Datacolor

Datacolor TOOLS™ Form Editor Guide

datacolor

Because Color Matters

Datacolor TOOLS™ Form Editor Guide
(Rev. 2, June, 2006)

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Datacolor TOOLS Form Editor

Overview

The Datacolor TOOLS Form Editor is a companion product to Datacolor TOOLS. It provides two fundamental functions:

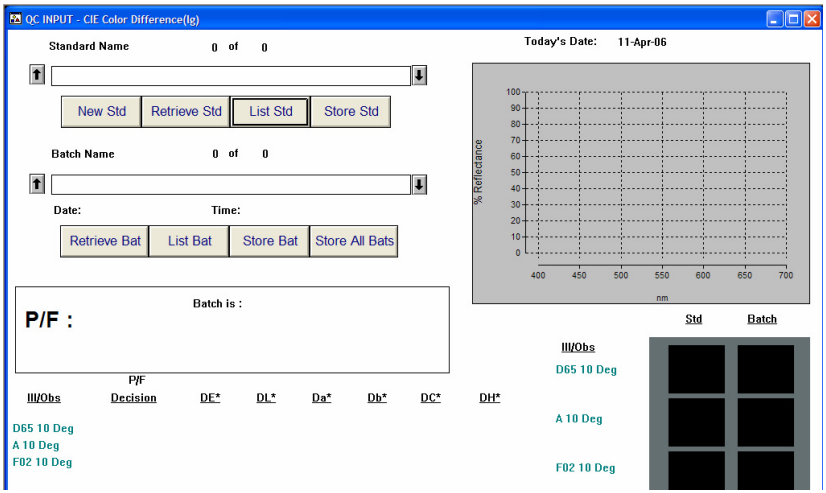
- Create and edit the forms used by Datacolor TOOLS. This is referred to as *Form Maintenance.*
- Create and edit the data fields displayed by Datacolor TOOLS and stored in the database. This is referred to as *User Field Maintenance*.
- Create and edit procedures implemented in Datacolor TOOLS. This is referred to as *Procedure Maintenance.*

Form Maintenance

Forms are the basis of the Datacolor TOOLS user interface. All of the commands and information displayed by the program, both input and output are displayed on a form. Three types of forms are used by Datacolor TOOLS:

- **Screen Forms.** Controls the display of information on the computer monitor.
- **Printer Forms.** Controls the contents of the printed data.
- **File Forms.** Controls the information exported to ASCII files for examination outside of the Datacolor TOOLS environment.

Below is an example of a default screen form used by Datacolor TOOLS:



Typically you will customize forms for two reasons:

- **To customize the display of specific data fields.** You select the data fields to be used and the location of the fields on the form. You can add text as needed. In the case of a Strength evaluation for example, you may include fields that display the *As Is* and *Adjusted* strength values for the standard and batch. See also Form Components and Form Maintenance in this guide for a detailed explanation of this function.
- **To guide a user through a particular procedure.** The form can be customized to include text and command buttons to prompt the user, step-by-step, through a procedure such as a strength evaluation. A form that includes a procedure may contain an Illuminant/Observer selection, a calibration button, and instructions for measuring the standard and batch samples. See also Procedure Maintenance in this guide for a detailed explanation of this function.

User Field Maintenance

The Form Editor is also used to create custom fields that are not included in the database that is provided with Datacolor TOOLS. Each application has unique needs, and this feature allows you to create a field as needed. For example, you may assign a product code to approved colors, and would find it convenient to include that with the color record. Once a user field is created, it can be added to the database, and placed on forms.

Procedure Maintenance

The Form Editor includes options for a user to create a procedure. Procedures are powerful tools that guide a user, step-by-step, through a routine color evaluation process. A procedure can be designed to prompt the user for all required input, and to automatically display the resulting output. Procedures are accessed from buttons on the TOOLS button bar.

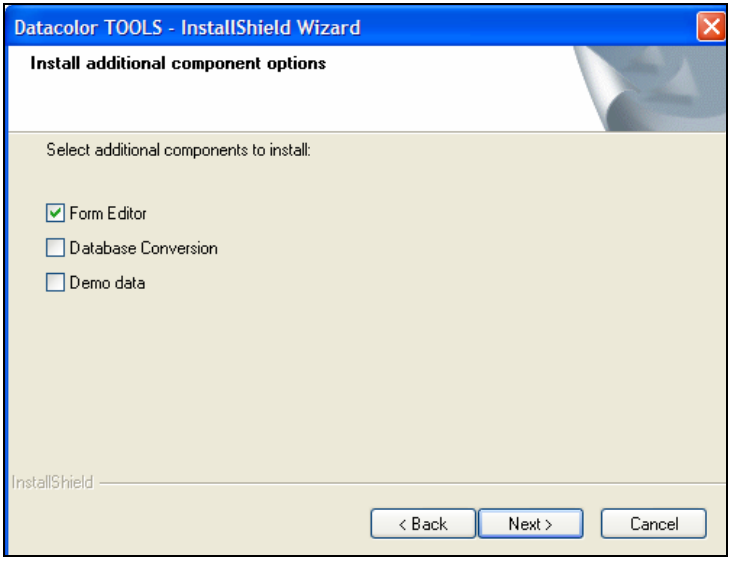
About This Guide

This guide is organized into the following chapters:

- **Overview.** Provides an overview of the program functions, this user's guide, and instructions for installing and launching the Form Editor program.
- **Form Components.** Identifies the types of forms used, the components used to create a form, and any interaction between the form components.
- **Form Maintenance.** Provides step-by step instructions for creating, editing and deleting forms. Instructions are provided for creating both procedure forms and data output forms. Discusses the creation and use of screen forms, printer forms and file forms.
- **User Field Maintenance.** Provides step-by-step instructions for creating user fields, and adding them to forms and to the database.
- **Form Editor Menus.** Provides a brief explanation of each menu option included in the program.

Installing the Form Editor Program

The default program installation for TOOLS includes the installation of the Form Editor program:

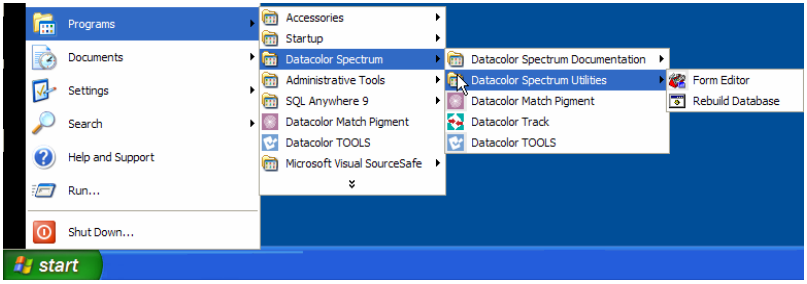


If you disabled the Form Editor as part of the installation, you must run the entire TOOLS installation procedure again to install the Form Editor program.

Launching the Program

To start the program, do the following:

- From the Windows desktop, click **Start, Programs, Datacolor Spectrum, Datacolor Spectrum Utilities, Form Editor**.



The Form Editor main window and menu bar are displayed.

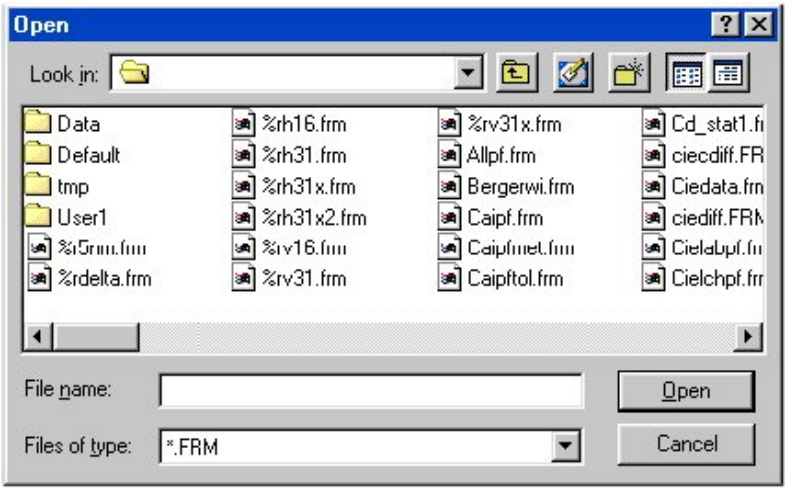
Running the Program

In order to successfully use this program, you should have a basic understanding of Windows and be able to execute various mouse functions such as clicking and dragging.

Opening an Existing Form

A large selection of forms are included as part of the program installation. To become familiar with the structure and layout of TOOLS forms, you can open one of the existing forms. To open a form:

1. From the menu bar, select **Edit, Open Form**. The Open dialog box displays. By default, all the forms in the Documents and Settings/All Users/Application Data/Datacolor/Tools/Tools Global *.* are shown.
2. Double-click on the form to be opened.
3. To select a different folder, move to the *Look in* field, click the down arrow, and locate the applicable drive, folder and/or subfolder containing the form you want to open.



3. Move through the folder listing and double-click on the form name. The form is opened and displayed in the Form Editor window.

Exiting the Program

When you want to close the Form Editor program, you can do one of the following:

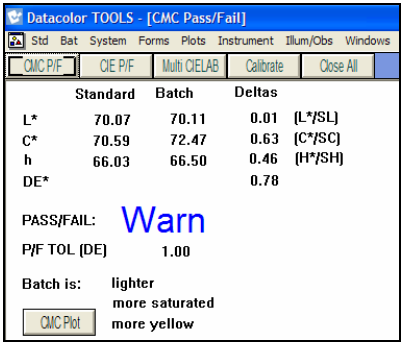
1. From the menu bar, select **File, Exit**.
2. Click the control box found in the upper right-hand corner of the window displayed as an “X.”

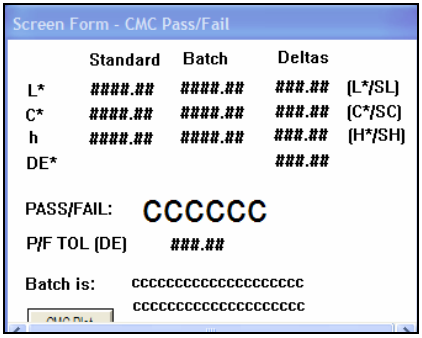
Form Components

Forms are the basis of the Datacolor TOOLS user interface. All of the commands and information displayed by the program, both input and output are displayed on a form. The Form Editor is used to design and edit the forms.

Below is a comparison of a form as displayed in the Datacolor TOOLS program and the same form as displayed in the Form Editor:

Screen Form Displayed in TOOLS	Screen Form Displayed in Form Editor





Form Types

Three types of forms are used by Datacolor TOOLS:

- Screen forms
- Printer forms
- File Forms

Each of these form types can be customized to your requirements.

Screen Forms

These are forms used to both input and display data to a video screen or terminal. Screen forms make up most of the Tools QC user interface. Screen forms have a title bar, can be moved and re-sized, and can be closed using a command button on the forms. Screen forms typically display standard and batch information, including spectral and colorimetric data and color differences. They can also include buttons for quick access to other QC functions.

Printer Forms

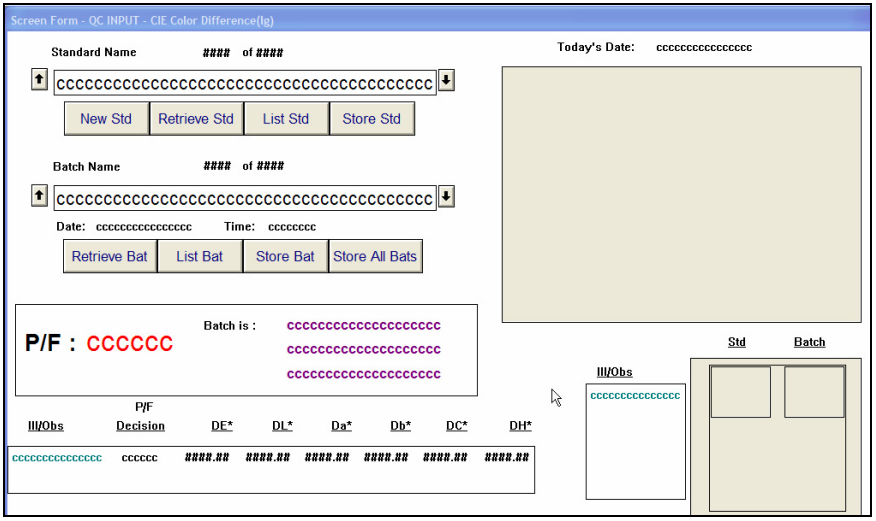
Printer forms are used to generate printed output, allowing you to keep a printed record of your QC procedure. Printed records often contain a larger volume of information, and these forms are often several pages long. They are useful if you need to keep physical records for a large number of batches.

File Forms

File forms are designed to transfer color data from Datacolor TOOLS to an ASCII file. A file form saves the output to an ASCII file, in exactly the format you require. Data from ASCII files can be imported to other programs.

Fields on the Forms

Fields are the individual data elements on the forms. You will populate your form with three classes of fields: input fields, text fields and output fields. When you create or edit a form, you will be adding and removing input fields, text fields and output fields.



- **Input Fields**. You can enter data from your keyboard into an input field. Examples include standard name and batch name.
- **Text Fields.** Used to label the data in an output field. Text fields can also be used to instruct the user as to what kind of information should be entered into an input field.

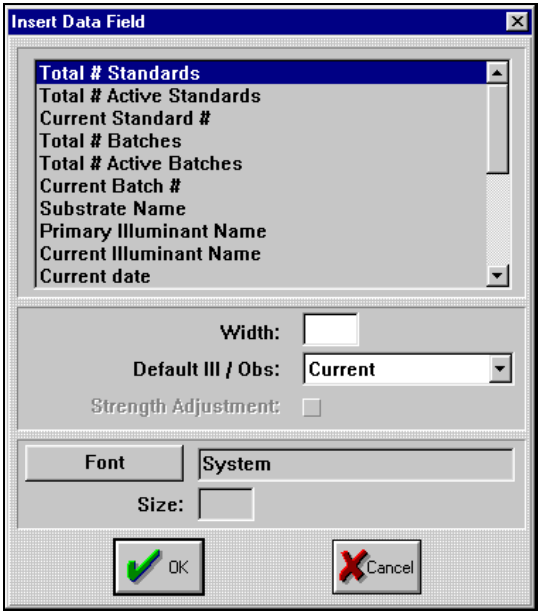
- **Output fields.** Data generated by the program are displayed in output fields. There are four types of output fields:
  - System fields
  - Standard fields
  - Batch fields
  - Delta fields

Before you start to create or edit a form you should spend some time to select the fields you want to add or remove from the form. *See also Appendix A in this guide for a complete list of all available fields.*

System Fields

System Fields contain information that can be used in all QC procedures, and are not specific to standard or batch. *See also Appendix A in this guide for a complete list of the System Fields.*

System fields are accessed from the **System Field** menu on the toolbar. When this option is selected, the dialog box below is displayed:



System Fields may include the following:

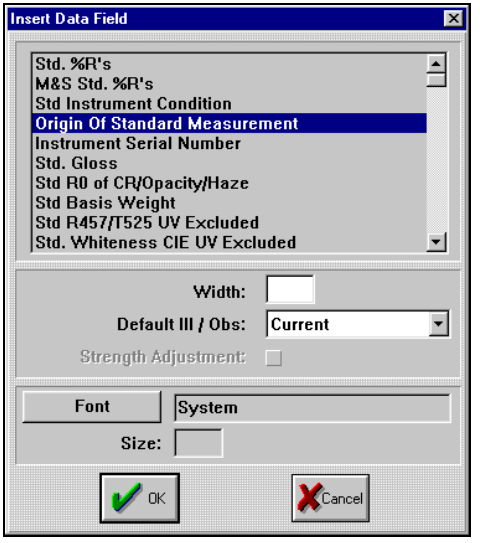
- Total number of standards and batches
- Total number of active standards and batches
- Current batch number
- Primary and current Illuminant name

NOTE
These fields are listed in both the QC.FLD and USER.FLD files. The system field names are in brackets [ ] at the top of the QC.FLD file before the [STANDARD_DATA] section.

Standard Fields

These fields provide information specifically about the standard. The field may be an input field for the standard name, the time and date the standard was measured, spectral and colorimetric data, etc. *See also Appendix A in this guide for a complete list of the Standard Fields.*

Standard fields are accessed from the **Standard Field** menu on the toolbar:



Standard Fields may include the following:

- Standard name
- Standard folder name
- Spectral data (reflectance or transmittance values)

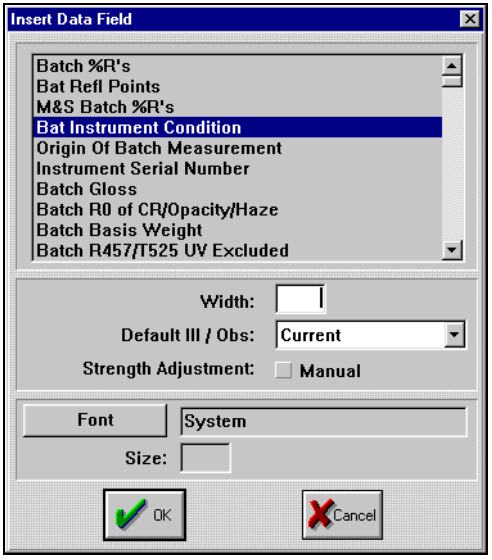
- Colorimetric data (e.g. CIEL*a*b* values, Hunter Lab values, CMC values, etc.)
- Whiteness index values (e.g. E313 Whiteness values, Ganz Whiteness, etc.) and
- Yellowness index values (e.g. E313 Yellowness, D 1925 Yellowness, etc.)
- K/S values
- Date, time standard was measured
- Status of adjustments to standard

NOTE
These fields are listed in both the QC.FLD and USER.FLD files. The standard field names are in brackets [ ] under the [STANDARD_DATA] section.

Batch Fields

These fields provide information specifically about the batch. The field may be an input field for the standard name, the time and date the batch was measured, spectral and colorimetric data, etc. *See also Appendix A in this guide for a complete list of the System Fields.*

Batch fields are accessed from the **Batch Field** menu on the toolbar:



Batch fields may include the following:

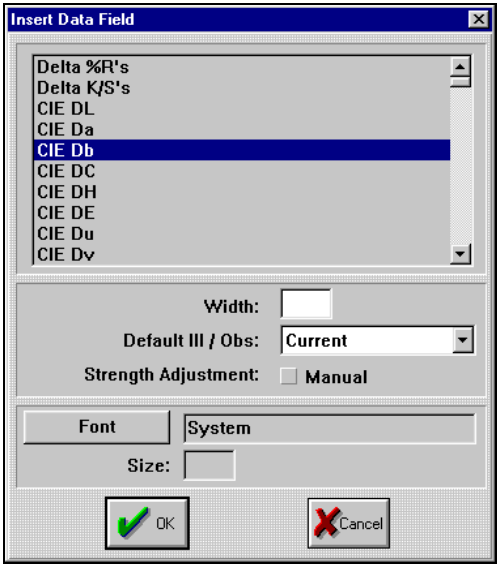
- Batch name
- Batch folder name.
- Spectral data (reflectance or transmittance values)
- Colorimetric data (e.g. CIEL*a*b* values, Hunter Lab values, CMC values, etc.)
- Whiteness index values (e.g. E313 Whiteness values, Ganz Whiteness, etc.) and Yellowness index values (e.g. E313 Yellowness, D 1925 Yellowness, etc.)
- K/S values
- Date, time batch was measured
- Pass/fail judgment
- Status of adjustments to batch

NOTE
These fields are listed in both the QC.FLD and USER.FLD files. The Batch field names are in brackets [ ] under the [BATCH_DATA] section.

Delta Fields

These fields display the differences (deltas) between the batch measurement value and the standard measurement value. For example, a "CIE Delta E*" field displays the total color difference between the standard and batch.

Delta fields are accessed from the **Delta Field** menu on the toolbar:



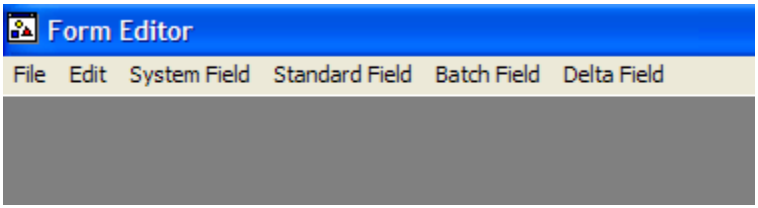
Delta Fields include the following:

- Deltas (differences) for all color space equations offered (e.g. CIEL*a*b*, Hunter Lab, FMCII, CMC, etc.
- Whiteness, yellowness, and brightness deltas (differences)
- AI Pass/Fail values, tolerances, and verbal descriptors
- Pass/Fail determinations
- Standard deviation (1-10)
- Average (1-10)
- Strength difference and adjustment method

NOTE
These fields are listed in both the QC.FLD and USER.FLD files. The Delta field names are in brackets [ ] under the [DELTA_DATA] section.

Form Maintenance

This section provides step-by–step instructions for creating and editing a form. All of the options used are accessed from the menu bar on the right side of the form window:



For the purposes of this explanation, a screen form will be created. It will include the following:

- Standard and batch names
- Standard color coordinates
- Batch deltas
- Pass/fail evaluation

NOTES

The procedures used for creating/editing a printer or file form are very similar to those used for screen forms. Any differences are explained in About Printer Forms and About File Forms found at the end of this section.

The files containing form information have the extension *.FRM. Depending on your system configuration, forms may be stored in three locations:

* Global data directory location
* App User data directory location
* Terminal data directory location

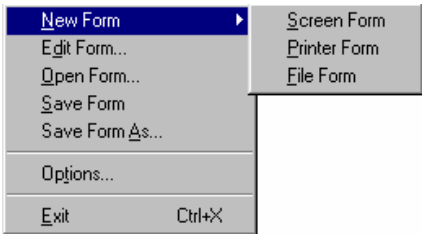
The forms may differ from one location to another. You should verify the location of the form file you want to change before you begin the edit. *See also Datacolor TOOLS User's Guide, Appendix, Data Locations for information regarding the folder locations and contents. See also Datacolor TOOLS Technical Reference.PDF for folder locations on a terminal server system.*

As a precaution, a backup of all customized forms should be stored on a portable media such as a CD, in the event of a system malfunction.

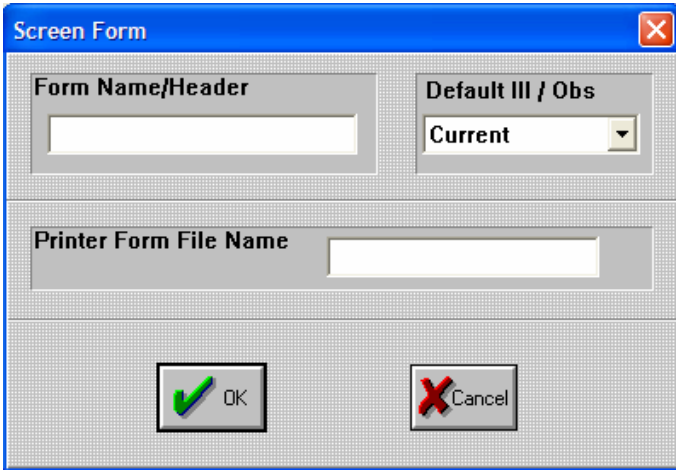
Creating a Form

To create a new screen form:

1. From the menu bar, select **File, New Form.**
2. From the submenu of options—Screen, Printer, and File—select the appropriate form type. In this example, **Screen Form** is selected.



The Screen Form dialog box displays.



You are now ready to begin creating a new form.

