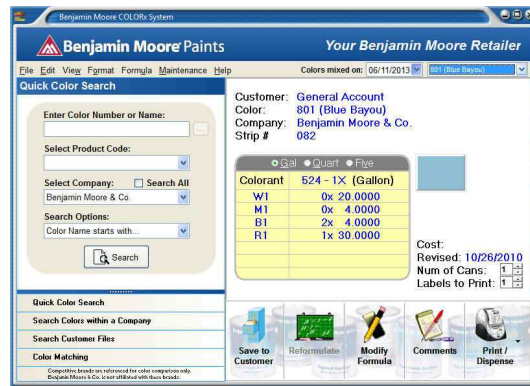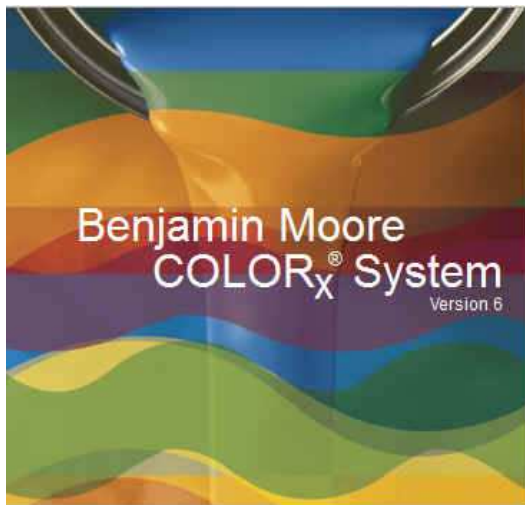# Benjamin Moore Paints®

Moore's COLORX®
Color Matching System
&
Prescription Book

COLORX Software Operator's Manual

Version 6

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INTRODUCTION

GENERAL INFORMATION

The Moore's COLOR$_x$ ® Color Matching System and Prescription Book Manual is divided into four sections.

Section 1 describes the Benjamin Moore Prescription & Competitive Formula Book.
Section 2 describes the COLOR$_x$ Color Matching Software.
Section 3 describes the Customer Transaction Database.
Section 4 describes the Maintenance functions of the software.

The Formula Book consists of all Benjamin Moore formulas along with calculated competitive prescriptions.

Both the formula book and the color matching software are easy to use. By utilizing easy to read screens, the program allows the operator to easily select the color and product that they desire.

Minimum System Requirements

To use the COLOR$_x$ Color Matching System and Electronic Prescription Book you need:

- Intel Pentium processor 500 MHz or higher.
- 1 GB of RAM
- 750 MB of free hard disk space.
- CD or DVD Drive
- Video card capable of supporting 16M colors
- Printer
- Serial or USB port for Spectrophotometer
- Windows® XP, Windows® Vista or Windows® 7

SERVICE ASSISTANCE

Call your regional Benjamin Moore Color Technology Representative for questions concerning software operation, software updates, and software problems at:

Benjamin Moore Color Matching Support Line (US & Canada): **1-800-809-9213**

Call the following X-Rite numbers for hardware service, spare parts, or warranty questions about the Match-Rite and the COLOR$_x$ spectrophotometers:

In the continental United States and Canada: **1-877-974-8332**

Section 1
COLOR$_x$ Formula Book

Accessing the Benjamin Moore Formula Book Program

To access the formula book program, double-click the Benjamin Moore COLOR$_x$ icon from the Windows desktop screen. The formula book screen will appear as seen below in figure 1-1.
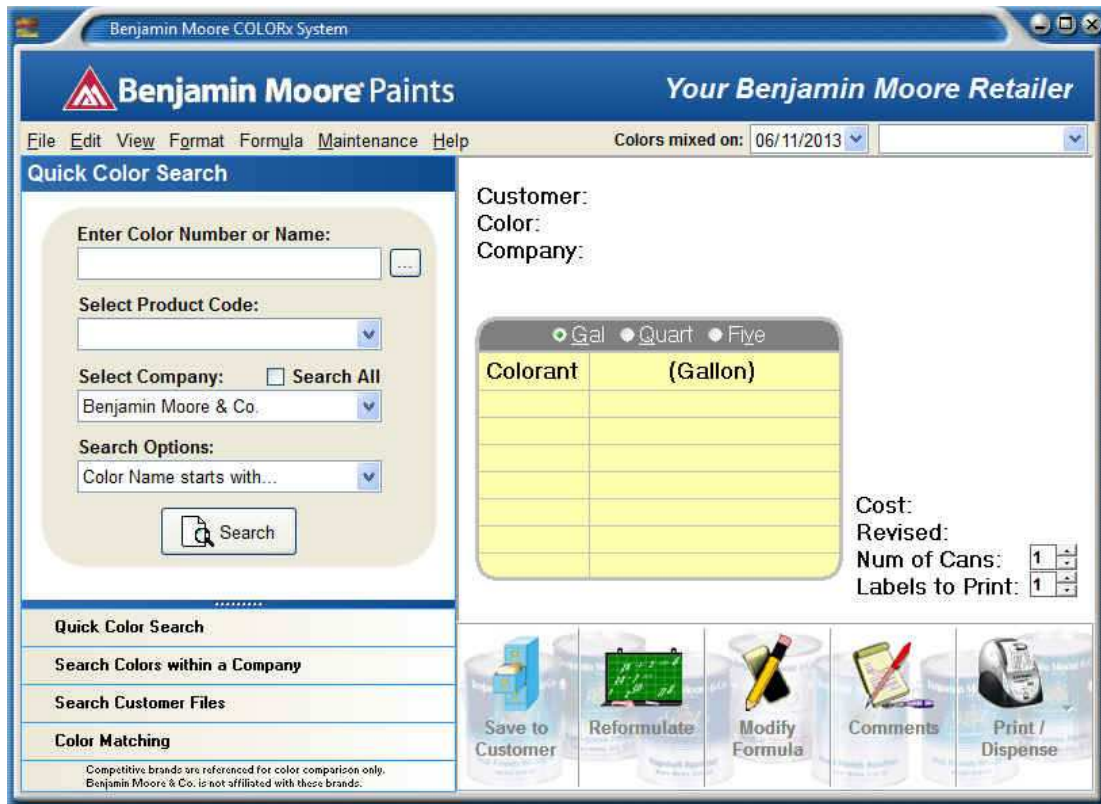
Figure 1-1

Accessing Benjamin Moore Prescriptions

To find a Benjamin Moore color, enter the desired color name or color number in the blank field labeled **Enter Color Number or Name**. Next, enter the desired product code in the field labeled **Select Product Code**.

If you don't know the three digit code for the desired product, click the down arrow at the right of the Select Product Code field and a list of products and codes will be displayed. If you are searching for a Benjamin Moore color, be sure Benjamin Moore is selected in the **Select Company** box. Now click on the **Search** button to display the formula.

When the color has been identified, the formula will be displayed as shown below in figure 1-2.
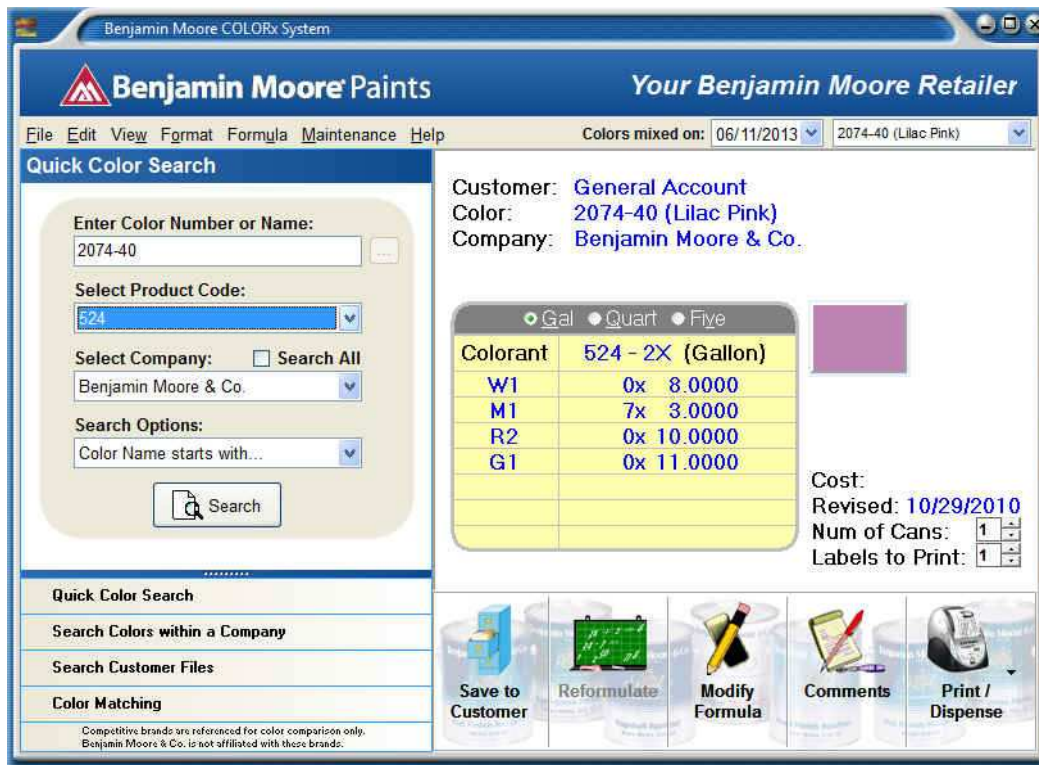

Figure 1-2

Printing the Sample Formula

Once a formula is displayed, the system is capable of displaying and printing the prescriptions for gallon, quart, or five-gallon sizes. You may view whichever size you desire by clicking the appropriate circle, **Gal**, **Quart**, or **Five** at the top of the formula grid.

To print the displayed prescription, click on the **Print** button. If you wish to print more than one label for the displayed prescription, click on the arrow on the **Labels to Print** window until the desired number of labels to print appears in the box. Then click the **Print** button.

Dispensing the Formula to an Automatic Dispenser

If you have an automatic dispenser connected to the COLOR$_x$ software, you can dispense the displayed formula by setting up the **Print** button to **Print / Dispense**. The system will send the formula displayed on the screen to the automatic dispenser and your printer. To set this up, see **Configuring the Print / Dispense Button** on page 53 of this manual. If you wish to dispense more than one can for the displayed prescription, click on the arrow on the **Num of Cans** window until the desired number of cans appears in the box. Then click the **Print / Dispense** button.

Cost

This the cost of the colorants for the current prescription as defined in the colorant table in the Modify Store Information screen. This display could be turned off in Modify Store Information. See page 49 for details.

Revised

This is the date that the prescription was created or revised.

Primer Required

If a primer is required for the current prescription, a message box will be displayed as below.
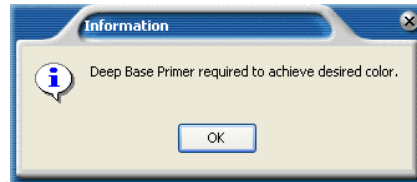

Figure 1-3

By clicking on the **OK** button, the primer formula is displayed as in figure 1-4.
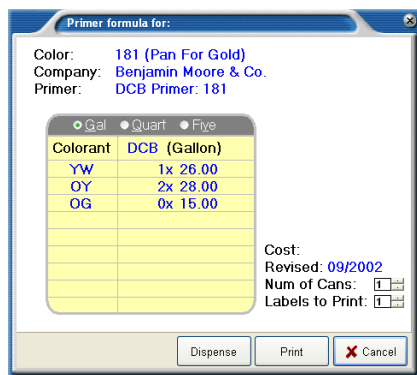From here you can print or dispense the primer formula,

Figure 1-4

If you choose a color that is unavailable in the product you selected, the system will display a list of Benjamin Moore products that have a prescription for the selected color as shown in figure 1-5. You can click on one of the products, then click on the **Select** button for a prescription for that product.

Figure 1-5

If you wish to look up a miscellaneous color name, but you don't know the spelling or the full name for the color, you can enter the beginning of the name or part of the name. Choose the **Search Options** box for either the "Color Name starts with…" choice or the "Color Name contains…" choice. The system will look up and display a list of color names beginning with the letters you entered or containing the text you entered depending on the option you chose.

Click on the color you desire from the list, and then click on the Select button, (figure 1-6.)
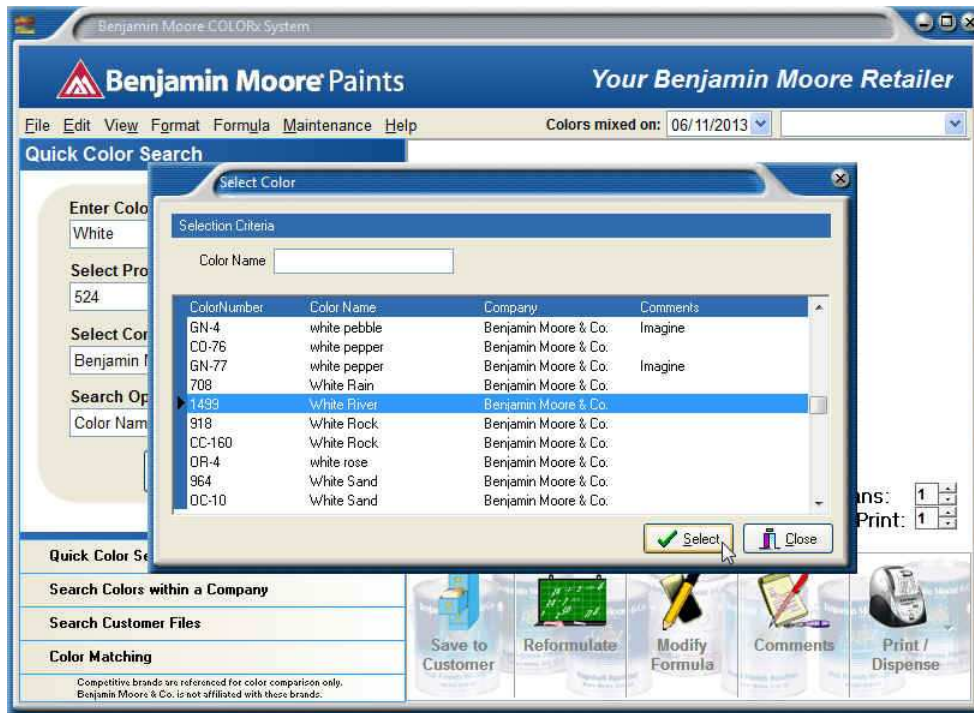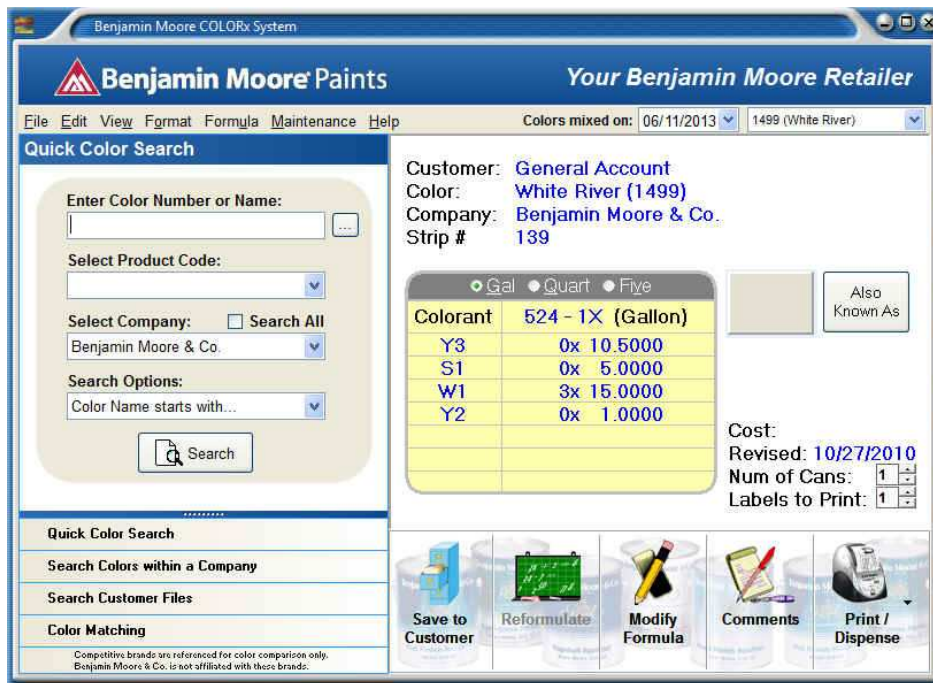

Figure 1-6

Figure 1-7

Strip Number

On certain Classic Colors, a **Strip #** will appear below the **Company**. This indicates which color strip the color is located on in the Benjamin Moore display.

Also Known As

Some Benjamin Moore Colors have different names associated with one color. When these colors are accessed, an **Also Known As** button appears below the color swatch. By clicking on this button, a list of color aliases for that color appears as shown below in figure 1-8.

Figure 1-8

Ladder Series

The Ladder Series feature makes it possible to adjust a displayed prescription, either lighter or darker.

By choosing the Modify Formula button when the desired formula is displayed, you can make the color lighter or darker by 5%, 10%, 25%, 50%, or 75%.
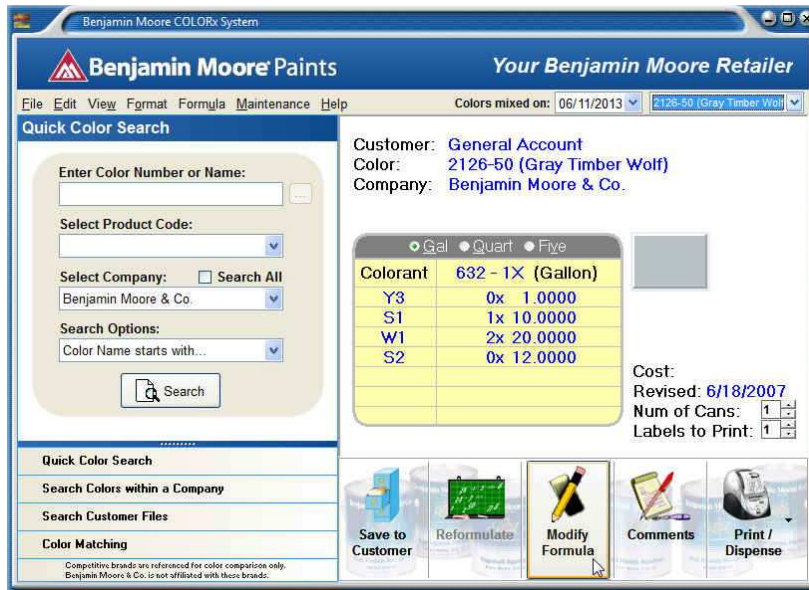
Figure 1-9

When you click on the Modify Formula button, the Modify Color Formula screen is displayed, as shown in figure 1-10. Move the pointer to the Adjust Original Formula box and click on the down arrow. Now you can adjust the displayed formula to lighten or darken the color by the desired percentage.

Figure 1-10

Figure 1-11

The adjusted prescription (in this example, 10% lighter) is displayed as shown in figure 1-12. If you wish to try a different percentage, click on the down arrow again and choose a different percentage.

