S	Save to Default Directory
Ctrl+D	Change Default Directory
Ctrl+F	Open Text File...
Ctrl+J	Save Text File
Ctrl+F4	Close
Ctrl+P	Print
Alt+P	Pack
Alt+U	Unpack
Alt+F4	Exit

Edit Commands

Ctrl+X	Cut
Ctrl+C	Copy
Ctrl+W	Copy to...
Ctrl+V	Paste
Ctrl+G	Insert File...
Del	Delete
Alt+F3	Find...
F3	Find Next...
Ctrl+F3	Replace...
Ctrl+A	Adjust
Ctrl+Enter	Break
F6	Continue
Ctrl+I	Name Procedure

Compile Commands

F8	Check Line
F9	Next Error
Shift+F9	Previous Error
Ctrl+F9	Re-warn
Ctrl+T	TUR Report

Test Run Commands

F2	Restart...
Alt+F2	Go...
Ctrl+F2	Show

Configure

Ctrl+M	Text Mode Toggle
Cnrl+K	Statement Colors
F12	Instruments