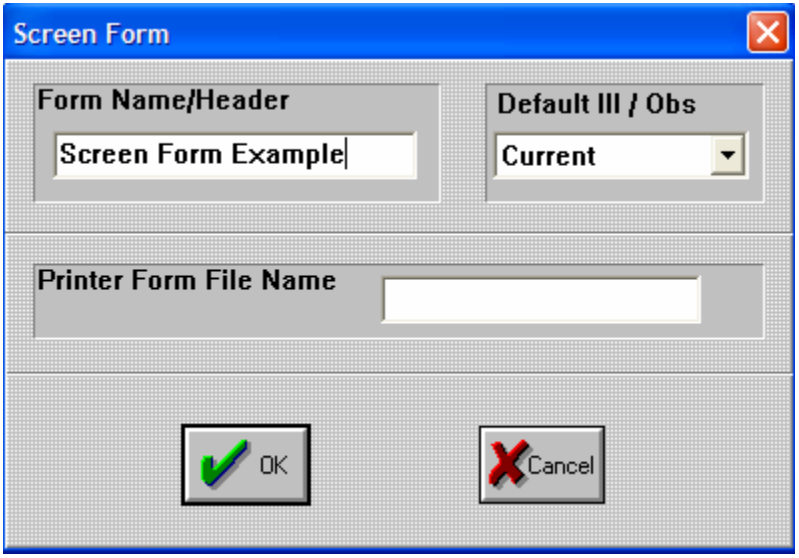
Naming Form Files

Datacolor TOOLS forms are stored as ASCII text files. When you save a form in the Form Editor and you give it a name, an ASCII text file is created with the name “Filename.FRM”. Forms have 2 different names:

- **External Filename.** This is the name of the actual form file. This is the name that you give the form when you select the option “Save As” or “Save”. This is the name assigned to the *.FRM file you have created. When you view the contents of the TOOLS folder using Windows Explorer, this is the name that appears.

- **Internal or Program Name.** This is the name entered into the Form Name/Header field shown below. It is displayed in the window header when the form is opened in TOOLS, and it also appears in the forms list in the TOOLS program.

NOTE
A complete list and examples of all forms currently shipping is included in the Appendix of the Datacolor TOOLS User's Guide.

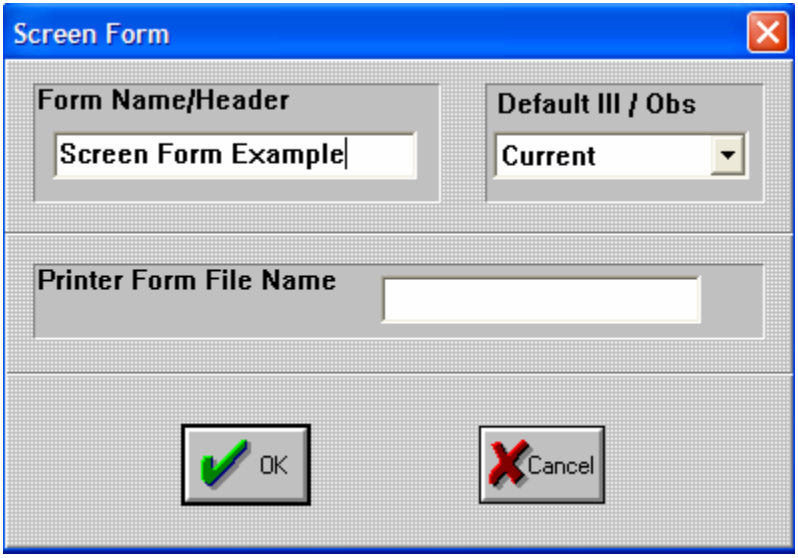


- **Form Name/Header.** Enter name for this new form *(e.g., Screen Form Example)*. This name appears in the window header and is used to select the form in the Tools program. You can enter up to 23 characters in this field.

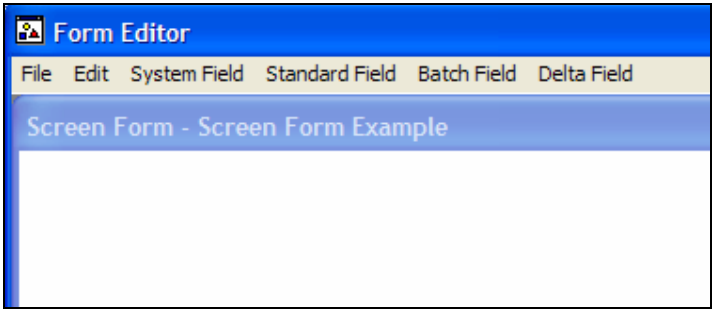
NOTES
The program will allow you to create multiple forms with the same name. However, the TOOLS program will only recognize one of the forms. We strongly advise you to assign unique names to each form you create or edit.

It is possible that forms may be stored in three locations: a Global data directory, an App User data directory, and a Terminal data directory location. The forms may differ from one location to another. You should verify the location of the form file you want to change before you begin the edit.

- **Default Ill/Obs.** Click the down arrow to view the choices and select the appropriate Illuminant/Observer condition to be used. If you select **Current,** the program will use the system default Illuminant/Observer. *See also Datacolor TOOLS User Guide, Illuminant/Observer Menu for instructions to view and change this selection.*
- **Printer Form File Name**. *L*eave this entry blank. The screen form is designed to display the output properly on a monitor, and may not print properly. If you need to print the output regularly, you should design a printer form to be used if a Print button on the screen form is selected.



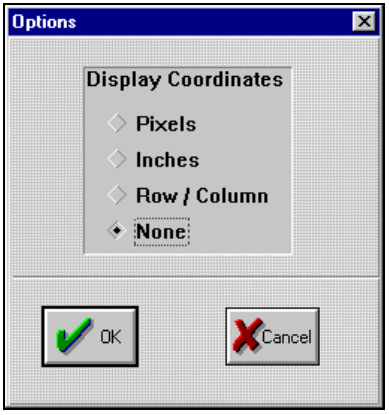
– When all selections/entries are made, click the **OK** button. A blank screen form displays as a full size window.



Selecting Display Coordinates

The program reports the field locations as coordinates, and they are displayed in the title bar of the Form Editor window as you move around the form. The coordinates are used to identify where fields should be placed on the form.

1. Click on **File Menu, Options**.



Three units of measurement are available:

- **Pixels.** Defines the location of the field based on pixel location.
- **Inches**. Defines the location of the field based on inches. This unit is helpful when designing printer forms.
- **Rows/Columns.** The Row/Column option scales the form based on column and row numbers (e.g., C19, R2). The current position of the cursor is displayed in the title bar of the form window.
- **None.** If accurate field location is not required, select this option.

2. Click the button next to the preferred coordinate type. Click **OK**.

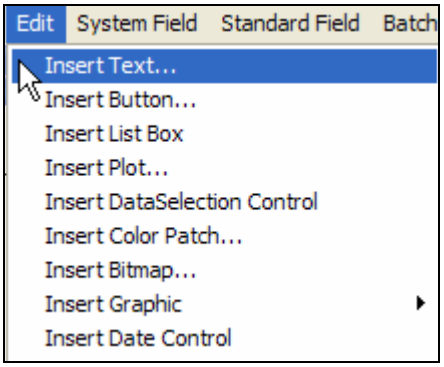
Inserting Fields on the Form

Below is a step-by-step example to create a new form. All fields are added in the same manner. The procedure described here can be used regardless of the type of field, standard, batch, system, or delta being inserted into the form. The form created here will display the following information:

- Date (System field)
- Illuminant/Observer Condition (System field)

- Standard Name (Standard field)
- Standard L*, C* h* Coordinates
- Batch Name (Batch field)
- DL, DC, DH, DE values for batch (Delta fields)
- Pass fail(Text)
- Labels for all of the fields (Text)

1. **Add a text label.** With the new form displayed on screen, move to the menu bar, and select **Edit Menu, Insert Text**.

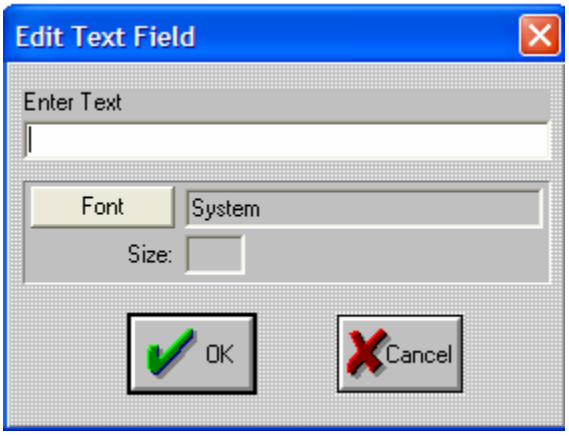


NOTE

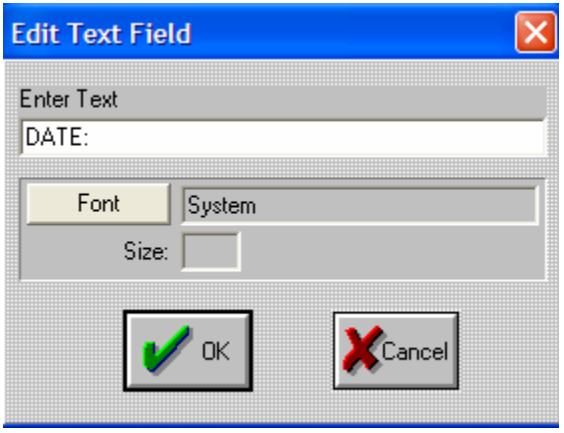
There is an alternate method for inserting data or text into a form. Move the mouse pointer to the approximate location on the form, and click the right mouse button. A popup menu will display containing most of the Insert options.

Select the option to be used. The dialog box displayed below will appear.

2. Enter the text to be displayed.



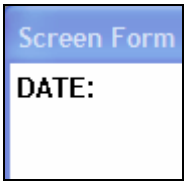
This example will start with the **Date** label.



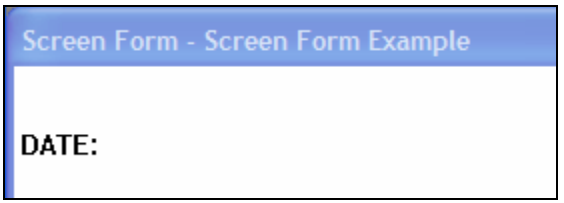
3. The default font is System font. This font is defined in the computer system's registry, and could be different on every PC. If a form is using a system font, and it is not appealing, you can choose another font for the form. If the displayed font is incorrect, click the **Font** button.

   - In the Font dialog box, select the desired Font type, style, and size, and click **OK**. When you return to the Insert Data Field dialog box, the selected size is displayed in the *Size* field.
   - When all selections/entries are made, click **OK**.

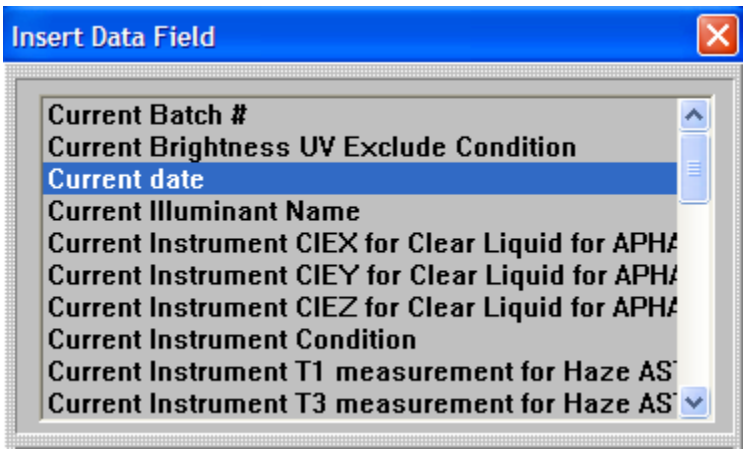
4. Click **OK.** The text will be displayed in the top left corner of the form.



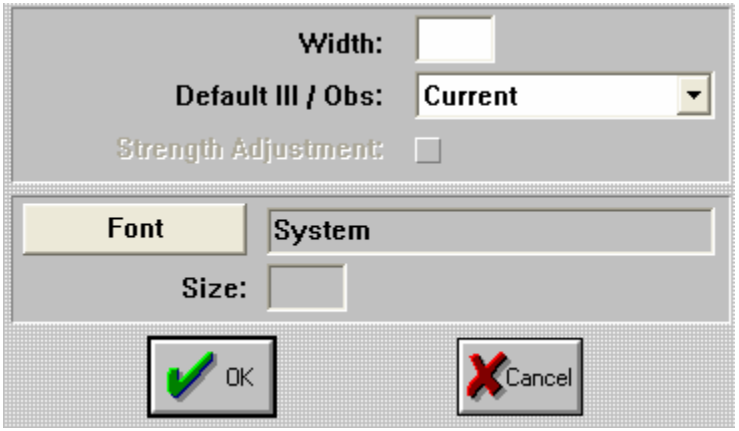
5. Use your mouse to move it to the correct position on the form:



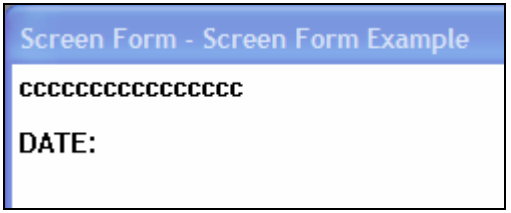
6. Add the date field to the form. Click on **System Fields.** Use the up/down scroll arrows to move through the list to locate the field to be inserted *and* click to highlight it.



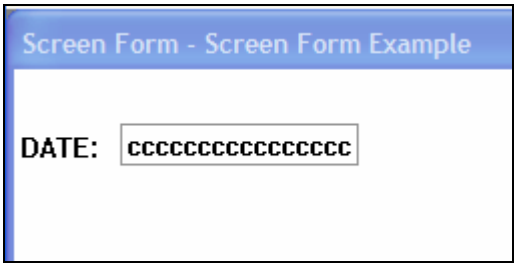
7. Complete the fields as appropriate on the bottom half of the window:



- In the *Width* field, enter the initial width for the field to display on the form.
- In the *Default III/Obs* field, leave the default entry, **Current**.
- Strength Adjustment. Enables the strength adjustment option. *Only applied to Batch and Delta fields.*
- The default font is System font. This font is defined in the computer system's registry, and could be different on every PC. If a form is using a system font, and it is not appealing, you can choose another font for the form. Select the desired Font type, style, and size, and click **OK**.
- When all selections/entries are made, click **OK**. The field will be placed in the top left corner of the form.



8. Use your mouse to reposition the date field:



9. Repeat this procedure for each text label and field to be added. To reproduce the form in this example, you will need to insert text labels, system, standard, batch, and delta fields.

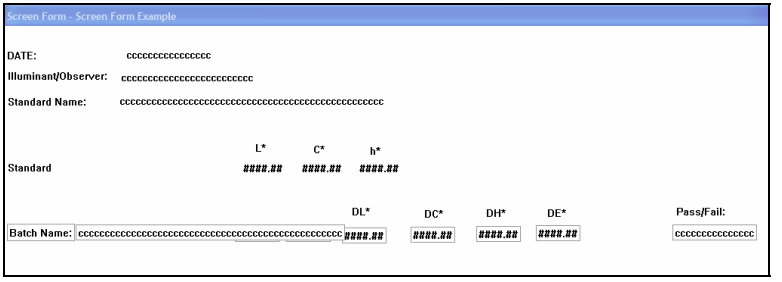
NOTES

If there is no destination location selected on the form for the data or text, the data or text is automatically inserted into the upper left hand corner. This can sometimes cause visual difficulties as this next field may overlap an existing field(s).

The placeholder used for an output field that contains numbers is the number symbol (###.##). The number of # characters and the position of the decimal point indicate the maximum number of digits and decimal places the number can have.

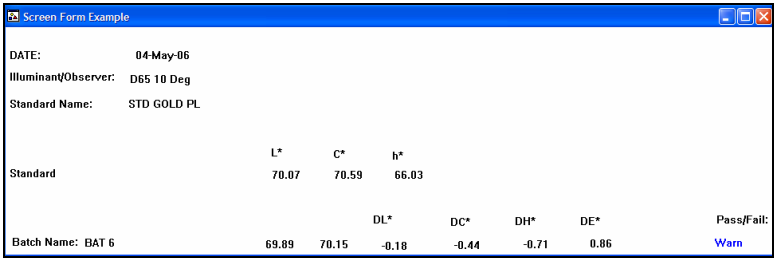
The placeholder used for an output field that contains text (e.g. pass/fail result), is the letter c (ccccccccccc). The number of *C* characters identifies the width of field for a text field.

Below is an example of the finished form *Screen Form Example:*



10. Click on **File Menu, Save Form** or **Save Form As** to save the form.

11. To display the form, launch TOOLS and open the form. The form names are listed in alphabetical order. Below is the *Screen Form Example* we have created:



Marking Field for Input

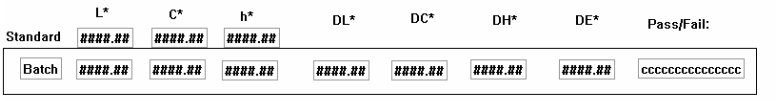
This function allows you to mark a field on your form as an "input field." An input type field allows the user to enter or type information into it while working with Tools.

1. Click on the field to become an input field. The field is surrounded by a rectangle, indicating it is selected.
2. Move to the menu bar, and select **Edit, Mark for Input**. A permanent box is placed around the field, enabling it to accept data.

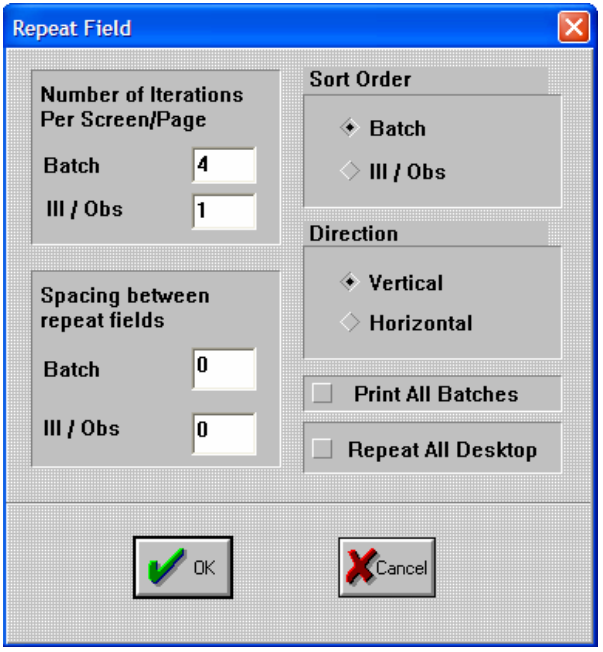
Inserting Repeat Blocks

A repeat block is a piece of information that appears multiple times on the same form. For example, if you are evaluating multiple batches, you would need to repeat the batch name and batch data for each. To do this you must set up a repeat block on the form. A repeat block can be defined for a single field or a group of fields. The repeat block permits multiple outputs without actually having to insert multiple field locations. This simplifies the form design.

1. Open the form you are using and select the field to be repeated. In the form *New Screen Form Example,* the batch fields will be marked as repeat blocks. This will allow data from multiple batches to be displayed. To make the selection:
   - Hold down the **Shift** key on the keyboard
   - Using the mouse, draw a box around all fields to be repeated.



2. From the menu bar, select **Edit, Create Repeat Block**. The Repeat field dialog box displays.



3. **Number of Iterations per Screen/Page.** Number of times the field is repeated on the screen or page. In this example, the information on four (4) batches/page will be displayed, under one (1) illuminant.

NOTES

If you enter more fields than fit on the screen or page, an error message displays. You must lower the number of repeats to be displayed.

When a repeat block is set, you cannot edit individual fields or add new fields to the repeat block section. *See also Editing and Deleting Forms, Removing a Repeat Block for instructions to delete a repeat block.*

4. **Spacing between repeat fields**. Specifies the amount of space to leave between the fields. Type the number of lines (for vertical repetition) or spaces (for horizontal repetition).

5. **Sort Order.** Assigns a priority to the sort used. In this example, you could display all of the data for one batch, or all of the batch data for a single Illuminant/Observer combination.

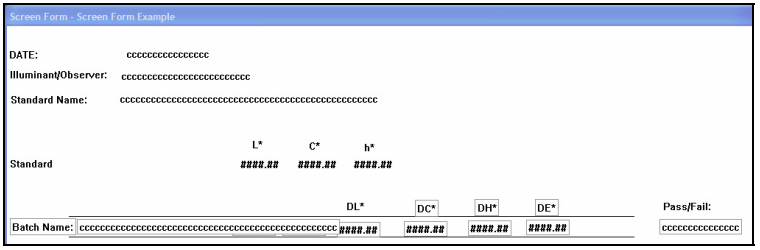
   For example:
   Sort on Ill/Obs. Repeat on ill/obs to see the first ill/obs condition with all the batches, then the second ill/obs, etc.

D65 BAT1
D65 BAT2
D65 BAT3
A BAT1
A BAT2
A BAT3

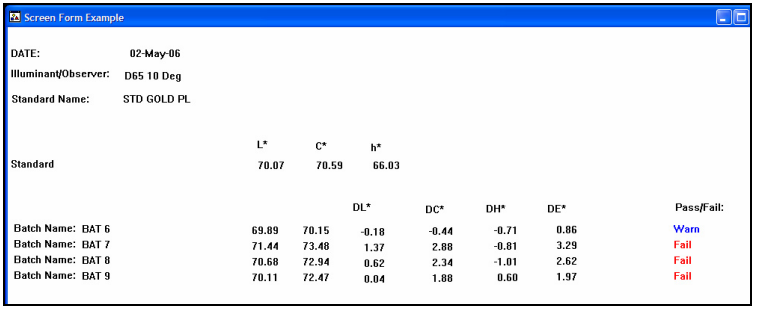
Sort on Batches. Repeat on batches to see the first batch with all the ill/obs conditions, then the second batch, etc.
BAT1 D65
BAT1 A
BAT1 CWF
BAT2 D65
BAT2 A
BAT2 CWF

6. **Direction (Vertical or Horizontal).** Specifies the direction of the repeat of the fields.—e.g., up and down (Vertical) or side by side (Horizontal).
7. **Print All Batches.** Applies to printer forms. When selected, all batch measurement data is printed. Place a check in the box to enable this option.
8. When all of the selections are made, click **OK.**

   A repeat block has been assigned to the batch data in the form *New Screen Form Example*:



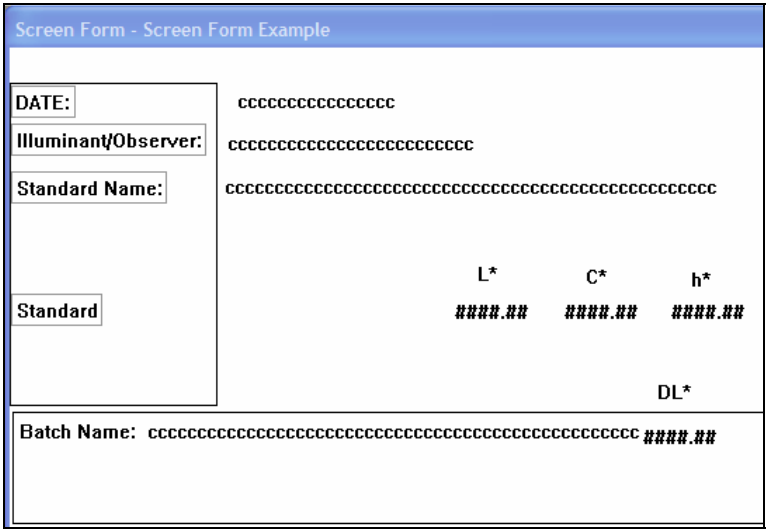
9. Click **File Menu, Save Form** to save the changes.
10. To view the display, open TOOLS and select *Screen Form Example*:



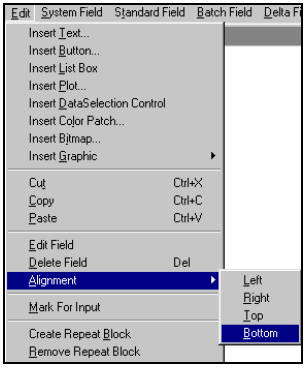
Aligning Fields

This function allows you to place blocks around fields in your form in order to align them. They can be aligned along the top, bottom, left, or right edges. It also allows you to reposition several fields at once, or define a repeat block in the form for multiple batch output. Hold down the **Shift Key** on the keyboard. Using the mouse, click and drag to draw a box around two fields.