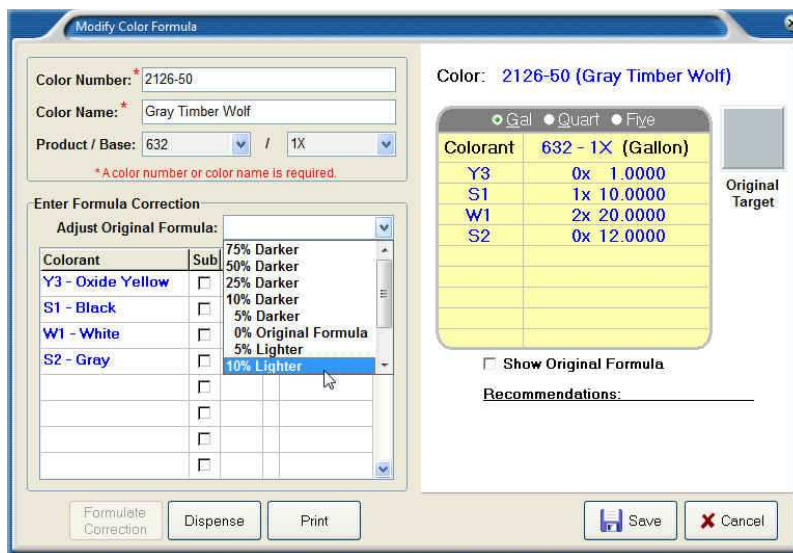If you wish to view the original formula again, move the pointer to the Show Original Formula box and click on it as shown below. **To display the adjusted formula again, you must uncheck this box**. When you are satisfied with an adjusted formula, click on the Save button and the current adjusted formula will be saved. You can print or dispense that formula by clicking on the desired button.
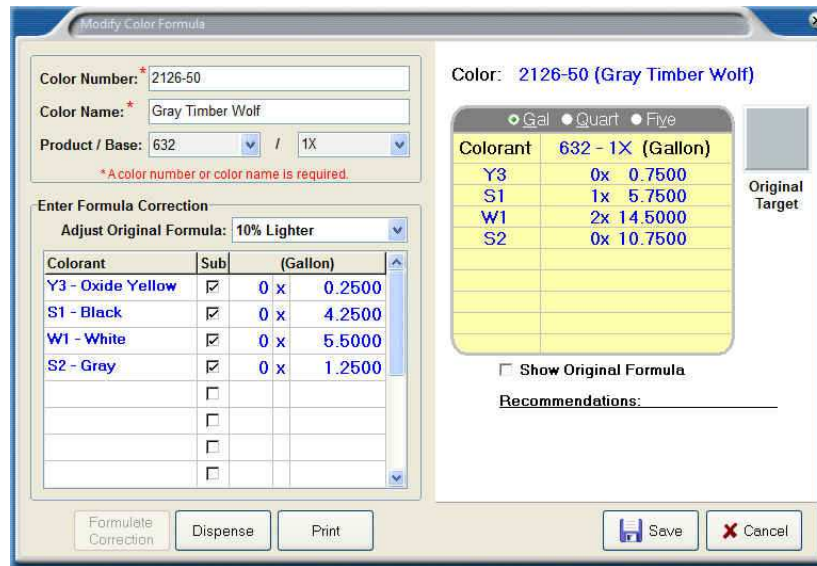
Figure 1-12

Certain formulas may not be scalable because adding more colorant may overfill the can. An example is shown in figure 1-13 when attempting to darken the formula by 10%. In this case a message will appear informing you that the system is unable to adjust the formula, because the new formula will exceed the volume of the can.
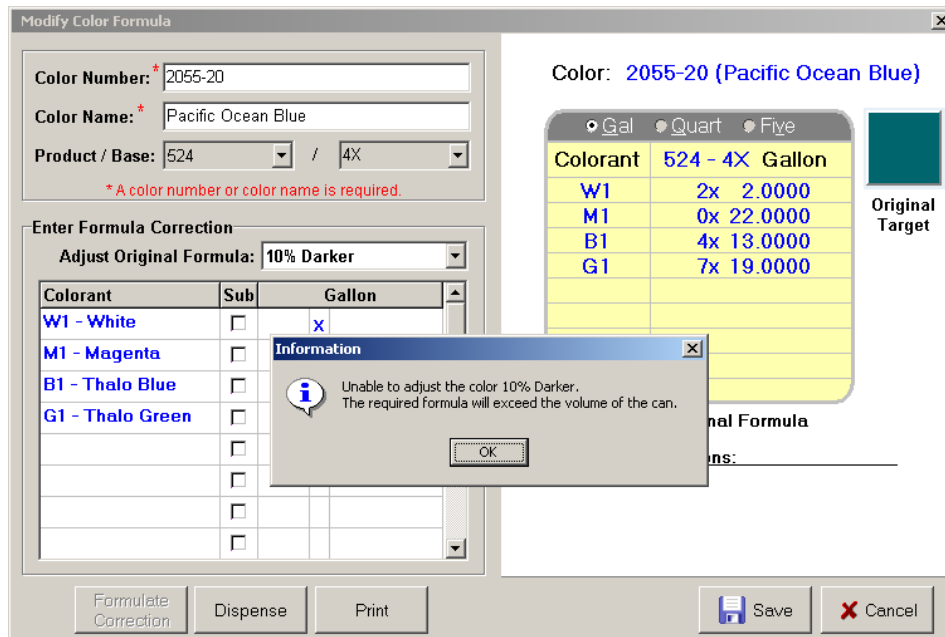

Figure 1-13

When using the Ladder Series to lighten a color, it may reduce the hiding capabilities of the color.

Vinyl Select Palette

The Vinyl Select palette will offer an alternative prescription for some of the deep colors that can safely be used on vinyl siding/trim.

When entering a color number, if the color is one from the Vinyl Select palette, two different prescriptions may be available, one that is the standard prescription (labeled General) for most substrates, and the other that is approved for use on vinyl siding. Please note that not all colors will be included in the Vinyl Select palette.
In the example below shown in figure 1-14, we entered color HC-134 in product 629. The Multiple Formulas Available screen opens up and prompts us to choose one of the two options.

Figure 1-14

By choosing General and clicking on the Select button, the General formula is displayed as shown below in figure 1-15.

Figure 1-15

By choosing Vinyl Select and clicking on the Select button as shown in figure 1-16, the formula for the best performance on vinyl siding is displayed as shown in figure 1-17.
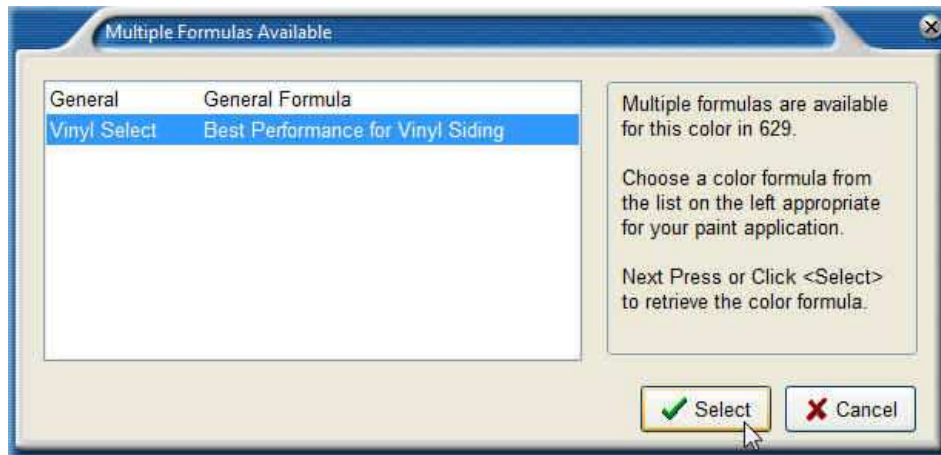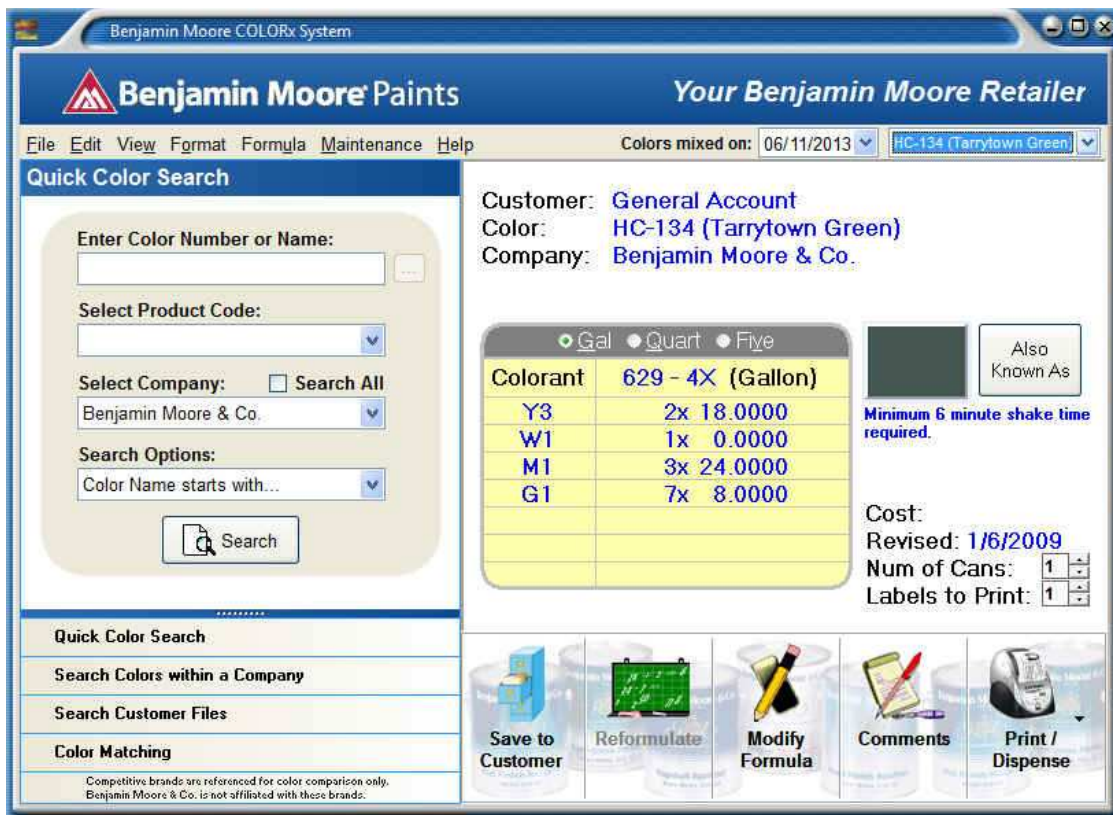

Figure 1-16

Figure 1-17

As in all prescription inquires, the prescriptions that are looked up are saved in the General Account. However to save a Vinyl Select prescription, you must save it to the Customer Transaction Database.

(For more information on creating and saving to the Customer Transaction Database, refer to Section 3 of this manual.)

Accessing Competitive Formulas

The COLOR$_x$ Formula Book can look up prescriptions for competitive companies. The list of available competitive companies and fandecks available are listed at the end of this manual.

The competitive colors in the COLOR$_x$ Formula Book are calculated matches.

Competitive Color Prescriptions from COLOR$_x$

We have amassed an extensive collection of colors from our competitor's color merchandise over the years. This information is available in our Color Search option in COLOR$_x$. To see if a color exists, simply follow the same procedure you would for a Benjamin Moore color. Enter a color number or name, along with a product, and either select an individual company or check the "Search All" box above the Select Company drop down list.

Unlike a Benjamin Moore color which displays a prescription created and tested by our Color Prescriptioning Lab, we store just the measurement of the competitive color. That measurement is run in our color matching application to generate a color prescription the same as if you measured a custom color with a spectrophotometer and calculated a match.

Therefore, when a customer requests a match to a competitive color, a retailer should follow this procedure.

First, look up the color in COLOR$_x$ and determine if we have it in our system. If it is, a prescription will be calculated and displayed. Click on the button "Closest BM Color", this will list the five closest Benjamin Moore colors. Suggest to the customer that they look at our closest colors and see if that meets their color requirements. This has two benefits, if the color is acceptable, then you have a tested Benjamin Moore prescription to make the color and you have changed a competitive color specification to a Benjamin Moore color specification.

Second, if you or the customer has a sample of the competitive color merchandise then match the color merchandise just as you would match a custom color. Since the customer will be judging the color to the merchandise sample that should be your target. Depending on the age and condition of the merchandise, it may not represent what we have stored in COLOR$_x$

Finally, if the customer does not like our closest color and no sample of the color is available then use the calculated match in COLOR$_x$.

 If you have any questions please contact your Color Technology Rep or call 800-809-9213.

To look up a competitive color, enter the desired color name or color number in the blank field labeled **Enter Color Number or Name**. Next, enter the desired product code in the field labeled **Select Product Code**.

If you don't know the three digit code for the desired product, click the down arrow at the right of the **Select Product Code** field and a list of products and codes will be displayed. Now click on the arrow in the **Select Company** box. Then choose the competitive company you wish to search by clicking on the desired company with the mouse as shown in the example in Figure 1-18. Now click on the **Search** button.
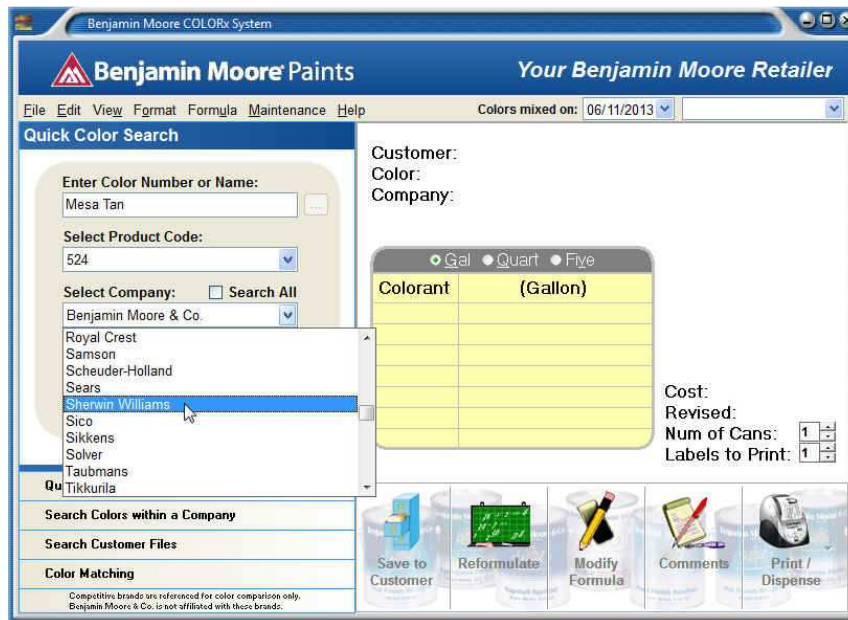

Figure 1-18

The system will search for the color you entered then calculate the color formula.
When the system locates the color, it will calculated the formula and display it as in the sample shown in figure 1-19.
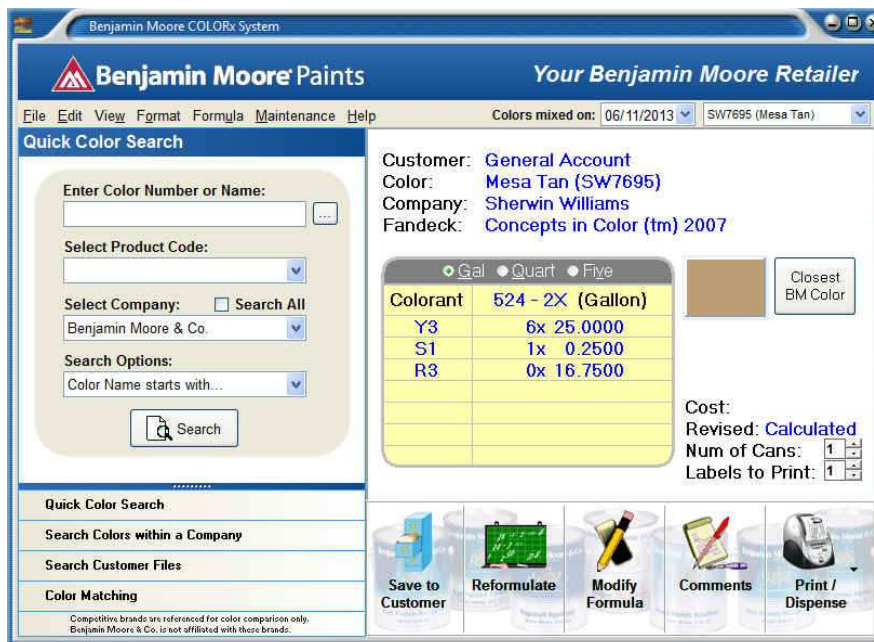

Figure 1-19

The fandeck or color card where the competitive color is displayed will also be listed.
A button will appear under the color swatch **Closest BM Color**. By clicking on this button, the system will display the five closest Benjamin Moore colors, the closest match being at the top of the list as shown in figure 1-20.
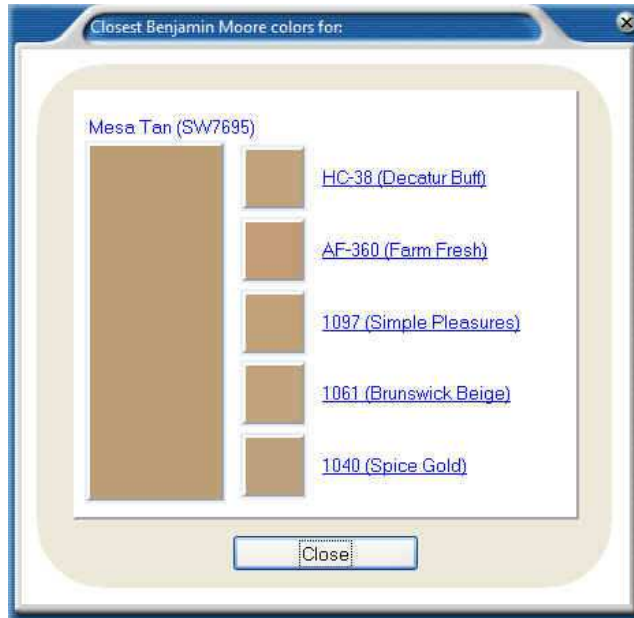

Figure 1-20

If your customer prefers one of the displayed Benjamin Moore colors, you can access the prescription by clicking on the color name.

If you wish to search for a color in all competitive fandecks, enter the color name and product code. Then click on the **Search All** box located above the **Select Company** box. Now click on **Search**. Select the sample you wish to display by clicking on the desired item with the mouse, highlighting it, and then click on the **Select** button, (figure 1-21.)
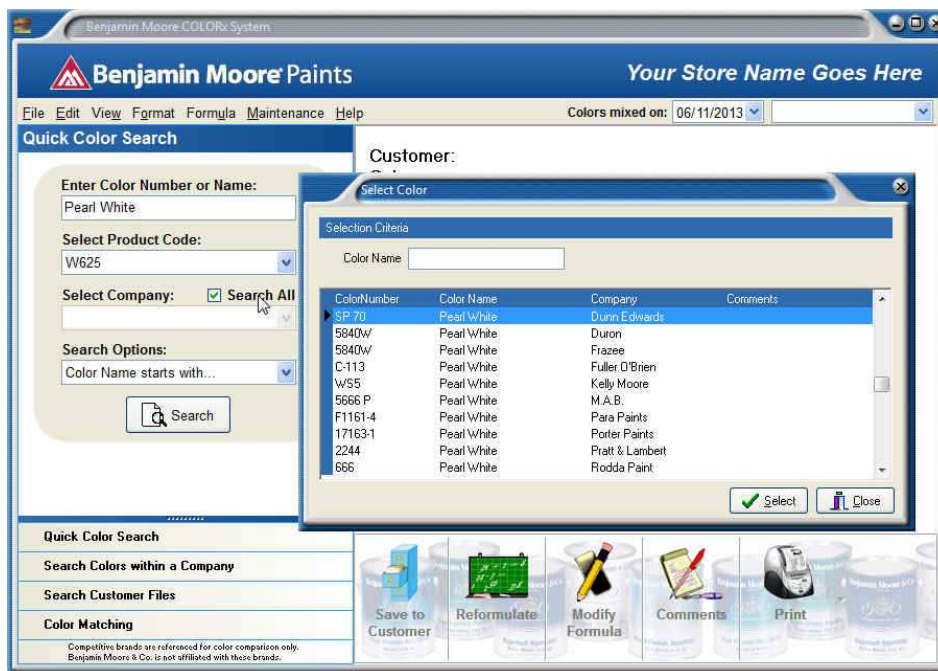

Figure 1-21

The color and company you selected will then be displayed along with the calculated formula as shown in figure 1-22.
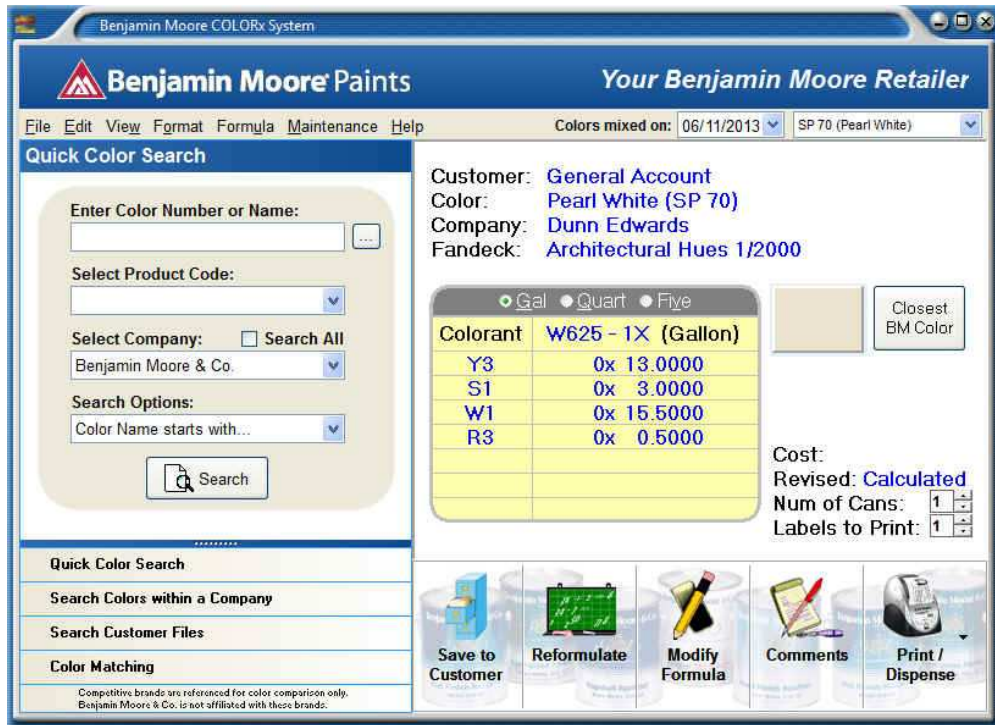

Figure 1-22

A feature that allows another search method that can be done by clicking on the **Search Colors within a Company** button at the bottom left of the screen (figure 1-23.)