1. Draw a box around the fields to be aligned:



2. From the menu bar, and select **Edit**, **Alignment**. From the submenu, select the preferred alignment type—*Left, Right, Top*, or *Bottom.*

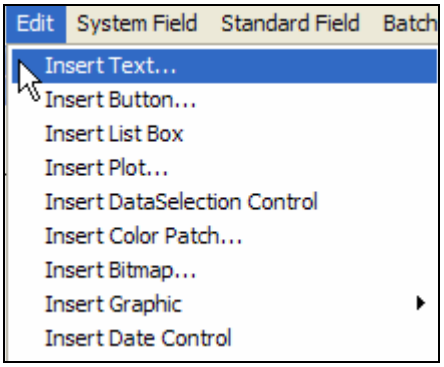


3. Click **File Menu, Save Form** to save the changes. The selected fields will be re-aligned in the display.

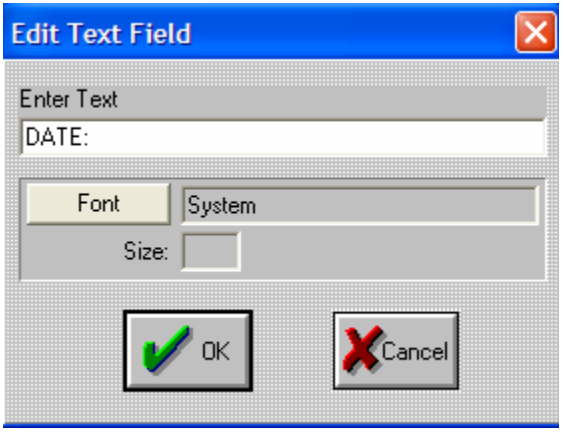
Inserting Text

The *Insert Text* option is used to insert a text string for display purposes. This option is used to create a label, or title, for the data fields. *In this example we will insert text to label the Date field.*

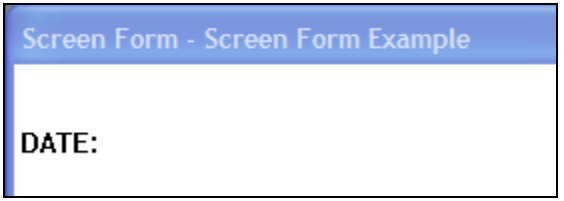
1. Move to the menu bar, and select **Edit, Insert Text**.



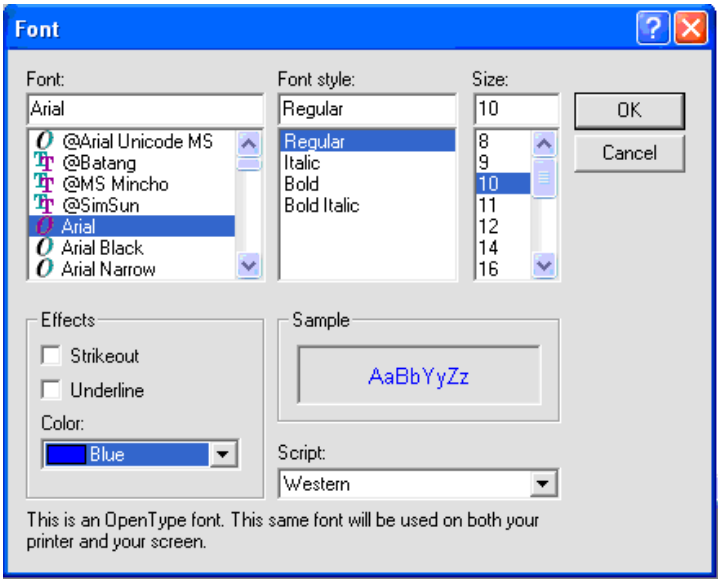
The Edit Text Field dialog box displays.



2. In the *Enter Text* field, type the text you want to include (e.g., Date, etc.).

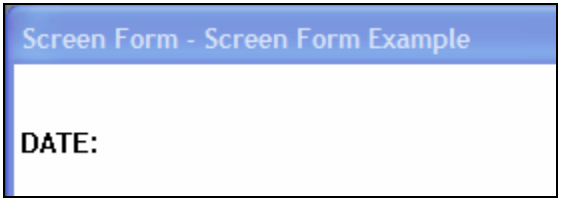


3. The *Font* field displays the font to be used. To change this selection click the **Font** button, and select the desired font characteristics.



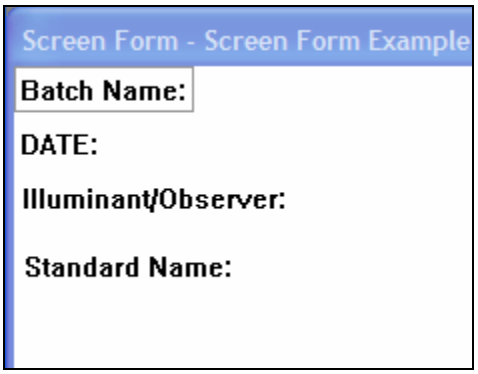
4. In the *Size* field, type the size for the font, or choose the font size from the Font screen.

5. Click **OK** when finished.



NOTE
When you finish the entry, the text may not be in the correct position on the form. You can use the mouse to move the text box and/or the Alignment option, to align the data properly.

6. Repeat these steps to add all of the appropriate labels to the form. In this example, the insert text procedure was repeated to add the standard and batch names, Illuminant/Observer condition.

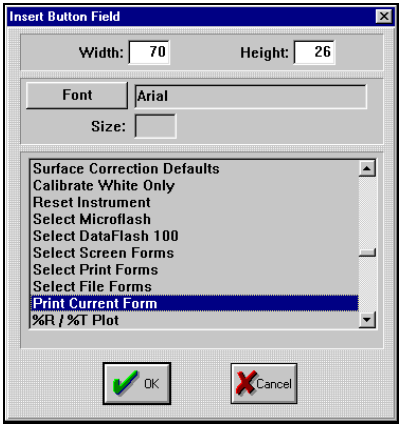


7. Click **File Menu, Save Form** to save the changes.

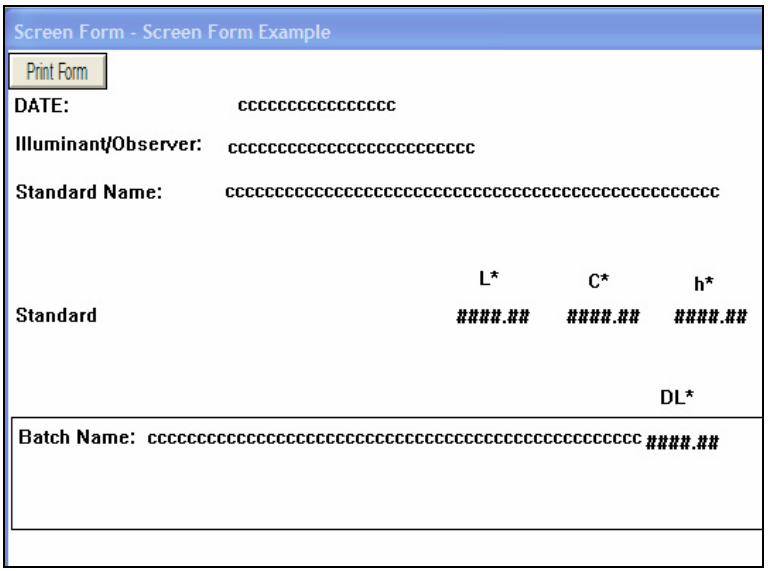
Inserting Buttons

In Datacolor TOOLS, buttons are often used to create instant access to procedures performed frequently. For example, if there is a certain plot you use to evaluate your batch(es), you may want to add a button to your form that displays that plot. In the example below a **Print** button will be inserted. This lets the operator print the data from the screen form itself.

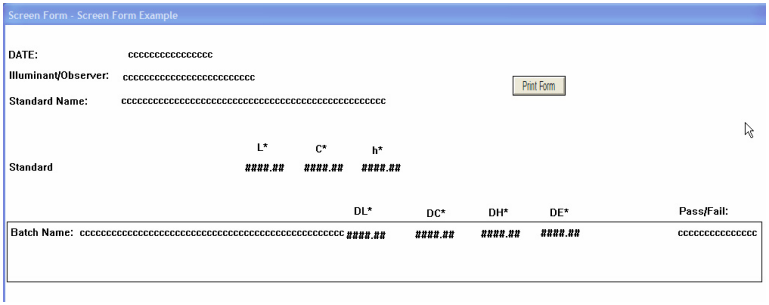
1. Open the form to which you want to add a button.
2. Move to the menu bar, and select **Edit, Insert Button**. The Insert Button Field dialog box displays:
3. Move through the list of buttons by using the up/down scroll arrow. When the preferred button is shown, click to highlight it.



4. In the *Width* and *Height* fields, enter the desired button dimensions.
5. If the font shown is not correct, click the **Font** button and select the desired font.
6. When all selections/entries are made, click **OK**. The form will look as follows:

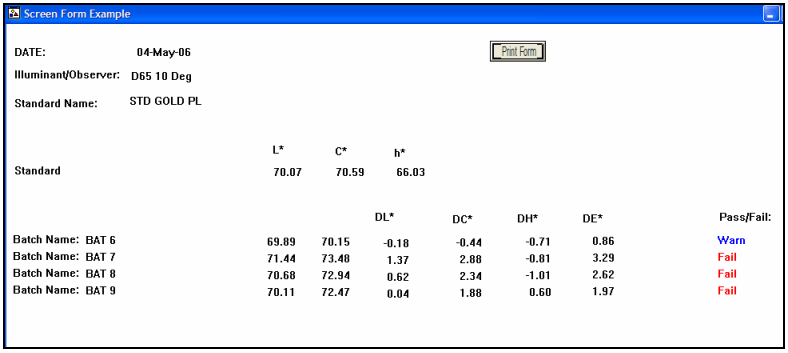


7. Use the mouse to move the button to an appropriate location on the form.



8. Click **File Menu, Save Form** to save the changes.

9. To view the changes to the form, launch Datacolor Tools and select the form. Below is the form *New Screen Form Example*, with the *Print* button displayed:

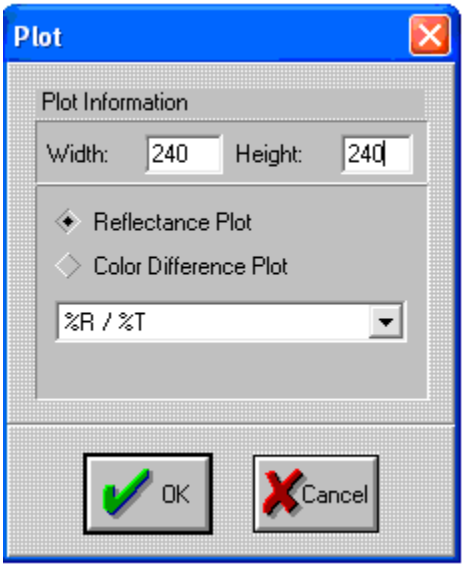


Inserting Plots

You can insert both spectral and colorimetric plots, of specified dimensions, into the form.

Reflectance Plots	Color Difference Plots
%R / %T Plot,	CIELab; CIELab DE
K/S / Absorbance vs. Wavelength	CIE LCh, CIE LCh elliptical
Log (K/S / Absorbance) vs. Wavelength,	CMC
%R IR.	A.I. P/F
	Hunter Lab
	FMCII
	Elliptical, CIELuv

1. Display the form to which you want to add a plot. Move to the menu bar, and select **Edit, Insert Plot**. The Plot dialog box displays.

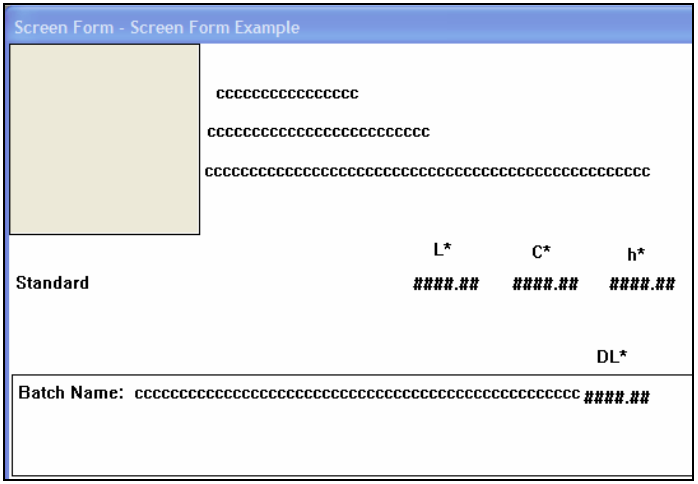


2. In the *Width* and *Height* fields, enter the size in pixels of the plot.

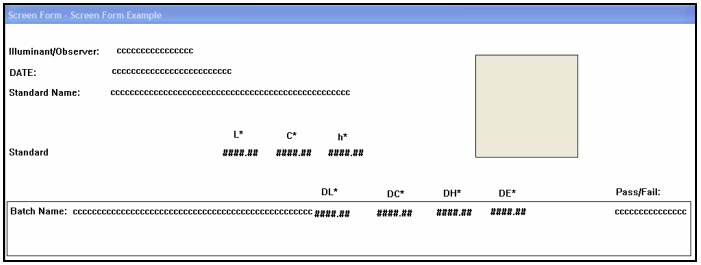
NOTE
The plot width and height should be a minimum of 240 by 240, to scale properly on a form.

3. Click the radio button next to the preferred plot--*Reflectance* or *Color Difference*.
4. Click the down arrow to view the plot choices, and select the preferred plot type. In this example, a CIELCh plot will be added.

5. Click **OK**. When you return to the form window, the plot added is represented in the form as a gray rectangle.

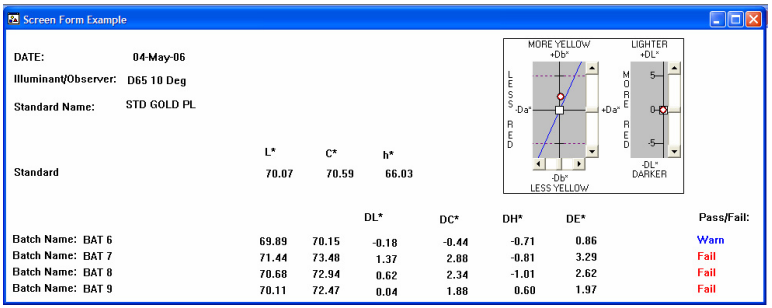


6. To move the plot to a different location on the form, simply click on it and drag it to a new location in the window



7. Click **File Menu, Save Form** to save the changes.

8. To view the changes to the form, launch Datacolor Tools and select the form. Below is the form *New Screen Form Example*, with the plot added:



Inserting Other Graphics into a Form

There are additional graphics that can be added to the form. They include:

- Color patches
- Bitmaps
- Other graphics

Inserting a Color Patch

A color patch is a video representation of a standard or batch color. This option is useful for displaying visually the standard and batch color differences under multiple illuminants. The color patch is a ***relative*** representation of the actual standard and batch colors.

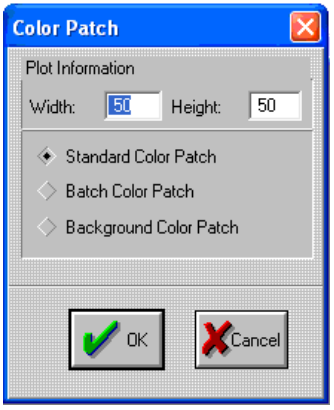
NOTES

The color displayed on the screen will not always visually match an object color because of limitations of video monitors.

The background patch can be used as a neutral background for the standard and batch patches. This is optional and the patches can be placed directly on the screen.

Color patches can be used in a repeat block.

1. Display the form to which you want to add a color patch.
2. Move to the menu bar, and select **Edit, Insert Color Patch.** The Color Patch dialog box displays.



3. In the *Width* and *Height* fields, enter the size in pixels of the color patch.

4. Click the radio button next to the preferred color patch type--Standard, Batch, or Background.
5. Click **OK.** When you return to the form window, the added color patch is represented in the form as a gray rectangle.
6. To move the color patch, simply click on it and drag it to a new location in the window.

Inserting a Bitmap

This function allows you to insert a bitmap graphics object into a screen or printer form. This option can be used to insert a company logo onto the form.

1. Display the form to which you want to add a bitmap. Move to the menu bar, and select **Edit, Insert Bitmap**. The Open dialog box displays.
2. Navigate to the location of the bitmap file you want to add, highlight it, and click **Open**. When you return to the form, the bitmap is inserted.

Inserting a Graphic

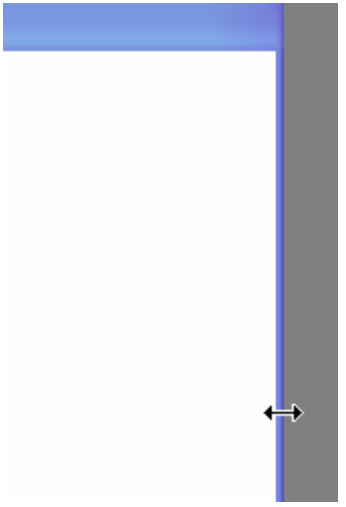
This function inserts a simple graphic shape such as a line, rectangle, or ellipse. These tools are used to draw attention to data components on the form.

1. Display the form to which you want to add a graphic. Move to the menu bar, and select **Edit, Insert Graphic**.
2. From the submenu, select the desired graphic type—*Line, Ellipse*, or *Rectangle*.
3. For a **Rectangle**, do the following:
   - When the + appears, hold down the **Shift** key, and move the mouse with the + to the spot you want it.
   - At this starting point, left click and draw the perimeter of the ellipse or rectangle until it is the desired size.
   - Then, release the **Shift** key.
4. For a **Line**, do the following:
   - When the + appears, hold down the **Shift** key, and move the mouse with the + to the spot you want it.
   - At this starting point, left click and draw the line until it is the desired length. Then, release the **Shift** key.
5. To remove either the rectangle or line, do the following:
   - Highlight the spot so that a box appears around the item.
   - Press the **Delete** key.

Resizing the Form Display Window

This option allows you resize the current window. The size and position of the window displayed here is the actual display size in the TOOLS program.

1. Display the form to be resized on screen.



2. To resize the form window, do the following:
   - Click on the border of the form until the pointer changes to a double-sided arrow.
   - Press/hold the mouse and drag the window to the desired size.
3. To reposition the form within the window, do the following:
   - Move to the title bar of the form (e.g., *Screen Form Example*).
   - Press/hold the mouse pointer and move the window to its preferred location on screen.

Saving a Form

Save your form periodically as you work on it, so that you won't lose your work in the event of a power outage. In addition, when editing a form, always be sure to save your changes before leaving the computer for any reason.

There are two ways in which to save a form:

- Use the existing form name
- Assign a new form name

NOTE
If you are saving the form for the first time, the Save As dialog box is presented. Refer to the instructions below for completing this dialog box.

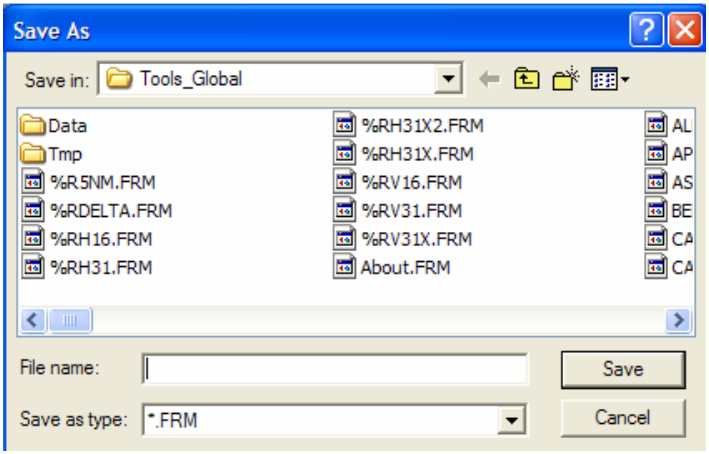
When executing either of the Save form options within the program, the form is saved to a default location on the fixed drive on your system. You should also make a duplicate of all customized forms on portable media such as a CD, to be used in the event of a system malfunction. *See also Protecting Your Custom Forms below, for additional information.*

To save the current form *with the assigned name*, do the following:

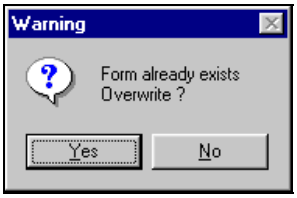
- Display the form on screen, and select **File, Save**. The form is automatically saved.

To save the current form *with a different name*, do the following:

1. From the menu bar, and select **File, Save Form As**. The Save As dialog box displays.
2. In the *File name* field, enter the name to be used for this form (e.g., New Screen Form Example). By default, the extension FRM is assigned to the form.



3. To save the form to a different location:
   - In the *Save in* field, browse to the destination drive and folder.
   - Click **Save.** If you have entered a file name that does not already exist, the dialog box closes, and the form is saved and the main Form Editor window is emptied.
   - If you have entered a file name that already exists, a warning message displays.



- If you want to overwrite the existing form name, click **Yes**.
- If you do not want to overwrite an existing form click **No**. The Save As dialog box is displayed. Enter a different file name.

Protecting your Custom Forms

Whenever new forms are added to Tools they should be saved to a CD or other removable media to be used in the event of a system malfunction. *See also Datacolor TOOLS User's Guide, Appendix, File Backup for information regarding all files to be saved on separate media. See also Datacolor TOOLS User's Guide, Appendix, Data File Locations for information regarding the location of the form files you are using.*

Editing and Deleting Forms

These options are used to customize or delete existing Tools forms.

1. Display the form you want to modify in the Form Editor window. *Refer to the instructions entitled, "Opening an Existing Form."*
2. With the desired form displayed, use the functions found on the **Edit** menu (e.g., *Insert Text, Insert Button*, etc.) to modify the form as necessary.
3. To change a field on the form, click on the field so that a rectangle surrounds the field. Then, move to the **Edit** menu and select the desired function—e.g., edit field, delete field, mark as input field, etc.
4. To move the field, click on the field and, while continuing to press the mouse button, drag the field to the new location on the form. When the field is in the desired place, release the mouse button.

Cut/Copy/Paste

This standard, Windows function allows you to cut (remove), copy (duplicate), and paste (insert) information within a form or between forms.

To **Cut** (remove) an item completely, do the following:

1. Highlight the item you want to remove.
2. From the menu bar, select **Edit, Cut**, or press **Ctrl + X**.

To **Copy** (make a duplicate) of an existing item and copy it to another location in the same form or a different form, do the following:

1. Highlight the item you want to copy.
2. From the menu bar, select **Edit, Copy**, or press **Ctrl + C**.
3. Open the form (either the same form or a different form) into which you want to copy the selected item.
4. Refer to the instructions entitled, “Paste.”

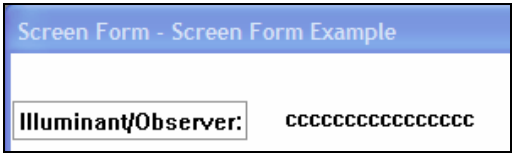
To **Paste** (insert) the item that has been copied onto the clipboard (the holding location in your system), do the following:

1. Display the form to which you want to insert the item.
2. From the menu bar, select **Edit, Paste**, or press **Ctrl + V**. The item is inserted.
3. To relocate the item on the form, simply click on it the item, and drag it to the new location.

Editing a Field

This function allows you to change the field contents of the field currently selected. In the example below, the Illuminant/Observer label will be edited.

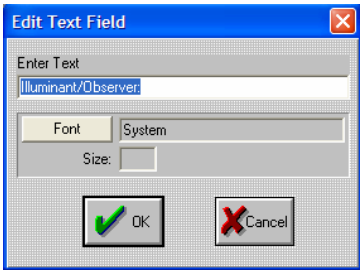
1. Display the form, and click on the field to be edited. The field is surrounded by a rectangle, indicating it is selected.

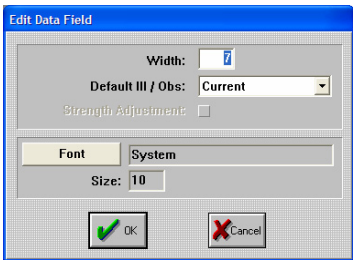


2. Do one of the following:
   - From the menu bar, select **Edit Menu, Edit Field**.
   - Use the mouse and double-click the field.

   Based on the type of field selected, *Text* or *Data*, the appropriate dialog box displays.

Text Field Dialog **Data Field Dialog**





3. Make the necessary changes, and click **OK**.

Deleting a Field

This function allows you to delete an existing field on the current form.

1. Click on the field to be deleted. The field is surrounded by a rectangle, indicating it is selected.
2. Do one of the following:
   - Press the **DEL** key on your keyboard.
   - From the menu bar, select **Edit, Delete Field**.

   The field is removed.

Removing a Repeat Block

When a repeat block is set, you cannot edit individual fields or add new fields to the repeat block section. This option removes the repeat block and the fields are available as they were before the repeat block was set.

1. Click on the repeat block to select it.
2. From the menu, select **Edit, Remove Repeat Block**. The box around the fields is removed and the fields are accessible.

Deleting an Entire Form

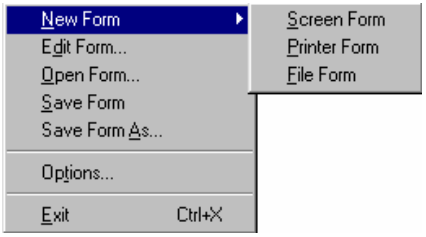
To delete a form permanently, it must be deleted from the folder in which it resides. This is done using standard Windows delete commands. *See also Datacolor TOOLS User's Guide, Appendix, Data File Locations to determine the location of the *.FRM file you need to delete.*

About Printer Forms

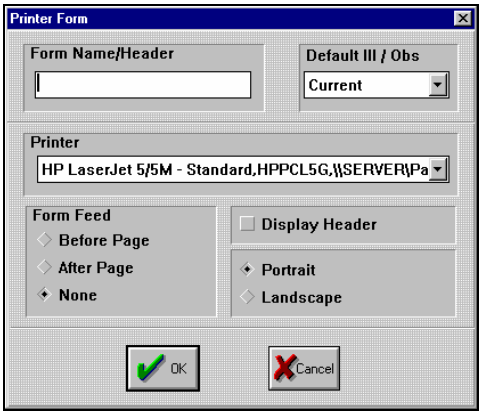
Printer forms are designed to format the data for printing. Typically, a screen can hold more information than a printed sheet. Because of this special attention is paid to aligning the fields on a printer form to insure that the information is legible.

Creating a New Printer Form

1. From the menu bar, select **File, New Form.** From the submenu of options—Screen, Printer, and File—select **Printer Form.**



The Printer Form dialog box displays.



2. **Form Name/Header.** Type in a name for the new form. This name is used to select the form in the Tools QC program. Maximum length = 23 chars.

NOTE
The program will allow you to create multiple forms with the same name. However, the TOOLS program will only recognize one of the forms. We strongly advise you to assign unique names to each form you create.

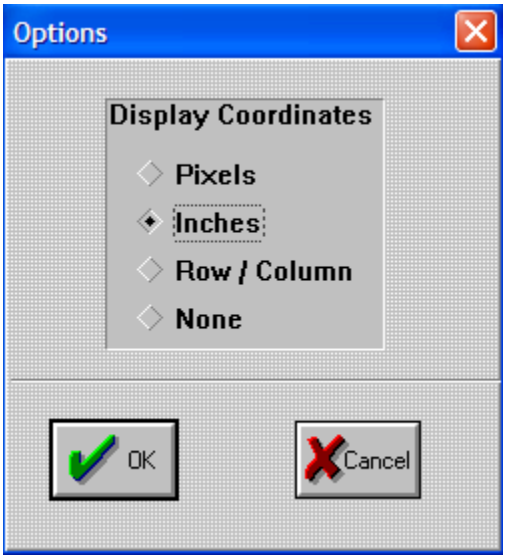
3. **Default Ill/Obs.** Click the down arrow to view the choices and select the appropriate Illuminant/Observer condition to be used. If you select **Current**, the program will use the system default Illuminant/Observer. *See also Datacolor TOOLS User Guide, Illuminant/Observer Menu for instructions to view and change this selection.*

4. **Printer.** Displays the current default Windows printer. This is written to the form, but it is not currently used. The form uses the default Windows printer specified on the local PC. DO NOT CHANGE THIS SETTING.

5. **Form Feed.** Do not change this setting.
6. **Display Header.** When selected, the form name is printed as a header across the form. Place a check in the box to enable it.

NOTE
This option is typically not used.

7. **Portrait/Landscape.** Specifies the orientation of the form for printing.
8. When all selections/entries are made, click **OK.** A blank field will be displayed. The printer form fills the entire window. You cannot see the entire page at one time. You should design your printer form based on the printed copy, rather than the appearance in the Form Editor window. To do this, you need to set the location of the cursor on the form.
9. Select **File Menu, Options.** The window below is displayed:



10. Selecting *inches* will help you to locate the fields on a printer form, taking into consideration the size of the printed page.
11. Add text and data fields as appropriate. See also Creating New Forms in this guide for detailed instructions.

It is best to print trial pages as you develop a printer form. To do this:

1. Save your printer form.
2. Launch Datacolor TOOLS. Select **Forms Menu, Printer Forms.** A list of printer forms will be displayed. Select the printer form you are designing from the list. It will be sent to the printer immediately.

Printer Forms, Repeat Fields

Repeat fields are done the same as for screen forms. The only difference occurs when the option "**Print All Batches**" is included on the form.

- If you enable this option, the form prints **all** the desktop batches, using as many pages as necessary.
- When this option is disabled, the form prints only the number of batches specified in the repeat setup.

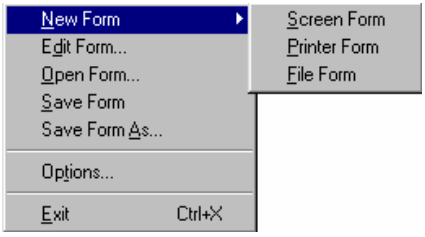
See also Creating New Forms, Repeat Blocks in this guide for details on this option.

About File Forms

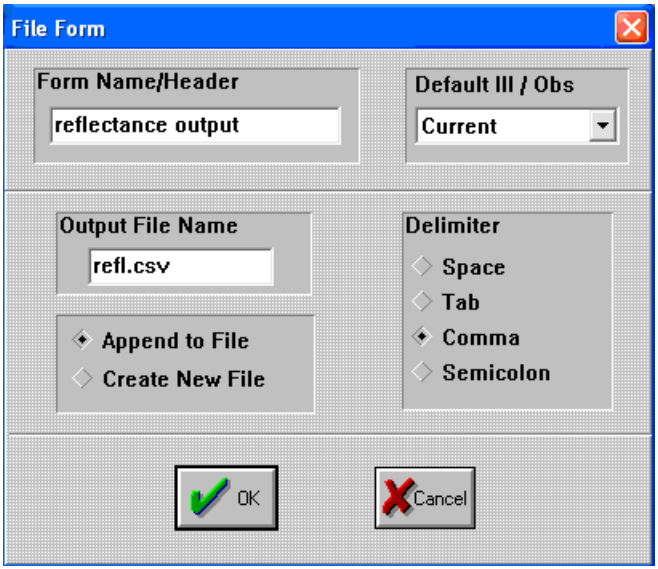
Three types of form files, screen, printer and file, can be created and edited using Form Editor. File forms are used to transfer color data to an ACSII file. The data can then be imported into another program. The format of the data in the ASCII file can be customized to your needs.

To create or edit a file form:

1. From the submenu of options—Screen, Printer, and File—select **File Form**.



The File Form dialog displays.



2. **Form Name/Header.** Enter a name for the new form. This name is used to select the form in the Tools QC program. Maximum length = 23 chars.
3. **Default Ill/Obs.** Default Illuminant/Observer is current / active one in Tools.
4. **Output File Name.** Enter a name for the output file. It can have a file extension *.CSV, *.TXT or *.QTX. In this example it is REFL.CSV.
5. **Append to File.** This option allows data to be added to the same file over time.
6. **Create New File.** This option creates a new file each time it is selected and assigns it the same name. This option overwrites the existing date in the file.
7. **Delimiter.** Delimiters are used to separate data fields in the file. The delimiter can be a space, a tab, a comma, or a semicolon. Click the radio button next to the desired option.

NOTES

You do not have to insert the delimiters. Form Editor inserts them when you run the form in QC. Simply place the fields next to each other without any delimiters.

We do not recommend that you use a space as a delimiter. This can cause the data to be exported in an undesirable position in the output file.

8. When all selections/entries are made, click **OK**. The form fills the Form Editor window, and contains scroll bars along the right side and bottom of the window. These allow you to move through multiple data fields quickly. Since this type of form creates a file on your computer, it is not limited to the size of your viewing screen, and can hold large quantities of data.

Editing Forms with a Text Editor

For most users, the Form Editor provides the editing tools needed to format the data exported to ASCII files. However, advanced users may need to edit the form file using an ASCII editor such as Notepad. Editing a form file with a text editor is usually done to align fields in complex forms. This allows you to locate the fields using position numbers, and may be easier than using the *Alignment* tool in Form Editor.

Screen Form Example

Shown below is a listing of the form, *Display CMC PF - SMBCMC1.FRM*.

```
Display CMC PF
1 0 638 343 640 480
MULTI CIELAB REPEAT
0
SCREEN

TEXT "DL*/lSL" 208 49 -1 16777216 0 0 0 0 0 0 0 0 0 1 0 0 0 0
"System"
TEXT "DC*/cSC" 290 49 -1 16777216 0 0 0 0 0 0 0 0 0 1 0 0 0 0
"System"
TEXT "DH*/SH" 374 49 -1 16777216 0 0 0 0 0 0 0 0 0 1 0 0 0 0
"System"
TEXT "CMC Color Difference" 217 0 -1 16777216 0 -22 0 0 0 0 0 0 0 1
4 0 1 0 "Arial"
TEXT "Batch Name" 47 49 -1 16777216 0 0 0 0 0 0 0 0 0 1 0 0 0 0
"System"
ILLNAME OUTPUT 516 21 -1 0 0 15 0 16777216 0 0 0 0 0 0 0 0 0 1 0 0
0 0 "System" 0
TEXT "CMC DE" 445 49 -1 16777216 0 0 0 0 0 0 0 0 0 1 0 0 0 0
"System"
STD_NAME OUTPUT 10 20 -1 1 0 24 0 16777216 0 0 0 0 0 0 0 0 0 1 0 0
0 0 "System" 0
TEXT "Standard Name" 37 0 -1 16777216 0 0 0 0 0 0 0 0 0 1 0 0 0 0
"System"
TEXT "CMC Pass/Fail" 518 49 -1 16777216 0 0 0 0 0 0 0 0 0 1 0 0 0 0
"System"
TEXT "Current Illuminant" 500 0 -1 16777216 0 0 0 0 0 0 0 0 0 1 0 0
0 0 "System"
REPEAT BATCH 15 1 VERT 0 FALSE 0
  BAT_NAME OUTPUT 12 66 -1 1 0 24 0 16777216 0 0 0 0 0 0 0 0 0 1 0
0 0 0 "System" 0
  CMC_DL OUTPUT 196 66 -1 0 0 6 0 16777216 0 0 0 0 0 0 0 0 0 1 0 0
0 0 "System" 0
  CMC_DC OUTPUT 277 66 -1 0 0 6 0 16777216 0 0 0 0 0 0 0 0 0 1 0 0
0 0 "System" 0
  CMC_DH OUTPUT 363 66 -1 0 0 6 0 16777216 0 0 0 0 0 0 0 0 0 1 0 0
0 0 "System" 0
```

```
  CMC_DE OUTPUT 443 66 -1 0 0 6 0 16777216 0 0 0 0 0 0 0 0 0 1 0 0
0 0 "System" 0
  CMC_PFDesc OUTPUT 543 66 -1 0 0 6 0 16777216 0 0 0 0 0 0 0 0 0 1
0 0 0 0 "System" 0
ENDREPEAT
```

Position and Size. 1st and 2nd characters = Position of upper left corner of window.

3rd and 4th characters = Width and Height in Pixels.

5th and 6th characters = Screen resolution of form file.

Fields

- 1st String = Field Name
- 2nd String = INPUT or OUTPUT field.
- 3rd Char = X (Horiz) Position in Pixels
- 4th Char = Y (Vert) Position in Pixels
- 5th Char = Font - 0=Default Font 1-9 = Font 1-9 (Old Method)
- 6th Char = Allowed For Input - 1=OK 0=NO
- 7th Char = Not Used
- 8th thru 25th = Font Characteristics
- 26th = Strength Adjustment Status

Text. Actual text string is in quotes

- 1st Char = X (Horiz) Position in Pixels
- 2nd Char = Y (Vert) Position in Pixels
- 3rd Char = Font - 0=Default Font 1-9 = Font 1-9 (Old Method)
- 4th thru 19th = Font Characteristics

NOTE

After you make any changes, save the form. If you save the form to a new external DOS file name, you should first change the internal form name. If you don't, you will see 2 identical form names in the forms list in the QC program.

Form File Format for Plots

You may need to use a text editor to align a plot in the form. Below is an example of the format for displaying a plot:

```
PLOT OUTPUT  5  50  200  170  2  1
```

Using the above example, graphic plots in a form are formatted as follows:

- **PLOT.** Field Type. Must be PLOT for a plot
- **OUTPUT.** Should always be OUTPUT
- **5.** X coordinate for top left corner of plot
- **50.** Y coordinate for top left corner of plot
- **200.** Width of plot in pixels
- **170.** Height of plot in pixels
- **2.** The type of plot. "1" = curve; "2" = color difference. If the "type of plot" (as shown in the previous position) is **1**, the following curve sub-types are used:
  - 1 = Reflectance/Transmission
  - 2 = K/S / Absorbance
  - 3 = Log K/S / Log Absorbance
  - 4 = IR

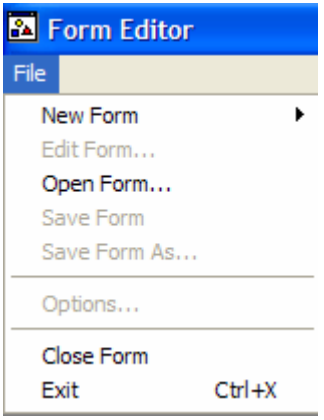
  If the "type of plot" (as shown in the previous position) is **2**, the following color difference sub-types are used:
  - 1 = CIELAB
  - 2 = CIELAB DE
  - 3 = CIELCH Rectangular
  - 4 = CIELCH Elliptical
  - 5 = CIELUV
  - 6 = FMC2
  - 7 = Hunter Lab
  - 8 = CMC
  - 9 = AI P/F

Menu Options

This section summarizes all options that are displayed on the drop-down menus in the Form Editor program.

File Menu

These menu options are used to create and manage your forms. Click on the File Menu to view the options:



NOTE
Some of these menu options are not displayed (e.g., Edit Form, Save Form) until a form is opened.

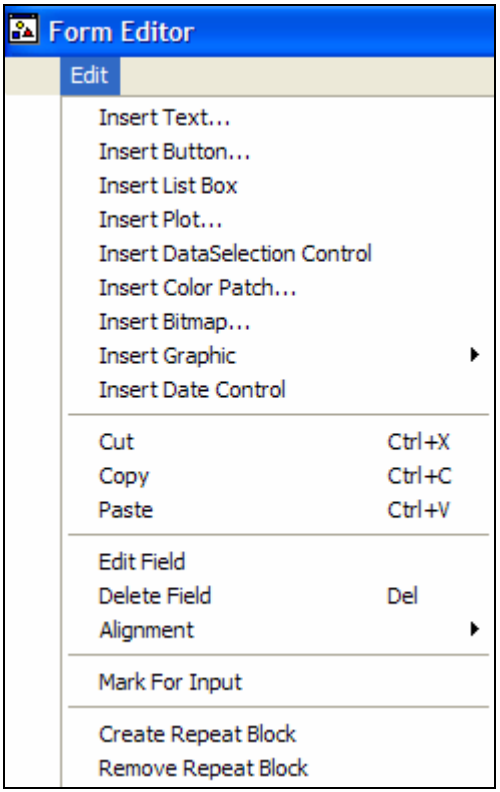
- **New Form.** Used to create a new form. You will be asked whether you want to create a Screen Form, a Printer Form, or a File Form.
- **Edit Form.** Used to change the name of the form, or the name of a printer form file name. It is not used change the individual fields on a form. Use **File Menu, Open Form** to change the fields.
- **Open Form.** Opens an existing form. Once opened, you can customize it to your needs.
- **Save Form.** Saves the form you are working on, without leaving the program or exiting the form.
- **Save Form As.** Saves the form you are working on under a different name. This allows you to modify an existing form, save the changed version under a new name, without destroying the original version.
- **Options. A**llows you to display the coordinates of your cursor as you edit the form. You have the choice of expressing the coordinates in

terms of pixels, inches, row and column, or not displaying the coordinates at all.

- **Exit.** Closes the Form Editor program. If you select **Exit** before saving your current form, the program will remind you that you have not done so, and will ask you if you want to save the changes you have made.

Edit Menu

The Edit Menu provides all of the options required to manage the fields on a form. This includes changing features such as text or button on the form, as well as changing individual fields within the form. Click on the Edit Menu to view the options:

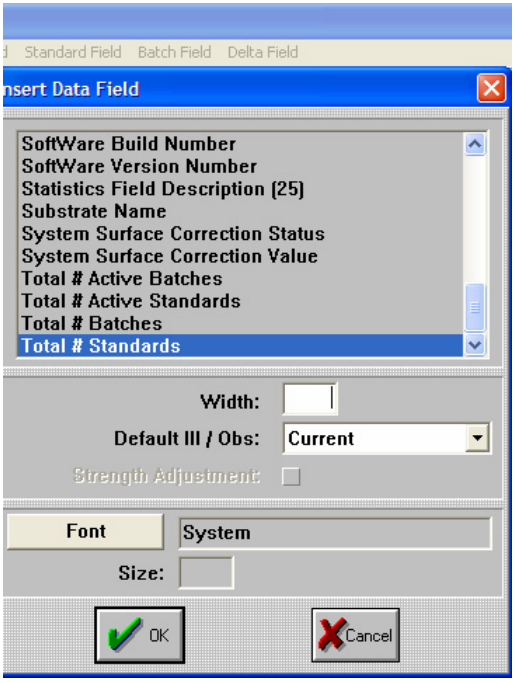


- **Insert Text.** Inserts a text string for display purposes. This is the way to create a label or title for your data fields.
- **Insert Button.** Inserts a command button to the form. Add a button to your form for start a function you perform regularly (e.g. %R Plot, Next Batch, Retrieve Stds, etc.).
- **Insert List Box.** Inserts an input dropdown box, linked to a specific file containing a list of data.

- **Insert Plot.** Inserts a plot of specified dimensions into the form.
  - Reflectance plots include the following: %R / %T Plot, K/S / Absorbance vs. Wavelength, Log (K/S / Absorbance) vs. Wavelength, and %R IR.
  - Color Difference plots include the following: CIELab, CIELab DE, CIELCh, CIELCh Elliptical, CIELuv, FMCII, Hunter Lab, CMC, and A.I. P/F.
  - The dimensions of the plot must be a minimum of 240 x 240, in order to scale the plot properly on the form.
- **Insert Data Selection Control.** Inserts a database input box from which to enter/retrieve the samples onto a screen form.
- **Insert Color Patch.** A color patch is a video representation of a standard or batch color. The color displayed on the screen will not always visually match an object color because of limitations of video monitors. The color patch will be a relative representation of the actual color.
- **Insert Bitmap.** Insert a bitmap image into the form. Bitmaps are not sized by the Form Editor and, therefore, should be created in the proper size. The bitmap file must be in the .BMP format.
- **Insert Graphic.** Create simple graphic shapes such as a line, rectangle, or ellipse.
- **Cut/Copy/Paste.** Standard Windows feature that allow you to cut (remove) or copy (duplicate) information from the current location, and paste (or insert) this same information into the new location. This feature is for data fields, and not used for inserted text fields.
- **Edit Field.** Allows you to change the field contents for the currently selected field.
- **Delete Field.** Removes the currently selected field.
- **Alignment.** Align marked fields along their left or right sides, or along their top or bottom edge.
- **Mark for Input.** Marks a selected field as an "input field." This allows you to enter information (such as the sample name) into the blank field.
- **Create Repeat Block.** Repeat selected fields to use for listing multiple batch data.
- **Remove Repeat Block.** Removes the selected repeat block from a field or group of fields.

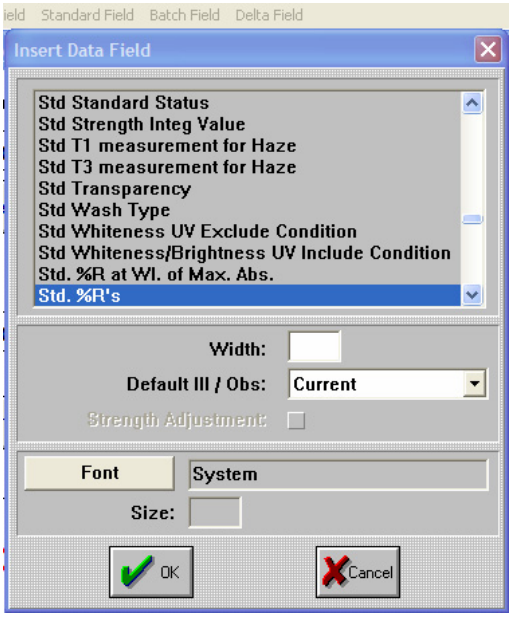
System Field Menu

The System Field menu option opens the dialog box containing all of the selections available for System Fields. *See also Appendix A in this guide for a complete list of the System Fields. See also Creating a New Form for instructions to use these fields to build a form.*



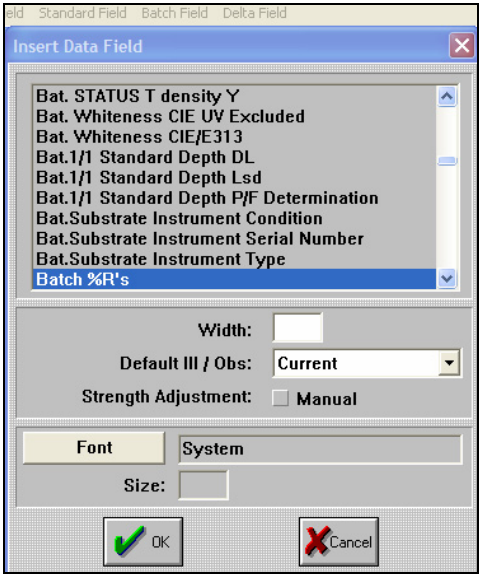
Standard Field Menu

This menu option opens the dialog box containing all of the selections available for System Fields. *See also Appendix A in this guide for a complete list of the Standard Fields. See also Creating a New Form for instructions to use these fields to build a form.*



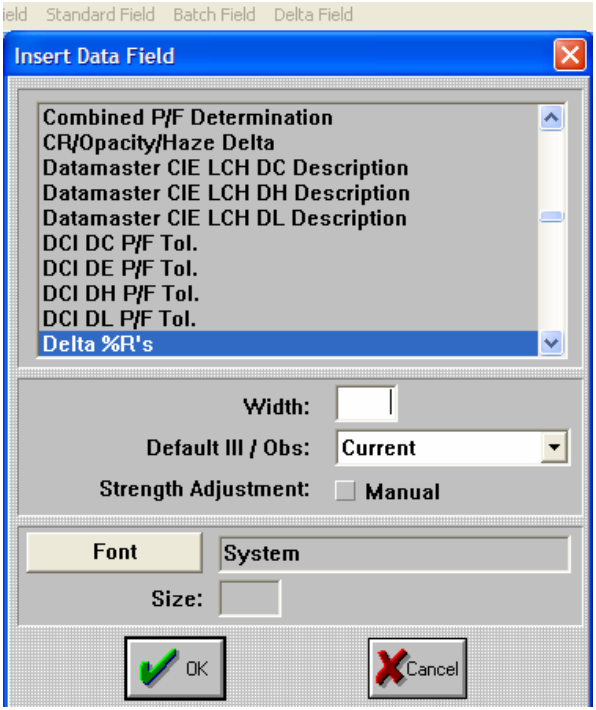
Batch Field Menu

This menu option opens the dialog box containing all of the selections available for System Fields. *See also Appendix A in this guide for a complete list of the Batch Fields. See also Creating a New Form for instructions to use these fields to build a form.*



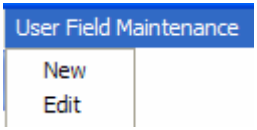
Delta Field Menu

This menu option opens the dialog box containing all of the selections available for System Fields. *See also Appendix A in this guide for a complete list of the Delta Fields. See also Creating a New Form in this guide for instructions to use these fields to build a form.*



User Field Maintenance

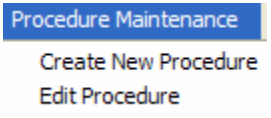
This menu provides access to the options used to add user fields to forms and to the database.



See also User Field Maintenance in this guide for instructions to use these options.

Procedure Maintenance

This menu provides access to the options used to create and edit procedures.



See also Procedure Maintenance in this guide for instructions to use these options.

User Field Maintenance

Overview

This function allows a user to create custom data fields, which can be added to screen forms, printer forms, or file forms. The custom fields can include both text and calculations as needed. These custom data fields can also be permanently added to the Datacolor TOOLS database for retrieval of the custom data for future evaluations. The custom data fields are added to the file called USER.FLD.