Figure 1-23

Choose the company you wish to search and the colors we have in our database for the selected company will appear. You can sort by color name or number, or do a search on a particular name or number. Then choose a product you wish to make the selected color in and press **Enter**. The color and calculated formula will then be displayed as shown below.
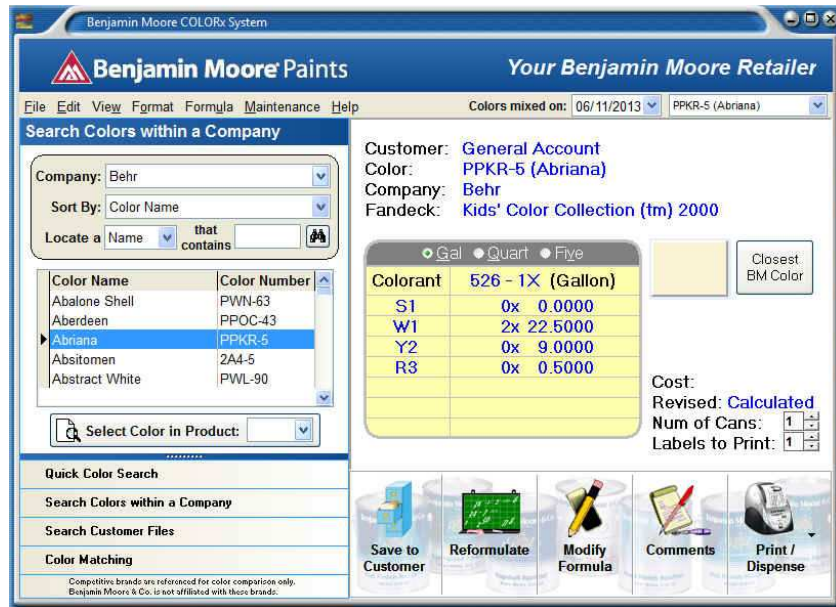
Figure 1-24

Reviewing Samples

When prescriptions are looked up or color matches are measured, the samples can be recalled on the screen by clicking on the dropdown arrow located near the top right side of the screen under the store name as shown below in figure 1-25. When the dropdown box appears, simply highlight the sample you wish to recall and it will be displayed. This dropdown displays all the samples that were measured or looked up on the date chosen in the **Colors mixed on** dropdown box.
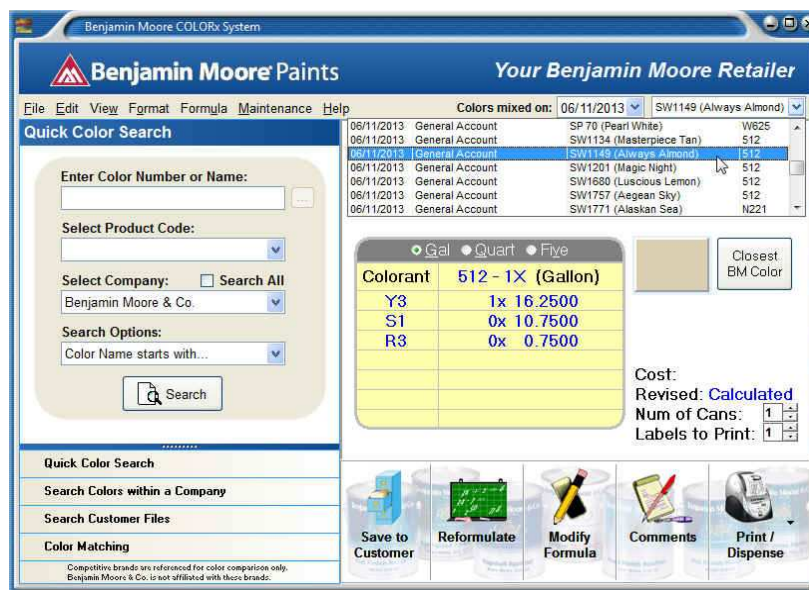
Figure 1-25

By using the **Colors mixed on** dropdown box, you can display the colors that were measured or looked up on a particular day. The default date is the current date. To change the date, click on the dropdown arrow and choose the date you wish to view as shown below in figure 1-26.

Figure 1-26

Pint Samples

COLOR$_x$ has the ability to dispense Pint Sample Colors using automatic dispensers.
Enter the desired Benjamin Moore color. Enter product code 127 and click on the Search button as shown below. Then click on the Print/Dispense button.

Figure 1-27

Section 2
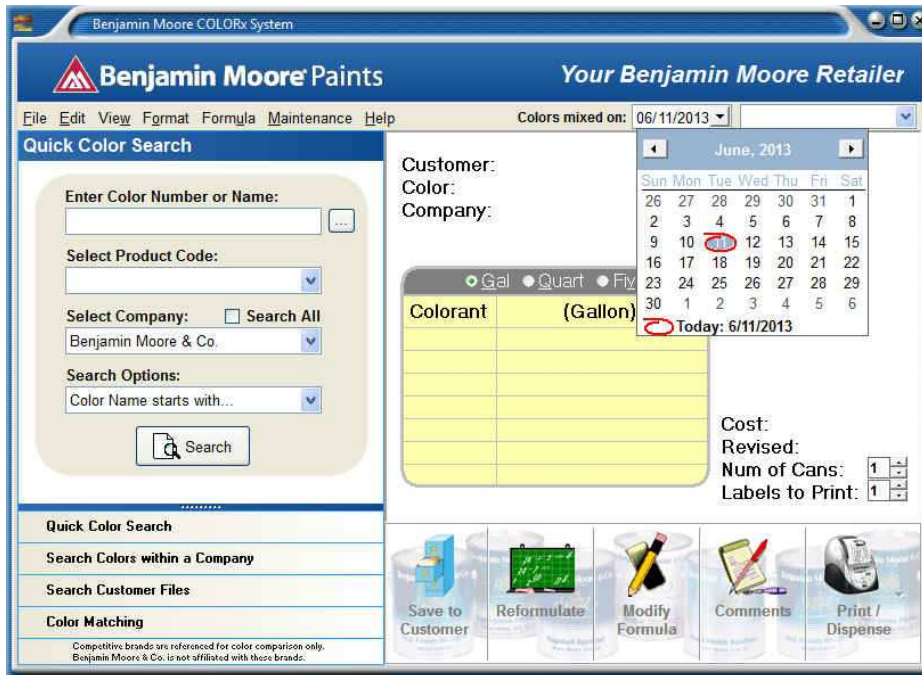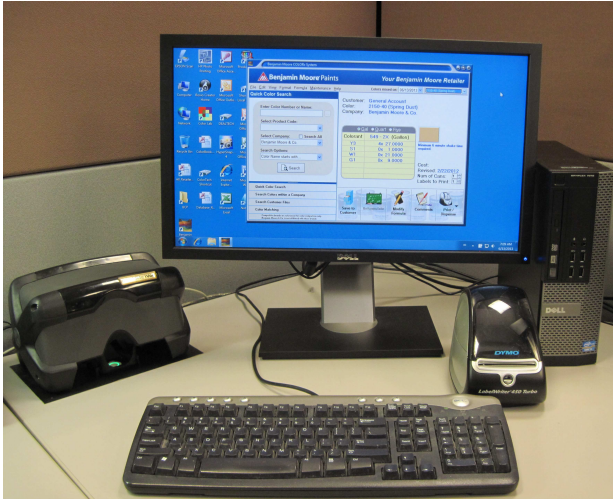# COLOR_x Color Matching Program

Dell® Computer with a MatchRite® Spectrophotometer and
a Dymo LabelWriter® Printer

Introduction

The COLOR$_x$ Color Matching System software is state-of-the-art in color technology. It is designed specifically for quick and accurate color matching and ease of use. The hardware, which the software runs on is composed of three main components:

- Spectrophotometer
- Computer
- Printer

Once the spectrophotometer and the computer are turned on, the software will control and coordinate all user interaction with the system. The program interacts with the operator by means of windows and dialog boxes on the screen, and guides the operator through the color formulation process. The user is free to give maximum attention to the preparation of the color samples.

This section describes the software operation of the system, and how to prepare, measure, and evaluate color samples using the color matching system.

Operation

Sample Preparation

Proper sample preparation is the key to a quick, accurate color match. The surface of the target sample must be large enough to completely cover the instrument aperture. The sample must be opaque to obtain a good reading. If your sample is translucent, layer the sample color to increase opacity.

Target Sample

The target sample is the color sample that you wish to match. It may be any solid opaque substance: wallpaper, plaster, or dried paint on a drawdown card.
Place your target sample on the backing tile, carefully lining up the color with the aperture. You should take two measurements of the target sample, using the Average Sample button. Move the sample slightly between each measurement. This averaging technique can help you reject a bad measurement that could cause a poor color match. If there is a significant change in data, the screen will display a warning. If this happens, you should reject the data and repeat the measurement from the beginning. Note that you can expect this warning message for non-uniform target colors. You should not reject data for these types of samples.

Batch Sample

The majority of colors made in 1 base, 2 base, and 3 base should be good commercial matches from the initial formulation. Certain colors made in 4 base will sometimes require at least one adjustment before being acceptable. You can expect to make adds to a number of 4 base colors.

Color matches should be evaluated by eye to see if additional adjustment is required. Do not use draw downs for this evaluation. Putting a small amount of the last batch you mixed on the same surface as the target color is best for visual evaluation. If this is not possible, then a piece of the drawdown containing only the color should be cut out. The area surrounding a color affects the eye's ability to evaluate color matches. It is very important to make sure that the bright white background surrounding the color on a drawdown card is not affecting your color perception.

The **batch sample** is the Benjamin Moore paint you have tinted with the formula generated by the COLOR$_x$ software. A sample of this tinted paint must be prepared for evaluation. First, be sure that the colorants you have added to the base paint have been completely dispersed. This requires at least five minutes on a conventional paint shaker. Be aware that if you do not fully develop the color by shaking, the program cannot predict an accurate match.

After the initial formula has been prepared, you must obtain a dry sample ("drawdown") to determine if further correction is necessary. To accomplish this, make a drawdown of the wet paint using a wet film applicator (drawdown bar.) Use the .008 side for most of your color work. Use the .012 side for colors with hiding warnings or that you suspect may have low hide characteristics. Apply the paint to the sealed (glossy) side of a white drawdown card.

The wet paint film should be allowed to setup naturally for at least five minutes. After this initial setup time, you can speed up the drying time by placing the sample in a low heat environment (120^0 to 150^0 F) with forced air ventilation, such as a fan or hair dryer. The paint <u>must</u> be completely dry in order to obtain good results.

Deep colors require up to <u>two</u> <u>hours</u> under a fan or hair dryer to fully stabilize before measuring. While the surface color may not change to the eye, the spectrophotometer's light can penetrate into the paint film and measure through a partially dry batch. This occurs frequently with 4B base colors that contain large amounts of oxide red and oxide yellow. Large negative adds in a correction typically indicate that the batch sample needs further curing to achieve an accurate measurement.

Remember, you decide if the color match is ready for customer acceptance. If you ask it to, the software will almost always find some way to further improve the match. This does not mean that it is not perfectly acceptable. Proper target presentation and preparation of the batch sample are essential in obtaining consistently high quality color matches.

SOFTWARE OPERATION

Introduction

This section of the manual explains how the color matching program guides you through the process of formulation using a series of menus and prompts. Step-by-step instructions are given.

Windows and popup windows display the available functions. Use the mouse to move the arrow cursor to the desired option, or type the requested option's underlined character while holding down the <Alt> key. When you select a function, the monitor displays a screen with one or more fields that require additional information or selections. The computer fills in some fields; other fields require your input.

The key to effective use of this system is to pay close attention to the cursor and the information displayed by the screens. There may be requests for input or additional selections. The program also displays informative messages about the state of the system. The blinking cursor shows you where to enter the requested information.

As you proceed through the available windows and popup windows, remember that when the system is looking for data input the cursor will flash in the appropriate field. Do not be fearful of hitting an incorrect key, for the worst that can happen is the system will ask for other data, or that you will have to repeat a procedure. These conventions are applied throughout the color matching system.

Spectrophotometers

There are two types of spectrophotometers in use with the COLOR$_x$ software.

The MatchRite iVue is a non contact desktop spectrophotometer which is the latest unit for use with the Benjamin Moore COLOR$_x$ software.

The MatchRite CF57 is also a desktop spectrophotometer.

Allow the spectrophotometer warm up for a few minutes before attempting to execute any functions.

When the color matching program is accessed, the program looks for the Spectrophotometer and automatically configures the type of instrument that is connected to the computer. If a spectrophotometer is not attached or is not communicating with the computer, the message below will appear.

Figure 2-1

The appearance of this error indicates that the software was unable to communicate with the spectrophotometer. There are several possible causes of this failure:

1. The spectrophotometer is not turned on.
2. The cable not connected. Insure that the cable is securely attached to both the computer and the spectrophotometer.
3. The cable is defective. If you are unable to resolve the problem by any other means, consider replacing the cable.
4. Incorrect COM port set. Most computers have more that one serial port and the wrong port may have been assigned to the spectrophotometer.
5. The wrong spectrophotometer is assigned in the program.

System Start-up

At the COLOR$_x$ screen, click on the **Color Matching** button as shown below.

Figure 2-2

Note that only the left panel changes. You are now ready to use the color matching system, (figure 2-3.)
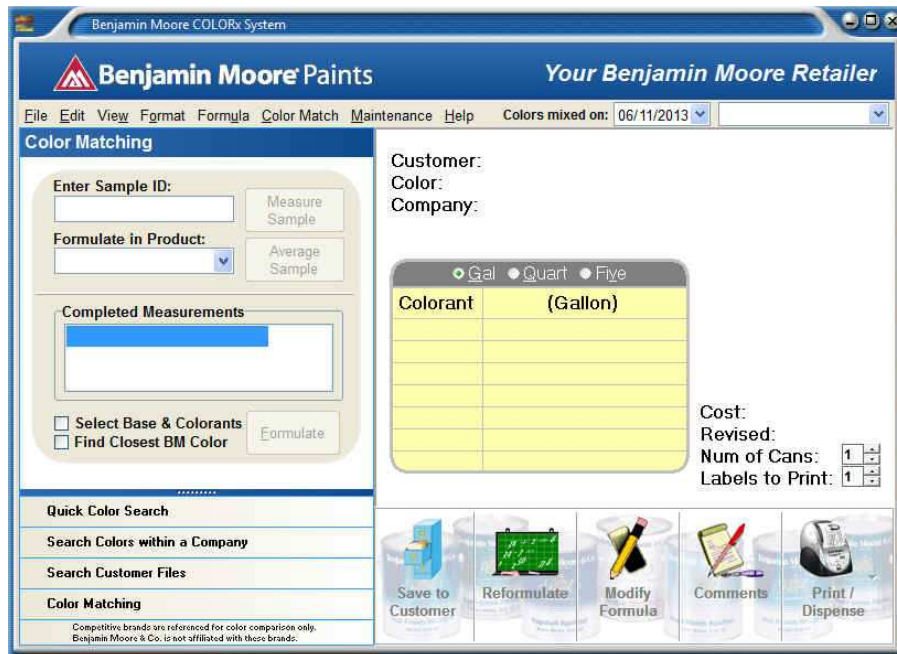

Figure 2-3

Calibration

The software automatically checks for a current calibration. The system will not allow you to color match unless the calibration is current. If the calibration is not current, the software will prompt you to calibrate. The system requires only one calibration daily, but additional calibrations are acceptable if you are unsure, or if conditions in the building (temperature, power supply, etc.) change during the course of the day.

Proper calibration is very important. The accuracy of all your results depends upon precise calibration to the white reference tile. If you calibrate with a dirty tile, if the tile doesn't completely cover the area-of-view aperture, or if you had something other than the white reference tile at the sample port, the computer may still accept the results, but the accuracy of all subsequent measurements will be adversely affected. An absolutely clean reference tile with no cracks is essential for proper calibration and correct readings. Clean your reference tile regularly.

To calibrate, click on **Maintenance** then move the mouse pointer to **Spectrophotometer** then click on **Calibrate** and as shown in figure 2-4.
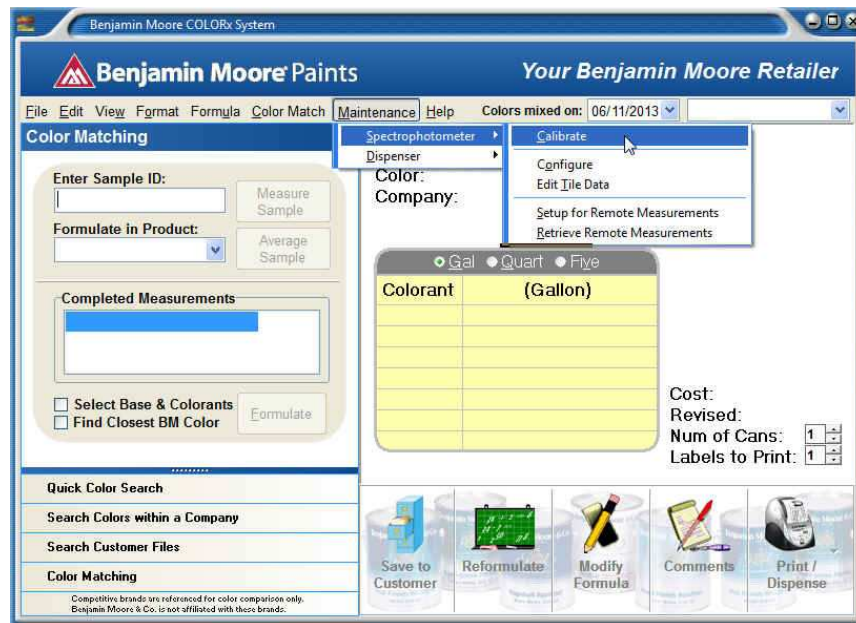

Figure 2-4

MatchRite Spectrophotometers

If you have a MatchRite CF57 spectrophotometer, follow the steps below.

After clicking **Calibrate**, the following dialog will be displayed:

Figure 2-5 Calibration Screen

Remove the plastic cap which covers the white tile that is built into the sample holder and close the sample holder. When the Reference tile is in place, click on "**OK**", or press **Enter** to continue.

If the white tile calibration is successful, the message below will appear.

Figure 2-6

Pull back the sample holder assembly away from the unit so that the aperture is open and click "**OK.**" When complete, the message in figure 2-7 will appear.

Figure 2-7

Calibration is now complete. Close the sample holder and replace the protective cap over the white tile. Click on "**OK**" to return to the Main Color Matching screen.

Note: If there is an excessive amount of light in the area, such as direct sunlight on the spectrophotometer, place your hand above the unit over the aperture to shade any excessive light from shinning through the open aperture. Be careful not to cover the aperture with your hand.

If you have a MatchRite iVue spectrophotometer, you will only be prompted to calibrate on the white tile.

Matching a Color Target

Enter a sample name in the **Enter Sample ID** box. Then, in the **Formulate in Product** box, enter the product number you wish to match the sample color in. You can also click on the arrow next to the field for a drop down list of all Benjamin Moore products as shown in figure 2-8.
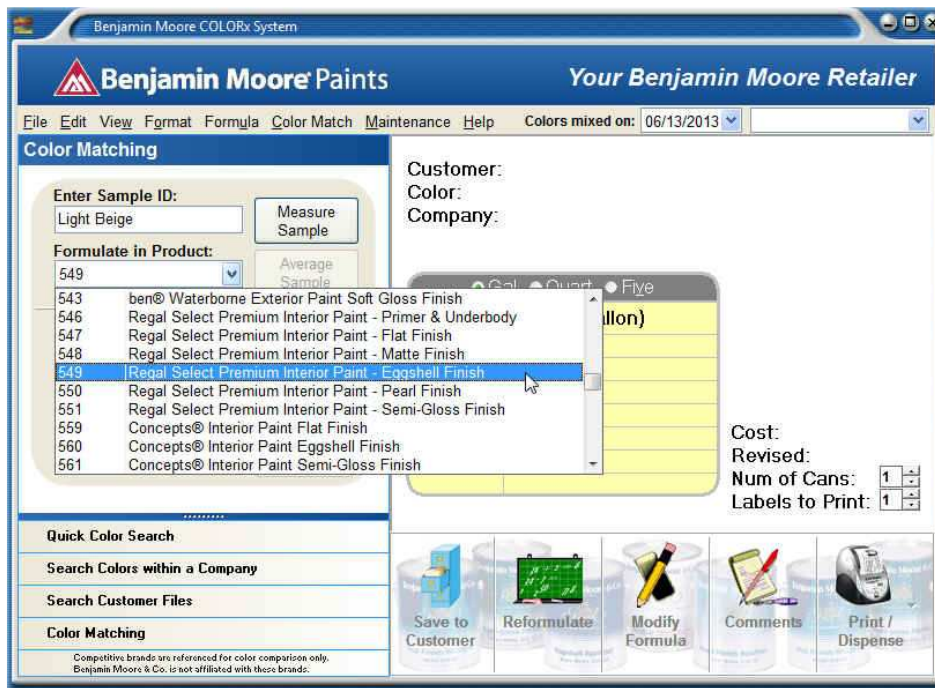

Figure 2-8

Once you choose your product, click on the **Measure Sample** button.
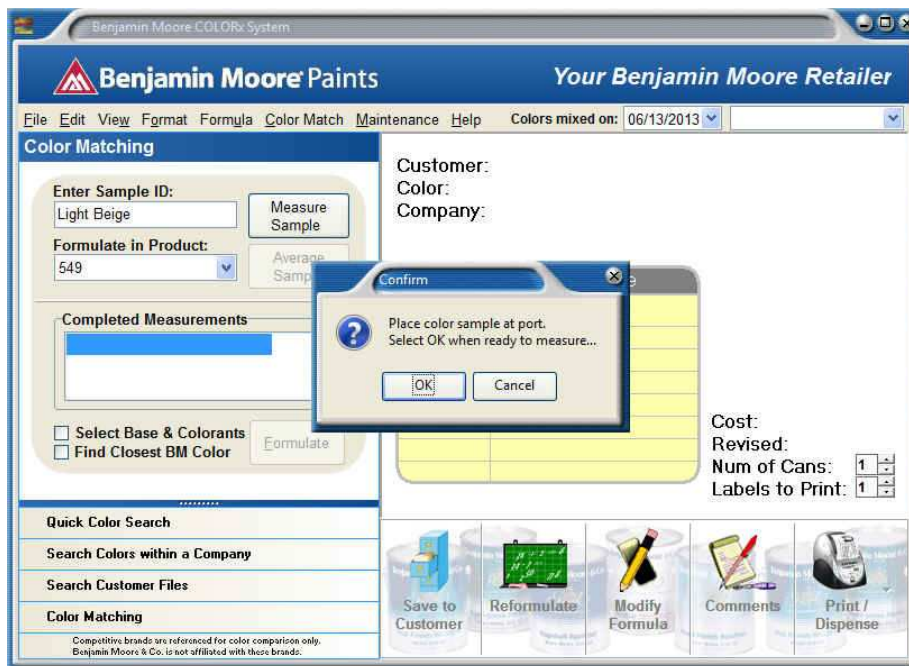A pop up screen appears instructing you to **Place color sample at port. Select OK when ready to measure…**

Figure 2-9

When you have carefully placed the target sample at the port (aperture) of the spectrophotometer, click on the **OK** button. The system measures the color sample and displays the completed measurement in the left panel as shown in figure 2-10.
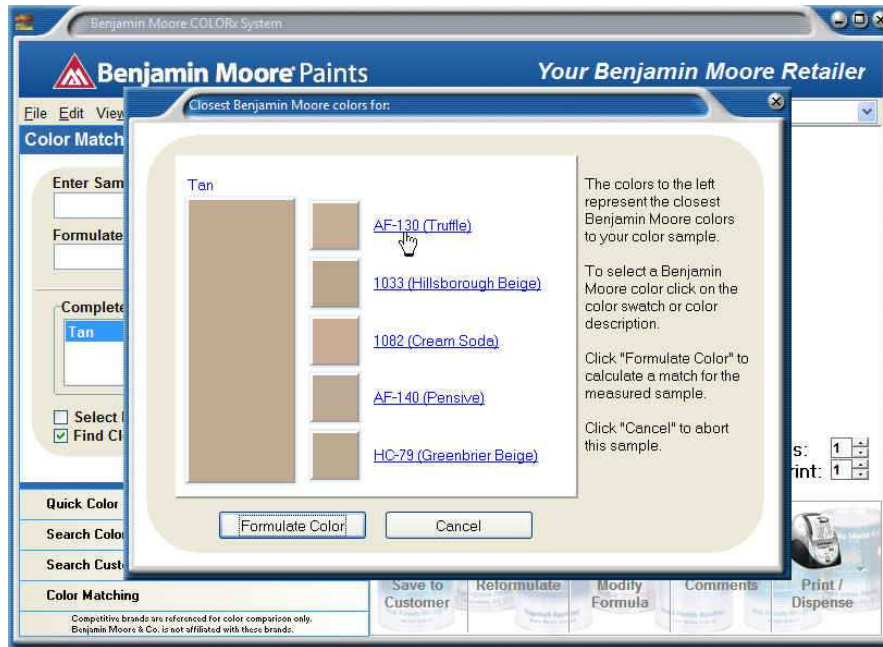
Figure 2-10

At this point you can measure more color samples. The system will list them in the **Completed Measurements** box as shown below in figure 2-11.
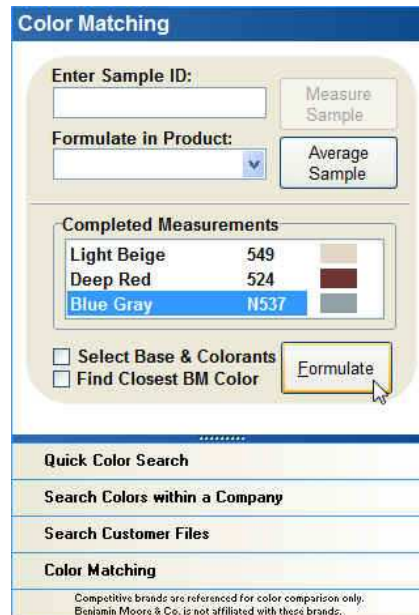

Figure 2-11

You can click on the **Formulate** button here or you can accomplish several functions at this point by highlighting a completed measurement sample with the mouse and right clicking on it. A pop up screen appears that allows you to: **Re-measure Sample** (highlighted sample), **Average Sample** (highlighted sample), **Formulate**, **Display Reflectance** (highlighted sample), **Delete Measurement** (highlighted sample), and **Delete All Measurements**. See figure 2-12.
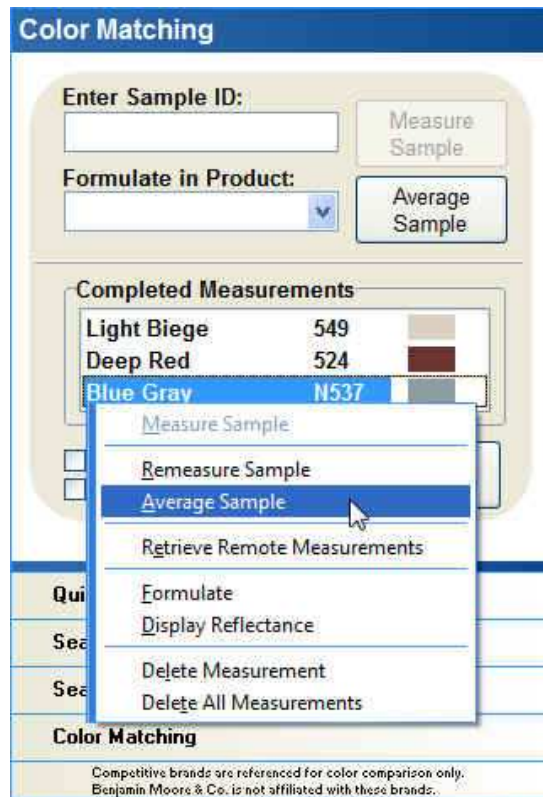
Figure 2-12

When you are finished measuring the color sample, click on the **Formulate** button.
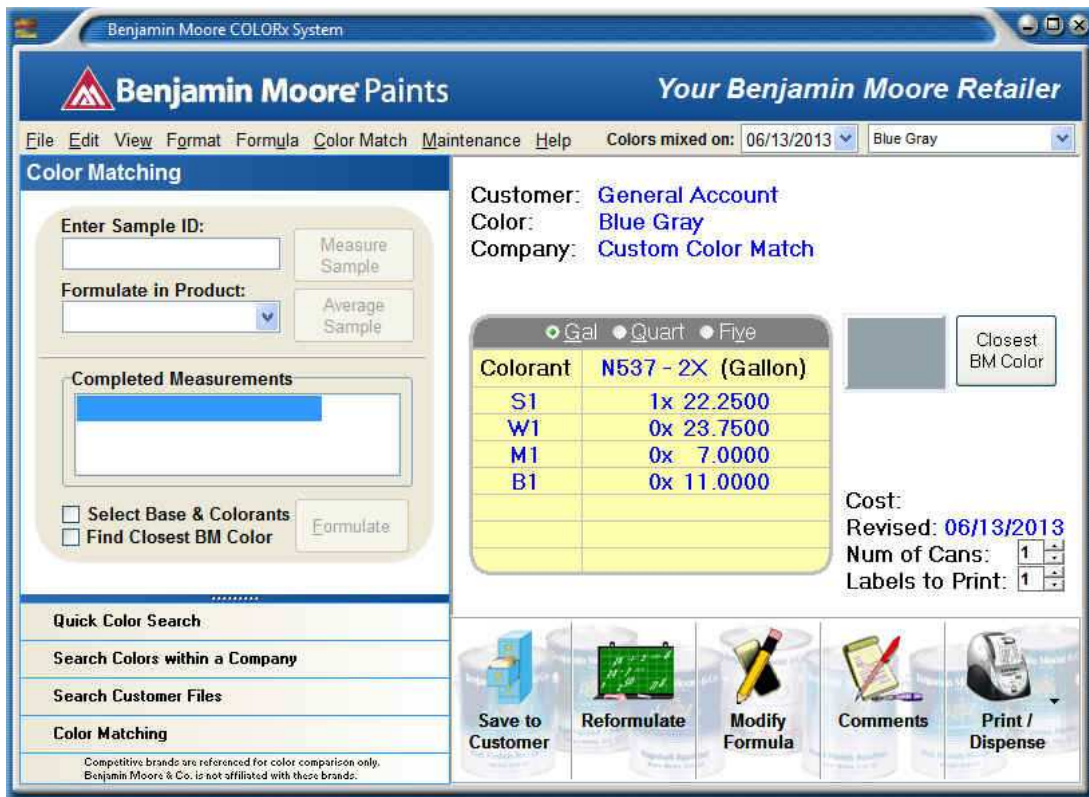The last sample you measured will be displayed as shown in figure 2-13.

Figure 2-13

Closest Benjamin Moore Color

If you wish to view the closest Benjamin Moore color to the measured sample, click on the **Closest BM Color** button to the right of the formula and the following screen will appear listing the five closest Benjamin Moore colors to the sample.
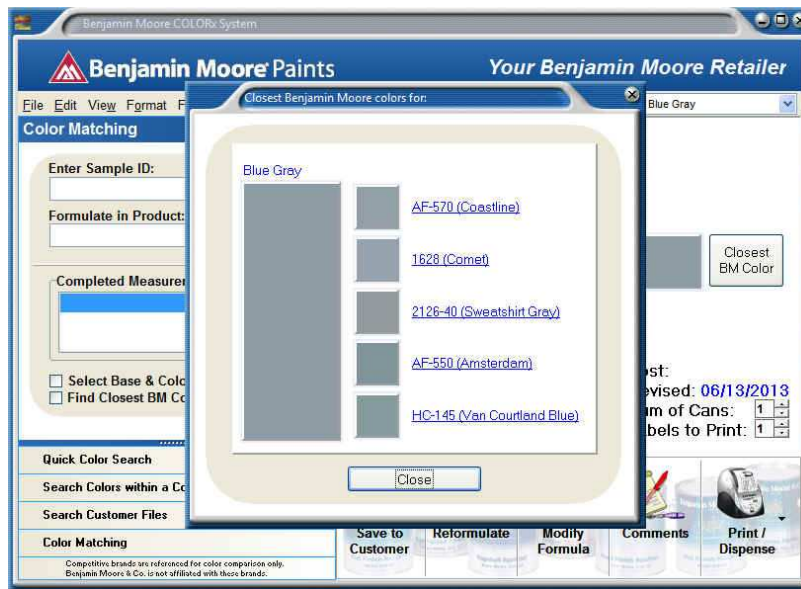

Figure 2-14

If you click on one of the displayed Benjamin Moore colors, the stored prescription for that color will be displayed.

Select Base and Colorants

This option will allow you to override the automatic base and colorants selected by the system. This feature may be useful if you are out of a particular base and would like to try to match the color sample in another base, or use a different combination of colorants.

To use this option, measure and average the sample as described above. Next, click on the **Select Base and Colorant** box. A checkmark will appear in the box as shown in figure 2-15.
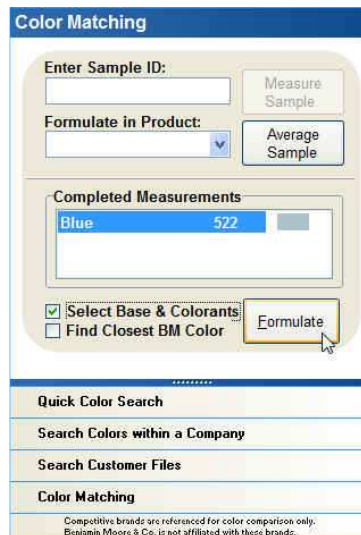

Figure 2-15

Now click on the "**Formulate**" button and the Select Base and Colorants screen will display. (figure 2-16)

Figure 2-16

If you wish to change the base level, enter the desired base level (1X – 4X) in the **Select Base** box. If the current base level is acceptable, simply leave it blank. After you have chosen a base, or have decided to allow the system to choose the base, you can enter your own choice of colorants by moving the mouse pointer to the white box next to the desired colorant and left clicking the mouse. This will place a check mark in the box representing the colorant you chose. *Note: You must choose at least three colorants*. When you are finished, click on the **OK** button.

The sample formula with the colorants you chose will be displayed as the current sample on the Main Color Matching screen.
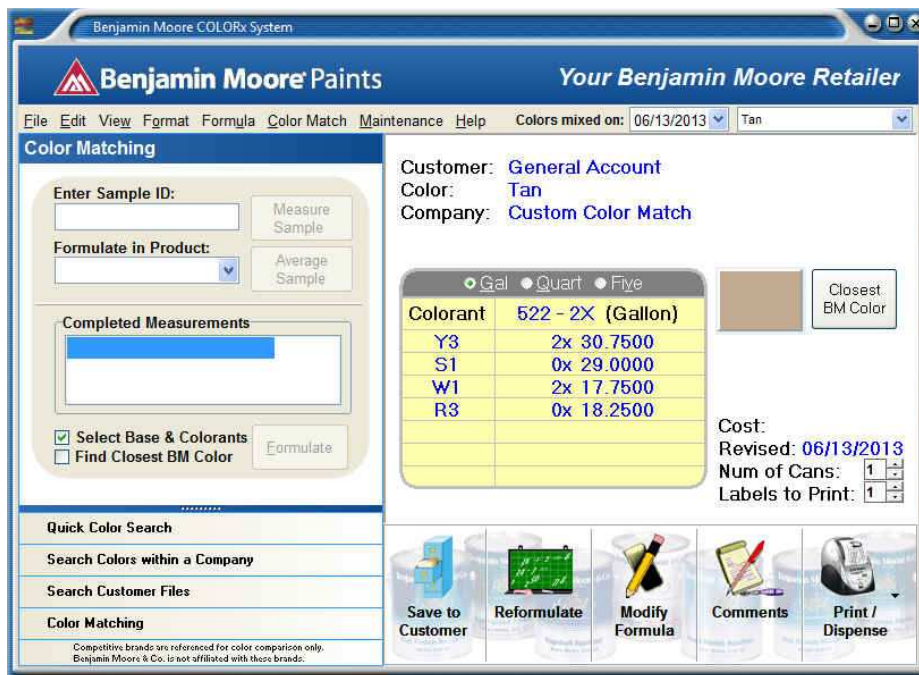

Figure 2-17

Find Closest Color Prior to Formulating Sample

If you wish to find the closest Benjamin Moore color for a sample without formulating, simply measure and average the sample then click on the **Find Closest BM Color** box under the Completed Measurements area. This will place a check mark in the box, (figure 2-19.)

Figure 2-19

Next, click on the **<u>Formulate</u>** button. The system will now compare the sample color and return a list of the five closest Benjamin Moore colors to it. See figure 2-20 below.