If you have added a custom field to a form(s), you have changed an individual form file *.FRM (where * is the name assigned to the form). Datacolor will not have a copy of any custom fields or forms you have developed in the event that your system malfunctions. You must save the USER.FLD file, and any forms that have been edited to add the new fields.

See also Creating/Editing New Screen Form for instructions to add fields to a form.

See also Protecting Custom Fields and Forms in this guide for the location of the files that are edited.

NOTE

In the event that you re-install TOOLS files on your system, the procedure will not overwrite the file USER.FLD, if one already exists.

Data Types

Four (4) custom data field types can be created in User Field Maintenance:

- *System Fields*: Date, time, and other general fields
- *Standards Fields*: Fields related to the standard
- *Batch Fields*: Fields related to the batch
- *Delta Fields*: Fields displaying difference data

Before You Begin

Prior to creating the user fields you should consider the following:

- Do you need only to view the new data, or to view the data and store it into the database?
- **Viewing Only.** Adding the field changes the file USER.FLD. The field must also be added to a form (*.FRM) to be accessed and/or displayed.

WARNING
When you add new fields, the desktop data in Datacolor TOOLS is automatically deleted the next time you launch Datacolor TOOLS. If you have Tools desktop data which needs to be saved, save all important data to the database, **BEFORE** creating new user defined fields.

See also Datacolor TOOLS Form Editor.PDF for instructions to add customized fields to a form.

- **Storing the field into the database.** Depending on the type of field added (standard or batch), changes are made to the file(s), STANDARD.FMT, BATCH.FMT.
- **Exchanging TOOLS data with other users.** The new field names will need to be added to the file, CTMAIL.FLD. See also Datacolor TOOLS User's Guide, Applications Technology, Exchanging Data with Other Users, for instructions to edit the CTMAIL.FLD file.

Creating Custom Fields

All custom QC fields are defined using the User Field Maintenance option in the Form Editor program. The sections below provide step-by-step instructions for creating the custom field *Operator Name.*

It will have the following characteristics:

- The data for the custom field is assigned as a System field.
- The data will consist of text.
- The field will be an input field, and the user will enter the information.
- The data will be displayed on forms ***and*** stored into the database.
- The operator will ***not*** be required to enter this data into the standard record.

The procedure remains the same for any user field you need to create.

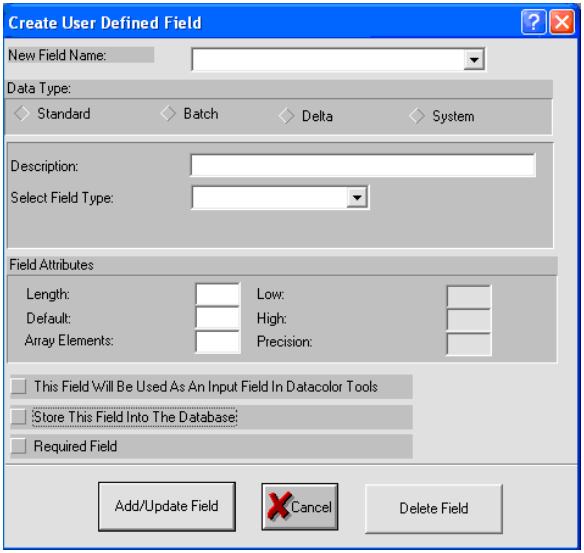
IMPORTANT
When you add new fields, the desktop data in Datacolor TOOLS is automatically deleted the next time you launch Datacolor TOOLS. ***You must save important data to the database BEFORE creating new user defined fields.***

Procedure

To access User Field Maintenance, do the following:

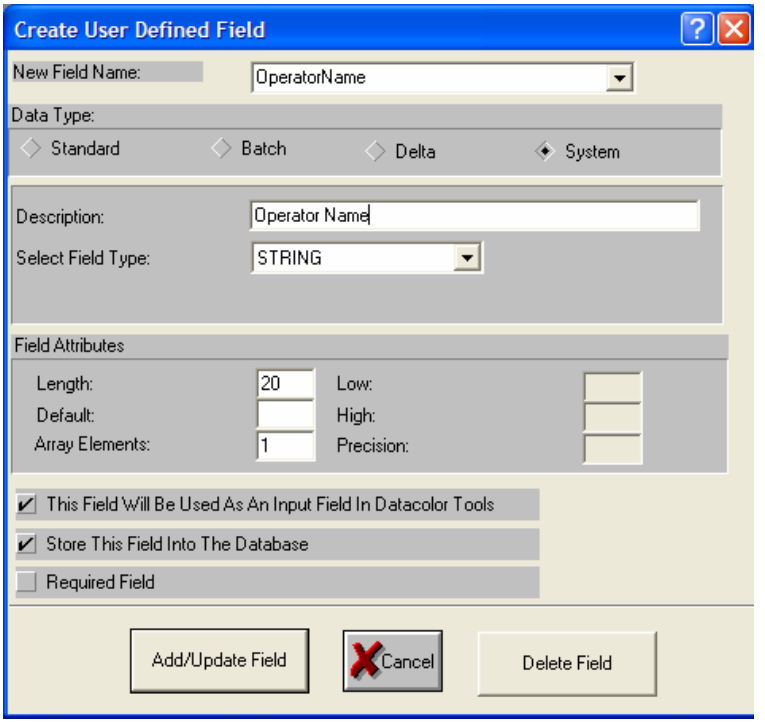
- Launch the Datacolor TOOLS Form Editor. Click **User Field Maintenance, New** found on the far right side of the menu bar.

The Create User Defined Field dialog box is displayed.



New Field Name

- Field names must be less than 128 characters in length
- Field Name can be composed of letters and numbers. (up to 64 characters is suggested, for display purposes)
- Field names cannot begin with a space
- Field names cannot have spaces between words. Use the underscore character "_" to join words.



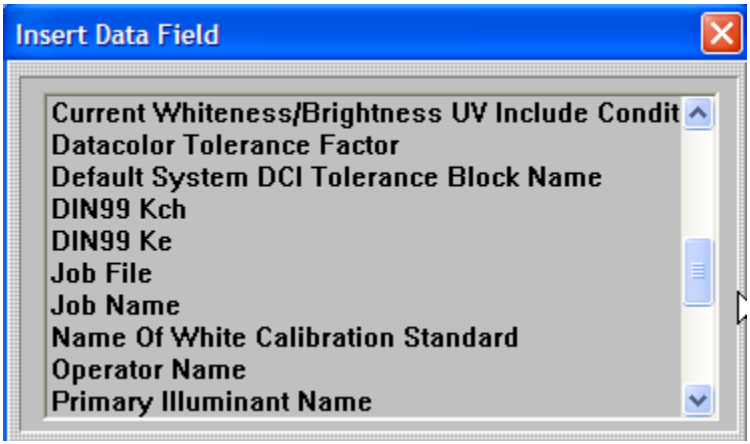
Data Type

Four (4) custom data field types can be created in User Field Maintenance:

- **System Fields.** Includes date, time, and other general fields. In this example, the type will be a System Field.
- **Standards Fields.** Fields that contain any information specifically associated with a standard. For example information that is customer-specific or product-specific may be associated with the standard.
- **Batch Fields.** Fields that contain any information specifically associated with a batch. Date of processing and date of final approval are examples of data that might be specifically associated with a batch.
- **Delta Fields.** Fields that display difference data. These can include colorimetric differences, differences based on index evaluations, etc. Fields Showing Difference Data.

Description

The **Description** is used to identify and select the field in the Form Editor. Enter a simple, short description, as this appears in the list of fields available to be added to a form. The description must be less than 256 characters. Spaces can be used in the description.



Field Types

A field is defined either as a string or integer. The final use of the field determines the type. You must assign a field type using one of the types defined below:

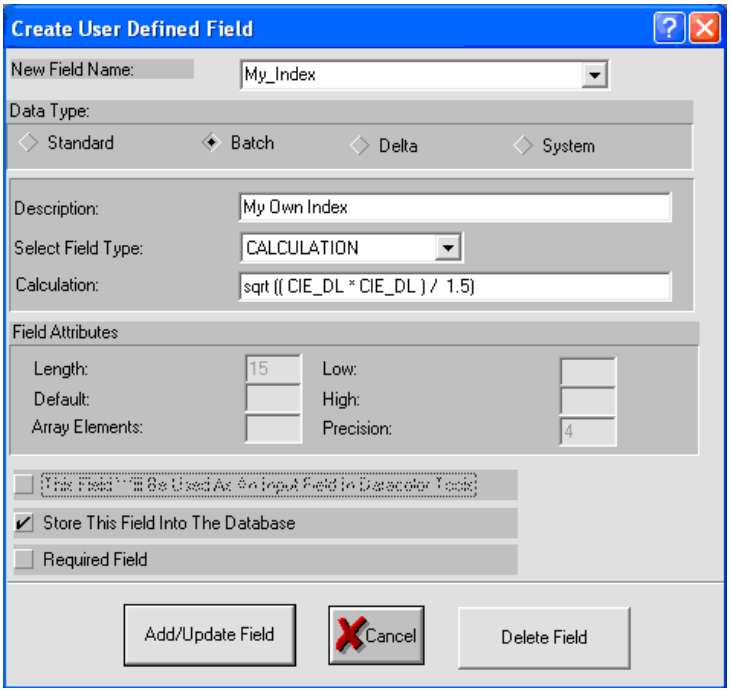
Available Types	Description
Type=**FLOAT**	Floating Point Number (2 decimal). This is a number field that requires some decimal precision.
Type=**DOUBLE**	Double Precision Floating Point (4 decimal)This is a number field type that provides the most precision, and uses the most data space. It is the default field type.
Type=**INT**	Regular Integer (-32,768 to 32,767) This is a number field used for whole numbers. There is no decimal precision.
Type=**LONG**	Long Integer. A number field type used when the numbers are larger than 32, 767.
Type=**STRING**	A text field used to display information not generated from a calculation.
Type=**CALC**	Calculation Field. This field performs a calculation using other field names and returns the results of the calculation. The equation is defined in the Calculation box. The syntax of a calculation is similar to writing a math equation, using math operator functions. Below is an example.

CALC Example

Below is an example of a calculation field:

CALC. sqrt ((CIE_DL *CIE_DL) / 1.5)

- where *sqrt* is the square root of the equation in brackets
- where *CIE_DL* is the CIELab Delta L value of a sample



When using spectral data (% R or % T) in the calculation box, use this syntax:

STD_R(nnn)

- where nnn is the wavelength.

STD_R(520)

- This instruction retrieves the %R value of the standard, at 520 nm.

See also Math Operators and Functions Used in Calculation Field Type below for a list of all math operators available.

Math Operators and Functions Used in Calculation Field Type

Operator/Function	Description
+	Addition
-	Subtraction
*	Multiplication
/	Division
abs	Absolute Value
acos	Arccosine
asin	Arcsine
atan	Arctangent
ceil	Rounds a number up to nearest integer
cos	Cosine
cosh	Hyperbolic cosine
exp	Returns e raised to the power of number
floor	Rounds down
log	Returns the natural logarithm
log10	Returns logarithm to base 10
sin	Sine
sinh	Hyperbolic sine
sqrt	Square root of number
tan	Tangent
tanh	Hyperbolic tangent
sum	Adds array

IMPORTANT
When using calculation fields, you must be careful that your calculation does not cause an error. For example, dividing by zero or taking the logarithm of 0 or a negative number, will result in an error in Tools. The program will not trap these errors and floating point or other fatal errors may result.

Field Attributes

- **Length.** Determines the number of characters that can be handled by the width of the field.
- **Precision.** Decimal precision for fields types. Identifies the number of decimal places to be displayed in FLOAT and DOUBLE fields. The default =2.

- **Default.** Default value for the field, if no data is entered or calculated. This will be displayed in the field when no information is provided. The default is 1.
- **Low.** Lowest data value permitted in the field.
- **High.** Highest data value permitted in the field.
- **Array Elements.** Some data points, such as reflectance values, are composed of multiple cells of data. This option creates an array for the number of fields defined. In the case of reflectance values, the number of cells = 85. Each of these cells contain a single reflectance point.

Field Uses

- **This field will be used as an input field in Datacolor TOOLS.** A checkmark indicates that the field will be an input field. If this box is not checked, the field cannot be marked for input on a form and will not accept input data. *See also Form Editor, Mark Data for Input for instructions to enable user input.*
- **Store This Field Into The Database**. A checkmark indicates the field will be created in the Tools database. When new fields are created in the database, this may change several files. The files affected are STANDARD.FMT, and BATCH.FMT. *See also Protecting Custom Fields and Forms in this section for instructions to backup the custom fields and forms you have created.*
- **Required Field**. A checkmark indicates that the field cannot be left blank. When a required field is left empty, you will receive an error message in TOOLS.

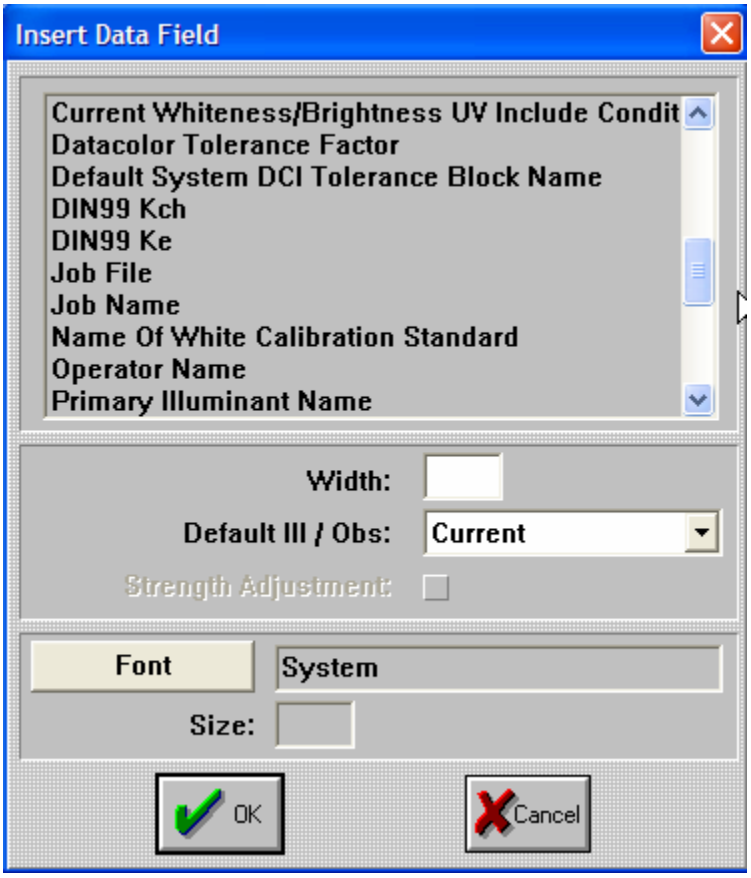
Implementing the New Field

After a field definition is made, the new information is stored in the USER.FLD file. The field is now available to be displayed on a form, and/or stored into the TOOLS data base. The field can also be exchanged with other users via the email options, and import/export file options.

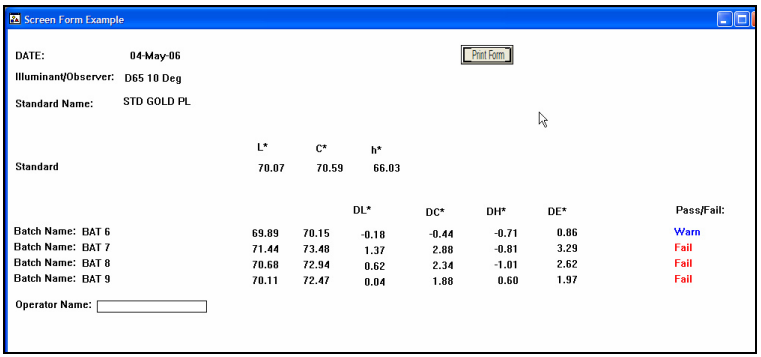
NOTE
You must re-start the Form Editor to view the new field in the list of fields.

1. Click on **File Menu, Open** to open a screen, printer, or file form(s) in the Form Editor program. In the example below, the form to be edited is *New Screen Form Example.* This field was specified as a *System f*ield at creation.

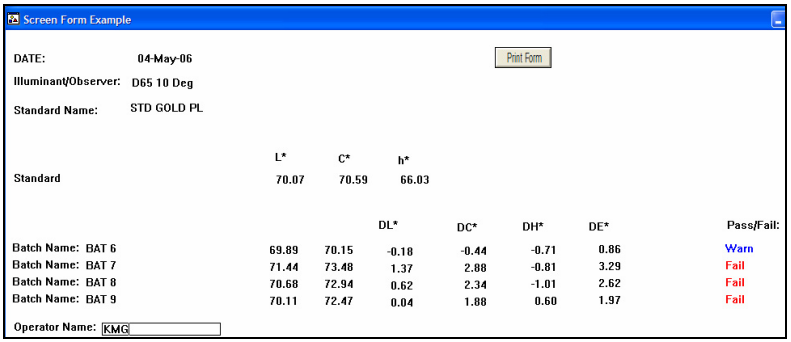
2. Click on the **System Field** menu to open the **System Field** menu:



3. Highlight the field to be added. to display the new information. In this example, the *Operator Name* field will be Marked for Input. Highlight the field in the main Form Editor screen, and click **Edit Menu, Mark for Input**.
4. Save the form.
5. Launch TOOLS and open the screen form New Screen Form Example.



This field was marked for input. The user can enter information into the Operator Name field:



If the new data fields need to be exported to another user via the Tools QTX file, the new fields will need to be added to the file, CTMAIL.FLD, using Microsoft Notepad. *See also Datacolor TOOLS User's Guide, Applications Technology, Exchanging Data with Other Users for a discussion of this feature.*

The new custom field needs to be added to any systems that will receive the data. The USER.FLD and CTMAIL.FLD files on the receiving system must be updated, to include this field. The field(s) must also be added to a form file (*.FRM) on the receiving systems to display of the new field.

NOTE

If you receive program errors in Datacolor TOOLS after adding user defined fields, check the fields carefully for spelling, spacing, and case.

Protecting Custom Fields and Forms

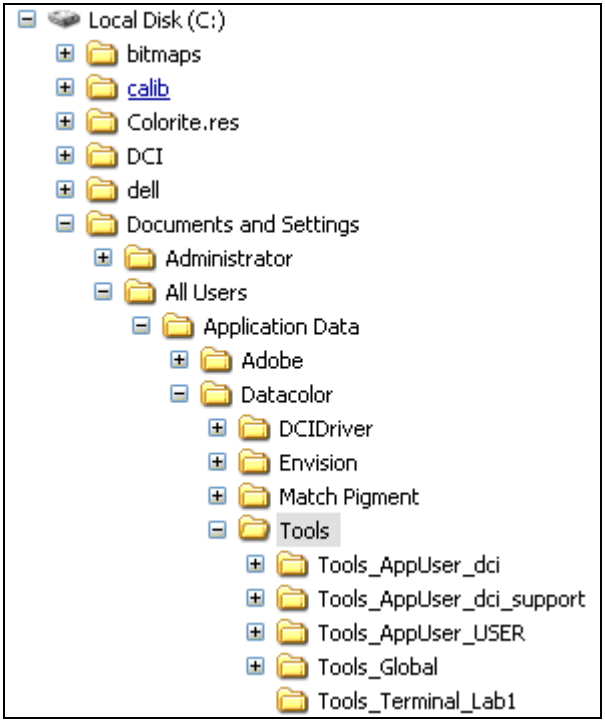
When a new field is added it can be used in forms, and may also be added to the database. Whenever new fields are added to Tools, files important to the operation of TOOLS may be changed. These files should be saved to a CD or other removable media to be used in the event of a system malfunction.

The files to be saved include:

- USER.FLD. defines any unique database fields created
- STANDARD. FMT
- BATCH.FMT
- CTMAIL.FLD

The default location of these files is:

C:\Documents and Settings\All Users\Application Data\Datacolor\Tools\Tools_Global



NOTE

See also Datacolor TOOLS User's Guide, Appendix, Data File Locations for information on data file locations.

See also Datacolor TOOLS Technical Reference.PDF for information on the file locations used by terminal server applications.

If you reload the software into the same directory, some files will be overwritten. However, USER.FLD is programmed so that it will not be overwritten if one already exists.

Procedure Maintenance

Overview

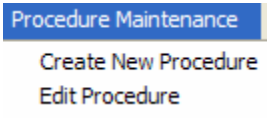
This function allows a user to create a procedure. Procedures are powerful tools that guide a user, step-by-step through a routine color evaluation process. They are typically used to control complex processes. A procedure can be designed to prompt the user, for all required input, and to automatically display the resulting output. Procedures are accessed from buttons, located either on the TOOLS button bars.

New Procedures

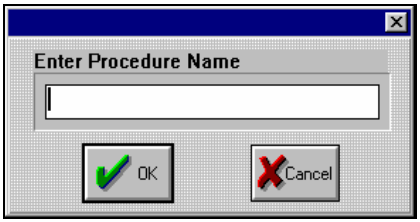
In the example below step-by-step instructions will be provided to create a procedure that does the following

- Recalls standards
- Measure batches
- Displays the output on the form New Screen Form Example

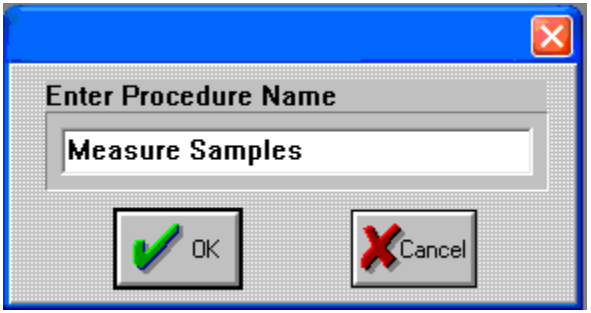
1. From the Form Editor Menu bar, select **Procedure Maintenance** on the far right side of the menu bar. From the menu, select **Create New Procedure**.



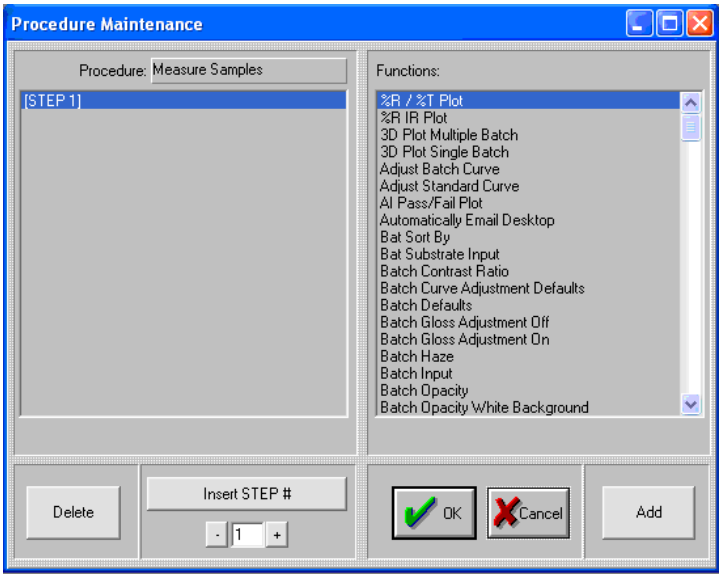
The dialog box below is displayed:



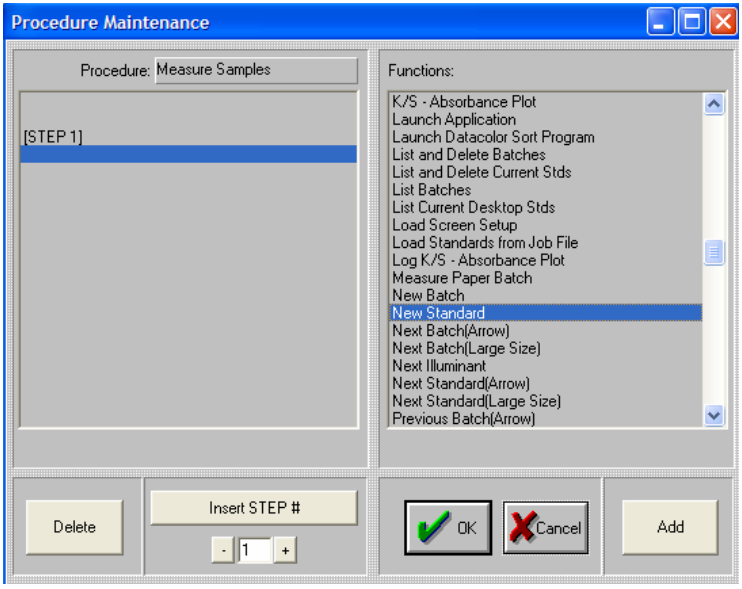
2. In the *Enter Procedure Name* field, enter a name to describe this procedure. Click **OK**.