Figure 2-20

You now have the option of clicking on the **Formulate Color** button which will formulate the sample you have measured, or you can choose one of the five closest Benjamin Moore colors

and retrieve a stored prescription for the chosen color. In our example, we will pick the first color listed, 320 (Amarillo.) Just click on the name and the following screen will appear with the prescription for color 320 (Amarillo) as shown below.
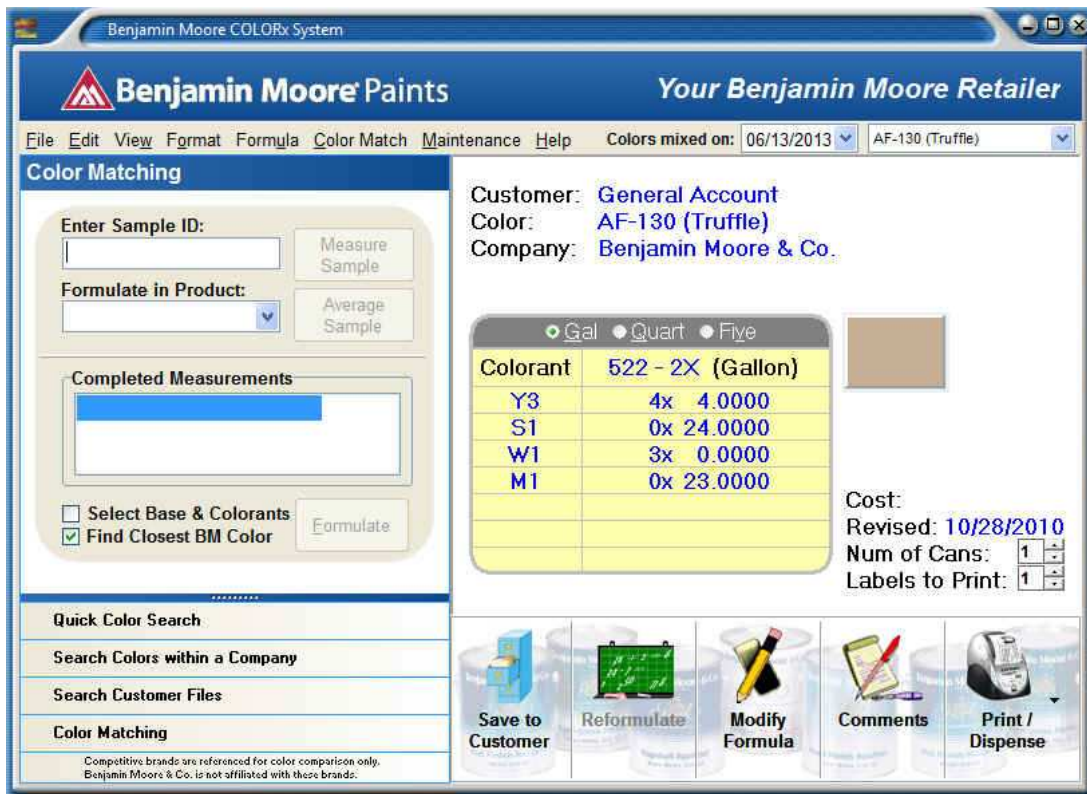

Figure 2-21

Printing the Sample Formula

At this point you may wish to print the formula. If you wish to print the gallon formula (default), just click on the **Print / Dispense** button on the bottom right of the screen.

You can print multiple labels of the displayed formula by changing the number in the **Labels to Print** box.

If you wish to view or print the formula in a quart or a five gallon, simply click on the desired size circle above the formula grid box. The formula on the screen will change to reflect the size you have chosen. When you click on the **Print** button, the formula printout will also reflect the size you have chosen.

Dispensing the Formula to an Automatic Dispenser

If you have an automatic dispenser connected to the COLOR$_x$ software, you can dispense the displayed formula by configuring the **Print** button to dispense. To set up a **Dispense** button, see **Configuring the Print / Dispense Button** on page 53. The system will send the formula displayed on the screen to the automatic dispenser and printer.

If you wish dispense a quart or a five-gallon formula, click on the desired size circle above the formula grid box then, click on the **Print / Dispense** button.

Correcting a Formula

Correction is a method of correcting an initial formulation. Most of your matches will be successful the first time through using the Formulation program. For those matches that are not optimal, COLOR$_x$ provides batch correction as a method for further improving the quality of an initial formulation.

A correction to the formula can be done automatically or manually. First we'll discuss automatic correction or batch correction.

Automatic Correction

To perform an automatic correction, be sure the sample you wish to correct is the current sample on the color matching main screen. In this example see figure 2-22
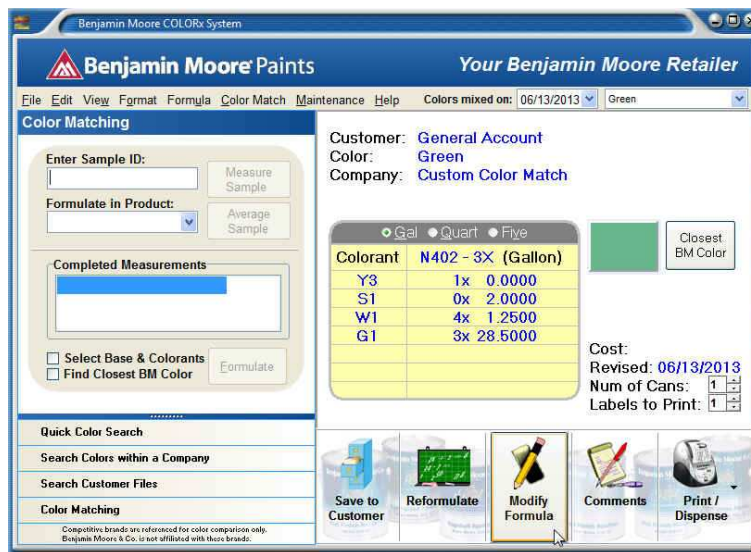

Figure 2-22

Choose the **Modify Formula** button on the Main Color Matching screen. The Modify Color Formula screen will open as shown in figure 2-23.
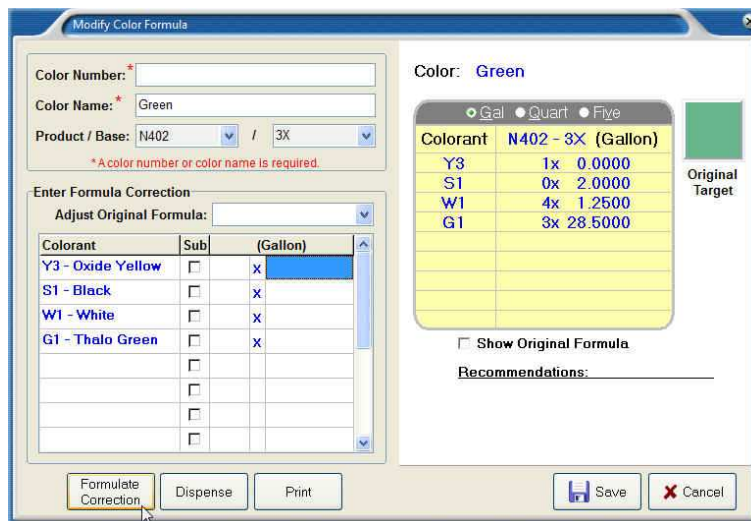

Figure 2-23

This screen shows the current formula on the right that you are going to modify, including the color swatch. To perform an automatic correction, click on the **Formulate Correction** button. The system will prompt you to place the sample at the port (figure 2-24.)
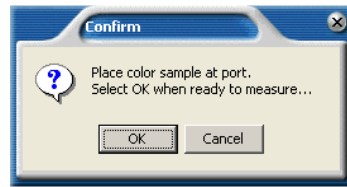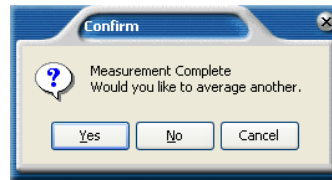

Figure 2-24   Figure 2-25

Place the sample at the port and select **OK** when you are ready to measure.
When the measurement is complete, the system will prompt if you would like to average another measurement (figure 2-25.) When you are finished, it will calculate the difference between the target and the sample and give a correction by listing the amount of colorant(s) to be added to the current formula to bring the sample color closer to the target sample. The add appears as a correction in the Formula Correction grid on the left of the screen as shown in figure 2-26. The **Measured Sample** swatch is displayed under the **Original Target**.
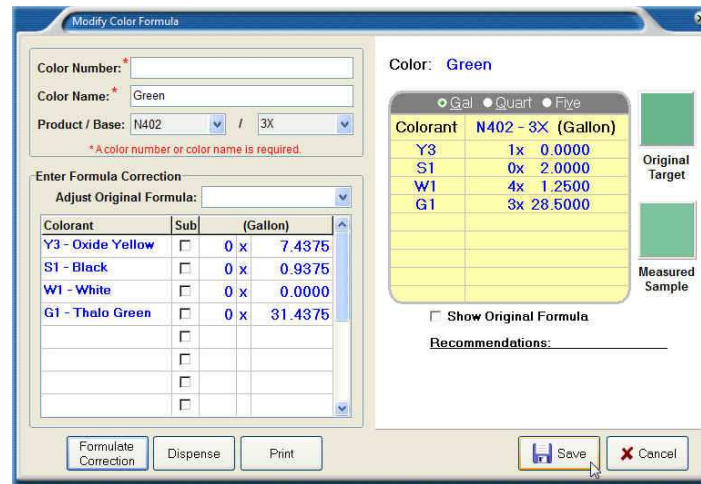

Figure 2-26

If you are satisfied with the correction, click the **Save** button and the formula will be totaled and saved as shown in figure 2-27.
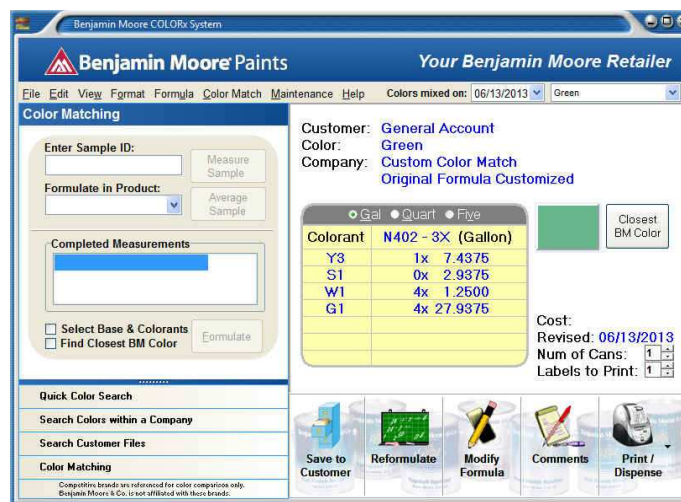

Figure 2-27

Manual Correction

Correcting a Formula Manually

You can correct a formula manually by adding or subtracting the amount of colorant that the system displays after a match is calculated. For example, after you measure and formulate the target sample, the displayed formula can be modified. In the following example, a target sample has been measured and formulated. The Modify Color Formula screen has been opened as shown below.
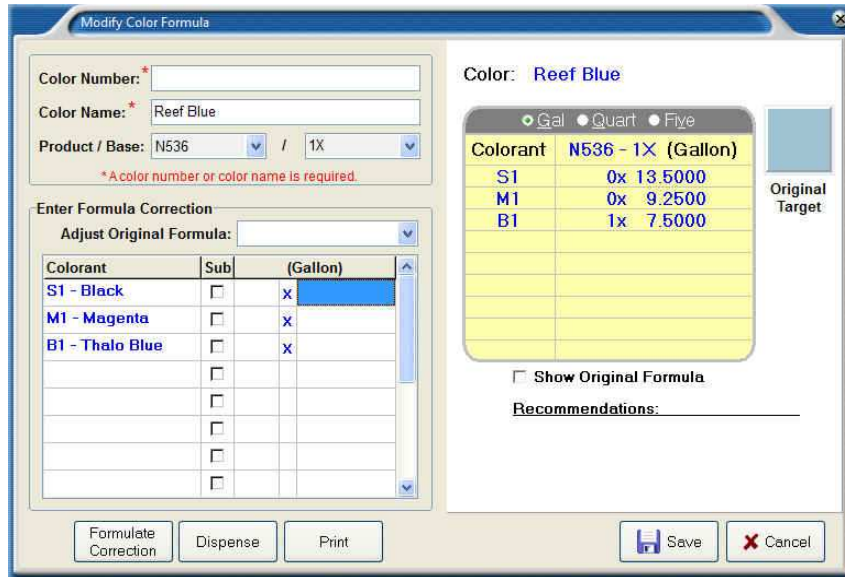

Figure 2-28

Before we add the colorant to the can, we may want to add 2 shots of Magenta (M1) to the formula. We also want to subtract 5 1/2 of a shots of Blue (B1). Finally, we want to add 10 shots of White (WH) to the formula.
To do this, move the mouse pointer to the Formula Correction box and in the shot column of the (M1) row enter 2.0. Next move to the B1 row. Use the mouse to place a check in the **Sub** (Subtract) box. Then type 5.50 in the shot column. By checking the Sub box and putting in 5.50, this will subtract 5 1/2 of a shots of B1 from the formula, (figure 2-29.)
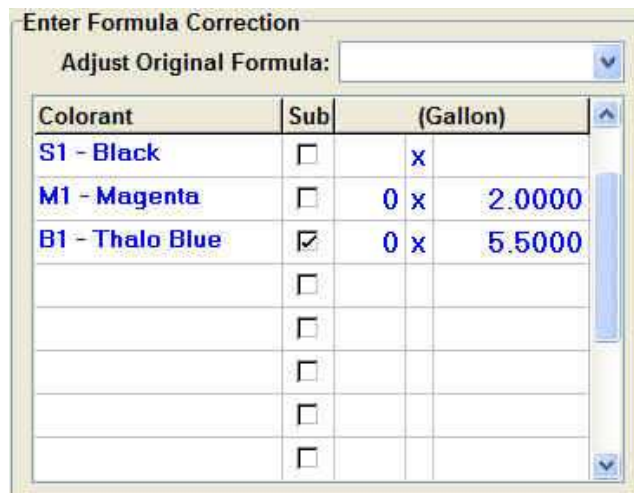

Figure 2-29

To add 10 shots of White (W1) to the formula, Move the pointer to the blank grid box in the Colorant grid below B1. Click on it to highlight and type W1. Now move the mouse pointer to the shot column and enter 10.0 (figure 2-30.)
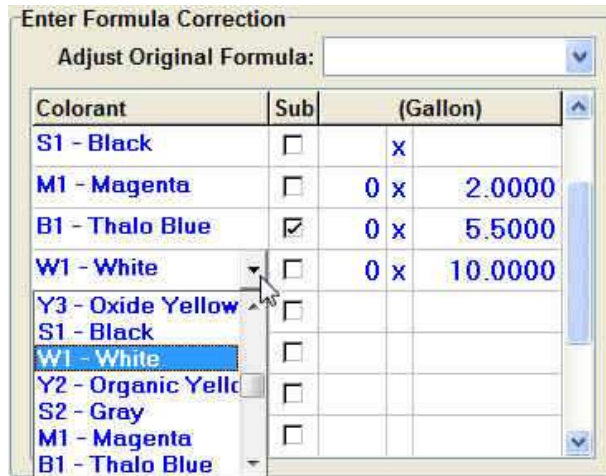

Figure 2-30

Once the changes are entered, click on the Save button. The colorant amounts you added and subtracted will total up from the left column and displayed on the main screen. In this example, note that 2 shots of M1 and the 10 shots of W1 were added. Also note that the 5 1/2 shots of B1 was subtracted from the finalized formula as show below in figure 2-31.
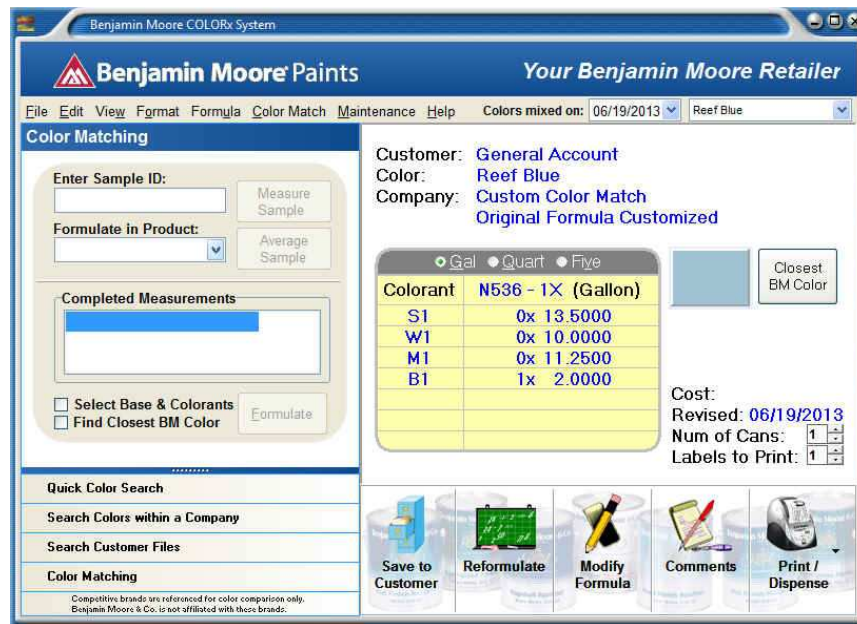
Figure 2-31

Reformulate

The **Reformulate** button allows you to match the current measured sample on the screen in a different product. For example, you measure a brown target and formulate it in 629 Aura interior flat, you may also want to make it in 632 Aura interior semi gloss to use for trim. You don't have to re-measure the target chip again. Once you measured the chip and have the formula displayed on the screen, simply click on the Reformulate button as shown in figure 2-32.
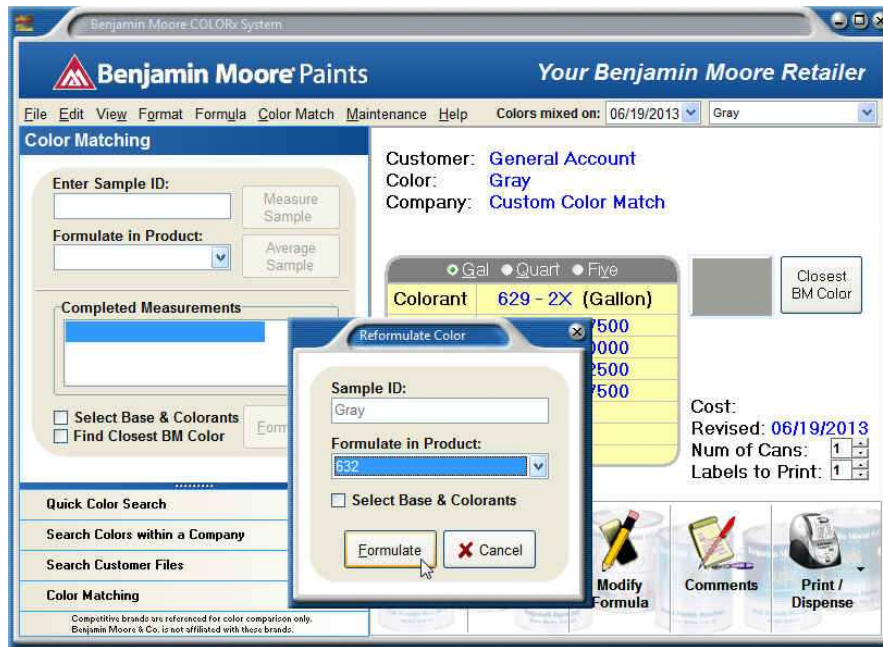
Figure 2-32

Choose 632 Aura in the **Formulate in Product** box and click on the **<u>Formulate</u>** button. The formula for 632 Aura now appears on the screen, (figure 2-33.)

Figure 2-33

Comments Button

The Comments button at the bottom of the screen allows you to write comments for the displayed formula. Simply click on the button and a popup screen appears where you can add your comments. When you finish typing in the comments, click on the **Save** button. The text on the Comment button will turn red to let you know that a comment has been added to that color.

Creating a Formula Manually
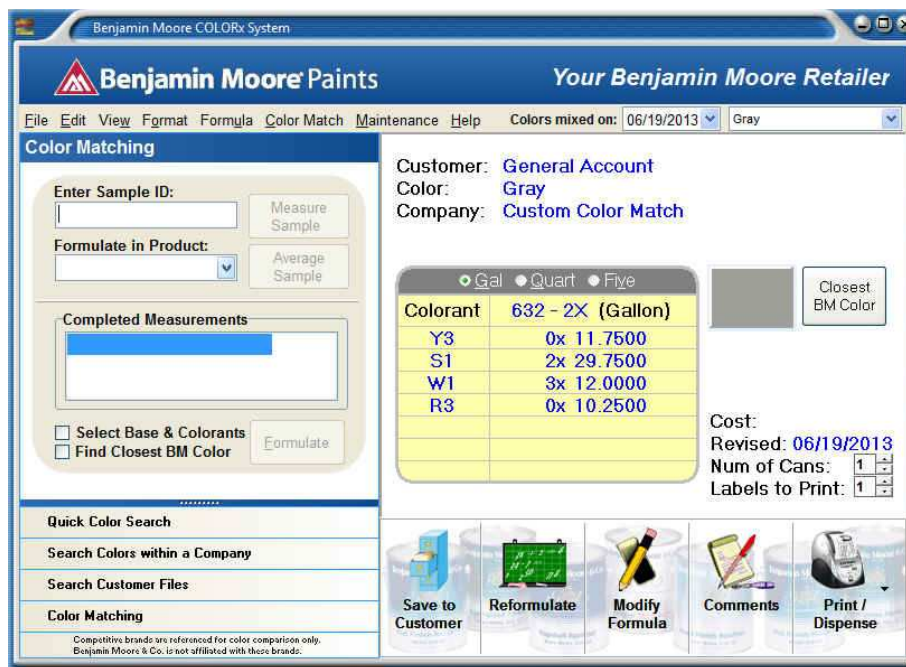
Add Manual Formula

This feature will allow you to enter a new formula manually without performing a measurement. This option is helpful if you know a formula for a particular sample which a customer has and you would like to store it for future reference.

To begin, click on the **Formula** dropdown on the Main Color Matching screen. When the dropdown screen appears, as in figure 2-34, choose Add Manual Formula.
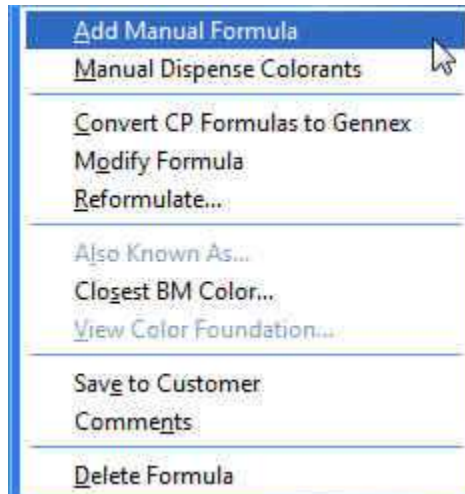
Figure 2-34

The Manual Color Formula screen appears as shown below.

Figure 2-35

Select the size of the can for the formula and click **OK**.

Enter a color number or name, and the product and base for the existing formula in. Now you can enter the colorants and amounts that you put in to the formula by using the mouse or the Tab key, (figure 2-36.)
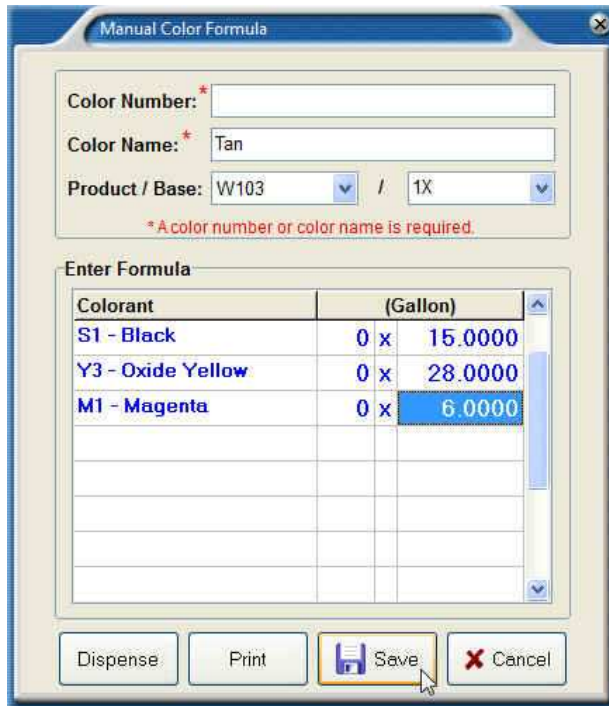
Figure 2-36

When you have finished, click on the **Save** button and the formula will be saved and displayed as shown below.
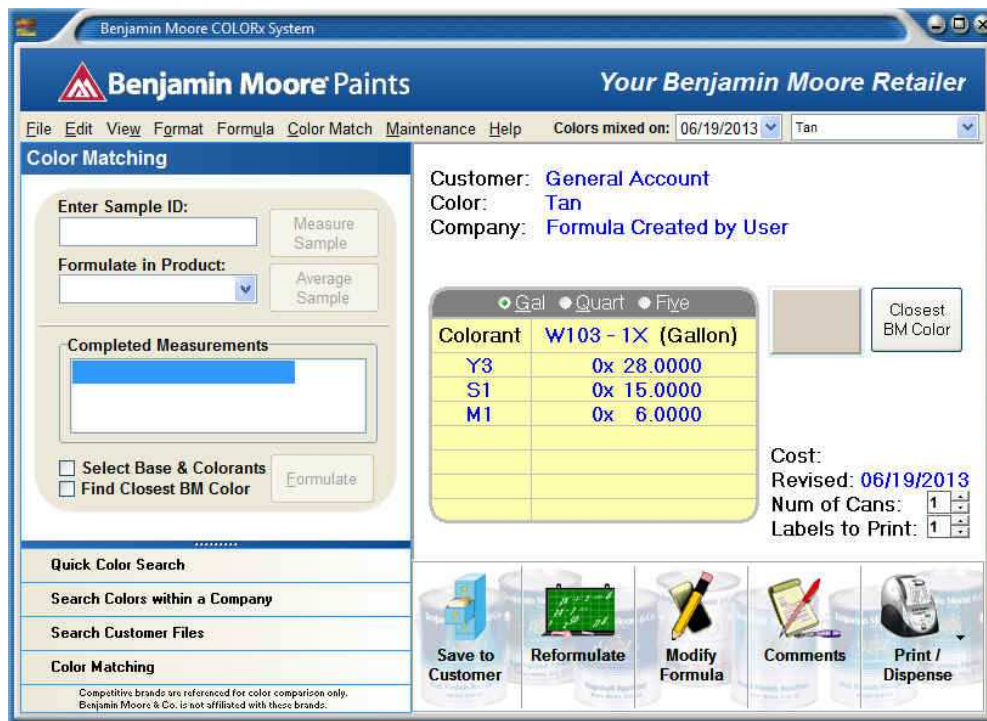
Figure 2-37

Dispensing a Formula Manually Using an Automatic Dispenser

If your system is connected to an automatic dispensing machine, you can dispense a formula manually by clicking on the **Formula** dropdown on the Main Color Matching screen and choosing **Manual Dispense Colorants** as shown below.
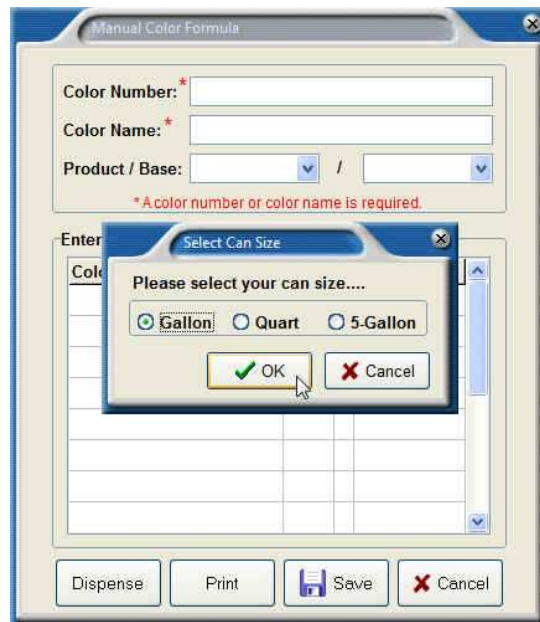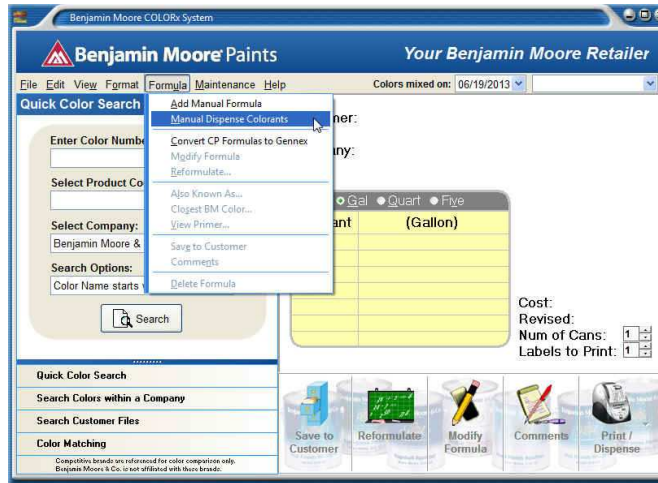

Figure 2-38

.
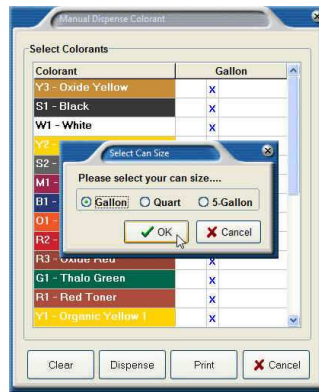
Figure 2-39

Choose the container size - Gallon, Quart, or 5-Gallon and The colorants displayed on the screen will depend on the system that is set up on your machine – Architectural or Water Borne colorants.
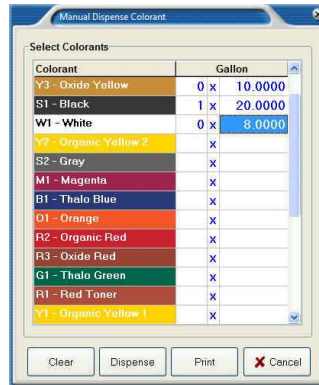
Figure 2-40

Enter the amounts - ounces and shots of the colorants you wish to dispense and click on **Dispense**.

Section 3
Customer Transaction Database

A customer database is integrated into the COLOR$_x$ ® software. Using the customer database allows you the capability to save information on all your customers.

Any color sold to a customer can be added to the database whether it was matched at the store or simply retrieved from the formula book. This powerful addition to your software, organized in an easy to understand format, will ensure that your customers always receive the same formula they originally purchased.

Saving a Color to a Customer

To demonstrate this, choose a color from the prescription book and save it to a customer. In this example, we've chosen Sun Valley (350) in product 524 (Aura Eggshell Finish.)
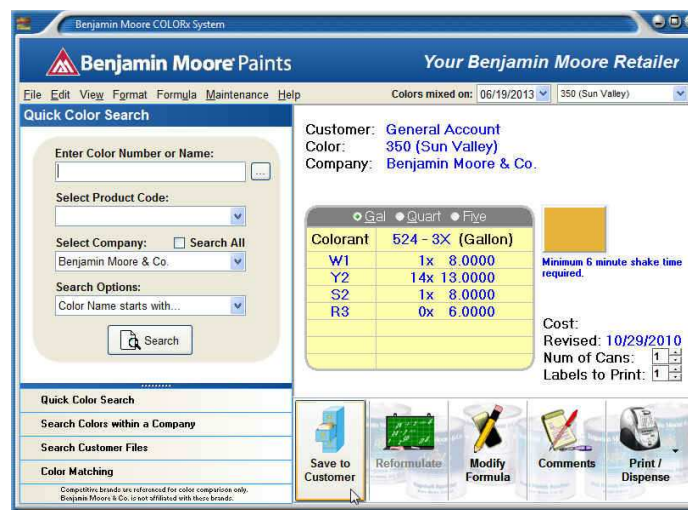
Figure 3-1

Click on the **Save to Customer** button and the window below opens up.

Note: The customers listed below are for demonstration purposes only.
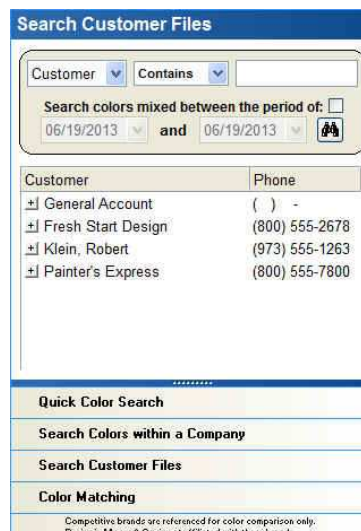
Figure 3-2

Adding a New Customer

At this point you could add this color to an existing customer or create a new one. For this example, let's create a new customer. Click on the **Add Customer** button.
The window below opens up. Enter either a last name for a customer or a company name. You can also add other information, if desired, (figure 3-3.)

Figure 3-3

You can save this information by clicking on the **Save** button or if you want to add more detailed information about the customer click on the **Details** button as shown below.
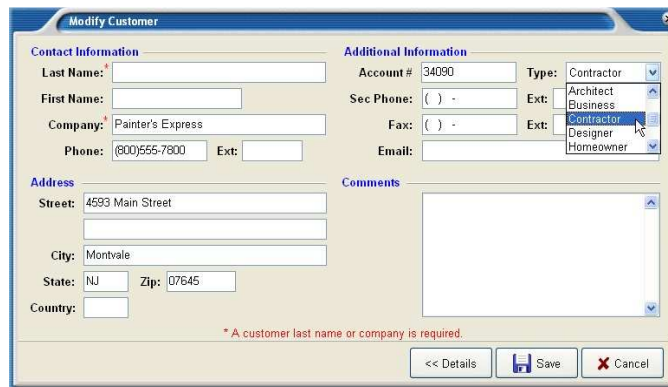
Figure 3-4

When you finish entering the information, click on the **Save** button. Another pop-up window appears asking you if you wish to associate the color to a job as seen in figure 3-5.

Figure 3-5

If you wish you can enter a job for this color such as a living room, bedroom, or a jobsite. You can also leave this blank and just click continue. In our example, we entered a jobsite. After clicking **Continue**, this color will be stored under the defined customer and jobsite. You'll notice in figure 3-6 that the customer we assigned this color to appears above the color name.

Figure 3-6

If you wish to assign a color to an existing customer, highlight the customer and click on the **Save** button as displayed in figure 3-2.

Searching for a Customer and Colors

You can locate a customer or a color at a later date by clicking on **Search Customer Files** on the main screen. The Search Customer Files panel opens as shown below.
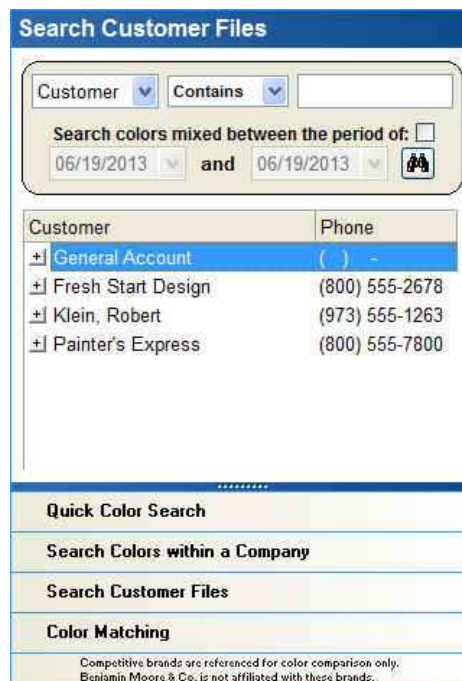
Figure 3-7

Now click on Painter's Express and it will expand to show colors made on a particular day, the color made and the job the color was assigned to. See figure 3-8 below.

Figure 3-8

If you double click on the color, it will appear back on the screen as it was shown in figure 3-6.

Customers can be searched by Customer name, Phone, Color, Job, Account, or Comments. Let's search the name by entering the start of the name or part of the name in the **Contains/Starts With** box as shown below in figure 3-9.
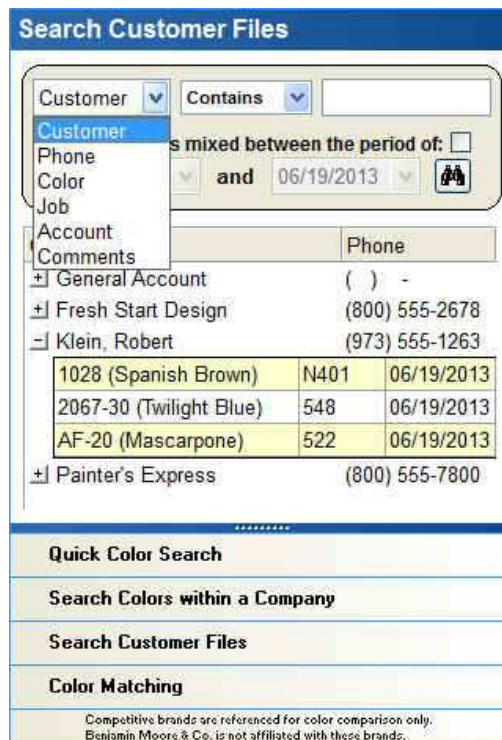
Figure 3-9

Colors can be searched by date by clicking on the check box and entering the date range to be searched as shown in figure 3-10.

Figure 3-10

Both customers and colors assigned to them can also be searched by narrowing the search criteria as shown in figure 3-11. This example searches for a Customer containing "Fresh Start Designs" with colors mix between "12/19/2011 and 2/23/2012."

Figure 3-11

By clicking on one of the displayed samples, it will expand to show the color that was mixed, (figure 3-12.)
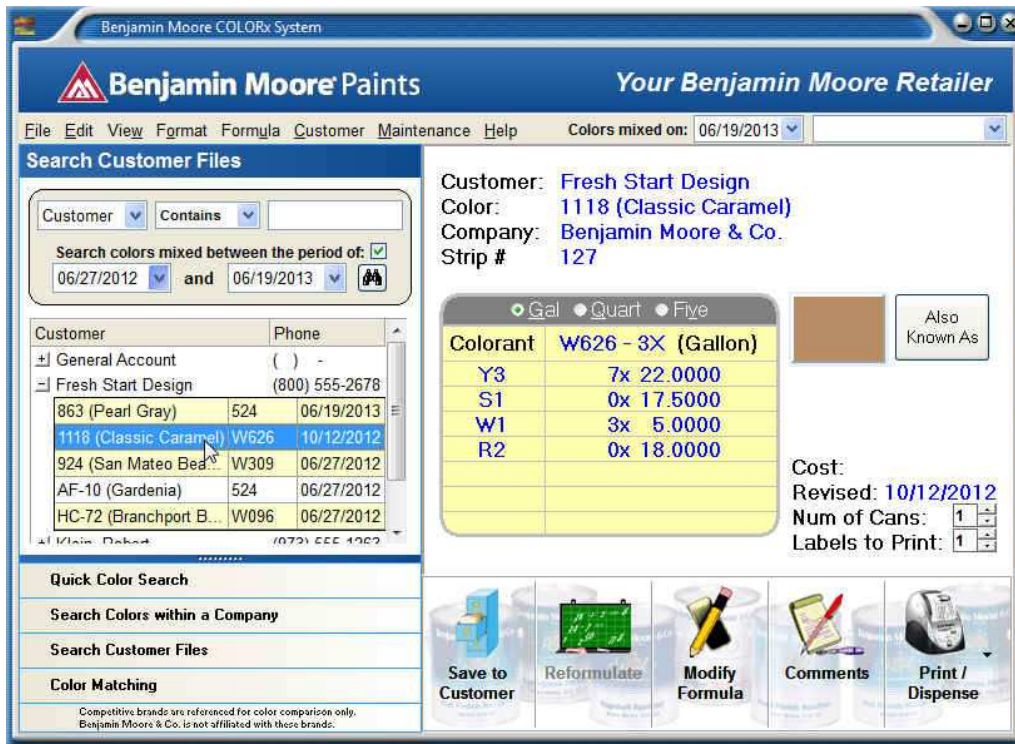
Figure 3-12

Grouping Colors by Job or Date

Once a customer is found you can group the colors assigned to them by job or date by right clicking on the customer name. Other options are available to you when you right click on the customer include, list colors by date, list colors by name, add a new customer, display customer details, and delete a customer (figure 3-13.)
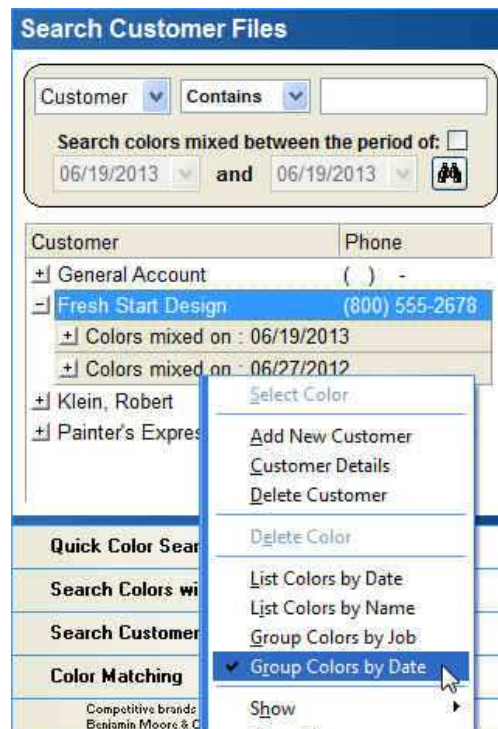
Figure 3-13

Section 4
Maintenance

Drop Down Menus

Near the top of the screen you will notice File; Edit; View; Format; Formula Options; Maintenance; Help. By moving the mouse pointer to these options, you can perform maintenance functions on the system.