3. The Procedure Maintenance dialog box displays. Under the *Procedure* heading, a highlighted field named *STEP 1* is displayed. This is the default selection for the first step. Move to the lower portion of the dialog box, and click the **Insert STEP #1** button.



4. Click on the line just below this entry.

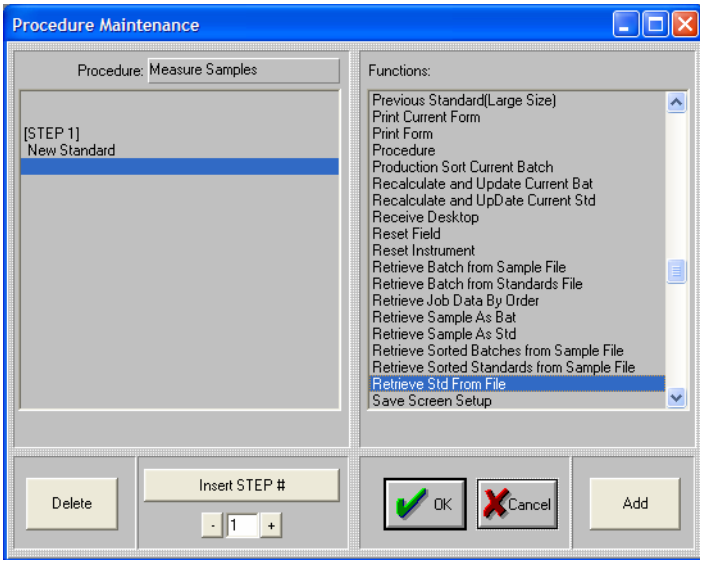


5. Move to the list shown on the right side of the window under the *Functions* heading and do the following:

   – Scroll through the list using the up/down scroll bar until the item, *New Standard* is located.

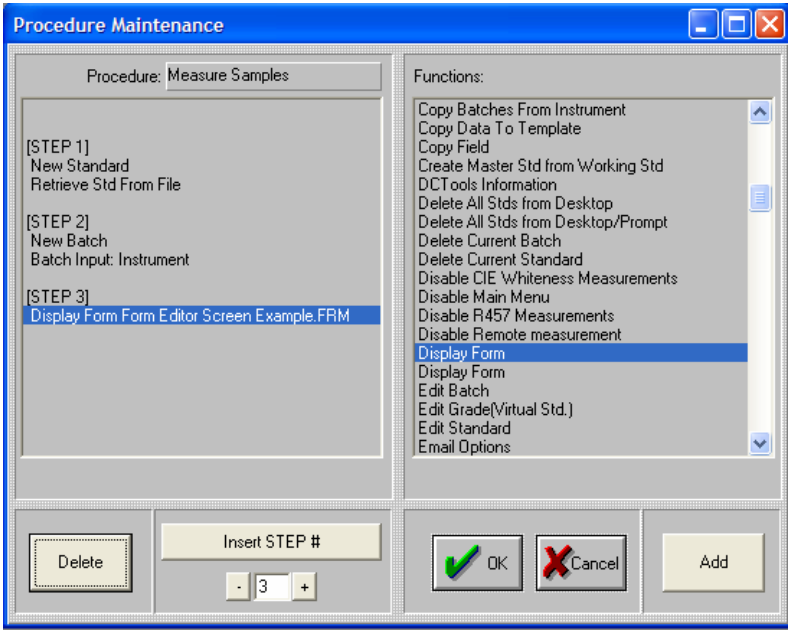
   – Click to highlight this item.

   – Click **Add**. The text is moved to the left side of the window.

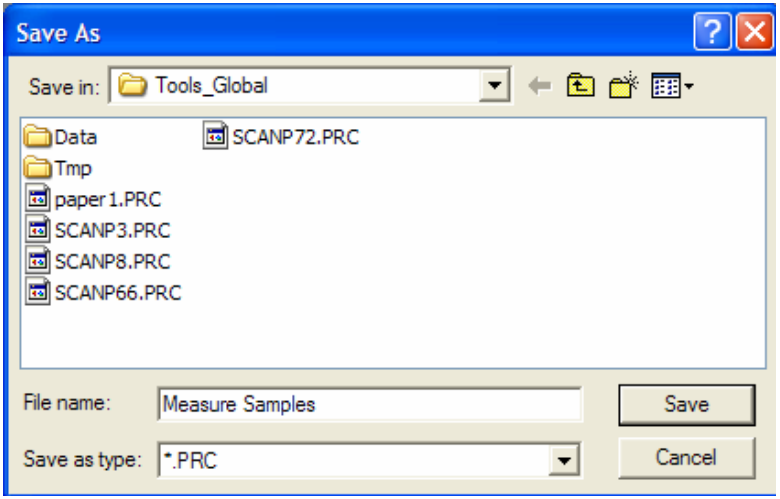


NOTE
Remember to click **Add** after inserting each function.

6. After all the functions for Step 1, move to the counter below the Insert STEP # button, and click the (+) sign to increment the counter to 2. The text, [STEP 2] is added to the Procedure listing.
7. Click on the line below the [STEP 2] notation and add the following functions:
   - **New Batch**
   - **Batch Input: Instrument**. Select the **Batch Input** function, click **Add** and, in the Select Measurement Mode dialog box that displays, click **Instrument**
8. Add [STEP 3]. This step should open a form to display the data.
9. Repeat the above steps to add the remaining functions to be executed. The procedure below includes several steps for retrieving a standard, measuring a batch and displaying a color difference evaluation:



10. Click **OK** to close the procedure. The Save As dialog box displays. Enter a file name (up to 8 characters) to identify the procedure you just created. All Procedure names must be followed by a .PRC extension.

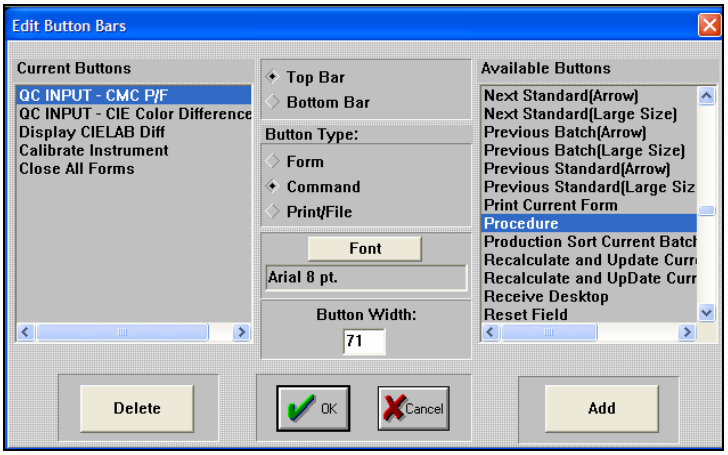


11. Click on **Save**.

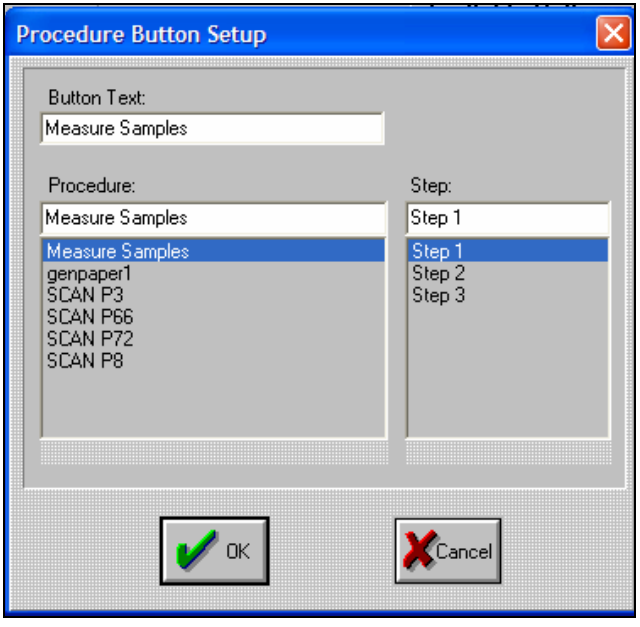
Implementing a Procedure in TOOLS

Procedures are implemented in TOOLS by adding them to the top or bottom button bars.

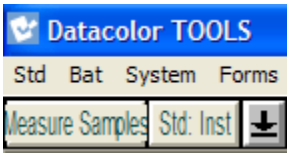
1. Launch TOOLS and click System Menu, Edit Button Bars.
2. Under Button Type, Click on **Command**. The *Available Button*s list refreshes to display command choices. The window below is displayed:



3. Click on **Procedure**. A list of available procedures is displayed:



4. In the *Button Text* field, enter a name for the procedure. This will be displayed on the button bar. When finished, click **OK**. The dialog box will close, and the button will be added to the button bar:

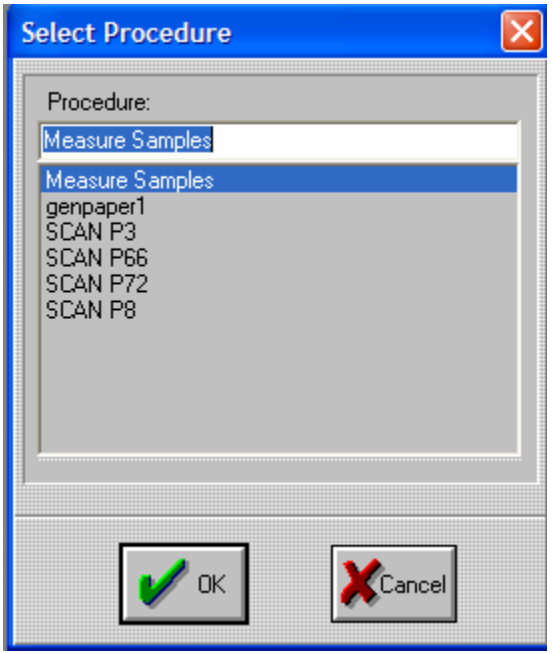


5. Click on the button to launch the procedure.

Edit Procedure

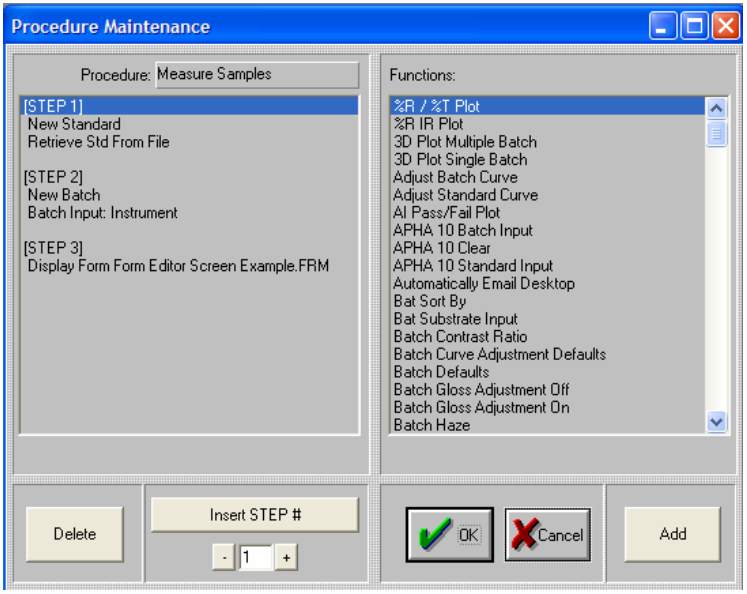
To change the steps in an existing procedure:

1. From the menu bar, select **Procedure Maintenance, Edit Procedure**. The Select Procedure dialog box displays.



2. From the *Procedure* listing, click on the procedure you want to edit.

3. Click **OK**. The Procedure Maintenance dialog box displays:



4. Make the necessary changes, and then click **OK**.

Appendix A: Form Editor Field Listing

About the Field Listing

This section contains a complete listing of all the fields used in the Tools program. This list is an essential reference when creating forms. The fields are grouped using the same categories--*System, Standard, Batch*, and *Delta*-- used in the Form Editor.

- *Description* lists the name of the field as seen in the Form Editor. The column labeled
- *Field Name* lists the actual internal field name. The column labeled
- *Explanation* provides additional comments regarding the information contained and uses of the field.

System Fields

The system field names are in brackets [ ] at the top of the QC.FLD and USER. FLD files before the [STANDARD_DATA] section.

Field Name	Description	Explanation
TotalStandards	Total # Standards	Number of Standards on Desktop
ActiveStandards	Total # Active Standards	Number of Active Standards
CurStandard	Current Standard #	Current Standard Number
TotalBatches	Total # Batches	Number of Batches of Current Standard
ActiveBatches	Total # Active Batches	Number of Active Batches
DCITolFactor	Datacolor Tolerance Factor	Datacolor Tolerance Factor
DIN99_Ke	DIN99 Ke	DIN99 Ke
DIN99_Kch	DIN99 Kch	DIN99 Kch
CurrentBatch	Current Batch #	Current Batch Number
SUBSTRATE_NAME	Substrate Name	Name of Substrate
PRIMILLNAME	Primary Illuminant Name	Primary Illuminant Name
ILLNAME	Current Illuminant Name	Current Illuminant Name
SYS_DATE	Current date	Today's Date
SYS_TIME	Current time	Current Time
STAT_DESC	Statistics Field Description (5)	Field for Statistics (Variable Array of 10)
JOB_FILE	Job File	Name of Job File
JOB_NAME	Job Name	Name of Job

Field Name	Description	Explanation
CALIBRATION_STD_SETTINGS	Name Of White Calibration Standard	Name of white used for instrument calibration; usually Factory White Tile.
CURRENT_INSTRUMENT_CONDITION	Current Instrument Condition	Current instrument condition
CURRENT_WHITENESS_BRIGHTNESS_UVINC_CONDITION	Current Whiteness/Brightness UV Include Condition	Current Whiteness/Brightness UV Include Condition for Instrument
CURRENT_BRIGHTNESS_UVEXC_CONDITION	Current Brightness UV Exclude Condition	Current Brightness UV Exclude Condition for Instrument
CURRENT_WHITENESS_UVEXC_CONDITION	Current Whiteness UV Exclude Condition	Current Whiteness UV Exclude Condition for Instrument
SYSTEM_SURF_CORR_VALUE	System Surface Correction Value	Current system default for surface correction value
SYSTEM_SURF_CORR_STATUS	System Surface Correction Status	Current system default for surface correction
SOFTWARE_VERSION_NUMBER	SoftWare Version Number	Software version
SOFTWARE_BUILD_NUMBER	SoftWare Build Number	Software build number
SYS_BLOCK_NAME	Default System DCI Tolerance Block Name	Default for system tolerance block
QC_APP_TITLE	QC Application Title	Name of program title
CURRENT_INSTRUMENT_UVCALIBRATION_METHOD	Current Instrument UV Calibration method	UV calibration method used for instrument UV filter

Standard Fields

The standard field names are in brackets [ ] at the top of the QC.FLD and USER. FLD files under the [STANDARD_DATA] section.

Field Name	Description	Explanation
STD_R	Std %R's	%R Values of Standard (Array of 16/31)
STD_GLOSS_UNADJUSTED_R	Std Gloss Unadjusted %R's	%R values of unadjusted Std for gloss measurement
STD_REFLLOW	First Wavelength Standard	First Wavelength of the Standard
STD_REFLHIGH	Last Wavelength Standard	Last Wavelength of the Standard
MS_STD_R	M&S Std %R's	% R Values equal to 16 points, from 400 nm to 700 nm, interpolated from 31 pt data
MS_STD_REFLINTERVAL	M&S Spectral Interval Standard	Spectral Interval of M&S Standard
MS_STD_REFLLOW	M&S First Wavelength Standard	First Wavelength of M&S Standard
STD_SubstrateR	Std Substrate %R's	Substrate %R's of Standard
STD_SUBREFLPOINTS	Std Substrate Ref Points	Std Substrate # of Reflectance Points
STD_SUBREFLINTERVAL	Std Substrate Interval	Std Substrate Spectral Interval
STD_SUBREFLLOW	Std Substrate Start wavelength	Std Substrate Start wavelength
STD_VIEWING	Std Instrument Condition	Instrument condition used for Standard
STD_MEASUREMENT_ORIGIN	Origin Of Standard Measurement	Origin Of Standard Measurement
STD_INSTRUMENT_SERIAL_NO	Instrument Serial Number	Instrument Serial Number for Standard
STD_UV_CALIBRATION_METHOD	Std Instrument UV Calibration method	Std Instrument UV Calibration method

Field Name	Description	Explanation
STD_CORRELATION_STATE	Std Instrument Correlation State	Std Instrument Correlation State
STD_CORRELATION_VIEWING	Std Master Instrument Correlation Condition	Std Master Instrument Correlation Condition
STD_CORRELATION_INSTR_INFOR	Std Correlation Master Instrument Infor	Std Correlation Master Instrument Infor
STD_CORRELATION_AVGDE_BEFORE	Std Master Instrument Avg Pre-correlation DE	Std Master Instrument Avg Pre-correlation DE
STD_CORRELATION_AVGDE_AFTER	Std Master Instrument Avg Post-correlation DE	Std Master Instrument Avg Post-correlation DE
STD_SUBSTRATE_VIEWING	Std Substrate Instrument Condition	Std Substrate Instrument Condition
Std_SUBSTRATE_MEASUREMENT_ORIGIN	Origin Of Standard Substrate Measurement	Origin Of Standard Substrate Measurement
Std_SUBSTRATE_INSTRUMENT_SERIAL_NO	Std Substrate Instrument Serial Number	Std Substrate Instrument Serial Number
Std_WHITENESS_BRIGHTNESS_UVINC_VIEWING	Std Whiteness/Brightness UV Include Condition	Std Whiteness/Brightness UV Include Condition
Std_BRIGHTNESS_UVEXC_VIEWING	Std Brightness UV Exclude Condition	Std Brightness UV Exclude Condition
Std_WHITENESS_UVEXC_VIEWING	Std Whiteness UV Exclude Condition	Std Whiteness UV Exclude Condition
Std_GLOSS	Std Gloss	Std Gloss
Std_R0	Std R0 of CR/Opacity/Haze	Std R0 of CR/Opacity/Haze
Std_RWBG	Std R(W)/White Tile of Opacity/Paper	Std R(W)/White Tile of Opacity/Paper
Std_BASIS_WEIGHT	Std Basis Weight	Std Basis Weight
Std_BI_TAPPI5 5_UVExclude	Std R 57/T5 5 UV Excluded	Std R 57/T5 5 UV Excluded
Std_WI(CIE)_UVExcluded	Std Whiteness CIE UV Excluded	Std Whiteness CIE UV Excluded
Std_WI_CIE_T _UVExclude	Std CIE Whiteness T UV Excluded	Std CIE Whiteness T UV Excluded

Field Name	Description	Explanation
Std_SURF_CORR_VALUE	Std Surface Correction Value	Amount in percent or value, for standard's curve adjustment
Std_SURF_CORR_STATUS	Std Surface Correction Descriptor	Standard is Adjusted or Unadjusted
Std_MS_INST_CONDITION	M&S Instrument Condition	Instrument type, spectral length, conditions of measurement
Std_X	Std CIE X	X Tristimulus Value of Standard
Std_Y	Std CIE Y	Y Tristimulus Value of Standard
Std_Z	Std CIE Z	Z Tristimulus Value of Standard
Std_CIEL	Std CIE L	L* Value of Standard
Std_CIEa	Std CIE a	a* Value of Standard
Std_CIEb	Std CIE b	b* Value of Standard
Std_CIEC	Std CIE C	C* Value of Standard
Std_CIEh	Std CIE h	h (hue angle) of Standard
Std_CIEu	Std CIE u	u* Value of Standard
Std_CIEv	Std CIE v	v* Value of Standard
Std_CIEx	Std CIE x	x - Chromaticity Coordinate of Standard
Std_CIEy	Std CIE y	y - Chromaticity Coordinate of Standard
Std_CIEz	Std CIE z	z - Chromaticity Coordinate of Standard
Std_HunterL	Std Hunter L	Hunter L Value of Standard
Std_Huntera	Std Hunter a	Hunter a Value of Standard
Std_Hunterb	Std Hunter b	Hunter b Value of Standard
Std_DIN99L	Std DIN99 L	DIN99 L value of Standard
Std_DIN99a	Std DIN99 a	DIN99 a value of Standard
Std_DIN99b	Std DIN99 b	DIN99 b value of Standard

Field Name	Description	Explanation
Std_DIN99C	Std DIN99 C	DIN99 C value of Standard
Std_DIN99h	Std DIN99 h	DIN99 h value of Standard
Std_WI(TAUBE)	Std Taube's Whiteness	Taube Whiteness of Standard
Std_WI(CIE)	Std Whiteness CIE/E313	CIE / E313 Whiteness Index of Standard
Std_DWI(CIE)	Std Delta Whiteness CIE (UV In/Out)	CIE whiteness difference of Standard between UV included and UV excluded measurement
Std_WI_Berger	Std Berger Whiteness	Berger Whiteness Index of Standard
Std_WI_GanzN	Std Ganz Whiteness Neutral	Ganz Neutral Whiteness of Standard
Std_WI_GanzG	Std Ganz Whiteness Green	Ganz Green Whiteness of Standard
Std_WI_GanzR	Std Ganz Whiteness Red	Ganz Red Whiteness of Standard
Std_WI_Stephansen	Std Stephansen Whiteness	Stephansen Whiteness Index of Standard
Std_WI_Harrison	Std Harrison Whiteness	Harrison Whiteness of Standard
Std_WI_GanzGriesser	Std Ganz-Griesser Whiteness	Ganz-Griesser Whiteness of Standard
Std_TV_GanzGriesser	Std Ganz-Griesser Tint	Ganz-Griesser Tint Value of Standard
Std_Dev_GanzGriesser	Std Ganz-Griesser Deviation	Ganz-Griesser Tint Deviation of Standard
Std_Desc_GanzGriesser	Std Ganz-Griesser Descriptor	Ganz-Griesser Tint Description ofStd
Std_YI(E313)	Std Yellowness E313	E313 Yellowness Index of Standard
Std_YI(D19 5)	Std Yellowness D1925	D1925 Yellowness Index of Standard

Field Name	Description	Explanation
Std_YI(DIN6167)	Std DIN6167 Yellowness	DIN6167 Yellowness Index of Standard
Std_YI(GEPQS)	Std GE-PQS2 Yellowness	
Std_BI_TAPPI525	Std R457/T525 Brightness	Std R457/T525 with UV Included
Std_BI_DTAPPI525	Std Delta R457/T525(UV In/Out)	Delta R457 of the Standard
Std_WI_CIE_TINT	Std CIE Whiteness Tint	CIE Whiteness Tint Value of the Standard
Std_DWI_CIE_TINT	Std Delta CIE Whiteness Tint (UV In/Out)	Standard's CIE whiteness difference between UV included/UV excluded
Std_NEWS_DOMINANT_WL	Std Dominant wavelength for newsprint	Standard Dominant Wavelength for newsprint
Std_NEWS_PURITY	Std Purity for newsprint	Standard purity for newsprint
Std_CONTRAST_RATIO	Std CR/Opacity/Haze	Standard Contrast Ratio/Opacity/Haze
Std_TRANSPARENCY	Std Transparency	Standard transparency
Std_OP_SX	Std Optical SX	Standard Optical SX
Std_OP_KX	Std Optical KX	Standard Optical KX
Std_OP_S	Std Optical S	Standard Optical S
Std_OP_K	Std Optical K	Standard Optical K
Std_LF_Rx	Std Luminous R(x) Factor	Luminous Reflectance Factor Rx ofStd
Std_LF_Ry	Std Luminous R(y) Factor	Luminous Reflectance Factor Ry ofStd
Std_LF_Rz	Std Luminous R(z) Factor	Luminous Reflectance Factor Rz ofStd
Std_K_OVER_S	Std K/S's	K/S Values of Standard (Array of 16/31)

Field Name	Description	Explanation
Std_MeasType	Type ofStd Measurement	Std Meas Type (i.e., %R, %T, Lab, etc.)
Std_WL_MAX_ABS	Std WI of Max Abs	Wavelength of Max Absorption ofStd
Std_R_WLMaxAbs	Std %R at WI of Max Abs	%R Value at WL of Max Absorption
Std_KS_WLMaxAbs	Std K/S or A at WI of Max Abs	K/S or Abs at WL of Max Absorption
Std_DATE	DateStd was measured	Date the Standard Was Measured
Std_TIME	TimeStd was measured	Time the Standard Was Measured
Std_CORRELATION_DATE	DateStd Master Instrument was correlated	DateStd Master Instrument was correlated
Std_CORRELATION_TIME	TimeStd Master Instrument was correlated	TimeStd Master Instrument was correlated
Std_CMYK_C	Std STATUS T density C	Std C value for Status T density
Std_CMYK_M	Std STATUS T density M	Std M value for Status T density
Std_CMYK_Y	Std STATUS T density Y	Std Y value for Status T density
Std_CMYK_K	Std density K (ISO Visual Density)	Std K value for ISO Visual density
Std_STATUSA_CMYK_C	Std STATUS A density C	Std C value for Status A density
Std_STATUSA_CMYK_M	Std STATUS A density M	Std M value for Status A density
Std_STATUSA_CMYK_Y	Std STATUS A density Y	Std Y value for Status A density
Std_STATUSM_CMYK_C	Std STATUS M density C	Std C value for Status M density
Std_STATUSM_CMYK_M	Std STATUS M density M	Std M value for Status M density
Std_STATUSM_CMYK_Y	Std STATUS M density Y	Std Y value for Status M density
Std_DOMINANT_WAVELENGTH	Std Dominant Wavelength	Standard Dominant Wavelength for newsprint
Std_PURITY	Std Purity	Standard purity for newsprint
Std_ INTEG_VALUE	Std Strength Integ Value	Std Strength Integ Value
Std_B11ST_VALUE	Std Color Depth 1/1	Std Color Depth 1/1

Field Name	Description	Explanation
Std_B13ST_VALUE	Std Color Depth 1/3	Std Color Depth 1/3
Std_B19ST_VALUE	Std Color Depth 1/9	Std Color Depth 1/9
Std_B 5ST_VALUE	Std Color Depth 1/ 5	Std Color Depth 1/ 5
Std_SORT_BOX_NUM	Standard Sort Box Number	Standard Sort Box Number
Std_SD_Lsd	Std 1/1 Standard Depth Lsd	Std 1/1 Standard Depth Lsd
Std_SD_DL	Std 1/1 Standard Depth DL	Std 1/1 Standard Depth DL
Std_SD_PFDesc	Std 1/1 Standard Depth P/F Determination	Std 1/1 Standard Depth P/F Result
Std_CMCCON97_DE	Std Color inconstancy DE	Std Color inconstancy DE
Std_CMCCON97_Da	Std Color inconstancy Da	Std Color inconstancy Da
Std_CMCCON97_Db	Std Color inconstancy Db	Std Color inconstancy Db
Std_CMCCON97_DC	Std Color inconstancy DC	Std Color inconstancy DC
Std_CMCCON97_DH	Std Color inconstancy DH	Std Color inconstancy DH
Std_CMCCON97_DL	Std Color inconstancy DL	Std Color inconstancy DL
Std_CURVE_ADJ_TYPE	Std Curve Adjustment Type	Adjustment of curve by percent or amount
Std_CURVE_ADJ_VALUE	Std Curve Adjustment Value	Value to adjust curve
Std_CURVE_ADJ_DESCRIPTOR	Std Curve Adjustment Descriptor	Describes whether curve is adjusted or not adjusted
Std_GLOSS_ADJ_STATUS	Std Gloss Adjusted Status	Status of standard adjusted for gloss
Std_GLOSS_ADJ_GEOMETRY	Std Gloss Adjustment Geometry	Gloss geometry used for Standard
Std_GLOSS_VALUE	Std Gloss Value	Gloss value of Standard
Std_GLOSS_ADJ_DESCRIPTOR	Std Gloss Adjustment Descriptor	Gloss descriptor of Standard
CIE _l	CIE2000 l	CIE2000 l value of Standard
CIE _c	CIE20000 c	CIE20000 c value of Standard
CIE _h	CIE2000 h	CIE2000 h value of Standard
CMC_l	CMC l	CMC l value of Standard

Field Name	Description	Explanation
CMC_c	CMC c	CMC c value of Standard
CIE94_l	CIE94 l	CIE94 l value of Standard
CIE94_c	CIE94 c	CIE94 c value of Standard
CIE94_h	CIE94 h	CIE94 h value of Standard
CMC_SL	CMC SL	CMC SL Value of Standard
CMC_SC	CMC SC	CMC SC Value of Standard
CMC_SH	CMC SH	CMC SH Value of Standard
CIE94_SL	CIE94 SL	CIE94 SL Value of Standard
CIE94_SC	CIE94 SC	CIE94 SC Value of Standard
CIE94_SH	CIE94 SH	CIE94 SH Value of Standard
Std_BLOCK_NAME	Std DCI Tolerance Block Name	
Std_NAME	Std Name	Name of Current Desktop Standard
Std_FILE	Std File	Current Standard's File Name (not used)
Std_ADJSTATUS	Status of adj toStd	Not used.
Std_MULTI_MEAS_NUM	Std Multi-measurement #	Number of Avg Reads To Take
Std_COLOR_PATCH	Std Color Patch	Standard Color Patch
Std_IR	Std IR %R's	IR %R's of Standard
Std_COL_FILE_NAME	Std Colorant File	Colorant File of Standard
Std_FRM_FILE_NAME	Std Formula File	Formula File of Standard
Std_K1	Std K1	Specular %R of Standard
Std_K	Std K	Internal %R of Standard
Std_Substrate_ID	Std Substrate ID	Substrate ID of Standard
Std_Substrate_Name	Std Substrate Name	Substrate Name of Standard
Std_COL_ID	Std Colorant ID (8)	Colorant ID Numbers of Standard
Std_COL_Name	Std Colorant Name (8)	Colorant Names of Standard
Std_COL_Amount	Std Colorant Amount (8)	Colorant Amounts of Standard

Field Name	Description	Explanation
Std_COL_ScaledLabel	ScaledStd Col Unit Label	Label for Scaled Colorant of Standard
Std_COL_ScaledAmount	ScaledStd Colorant Amount (8)	Scaled Colorant Amounts of Standard
Std_Film_Thickness	Std Film Thickness	Film Thickness of Standard
Std_INST_TYPE	Std Instrument Type	Instrument ID Text from TOOLMAN32.INI
Std_Substrate_INST_TYPE	Std Substrate Instrument Type	
Std_Meas_Checksum	Std Checksum	Checksum value of the currentStd %R.
MS_Std_Meas_Checksum	M&SStd Checksum	Checksum value of M&S Standard
Std_KN_Value	Std KN - Pr Contrast	KN or Print Contrast Value ofStd
Std_COST	Price For Strength Calculation	Cost of standard for strength difference
Std_CONCENTRATION	Material Concentration For Strength Calculation	Standard's material concentration for strength calculation
Std_INTEGRAL_STRENGTH	Integral Strength ForStd	Integral strength value for standard
Std_INPUT_METHOD	Method of Input for Standard Data	Measurement method of standard
Std_FOLDERID	Standard Database Folder Id	Folder ID of Standard
Std_SAMPLEID	Standard Database ID	Sample ID of Standard
Std_FOLDERNAME	Standard Database Folder Name	Database folder name of Standard
Std_DESCRIPTION	Standard Description	Description of Standard, stored from Match Textile
Std_WI_Stensby	Stensby Whiteness forStd	Stensby whiteness index for standard
Std_RGB_R	Standard RGB R Value	R value for color patch of standard
Std_RGB_G	Standard RGB G Value	G value for color patch of standard
Std_RGB_B	Standard RGB B Value	B value for color patch of standard

Field Name	Description	Explanation
Std_GUID	Standard Global Identifier	Unique ID for Standard
Std_DCITOLFACTOR	Standard DCI Tolerance Block Factor	DCI Tolerance Block value of Standard
Std_OPCAL_METHOD	Standard Calculation Method for CR/Opacity/Haze	Standard Calculation Method for CR/Opacity/Haze

Batch Fields

The batch field names are in brackets [ ] at the top of the QC.FLD and USER. FLD files under the [BATCH_DATA] section.

Field Name	Description	Explanation
BAT_R	Batch %R's	%R Values of Batch (Array of 16/31)
BAT_GLOSS_UNADJUSTED_R	Batch Gloss Unadjusted %R's	
BAT_REFLPOINTS	Bat Refl Points	Number of Batch reflectance points
BAT_REFLLOW	First Wavelength Batch	First Wavelength of the Batch
BAT_REFLHIGH	Last Wavelength Batch	Last Wavelength of the Batch
MS_BAT_R	M&S Batch %R's	16 point reflectance data interpolated from 31 point (longer) spectral data
MS_BAT_REFLINTERVAL	M&S Spectral Interval Batch	Spectral Interval of M&S Batch
MS_BAT_REFLLOW	M&S Low Wavelength Batch	Low Wavelength of M&S Batch
BAT_SubstrateR	Batch Substrate %R's	Batch Substrate %R's
BAT_SUBREFLPOINTS	Batch Substrate Ref points	Batch Substrate Reflectance points
BAT_SUBREFLINTERVAL	Batch SubstrateRef Interval	Batch Substrate Reflectance Interval

Field Name	Description	Explanation
BAT_SUBREFLLOW	Batch Substrate start wavelength	Batch Substrate start wavelength
BAT_VIEWING	Bat Instrument Condition	Bat Instrument Setup Text or Keyboard
BAT_MEASUREMENT_ORIGIN	Origin Of Batch Measurement	Batch measurement origin - instrument or keyboard
BAT_INSTRUMENT_SERIAL_NO	Instrument Serial Number	Instrument serial number of batch
BAT_UV_CALIBRATION_METHOD	Bat Instrument UV Calibration method	UV calibration method of Batch measurement
BAT_CORRELATION_STATE	Bat Instrument Correlation State	Instrument correlation state of batch measurement
BAT_CORRELATION_VIEWING	Bat Master Instrument Correlation Condition	Bat Master Instrument Correlation Condition
BAT_CORRELATION_INSTR_INFOR	Bat Correlated Master Instrument Infor	Bat Correlated Master Instrument Information
BAT_CORRELATION_AVGDE_BEFORE	Bat Master Instrument Avg Pre-correlation DE	Bat Master Instrument Avg Pre-correlation DE
BAT_CORRELATION_AVGDE_AFTER	Bat Master Instrument Avg Post-correlation DE	Bat Master Instrument Avg Post-correlation DE
BAT_SUBSTRATE_VIEWING	Bat Substrate Instrument Condition	Bat Substrate Instrument Condition
BAT_SUBSTRATE_MEASUREMENT_ORIGIN	Origin Of Batch Substrate Measurement	Origin Of Batch Substrate Measurement
BAT_SUBSTRATE_INSTRUMENT_SERIAL_NO	Bat Substrate Instrument Serial Number	Bat Substrate Instrument Serial Number
BAT_WHITENESS_BRIGHTNESS_UVINC_VIEWING	Bat Whiteness/Brightness UV Include Condition	Bat Whiteness/Brightness UV Include Measurement Condition
BAT_BRIGHTNESS_UVEXC_VIEWING	Bat Brightness UV Exclude Condition	Bat Brightness UV Exclude Measurement Condition

Field Name	Description	Explanation
BAT_WHITENESS_UVEXC_VIEWING	Bat Whiteness UV Exclude Condition	Bat Whiteness UV Exclude Measurement Condition
BAT_GLOSS	Batch Gloss	Gloss Value of Batch
BAT_R0	Batch R0 of CR/Opacity/Haze	CIE Y value of over dark measurement of batch
BAT_RWBG	Batch R(W)/White Tile of Opacity/Paper	Batch R(W) value of White Tile for Opacity/Paper
BAT_BASIS_WEIGHT	Batch Basis Weight	User defined weight of paper batch
BAT_BI_TAPPI525_UVExclude	Batch R457/T525 UV Excluded	Batch R457/T525 index from UV excluded measurement
BAT_WI(CIE)_UVExcluded	Bat Whiteness CIE UV Excluded	Batch CIE whiteness from UV excluded measurement
BAT_WI_CIE_Tint_UVExclude	Bat CIE Whiteness Tint UV Excluded	Batch CIE whiteness tint from UV excluded measurement
BAT_SURF_CORR_VALUE	Batch Surface Correction Value	Batch Surface Correction Value
BAT_SURF_CORR_STATUS	Bat Surface Correction Descriptor	Batch Surface Correction Status
BAT_MS_INST_CONDITION	M&S Instrument Condition	Contains all M&S instrument conditions for batch measurement
BAT_X	Batch CIE X	X Tristimulus Value of Batch
BAT_Y	Batch CIE Y	Y Tristimulus Value of Batch
BAT_Z	Batch CIE Z	Z Tristimulus Value of Batch
BAT_CIEL	Batch CIE L	L* Value of Batch
BAT_CIEa	Batch CIE a	a* Value of Batch
BAT_CIEb	Batch CIE b	b* Value of Batch
BAT_CIEC	Batch CIE C	C* Value of Batch
BAT_CIEh	Batch CIE h	h (hue angle) of Batch
BAT_CIEu	Batch CIE u	u* Value of Batch

Field Name	Description	Explanation
BAT_CIEv	Batch CIE v	v* Value of Batch
BAT_CIEx	Batch CIE x	x - Chromaticity Coordinate of Batch
BAT_CIEy	Batch CIE y	y - Chromaticity Coordinate of Batch
BAT_CIEz	Batch CIE z	z - Chromaticity Coordinate of Batch
BAT_HunterL	Batch Hunter L	Hunter L Value of Batch
BAT_Huntera	Batch Hunter a	Hunter a Value of Batch
BAT_Hunterb	Batch Hunter b	Hunter b Value of Batch
BAT_DIN99L	Batch DIN99 L	DIN99 L value of Batch
BAT_DIN99a	Batch DIN99 a	DIN99 a value of Batch
BAT_DIN99b	Batch DIN99 b	DIN99 b value of Batch
BAT_DIN99C	Batch DIN99 C	DIN99 C value of Batch
BAT_DIN99h	Batch DIN99 h	DIN99 h value of Batch
BAT_WI(TAUBE)	Batch Taube's Whiteness	Taube whiteness of Batch
BAT_WI(CIE)	Bat Whiteness CIE/E313	CIE/E313 whiteness of Batch
BAT_DWI(CIE)	Bat Delta Whiteness CIE (UV In/Out)	Batch Delta CIE/E313 whiteness between UV included/UV excluded measurement
BAT_WI_Berger	Batch Berger Whiteness	Berger Whiteness Index of Batch
BAT_WI_GanzN	Batch Ganz Whiteness Neutral	Ganz Neutral Whiteness of Batch
BAT_WI_GanzG	Batch Ganz Whiteness Green	Ganz Green Whiteness of Batch
BAT_WI_GanzR	Batch Ganz Whiteness Red	Ganz Red Whiteness of Batch
BAT_WI_Stephansen	Stephansen Whiteness	Stephansen Whiteness Index of Batch
BAT_WI_Harrison	Bat Harrison Whiteness	

Field Name	Description	Explanation
BAT_WI_GanzGriesser	Bat Ganz-Griesser Whiteness	Ganz-Griesser Whiteness of Batch
BAT_TV_GanzGriesser	Bat Ganz-Griesser Tint	Ganz-Griesser Tint Value of Batch
BAT_Dev_GanzGriesser	Bat Ganz-Griesser Deviation	Ganz-Griesser Tint Deviation of Batch
BAT_Desc_GanzGriesser	Bat Ganz-Griesser Descriptor	Ganz-Griesser Tint Description of Bat
BAT_YI(E313)	Batch Yellowness E313	E313 Yellowness Index of Batch
BAT_YI(D1925)	Batch Yellowness D1925	D1925 Yellowness Index of Batch
BAT_YI(DIN6167)	Bat DIN6167 Yellowness	DIN6167 Yellowness Index of Batch
BAT_YI(GEPQS2)	Bat GEPQS2 Yellowness	GEPQS2 Yellowness of Batch
BAT_BI_TAPPI525	Bat R457/T525 Brightness	R457/T525 Brightness of Batch
BAT_BI_DTAPPI525	Bat Delta R457/T525(UV In/Out)	Delta R457 of the Batch (UV In/Out)
BAT_WI_CIE_Tint	Bat CIE Whiteness Tint	CIE Whiteness Tint Value of the Batch
BAT_DWI_CIE_Tint	Bat Delta CIE Whiteness Tint (UV In/Out)	Batch Delta CIE whiteness tint between UV included/UV excluded measurement
BAT_NEWS_DOMINANT_WL	Bat Dominant wavelength for newspr	Batch dominant wavelength value for newsprint
BAT_NEWS_PURITY	Bat Purity for newspr	Batch purity for newsprint
BAT_CONTRAST_RATIO	Bat CR/Opacity/Haze	Batch Contrast Ratio
BAT_TRANSPARENCY	Batch Transparency	Batch transparency
BAT_OP_SX	Batch Optical SX	Batch Optical SX value
BAT_OP_KX	Batch Optical KX	Batch Optical KX value

Field Name	Description	Explanation
BAT_OP_S	Batch Optical S	Batch Optical S value
BAT_OP_K	Batch Optical K	Batch Optical K value
BAT_LF_Rx	Bat Luminous R(x) Factor	Luminous Reflectance Factor Rx of Bat
BAT_LF_Ry	Bat Luminous R(y) Factor	Luminous Reflectance Factor Ry of Bat
BAT_LF_Rz	Bat Luminous R(z) Factor	Luminous Reflectance Factor Rz of Bat
BAT_K_OVER_S	Batch K/S's	K/S Values of Batch (Array of 16/31)
BAT_MeasType	Type of Batch Measurement	Bat Meas Type (i.e. %R, %T, Lab, etc)
BAT_WL_MAX_ABS	Batch Wl of Max Abs	Wavelength of Max Absorption of Bat
BAT_R_WLMaxAbs	Bat %R at Wl of Max Abs	%R Value at WL of Max Absorption - Bat
BAT_KS_WLMaxAbs	Bat K/S or A at Wl of Max Abs	K/S or Abs at WL of Max Absorption - Bat
BAT_DATE	Date batch was measured	Date batch was measured
BAT_TIME	Time batch was measured	Time batch was measured
BAT_CORRELATION_DATE	Date batch Master Instrument was correlated	Date batch Master Instrument was correlated
BAT_CORRELATION_TIME	Time batch Master Instrument was correlated	Time batch Master Instrument was correlated
BAT_CMYK_C	Bat. STATUS T density C	Batch C value for Status T density
BAT_CMYK_M	Bat. STATUS T density M	Batch M value for Status T density
BAT_CMYK_Y	Bat. STATUS T density Y	Batch Y value for Status T density

Field Name	Description	Explanation
BAT_CMYK_K	Bat. density K (ISO Visual Density)	Batch K value for ISO Visual density
BAT_STATUSA_CMYK_C	Bat. STATUS A density C	Batch C value for Status A density
BAT_STATUSA_CMYK_M	Bat. STATUS A density M	Batch M value for Status A density
BAT_STATUSA_CMYK_Y	Bat. STATUS A density Y	Batch Y value for Status A density
BAT_STATUSM_CMYK_C	Bat. STATUS M density C	Batch C value for Status M density
BAT_STATUSM_CMYK_M	Bat. STATUS M density M	Batch M value for Status M density
BAT_STATUSM_CMYK_Y	Bat STATUS M density Y	Batch Y value for Status M density
BAT_DOMINANT_WAVELENGTH	Batch Dominant Wavelength	Batch Dominant Wavelength
BAT_PURITY	Batch Purity	Batch Purity
BAT_ INTEG_VALUE	Batch Strength Integ Value	Batch Strength Integ Value
BAT_B11ST_VALUE	Bat Color Depth 1/1	Bat Color Depth 1/1
BAT_B13ST_VALUE	Bat Color Depth 1/3	Bat Color Depth 1/3
BAT_B19ST_VALUE	Bat Color Depth 1/9	Bat Color Depth 1/9
BAT_B 5ST_VALUE	Bat Color Depth 1/ 5	Batch Color Depth 1/25
BAT_SORT_BOX_NUM	Batch Sort Box Number	Batch Sort Box Number
BAT_SD_Lsd	Bat 1/1 Standard Depth Lsd	1/1 Standard Depth Lsd of Batch
BAT_SD_DL	Bat 1/1 Standard Depth DL	1/1 Standard Depth DL of Batch
BAT_SD_PFDesc	Bat 1/1 Standard Depth P/F Determination	1/1 Standard Depth P/F result of Batch
BAT_CMCCON97_DE	Bat Color inconstancy DE	Bat Color inconstancy DE
BAT_CMCCON97_Da	Bat Color inconstancy Da	Bat Color inconstancy Da

Field Name	Description	Explanation
BAT_CMCCON97_Db	Bat Color inconstancy Db	Bat Color inconstancy Db
BAT_CMCCON97_DC	Bat Color inconstancy DC	Bat Color inconstancy DC
BAT_CMCCON97_DH	Bat Color inconstancy DH	Bat Color inconstancy DH
BAT_CMCCON97_DL	Bat Color inconstancy DL	Bat Color inconstancy DL
BAT_USER_OPACITY	Test Opacity	User defined test opacity of paper
BAT_USER_TRANSPARENCY	Test Transparency	User defined test transparency of paper
BAT_USER_BASIS_WEIGHT	Test Basis Weight	User defined test weight of paper
BAT_CURVE_ADJ_TYPE	Bat Curve Adjustment Type	Bat Curve Adjustment Type
BAT_CURVE_ADJ_VALUE	Batch Curve Adjustment Value	Batch Curve Adjustment Value
BAT_CURVE_ADJ_DESCRIPTOR	Bat Curve Adjustment Descriptor	Bat Curve Adjustment Descriptor
BAT_GLOSS_ADJ_STATUS	Batch Gloss Adjusted Status	Batch Gloss Adjusted Status
BAT_GLOSS_ADJ_GEOMETRY	Batch Gloss Adjustment Geometry	Batch Gloss Adjustment Geometry
BAT_GLOSS_VALUE	Batch Gloss Value	Batch Gloss Value
BAT_GLOSS_ADJ_DESCRIPTOR	Batch Gloss Adjustment Descriptor	Batch Gloss Adjustment Descriptor
BAT_THEO_OPACITY	Theo Opacity	Batch theoretical opacity
BAT_THEO_TRANSPARENCY	Theo Transparency	Batch theoretical transparency
BAT_THEO_BASIS_WEIGHT	Theo Basis Weight	Batch theoretical basis weight
BAT_THEO_SX	Theo Opacity SX	Batch theoretical SX opacity
BAT_THEO_KX	Theo Opacity KX	Batch theoretical KX opacity
BAT_NAME	Batch Name	Name of Current Desktop Batch
BAT_FILE	Std File For Batch	Current Batch's Standards File Name

Field Name	Description	Explanation
BAT_HIST_FILE	Batch History File	Current Batch's History File Name
BAT_HIST_FILE_STD	Standard For Batch History	Standard Associated with Current Batch
BAT_PF_JUDGE	Pass/Fail Indicator	Numeric P/F Flag - 1=Pass 2=Fail 0 =Exc
BAT_PF_DESC	Pass/Fail Judgement	Visual P/F Flag - Text - Pass/Fail/Exclude
BAT_ADJSTATUS	Status of adj to batch	Text Flag when Batch is adjusted.
BAT_MULTI_MEAS_NUM	Bat Multi-measurement #	Number of Avg Reads To Take
BAT_COLOR_PATCH	Batch Color Patch	Batch Color Patch
BAT_IR	Batch IR %R's	IR %R's of Batch
BAT_COL_FILE_NAME	Batch Colorant File	Colorant File of Batch
BAT_FRM_FILE_NAME	Batch Formula File	Formula File of Batch
BAT_K1	Batch K1	Specular %R of Batch
BAT_K	Batch K	Internal %R of Batch
BAT_Substrate_ID	Batch Substrate ID	Substrate ID of Batch
BAT_Substrate_Name	Batch Substrate Name	Substrate Name of Batch
BAT_COL_ID	Batch Colorant ID (8)	Colorant ID Numbers of Batch
BAT_COL_Name	Batch Colorant Name (8)	Colorant Names of Batch
BAT_COL_PercentAmount	Percent Formula (8)	Colorant Percents of Batch
BAT_COL_PercentTotalAmt	Percent Formula Total Amount	Percent Formula Total Amount of Batch
BAT_COL_ScaledLabel	Scaled Batch Col Unit Label	Label for Scaled Colorant of Batch
BAT_COL_ScaledAmount	Scaled Formula (8)	Scaled Colorant Amounts of Batch

Field Name	Description	Explanation
BAT_COL_ScaledTotalAmt	Scaled Formula Total Amount	Scaled Colorant Amounts of Batch
BAT_COL_UnitCost	Batch Colorant Unit Cost (8)	Unit Colorant Cost
BAT_COL_Cost	Batch Colorant Cost (8)	Colorant Cost
BAT_COL_Total_Cost	Batch Colorant Total Cost	Total Cost of Formula
BAT_Film_Thickness	Batch Film Thickness	Film Thickness of Batch
BAT_PREV_PERCENT	Batch Percent Amount Before Correction (8)	Percent Batch Formula Before Correction
BAT_PREV_SCALED_AMOUNT	Batch Scaled Amount Before Correction (8)	Scaled Batch Formula Before Correction
BAT_PREDICTED_PERCENT	Batch Predicted Colorant Amount (8)	Percent Match To Batch Formula
CORR_FACTOR	Correction Factor (8)	Performance Factors
AMT_ADD	Amount Add (8)	Colorant Add Amounts
PERCENT_ADD	Percent Add (8)	Colorant Percent Add
NORMALIZED_ADD	Normalized Add (8)	Normalized Colorant Add
BATCH_TOTAL_WEIGHT_ADD	Total Batch Weight Added	Total Amount Added
BatchPlusAdd_ScaledAmt	Batch Plus Add Scaled Formula (8)	Original Batch Amounts Plus Add
BatchPlusAdd_ScaledTotal	Batch Plus Add Scaled Total Amts	Total Amount of Scaled Batch Plus Add
MATCH_TO_BATCH_DE	DE Of The Match To The Batch	DE of the Match To The Batch Formula
BAT_INST_TYPE	Bat Instrument Type	Instrument ID Text from TOOLMAN32.INI
BAT_Substrate_INST_TYPE	Bat Substrate Instrument Type	Checksum value of the currentBat %R.