Figure 4-1

The **File** dropdown shown below in figure 4-2 allows several functions.
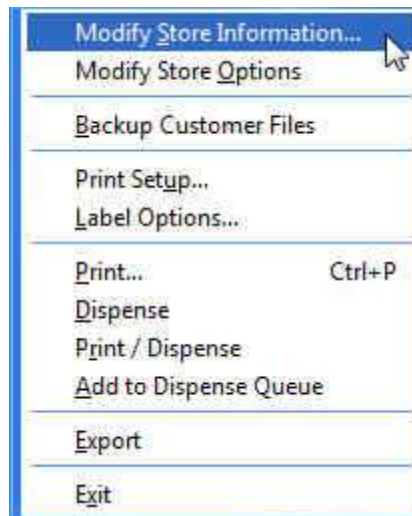
Figure 4-2

Modify Store Information
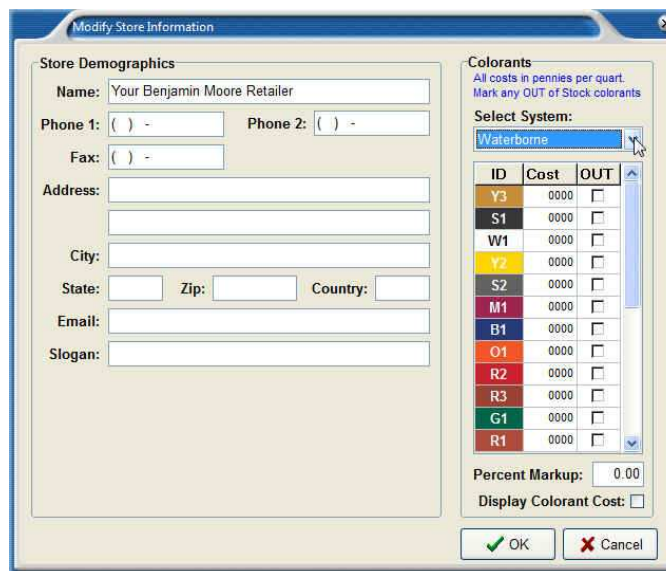
Figure 4-3

Your store name, address, phone numbers and a slogan can be added by placing the cursor in the field that you wish to modify.

Colorant Costs can be modified in this window. Architectural colorants and Industrial colorants can both be modified here. Amounts can be modified by changing the price in the cost field for each colorant. The price is listed as pennies per quart.

Out of Stock Colorants can be set here by placing a check mark in the OUT check box next to the colorants that are out of stock. When a colorant **OUT** box is checked, the system will not calculate colors using that colorant.
*Note: Remember to uncheck the colorant OUT box when the colorant is back in stock.*

Percent Markup This allows you to change the percentage of markup on all colorants.

Display Colorant Cost
Checking or un-checking this box, determines if the cost of the formula is displayed on the screen.
When you are finished adding or changing the information, click on the **OK** button.

Modify Store Options

Formula
This feature allows you to change the shot resolution to either 1/2, 1/4, 1/8, or 1/16 resolution of an automatic dispenser depending on the type.

Figure 4-4

Other options found in the File dropdown box are **Print**, **Dispense** and **Print/Dispense**. These options allow you to print and or dispense the displayed formula.

Active Products
The option allows you to turn off or on products in the product dropdown screen on the main color matching screen. By deactivating selected products, they will not appear on the product dropdown screen.
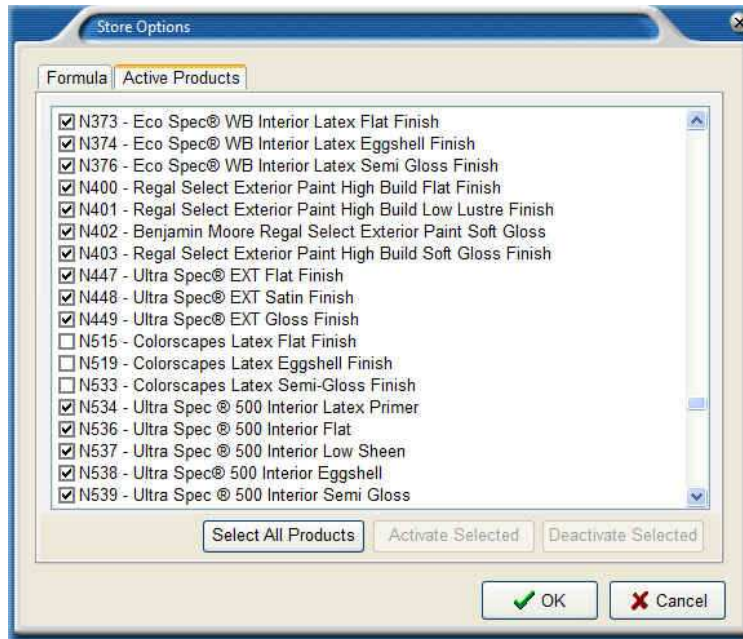
Figure 4-5

Backup Customer Files
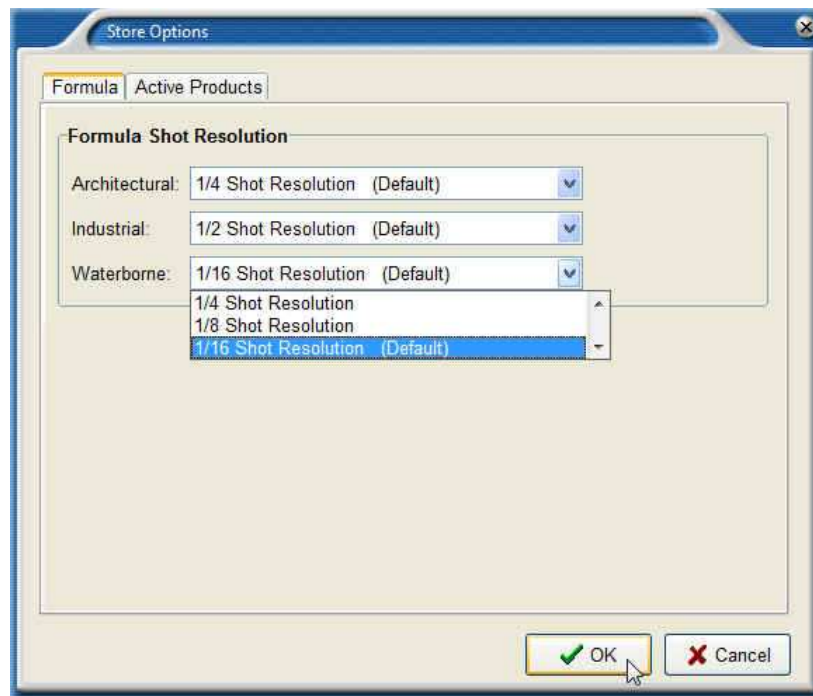This feature allows you to copy the color transaction file to a folder of your choice for backup.

Print Setup
To select the type of printer you have connected to your PC, click on **Print Setup**. The default printer is displayed. If you wish to change the printer, click on the down arrow next to the **Name** box and a list of installed printers will appear. Select the printer you will use and click on **OK**.

Label Options
Prescriptions in the Formula Book and Color Matching System can be printed on labels or paper. If you wish to modify the size of the margins, the page layout, font type or font size, click on Label Options. You can now change these settings to customize your labels. If you wish to change back to the default settings, simply click on the **Restore** button.
You can also set items to print on the labels or paper such as **Company Name**, **Address**, or **Phone**

Slogan, **Prescription**, **Comments, and Prescription Cost**. Turn these on or off by clicking in the box next to the item you wish to print. When a check mark is displayed, that item will print. When you are printing on small labels, you may only want to print the company name and prescription because of the limited space.
To change or add information for these items, go to **Modify Store Information**.

Dispense
This option allows you to dispense to an automatic colorant dispenser.

Print / Dispense
This will print a label and dispense.

Add to Dispenser Queue
This option will send the formula to the dispenser and hold it in a queue to be dispensed later.

Export
This allows you to copy the Benjamin Moore prescriptions to a file.

The **View** dropdown box allows you to access the same functions that are on the main screen.

Figure 4-6

The **Format** dropdown box shown below in figure 4-7 gives you the option to change the outer skin of the program to four different types. The Configure Formula Display lets you change the colors of the text on the screen.

Figure 4-7

The **Formula** dropdown box allows you to access the same functions that are on the main color matching screen and on the displayed formula screen.
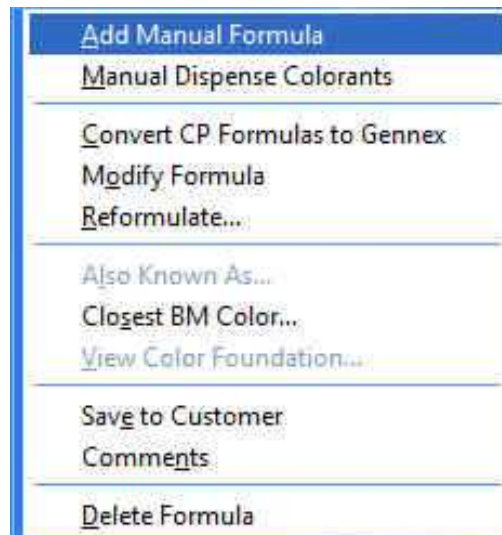
Figure 4-8

The **Maintenance** dropdown allows you to access spectrophotometer and dispenser functions.

Figure 4-9

Spectrophotometer Setup

Under Spectrophotometer you can calibrate the unit (figure 4-10), configure the type of unit you have (figure 4-11) and edit the tile data on earlier units.
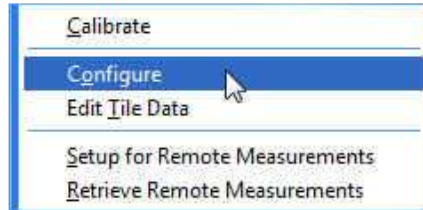
Figure 4-10

Figure 4-11

Automatic Dispenser Setup

The **Maintenance** dropdown allows you to access the dispenser function and set the type of dispenser you have.
Click on Dispenser, then Configure to set the type of automatic dispenser unit you have as shown below.

Figure 4-12

Select the colorant system by clicking the arrow next to the Select Colorant System box and choosing Architectural or Waterborne as shown in figure 4-13.
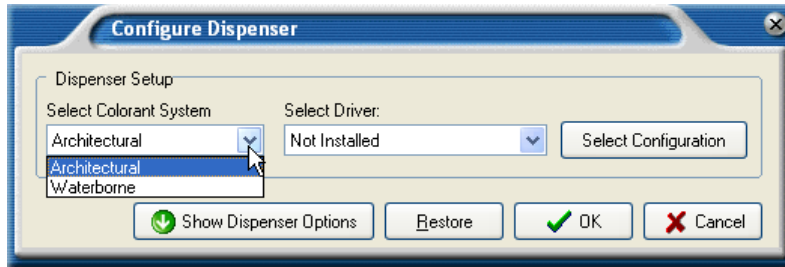
Figure 4-13

Select the dispenser you have by clicking the arrow next to the Select Driver box and choosing the dispenser in the dropdown list as shown in figure 4-14.
When selected, click on the OK button.
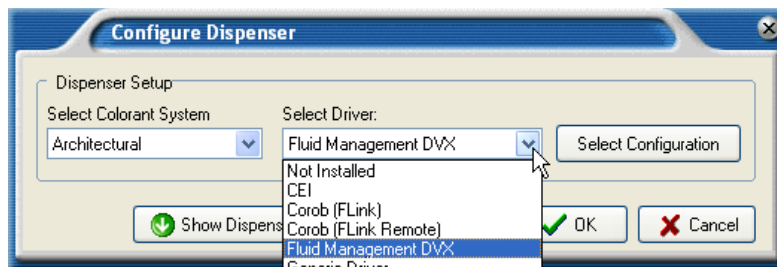
Figure 4-14

Configuring the Print / Dispense Button

You can reconfigure the **Print** button by following the next steps.

To change the button action, click on the **Edit** dropdown on the main COLOR$_x$ screen. Next, click on **Set Default Button Action**. You can now change the Print button to either **Print** only, **Dispense** only, or **Print/Dispense**.

Figure 4-15

When you click on the desired function, the **Print** button will change to reflect your choice. In this example we chose **Print/Dispense** as shown below in figure 4-16.

Figure 4-16

When you click on the **Print/Dispense** button, the displayed formula will be sent to the automatic dispenser and the formula will be printed to the label printer.

Accessing the Benjamin Moore Web Page through COLOR$_x$

The **Help** dropdown box has several options available (figure 4-17.)
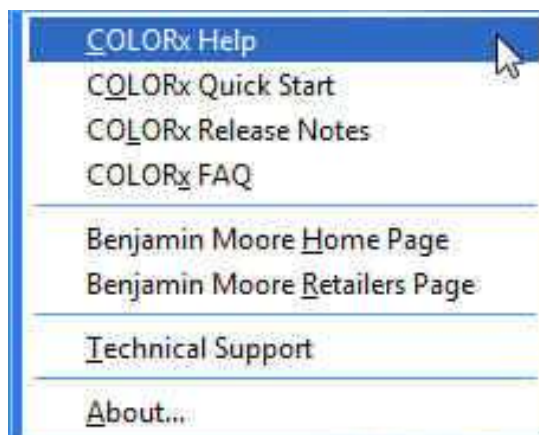
Figure 4-17

If you have internet access on your computer, you can click on the **Benjamin Moore Home Page** to visit the Benjamin Moore website or click on the **Benjamin Moore Retailers Page** to visit that area of the website. Also, you can click on the **Online Color Prescription Inquiry** to access the latest prescription changes to Benjamin Moore formulas.

Technical Support
This displays the Benjamin Moore Computer Color Matching Support phone number.

Version Number and System Information

<u>About</u>
This displays the version number of the COLOR$_x$ software.

Figure 4-18

<u>System Info</u> button
This displays information about your computer, (figure 4-19.)
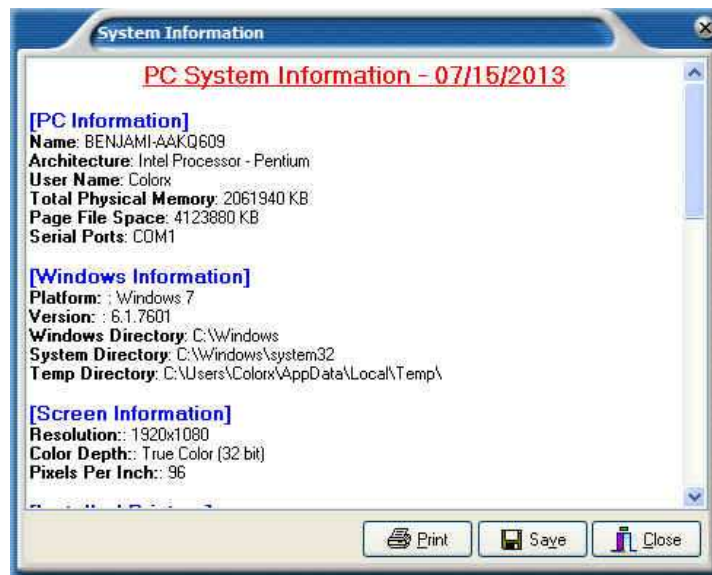
Figure 4-19

Changing the Shot Resolution in the COLOR$_x$ Software

Certain dispensers can dispense down to 1/16 of a shot. COLOR$_x$, has the ability to change the shot resolution to dispense on an automatic colorant dispenser.

To change the shot resolution, be sure you have the proper automatic dispenser configured in COLOR$_x$. (See page 52.)

From the main screen, click on **File** then **Modify Store Options** as shown in figure 4-20.
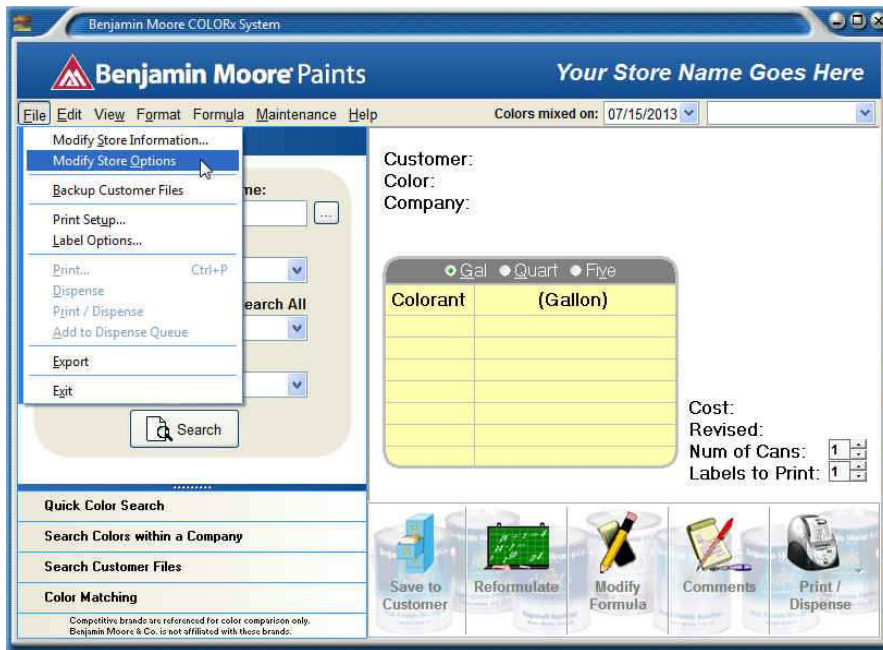
Figure 4-20

The next screen appears and allows you to modify the shot resolution in the type of products you are using. Use the dropdown on Architectural, Industrial, or Waterborne products to change the shot resolution. When you are finished, click on OK. (Figure 4-21)
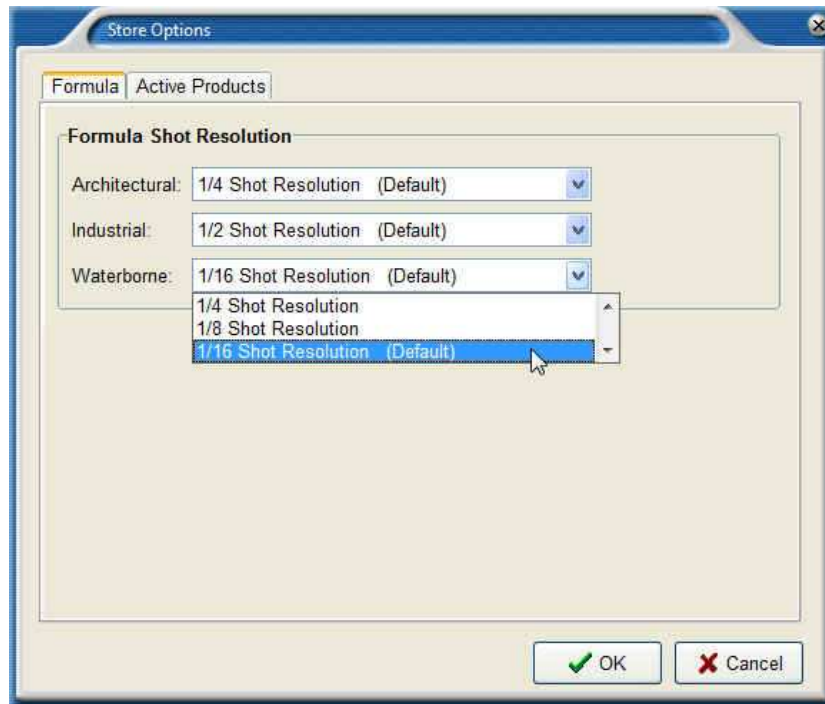
Figure 4-21

Now when you display a formula on the screen, the shot resolution reflects in the amount of each colorant displayed as shown in figure 4-22. When you click on the **Dispense** button, the amounts displayed are the amounts that will be dispensed.