Field Name	Description	Explanation
Batch_Meas_Checksum	Batch Checksum	Checksum value of the currentBat %R.
MS_Batch_Meas_Checksum	M&S Batch Checksum	Checksum value of interpolated 16 pt reflectances
BAT_KN_Value	Bat KN - Pr Contrast	KN Value or Print Contrast of Batch
BAT_COST	Price For Strength Calculation	Cost to adjust for strength differences
BAT_CONCENTRATION	Material Concentration For Strength Calculation	Colorant amount calculated to adjust strength
BAT_INPUT_METHOD	Method of Input for Batch Data	Measurement method of batch
BAT_FOLDERID	Batch Database Folder ID	Batch Stensby Whiteness
BAT_SAMPLEID	Batch Database ID	R value for batch color display
BAT_FOLDERNAME	Batch Database Folder Name	G value for batch color display
BAT_DESCRIPTION	Batch Description	B value for batch color display
BAT_PRODUCTIONSORT_BINNUMBER	Bin number of current production shade sort	Batch AI sort bin number
BAT_WI_Stensby	Stensby Whiteness for Batch	Batch Stensby Whiteness
BAT_RGB_R	Batch RGB R Value	R value for batch color display
BAT_RGB_G	Batch RGB G Value	G value for batch color display
BAT_RGB_B	Batch RGB B Value	B value for batch color display
BAT_GUID	Batch Global Identifier	Unique ID number for batch
BAT_OPCAL_METHOD	Batch Calculation Method for CR/Opacity/Haze	Batch Calculation Method for CR/Opacity/Haze

Delta Fields

The delta field names are in brackets [ ] at the top of the QC.FLD and USER. FLD files under the [DELTA_DATA] section.

Field Name	Description	Explanation
DELTA_R	Delta %R's	%R Difference betweenStd and Bat
DELTA_K_OVER_S	Delta K/S's	K/S Difference betweenStd and Bat
CIE_DL	CIE DL	DL* Value
CIE_Da	CIE Da	Da* Value
CIE_Db	CIE Db	Db* Value
CIE_DC	CIE DC	DC* Value
CIE_DH	CIE DH	DH* Value
CIE_DE	CIE DE	DE* Value
CIE_Du	CIE Du	Du* Value
CIE_Dv	CIE Dv	Dv* Value
CIE_DEuv	CIE DEuv	DEuv* Value
CIE_DX	CIE DX	Delta X
CIE_DY	CIE DY	Delta Y
CIE_DZ	CIE DZ	Delta Z
CIE_Dx	CIE Dx	Delta x
CIE_Dy	CIE Dy	Delta y
Hunter_DL	Hunter DL	Hunter DL

Field Name	Description	Explanation
Hunter_Da	Hunter Da	Hunter Da
Hunter_Db	Hunter Db	Hunter Db
Hunter_DE	Hunter DE	Hunter DE
CMC_DL	CMC DL*/SL	CMC DL*/SL
CMC_DC	CMC DC*/SC	CMC DC*/SC
CMC_DH	CMC DH*/SH	CMC DH*/SH
CMC_DE	CMC DE	CMC DE
CIE94_DL	CIE94 DL*/SL	CIE94 DL*/SL
CIE94_DC	CIE94 DC*/SC	CIE 94 DC*/SC
CIE94_DH	CIE94 DH*/SH	CIE 94 DH*/SH
CIE94_DE	CIE94 DE	CIE94 DE
CIE94_SL	CIE94 SL	CIE94 SL
CIE94_SC	CIE94 SC	CIE94 SC
CIE94_SH	CIE94 SH	CIE94 SH
CIE94_RF	CIE94 Rotation Factor	CIE94 Rotation Factor
GEPQS_DC	GE_PQS II DC	GE_PQS II DC
GEPQS_DYY	GE_PQS II DY/Y	GE_PQS II DY/Y
GEPQS_DX	GE_PQS II Dx	GE_PQS II Dx
GEPQS_DY	GE_PQS II Dy	GE_PQS II Dy
GEPQS_DXM	GE_PQS II Metameric shift coordinate x	GE_PQS II Metameric shift coordinate x
GEPQS_DYM	GE_PQS II Metameric shift coordinate y	GE_PQS II Metameric shift coordinate y
DIN99_DL	DIN99 DL	DIN99 DL

Field Name	Description	Explanation
DIN99_Da	DIN99 Da	DIN99 Da
DIN99_Db	DIN99 Db	DIN99 Db
DIN99_DC	DIN99 DC	DIN99 DC
DIN99_DH	DIN99 DH	DIN99 DH
DIN99_DE	DIN99 DE	DIN99 DE
Ellipse_DE	Elliptical DE	Elliptical DE
FMC2_DL	FMC2 DL	FMC2 DL
FMC2_DCRG	FMC2 DCRG	FMC2 DCRG
FMC2_DCYB	FMC2 DCYB	FMC2 DCYB
FMC2_DC	FMC2 DC	FMC2 DC
FMC2_DE	FMC2 DE	FMC2 DE
MS89_DL	M&S 89 DL	M&S 89 DL
MS89_DC	M&S 89 DC	M&S 89 DC
MS89_DH	M&S 89 DH	M&S 89 DH
MS89_DE	M&S 89 DE	M&S 89 DE
MS89_DL_Verbal	M&S 89 DL Descriptor	M&S 89 DL Descriptor
MS89_DC_Verbal	M&S 89 DC Descriptor	M&S 89 DC Descriptor
MS89_DH_Verbal	M&S 89 DH Descriptor	M&S 89 DH Descriptor
MS89_PF_Indicator	M&S 89 PF Indicator	M&S 89 PF Indicator
MI	Metamerism Index/Multiplicative Correction	Metamerism Index/Multiplicative Correction Method
MI_ADDITIVE	Metamerism Index/Additive Correction	Metamerism Index/Additive Correction Method
D_WI(TAUBE)	Taube's Whiteness Delta	Taube's Whiteness Delta

Field Name	Description	Explanation
D_WI(CIE)	Whiteness CIE/E313 Delta	Whiteness CIE/E313 Delta
D_WI(CIE)_UVExcluded	Whiteness CIE UV Excluded Delta	CIE Whiteness Delta of UV excluded measurements
D_DWI(CIE)	WhitenessCIE Delta (UV In/Out)	CIE Whiteness Delta between UV included/UV excluded measurement
D_WI_Berger	Berger Whiteness Delta	Berger Whiteness Delta
D_WI_GanzN	Ganz Whiteness Neutral Delta	Ganz Whiteness Neutral Delta
D_WI_GanzG	Ganz Whiteness Green Delta	Ganz Whiteness Green Delta
D_WI_GanzR	Ganz Whiteness Red Delta	Ganz Whiteness Red Delta
D_WI_Stephansen	Stephansen Whiteness Delta	Stephansen Whiteness Delta
D_WI_Harrison	Harrison Whiteness Delta	Harrison Whiteness Delta
D_WI_GanzGriesser	Ganz-Griesser Whiteness Delta	Ganz-Griesser Whiteness Delta
D_TV_GanzGriesser	Ganz-Griesser Tint Delta	Ganz-Griesser Tint Delta
D_YI(E313)	Yellowness E313 Delta	E313 Yellowness Index Delta
D_YI(D19 5)	Yellowness D1925 Delta	D1925 Yellowness Index Delta
D_YI(DIN6167)	DIN 6167 Yellowness Delta	DIN 6167 Yellowness Index Delta
D_YI(GEPQS)	GE PQS Yellowness Delta	GE-PQS II Yellowness Delta
D_BI_TAPPI525	R457/T525 Brightness Delta	Delta R457 UV Included
D_BI_TAPPI525_UVExclude	R457/T525 UV Excluded Delta	Delta R457 UV Excluded
D_BI_DTAPPI525	Delta R 57/T5 5(UV In/Out) Delta	Delta of Delta R457 UV Inc and Delta R457 UV Exc
GS_ColorChange	Gray Scale for Color Change	Gray Scale for Color Change - Decimal

Field Name	Description	Explanation
GS_ColorChangeRating	Gray Scale for Color Change Rating	Gray Scale for Color Change - Rating
GS_Staining	Gray Scale for Staining	Gray Scale for Staining - Decimal
GS_StainingRating	Gray Scale for Staining Rating	Gray Scale for Staining - Rating
D_WI_CIE_Tint	CIE Whiteness Tint Delta	CIE Whiteness Tint Delta
D_WI_CIE_Tint_UVExcluded	CIE Whiteness Tint UV Excluded Delta	CIE Whiteness Tint Delta of UV excluded measurement
D_DWI_CIE_Tint	Delta CIE Whiteness Tint (UV In/Out) Delta	CIE Whiteness Tint Delta of UV included/UV excluded measurement
D_LF_Rx	Luminous R(x) Factor Delta	Luminous R(x) Factor Delta
D_LF_Ry	Luminous R(y) Factor Delta	Luminous R(y) Factor Delta
D_LF_Rz	Luminous R(z) Factor Delta	Luminous R(z) Factor Delta
D_GLOSS	Gloss Delta	Gloss Delta
FUZZY_PF	AI P/F Value	DE Value for AI Ellipsoidal Pass/Fail
FUZZY_-L	AI P/F -L	AI Low P/F Tolerance for DL*
FUZZY_ L	AI P/F L	AI High P/F Tolerance for DL*
FUZZY_-C	AI P/F -C	AI Low P/F Tolerance for DC*
FUZZY_ C	AI P/F C	AI High P/F Tolerance for DC*
FUZZY_-H	AI P/F -H	AI Low P/F Tolerance for DH*
FUZZY_ H	AI P/F H	AI High P/F Tolerance for DH*
FUZZY_OFFSET_L	AI P/F Offset L	AI Offset Tolerance for DL*
FUZZY_OFFSET_C	AI P/F Offset C	AI Offset Tolerance for DC*

Field Name	Description	Explanation
FUZZY_OFFSET_H	AI P/F Offset H	AI Offset Tolerance for DH*
FUZZY_PASSTOL	AI P/F Pass Tol	Pass Tolerance Value - Defines Check
FUZZY_FAILTOL	AI P/F Fail Tol	Fail Tolerance Value - Defines Check
Ellipse_DL_HI	LCH Elip DL P/F Tol	Elliptical P/F Tolerance for DL*
Ellipse_DC_HI	LCH Elip DC P/F Tol	Elliptical P/F Tolerance for DC*
Ellipse_DH_HI	LCH Elip DH P/F Tol	Elliptical P/F Tolerance for DH*
CIE_DE_HI	CIE DE P/F Tol	P/F Tolerance for DE* (CIE Lab)
CIE_DL_LO	CIE DL Low P/F Tol	Low P/F Tolerance for DL* (CIE Lab)
CIE_DL_HI	CIE DL High P/F Tol	High P/F Tolerance for DL* (CIE Lab)
CIE_Da_LO	CIE Da Low P/F Tol	Low P/F Tolerance for Da* (CIE Lab)
CIE_Da_HI	CIE Da High P/F Tol	High P/F Tolerance for Da* (CIE Lab)
CIE_Db_LO	CIE Db Low P/F Tol	Low P/F Tolerance for Db* (CIE Lab)
CIE_Db_HI	CIE Db High P/F Tol	High P/F Tolerance for Db* (CIE Lab)
CIE_DELCh_HI	CIELCh DE P/F Tol	P/F Tolerance for DE* (CIE LCH)
CIE_DLCh_LO	CIELCh DL Low P/F Tol	Low P/F Tolerance for DL* (CIE LCH)
CIE_DLCh_HI	CIELCh DL High P/F Tol	High P/F Tolerance for DL* (CIE LCH)

Field Name	Description	Explanation
CIE_DC_LO	CIE DC Low P/F Tol	Low P/F Tolerance for DC* (CIE LCH)
CIE_DC_HI	CIE DC High P/F Tol	High P/F Tolerance for DC* (CIE LCH)
CIE_DH_LO	CIE DH Low P/F Tol	Low P/F Tolerance for DH* (CIE LCH)
CIE_DH_HI	CIE DH High P/F Tol	High P/F Tolerance for DH* (CIE LCH)
CIE_DEuv_HI	CIELuv DE P/F Tol	P/F Tolerance for DE* (CIE Luv)
CIE_DLuv_LO	CIELuv DL Low P/F Tol	Low P/F Tolerance for DL* (CIE Luv)
CIE_DLuv_HI	CIELuv DL High P/F Tol	High P/F Tolerance for DL* (CIE Luv)
CIE_Du_LO	CIE Du Low P/F Tol	Low P/F Tolerance for Du* (CIE Luv)
CIE_Du_HI	CIE Du High P/F Tol	High P/F Tolerance for Du* (CIE Luv)
CIE_Dv_LO	CIE Dv Low P/F Tol	Low P/F Tolerance for Dv* (CIE Luv)
CIE_Dv_HI	CIE Dv High P/F Tol	High P/F Tolerance for Dv* (CIE Luv)
Hunter_De_HI	Hunter DE P/F Tol	P/F Tolerance for DE (Hunter Lab)
Hunter_DL_LO	Hunter DL Low P/F Tol	Low P/F Tolerance for DL (Hunter Lab)
Hunter_DL_HI	Hunter DL High P/F Tol	High P/F Tolerance for DL (Hunter Lab)

Field Name	Description	Explanation
Hunter_Da_LO	Hunter Da Low P/F Tol	Low P/F Tolerance for Da (Hunter Lab)
Hunter_Da_HI	Hunter Da High P/F Tol	High P/F Tolerance for Da (Hunter Lab)
Hunter_Db_LO	Hunter Db Low P/F Tol	Low P/F Tolerance for Db (Hunter Lab)
Hunter_Db_HI	Hunter Db High P/F Tol	High P/F Tolerance for Db (Hunter Lab)
CMC_DE_HI	CMC DE P/F Tol	P/F Tolerance for DE (CMC)
CIE94_DE_HI	CIE94 DE P/F Tol	P/F Tolerance for DE (CIE94)
FMC2_DE_HI	FMCII DE P/F Tol	P/F Tolerance for DE (FMCII)
FMC2_DL_LO	FMCII DL Low P/F Tol	Low P/F Tolerance for DL (FMCII)
FMC2_DL_HI	FMCII DL High P/F Tol	High P/F Tolerance for DL (FMCII)
FMC2_DCRG_LO	FMCII DCRG Low P/F Tol	Low P/F Tolerance for DCRG (FMCII)
FMC2_DCRG_HI	FMCII DCRG High P/F Tol	High P/F Tolerance for DCRG (FMCII)
FMC2_DCYB_LO	FMCII DCYB Low P/F Tol	Low P/F Tolerance for DCYB (FMCII)
FMC2_DCYB_HI	FMCII DCYB High P/F Tol	High P/F Tolerance for DCYB (FMCII)
MS89_DE_HI	M&S 89 DE Tolerance	P/F Tolerance for DE (MS89)
MS89_DL_HI	M&S 89 DL Tolerance	P/F Tolerance for DL (MS89)
MS89_DC_HI	M&S 89 DC Tolerance	P/F Tolerance for DC (MS89)
MS89_DH_HI	M&S 89 DH Tolerance	P/F Tolerance for DH (MS89)

Field Name	Description	Explanation
GEPQS2_DC_HI	GE-PQS II DC P/F Tol	P/F Tolerance for DC (GE-PQSII)
GEPQS2_DYY_LO	GE-PQS II Low DY/Y P/F Tol	Low P/F Tolerance for DY/Y (GE-PQSII)
GEPQS2_DYY_HI	GE-PQS II High DY/Y P/F Tol	High P/F Tolerance for DY/Y (GE-PQSII)
GEPQS2_DX_LO	GE-PQS II Low Dx P/F Tol	Low P/F Tolerance for Dx (GE-PQSII)
GEPQS2_DX_HI	GE-PQS II High Dx P/F Tol	High P/F Tolerance for Dx (GE-PQSII)
GEPQS2_DY_LO	GE-PQS II Low Dy P/F Tol	Low P/F Tolerance for Dy (GE-PQSII)
GEPQS2_DY_HI	GE-PQS II High Dy P/F Tol	High P/F Tolerance for Dy (GE-PQSII)
DIN99_DE_HI	DIN99 DE P/F Tol	P/F Tolerance for DE (DIN99)
DIN99_DL_LO	DIN99 DL Low P/F Tol	Low P/F Tolerance for DL (DIN99)
DIN99_DL_HI	DIN99 DL High P/F Tol	High P/F Tolerance for DL (DIN99)
DIN99_Da_LO	DIN99 Da Low P/F Tol	Low P/F Tolerance for Da (DIN99)
DIN99_Da_HI	DIN99 Da High P/F Tol	High P/F Tolerance for Da (DIN99)
DIN99_Db_LO	DIN99 Db Low P/F Tol	Low P/F Tolerance for Db (DIN99)
DIN99_Db_HI	DIN99 Db High P/F Tol	High P/F Tolerance for Db (DIN99)
DIN99_DC_LO	DIN99 DC Low P/F Tol	Low P/F Tolerance for DC (DIN99)

Field Name	Description	Explanation
DIN99_DC_HI	DIN99 DC High P/F Tol	High P/F Tolerance for DC (DIN99)
DIN99_DH_LO	DIN99 DH Low P/F Tol	Low P/F Tolerance for DH (DIN99)
DIN99_DH_HI	DIN99 DH High P/F Tol	High P/F Tolerance for DH (DIN99)
GENTOL_LO	Generic Low Tolerance(15)	Low P/F Tolerance for Generic Field (5)
GENTOL_HI	Generic High Tolerance(15)	High P/F Tolerance for Generic Field (5)
GENWARNTOL_LO	Generic Warn Low Tolerance(15)	Low P/F Warn Tolerance for Generic Field (5)
GENWARNTOL_HI	Generic Warn High Tolerance(15)	High P/F Warn Tolerance for Generic Field (5)
GENTOL_VALUE	Generic PF Value(15)	Generic Field Value (5)
GENTOL_DESC	Generic PF Description(15)	Description of Generic Field (5)
GENTOL_JUDGE	Generic P/F Determination(15)	Pass/Fail Text for Generic Field (5)
GENWARNTOL_JUDGE	Generic Warn Determination(15)	Pass/Fail determination for Generic tolerance
GENTOL_ILLOBS	Property Illuminant/Observer(15)	Generic tolerance field for illuminant/observer
GENTOL_INSTCONDS	Property Instrument Condition(15)	Generic tolerance field for instrument conditions
GENTOL_TARGET	Property Target Value(15)	Generic tolerance target value
STRENGTH	Strength Difference	Strength Difference betweenStd and Bat
STRENGTH_METHOD	Strength Adj Method	Method of Strength Adjustment

Field Name	Description	Explanation
Std_DEV	Standard Deviation (5)	Std Deviation for Field (n) / n=10
AVG	Average (5)	Average for Field (n) / n=10
D_CONTRAST_RATIO	CR/Opacity/Haze Delta	Delta CR/Opacity/Haze betweenStd/Bat
555_Description	555 Color Space	Color Space for 555 Sort
555_TolDescription	555 Tolerance Description(3)	Text Description of 555 Tolerance (3)
555_Boxes	Number of 555 Boxes	Number of Boxes Used in 555 Sort
555_Lo_Tolerance	555 Low Sort Tolerance(3)	Low Sort Tolerances for 555 Sort (3)
555_Hi_Tolerance	555 High Sort Tolerance(3)	High Sort Tolerance for 555 Sort (3)
555_Rating	555 Sort Code	Actual 555 Sort Code for Batch
TOC_Rating	TOC Sort Code	Truncated Octahedron Method for Shade Sorting
DCI_DL	DCI DL P/F Tol	Datacolor DL P/F tolerance
DCI_DC	DCI DC P/F Tol	Datacolor DC P/F tolerance
DCI_DH	DCI DH P/F Tol	Datacolor DH P/F tolerance
DCI_DE	DCI DE P/F Tol	Datacolor DE P/F tolerance
CIELab_PFDesc	CIE Lab P/F Determination	Pass/Fail Text for CIE Lab P/F
CIELCh_PFDesc	CIE LCh P/F Determination	Pass/Fail Text for CIE LCh P/F
CIELUV_PFDesc	CIE LUV P/F Determination	Pass/Fail Text for CIE LUV P/F
EllipseLCh_PFDesc	Ellipse LCh P/F Determination	Pass/Fail Text for Ellipse LCh P/F

Field Name	Description	Explanation
CMC_PFDesc	CMC P/F Determination	Pass/Fail Text for CMC P/F
CIE94_PFDesc	CIE94 P/F Determination	Pass/Fail Text for CIE94 P/F
CIE2000_PFDesc	CIE2000 P/F Determination	Pass/Fail Text for CIE2000 P/F
GEPQS2_PFDesc	GE-PQS II P/F Determination	Pass/Fail Text for GE-PQS II P/F
DIN99_PFDesc	DIN99 P/F Determination	Pass/Fail Text for DIN99 P/F
FMCII_PFDesc	FMCII P/F Determination	Pass/Fail Text for FMCII P/F
Hunter_PFDesc	Hunter Lab P/F Determination	Pass/Fail Text for Hunter Lab P/F
Fuzzy_PFDesc	AI P/F Determination	Pass/Fail Text for AI P/F
MS89_PFDesc	M&S 89 P/F Determination	Pass/Fail Text for MS89 P/F
Combined_PFDesc	Combined P/F Determination	Pass/Fail Text for Combined P/F
Fuzzy_LDesc	AI P/F DL Description	Lightness Descriptor for AI/PF
Fuzzy_CDesc	AI P/F DC Description	Chroma Descriptor for AI/PF
Fuzzy_HDesc	AI P/F DH Description	Hue Descriptor for AI/PF
PIGMENT_WEIGHT	Pigment Weight	Weight of pigment in strength sample.
CLEAR_WEIGHT	Clear Weight	Weight of clear in strength sample.
PIGMENT_ADD	Pigment Add	Amount of pigment to add for = strength.
CLEAR_ADD	Clear Add	Amount of clear to add for = strength.
INTEGRAL_COST_STRENGTH	Integral Strength Based On Cost	Integral Strength Based On Cost

Field Name	Description	Explanation
D_KN_Value	Delta KN Value	Delta KN Value betweenStd and Bat
TOLBLOCK_PFDesc	Tol Block P/F Determination	Pass/Fail determination based on Tolerance Block
Chroma_QC_HDesc	CIE DH Description	CIE DH color descriptor
Chroma_QC_CDesc	CIE DC Description	CIE DC color descriptor
Chroma_QC_LDesc	CIE DL Description	CIE DL color descriptor
Chroma_QC_aDesc	CIE Da Description	CIE Da color descriptor
Chroma_QC_bDesc	CIE Db Description	CIE Db color descriptor
DELTA_WI_Stensby	Stensby Whiteness Delta	Stensby Whiteness Delta

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