Figure 4-22

The display also changes when you modify a formula, enter a formula manually, and dispense colorant manually as shown in the next examples.

Modifying a Formula

To modify a formula, click on the shot field you wish to modify then click on the button in that field to display the shot level you wish to add. In this example, S1 (Figure 4-23)

Figure 4-23

Select the shot fraction that you wish to add. In this example we selected the **1/8** button as shown below in figure 4-24.
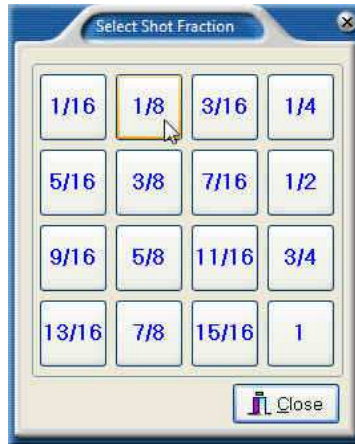
Figure 4-24

The 1/8 shot is added to the screen as shown below. (Figure 4-25)
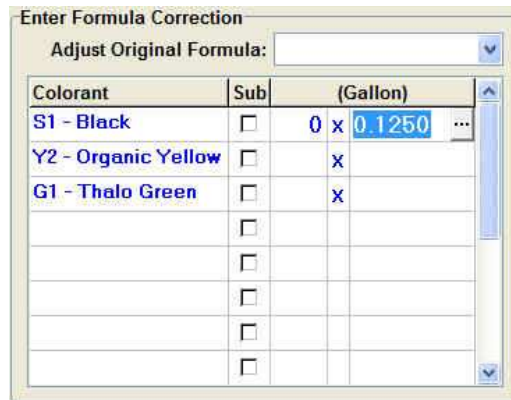
Figure 4-25

Click on the **Save** button and the 1/8 shot will be added to the formula as shown in figure 4-26.
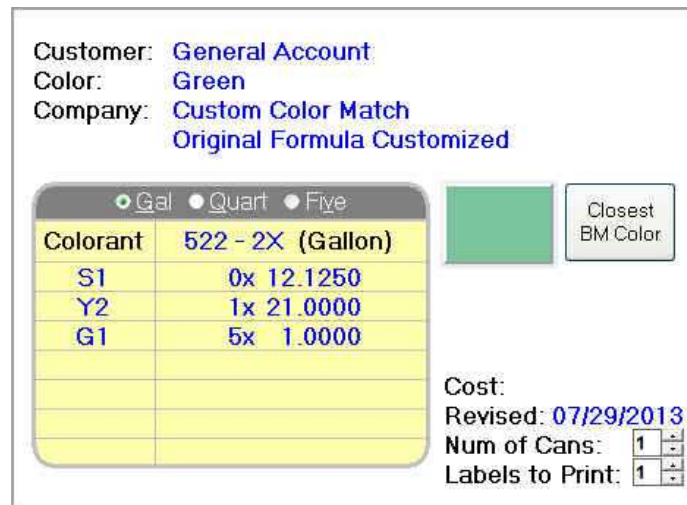
Figure 4-26

Create a Formula Manually

To create a formula manually, go to the Manual Color Formula screen (page 39.) Enter the color name, the product, the base level, and the colorants along with the amounts as shown in figure 4-27.

Figure 4-27

Now click on the **Save** button to save and display the formula. (Figure 4-28)

Figure 4-28

Manually Dispense Colorants

To manually dispense colorants, go to the Manual Dispense Formula screen (page 41.) If you have your system configured as both architectural and waterborne, the following message will appear.
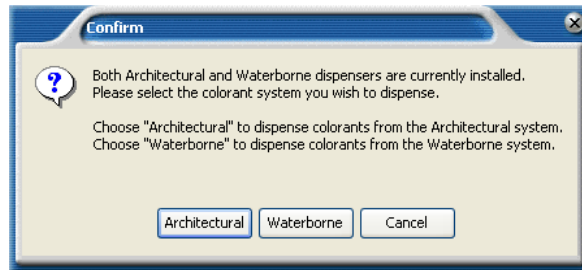
Figure 4-29

In our example, we'll click on the **Waterborne** button.
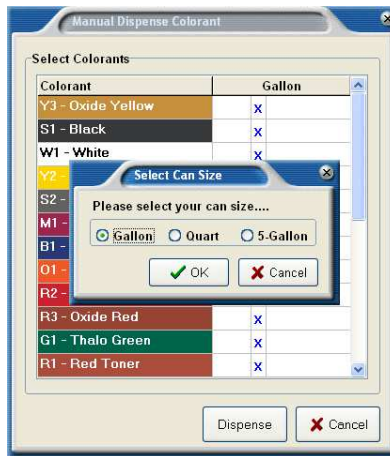
Figure 4-30

Choose the can size then click OK. Now enter the amounts of colorant you wish to dispense. In our example, we've selected 20 shots of Y3 and using the Select Shot Fraction button we selected 1/8 shot of S1 as shown in figure 4-31. Now click on the **Dispense** button to dispense formula.
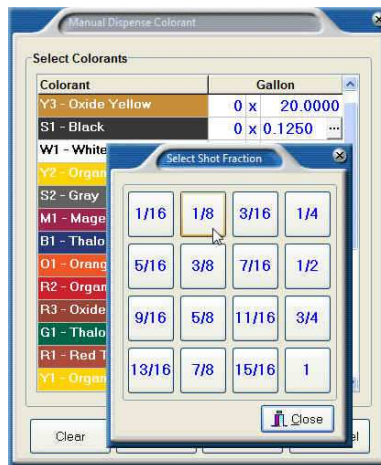
Figure 4-31

Networking the COLOR$_x$ System®

The COLOR$_x$ System® has been designed to take advantage of a computer network. The COLOR$_x$ Software can be loaded on a server and act as a shared resource for the PC's that drive automatic colorant dispensers, label printers, and spectrophotometers on the network. Each PC will share a common transactional database (where the retailer's customer prescriptions are stored.) When you create a custom color match with the spectrophotometer, you can go to the PC running your automatic colorant dispenser and that color will be available in the transactional database ready to be sent to the dispenser. Actually, all of your customer records and custom color matching will be located in one database on your server, where it can be stored securely and easily backed up. When you need to update the COLOR$_x$ software, you only have to install the COLOR$_x$ Update on your server, and all your PC's will be updated at the same time. If you have a broadband internet connection, you can download and install an update in minutes to all of your PC's using COLOR$_x$.

Network System Requirements and Procedures

If there is a pre-existing network that you plan to use, you should follow the recommendations of your IT people who run your network. If you are planning to put in a new network to connect COLOR$_x$ to your colorant dispensers, you should purchase new computers that can run Windows XP Professional® operating system or higher. Once you have your network up and running, you can contact your Benjamin Moore Color Technology Representative for information on how to set up your COLOR$_x$ System® to communicate with the colorant dispensers, label printers, and spectrophotometers. One caveat, Benjamin Moore will not install or make changes to your network. We also require that on the day our Rep installs COLOR$_x$ on your network, someone from IT be present to assist our Rep and understand what is being put on your network.

List of Available Competitive Companies and Fandecks

The following competitive companies are included in the COLOR$_x$ Formula Book.
The Competitive Formula Book gives <u>approximate</u> prescriptions for these competitor's colors. These prescriptions are <u>calculated</u> matches.

<u>North American Companies</u>

ABC Seamless
- *PVC Colors*

17 colors

Ace
- *Illuminations*
- *Royal Shield Exterior Colors*
- *Colors for your Life*
- *Clark + Kensington*

3071 colors

AFM Safe Coat
- *SafeCoat*

108 colors

Alcan (Canadian)
- *Alurite Trim & Siding*
- *Aluminum Siding Color Guide*
- *Building Products*

36 colors

Alcoa
- *Alcoa Siding Colors*

47 colors

Ameritone Devoe
- *The Color Key Program*

2266 colors

Andersen Windows and Doors
- *Window Colors*

4 colors

Beckers
- *Natural Color System (NCS)*

1749 colors

Behr (Home Depot)
- *Paints & Stains Interior / Exterior*
- *Various Color Sets*
- *Premium Plus - Traditional Home*
- *Premium Plus - Country Home*
- *Premium Plus - The Whites Collection*
- *Premium Plus - Better Homes & Garden*

- *Premium Plus - The Interior Collection*
- *Premium Plus - The Exterior Collection*
- *Premium Plus – Int./Ext. Collection*
- *Premium Plus - The One Coat*
- *Premium Plus Int./Ext. Paints & Stains*
- *Premium Plus – Ultra*
- *2002 Color Card Collection*
- *Basement & Masonry Waterproofer*
- *Kids' Color Collection*
- *Midtone & Deep Collection*
- *Premium Plus - Interior Collection*
- *White & Neutral Collection*
- *Whites & Light Collection*
- *Spanish Color Card*
- *Color & Design Trends*
- *Color & Design Trends*
- *Trends 2012 & 2013*
- *Marquee Color Collection*
- *Concrete & Wood Floor Coatings*
- *Deckover*
- *Exterior Wood Stains & Finishes*
- *Home Decorator's Collection*
- *Masonry, Stucco, and Brick Paints*
- *Porch & Floor Collection*

6234 colors

Bob Timberlake
- *Summer Harvest Collection*

216 colors

Bruning Paints
- *Contractor Color Collection*

639 colors

C2 (The Coatings Alliance)
- *Collections of Color*

588 colors

Cabot
- *Cabot stains*

292 colors

California Paints
- *Historic Colors of America*
- *Colors in White*
- *Millenium*

1670 colors

Canada Hardware
- *Beauti-Tone*

1176 colors

Canadian Tire
- *Canadian Tire Colors*

1223 colors

Certain Tweed
- *Monogram Siding*

36 colors

Clairtone
- *Professional Paints*

653 colors

Canexel (Canadian)
- *Wood Fibre Siding*

20 colors

Color Guild
- *Millenium*

1488 colors

Color World
- *Color Life*

1601 colors

Color Your World
- *Color Selector*
- *Color Pallet*

2220 colors

Columbia Paint
- *Color IS*

1320 colors

Con-Lux
- *Color Dynamics*

780 colors

Coronado
- *Coronado Colors*
- *Color Impressions*

2416 colors

Cloverdale
- *Int./Ext. Colors*

1320 colors

Crayon Colors
213 colors

Crown Diamond
- *Distinction*

1258 colors

Dal Worth Paints
- *Dal Worth Paints*

850 colors

Denalt
- *Color Collection*

56 colors

Devine Colors
- *Colors of Inspiration*

123 colors

Devoe/Fuller O'Brien
- *Color Key Program*

1406 colors

Diamond Vogel
- *Studio Collection*

640 colors

Disney
- *Disney Colors*

160 colors

Do it Best
- *Do it Best Colors*

1056 colors

Donald Kaufman
The Donald Kaufman Color Collection
100 colors

Dunn Edwards
- *GALAX-Z*
- *Architecture Hues*
- *Perfect Palette*

3120 colors

Duron
- *Color Collection*
- *Historic Colors of Charleston*
- *Historic Colors of America*
- *Mount Vernon Estate of Colors*

1531 colors

Dutch Boy
- *Custom Colors With Accents*
- *Dutch Boy Colors*
- *Dimensions*
- *Better Homes & Gardens*
- *Simple Innovations*

4172 colors

Farrow & Ball (Canadian)
- *Choice of Colour*
- *Farrow & Ball Colours*

256 colors

Fine Paints of Europe
- *Fine Paints of Europe Colors*

1959 colors

Frazee
- *Creative colors*

1141 colors

FreshAire Choice Paint
- *Colors*

66 colors

Finnaren & Haley
- *Millennium*
- *Interior colors*
- *Whisper Whites*
- *Historic colors of America*
- *Authentic Colors of Historic Philadelphia*

1742 colors

Floodpro
- Solid Color Deck & Siding Finish

96 colors

Fuller O'Brien
- *Fulcolor Fashion Structured Colors*

1008 colors

General Paint
- *Custom Color*
- *ColorLife*
- **2472 colors**

Georgia Pacific
- *Vision Pro Siding Colors*

12 Colors

Glidden
- *Professional Colors*
- *General Formulas*
- *Classic & Neutrals*
- *Brilliance*
- *Color Futures*
- *Porch & Floor*
- *Endurance*
- *Glidden Colors*
- *Better Homes & Gardens*
- *Evermore Kids' Colors*
- *Disney by Glidden*

3507 colors

Home Hardware (Canadian)
- *Designer Series*
- *Beauti-Tone Colors*

1376 colors

Hüls America
- *Colortrend Ambiance, Cue, & Nuance*
- *Industrial Color System*

2928 colors

Hunter (Canadian)
Hunter Building Products
16 colors

ICI
- *Master Palette*
- *Color Palette (Color Your World)*
- *Master Palette Global Color System*

3691 colors

Insl-X
- *Hot Trax*
- *Ready Mix*

25 colors

Janovic
- *Janovic Custom Colors*

940 colors

James Hardie
- *Siding Products*
- *Color Plus Collection*

30 colors

Jones Blair
- *Gilman Paint*

880 colors

Kaycan
- *Kaycan Architectural Colors*

18 colors

Kelly Moore
- *Color Ensemble*
- *Color Xperience 2004*
- *Color Studio Collection 2013*

3884 colors

Kilz (Walmart)
- *Kilz Casual Colors*
- *Pro-X Color Collection 300 Series*

1047 colors

Kolb & Kolb
- *Heritage Series Standard Aluminum Colors*

5 colors

Laura Ashley (See Lowes)

Laurentide (Canadian)
- *Systeme de Couleurs*
- *Simple Color Selection & Harmonization*

2252 colors

Lowes
- *Alexander Julian - At Home Colours*
- *Laura Ashley - Home Colour Collection*
- *Nickelodeon - American Tradition Signature Colors*
- *Eddie Bauer Home*

1028 colors

Lutron
- *Architectural Colors*

10 colors

M.A.B
- *Color Symphony*
- *Italy*
- *Color Quest*

2909 colors

Martha Stewart
- *Everyday Colors*
- *Signature Series*
- *Martha Stewart Living*
- *Valspar Signature Martha Stewart colors*

1291 colors

Martin Senour
- *Decorator's Palette*
- *Super Tough Coat*

1534 colors

Marvin Windows & Doors
- *Window & Door Colors*

20 colors

McCormick Paints
- *Off whites*
- *McCormick Fandeck*

880 Colors

MF Peintures (Canadian)
- *Deco Nova*
- *Pure*

1519 colors

Mid America Building Products
- *Master Sutter Colors*

22 colors

Mitten Building Products (Canadian)
- *Colors of Mitten*

34 colors

Mobile Paints
- *Exterior Finishes*
- *Color Studio Classic*
- *Cool Colors*
- *Warm Colors*
- *Floor & Deck Finishes*
- *Industrial Quick Dry Enamel*
- *Int./Ext. High Gloss Finishes*
- *Rust-Kil*

1287 colors

Muralo
- *Designer Palette*
- *Color Fashions*

2449 colors

NCS Natural Color System
- *Natural Color System*

1984 colors

Olympic
- *Color For Interiors*
- *Premium Latex Stain Color Selector*
- *Olympic Paint Colors*

1495 colors

Para Paints
- *Design Line II*
- *Core Colors 2008*
- *Para Colors*

5304 colors

Pella Windows & Doors
- *Window Colors*

13 colors

Pittsburgh
- *Designa Color System*
- *Voice of Color*
- *Various Color Cards*

3200 colors

Porter Paints
- *The Designer 800*
- *Design Spectrum*
- *Color Selector*

3195 colors

Pratt & Lambert
- *Calibrated Colors IV*
- *Never Compromise Colors*

2118 colors

Premier Paint
- *Designers Choice of Color III*

1344 colors

Ralph Lauren
- *Various Colors*
- *Collections*
- *Ralph Lauren Canyon Road Collection*
- *Ralph Lauren Greenhouse*
- *Ralph Lauren Island Brights*
- *Ralph Lauren Naturals*
- *Ralph Lauren New England Lighthouse*
- *Ralph Lauren Sea & Sky*
- *Ralph Lauren Southport Collection*
- *Ralph Lauren Whitewash*
- *Thoroughbred*
- *Village Masters*
- *Modern Light*
- *Urban Loft*

- *Whitewash*

1784 colors

RAL
- *RAL Colors*

186 colors

Restoration Hardware
Various colors
36 colors

Reynolds Siding
- *Siding colors*

11 colors

Richard's
- *Portfolio Color Collection*
- *Color Is*

1646 colors

Rodda Paint (Canadian)
- *Colour Expressions*

964 colors

Rollex Siding
- *Siding colors*

24 colors

Rona
- *Studio by Rona*

800 colors

Royal Crest
- *Royal Crest Colors*

16 colors

Rustoleum
- *Deck & Concrete Restore*

60 colors

Sears
- *Decorating System*
- *Easy Living*

2160 colors

Sherwin Williams
- *Interior/Exterior Color Answers*
- *6000 - 7000 Series*
- *System 4000*
- *Concepts in Color*
- *Exterior Accents*
- *Interior Highlights*
- *Various Collections*
- *Whites & Lights*
- *Woodscapes Exterior Stain*

4570 colors

Sico (Canadian)
- *Sico 4000*
- *Sico 6000*
- *Colorama 2000*
- *Confort*
- *Energie*
- *Exterirur*
- *Luxe*
- *Serenite*

4681 colors

Sikkens
- *Cetol Natural Balance Color Collection*
- Rubbol Color Collection

113 colors

True Value
- *Tru-Test Quality Paints*
- *Color Collection*
- *Color Trends*
- *Kitchen & Bath*
- *Discover America*
- *E-ZKare Interior*
- *WeatherAll Exterior*
- *Color Made Simple*

3252 colors

US Government
- *Federal Standard Colors 595B*

583 colors

Ultimate Paints
- Color by Design

1318 colors

Valspar
- *Color Spectrum*
- *American Tradition Colors*
- *Allen & Roth*

- *Color Ideas*
- *Creative Ideas*
- *Universe*
- *American Tradition Earth Elements*
- *Seaside Retreat*
- *Medallion*
- *Whites & Neutrals*

5092 colors

Vista Paint
- *Kaleidoscope*
- *Paint Color Selector*

2284 colors

Vtec Siding
- *Siding Colors*

44 colors

Walmart
- *Color Place*

1022 colors

Waverly
- *Waverly Home Classics*

462 colors

Wolverine Siding
- *Wolverine Siding Colors*

16 colors

Pacific Limited Companies

Australian Standards
- *Australian Standards*

145 colors

Burger
- *Exterior/Interior*

221 colors

British Paints
- *Color Planner*
- *Steelite Roof Paint Systems*

1082

Dulux
- *Colour Range*
- *Color Collections*
- *Colour Range*
- *Master Palette*
- *Spruce Roof Color Guide*
- *Colour Solutions System*

2836 colors

Epiglass
- *March-On Floor Finish*
- *Colour Range*
- *Interior Colour Selector*
- *Glide Roof Paint*
- *Premium Colours*

722 colors

Japan
- *Colors From Japan*
- *Japan Standard colors 2001*

659 colors

Korea Chemical
- *Colorbank*

967 colors

Major Decorating
- *Colour Selector*
- *Colour Chart*

164 colors

Resene
- *Total Colour System*

516 colors

Samson
- *Creative Colour*
- *Style Interior Vinyl Chart*
- *Roof & Paving Paint*

357 colors

Solver Paints
- *Interior - Exterior Nature Colours*

281 colors

Taubmans
- *Taubman's Premium Colours*
- *Colour Concept System*

960 colors

Walpamur
- *Interior/Exterior Roof Paint*

127 colors

Wattyl
- *Solargard*
- *Various Sets*

967 colors

White Knight Paint
- *Interior/Exterior*

135 colors

European Companies

Scheuder-Holland
- *Hascolac Classic European Colors*

40 Colors

Tikkurila
- *Symphony*
- *Facade*

2667 Colors