

# Color Tone Matching Assistant

## User's Guide

---

Overview

Color Adjustment Method

## Cautions

- No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of Seiko Epson Corporation.
- The contents of this document are subject to change without notice. Please contact us for the latest information.
- While every precaution has been taken in the preparation of this document, Seiko Epson Corporation assumes no responsibility for errors or omissions.
- Neither is any liability assumed for damages resulting from the use of the information contained herein.
- Neither Seiko Epson Corporation nor its affiliates shall be liable to the purchaser of this product or third parties for damages, losses, costs, or expenses incurred by the purchaser or third parties as a result of: accident, misuse, or abuse of this product or unauthorized modifications, repairs, or alterations to this product, or (excluding the U.S.) failure to strictly comply with Seiko Epson Corporation's operating and maintenance instructions.
- Seiko Epson Corporation shall not be liable against any damages or problems arising from the use of any options or any consumable products other than those designated as Original EPSON Products or EPSON Approved Products by Seiko Epson Corporation.

## Trademarks

EPSON is a registered trademark of Seiko Epson Corporation.

Exceed Your Vision is a registered trademark or trademark of Seiko Epson Corporation.

Microsoft®, Windows®, and Windows Server® are either registered trademarks or trademarks of Microsoft Corporation in the United States and other countries.

All other trademarks are the property of their respective owners and used for identification purpose only.

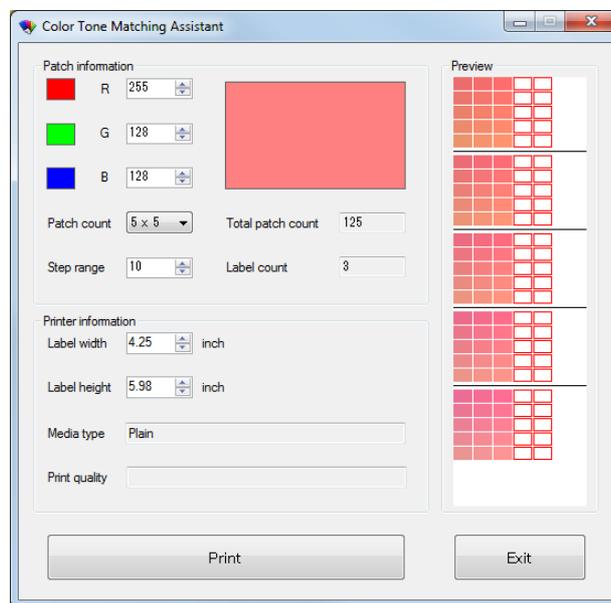
© Seiko Epson Corporation 2014. All rights reserved.

# Overview

## Overview

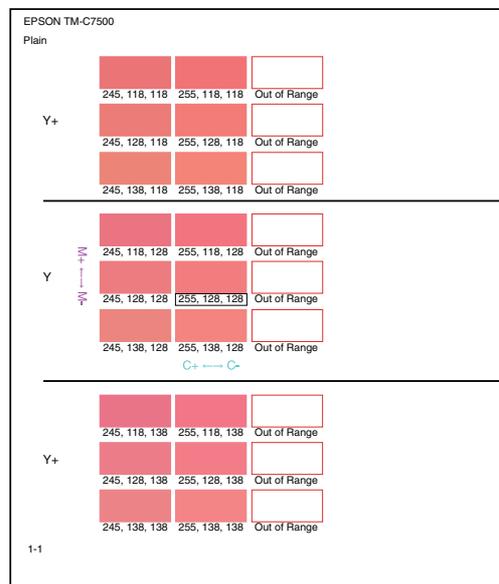
Color Tone Matching Assistant is a utility that supports color adjustment of illustrations and text to be printed. By using this utility to specify the colors to be printed with three elements (R: red, G: green, and B: blue), you can print a sample pattern with each element slightly varied. From the sample pattern, select the color to be printed and set it to the original data using a graphics software or other software. You can then print the data with the specified color.

You can use this utility to check the color tone that will be output for a specific color in an illustration or text. The utility cannot be used to adjust or check the data of multiple colors such as in a photograph.



Color Tone Matching Assistant enables you to do the following:

- Create a sample pattern with RGB values of colors.
- Print a sample pattern.



## Utility File Name



ColorToneMatchingAssistant.exe

## Operating environment

### OS

- Windows 8.1 (32 bit/ 64 bit)
- Windows 8 (32 bit/ 64 bit)
- Windows 7 SP1 (32 bit/ 64 bit)
- Windows Vista SP2 (32 bit/ 64 bit)
- Windows XP SP3 (32 bit)
- Windows Server 2012 R2 (64 bit)
- Windows Server 2012 (64 bit)
- Windows Server 2008 R2 SP1 (64 bit)
- Windows Server 2008 SP2 (32 bit/ 64 bit)
- Windows Server 2003 R2 SP2 (32 bit)

#### NOTE

The supported operating systems may vary depending on the printer and printer driver. See the Technical Reference Guide of your Epson inkjet label printer.

### Software

The following software needs to be installed in advance.

- .NET Framework Ver.3.5
- Printer driver (for Epson inkjet label printer)

# Precautions

- The following cannot be performed in terms of color rendering:
  - Colors displayed on the screen cannot be faithfully reproduced.
  - The ink of the inkjet label printer is expressed with ink colors such as C (cyan), M (magenta), Y (yellow), and K (black). This utility is used to set colors using R (red), G (green), and B (blue). Therefore, colors cannot be matched completely.

**NOTE**

K (black) may not be available depending on the printer.

- Colors are viewed and perceived differently depending on the person. Therefore, it is impossible to express the same color perceived by everyone.
- 
- Perform color adjustments while taking into consideration the following environmental factors.
    - The tone of a color varies depending on the surrounding colors and lighting. For example, printed matter with red components will appear darker in an environment with red lighting. Check colors in a bright environment.

**NOTE**

As in the case of checking commercial printed matter, observe the printed matter in an environment with fluorescent lights with a flat distribution of spectral energy at 5000 K (Kelvin) and 500 to 600 lux.

- Even when using the same data, the printed result can greatly vary depending on the type and thickness of the printed paper. Therefore, be sure to check color adjustments using the label to be printed.



# Color Adjustment Method

Use the following procedure to create print data when adjusting colors with Color Tone Matching Assistant.

## 1. Obtain the RGB Values of the Print Data (p.8)

Obtain the RGB values of the colors to be adjusted using a graphics software or other software.

## 2. Connect the Printer (p.9)

Connect the printer and load the label paper to be used.

## 3. Create and Print an RGB Sample Pattern (p.10)

Start Color Tone Matching Assistant, and specify the RGB values of the colors to be adjusted and the number of patterns.

## 4. Check the Sample Pattern (p.12)

From the printed sample patterns, find the desired color, and check the RGB values of that color.

## 5. Set the RGB Values to the Print Data (p.15)

Set the RGB value to the print data using a graphics software or other software, and save the data.

## 6. Specifying Print Data from an Application (p.16)

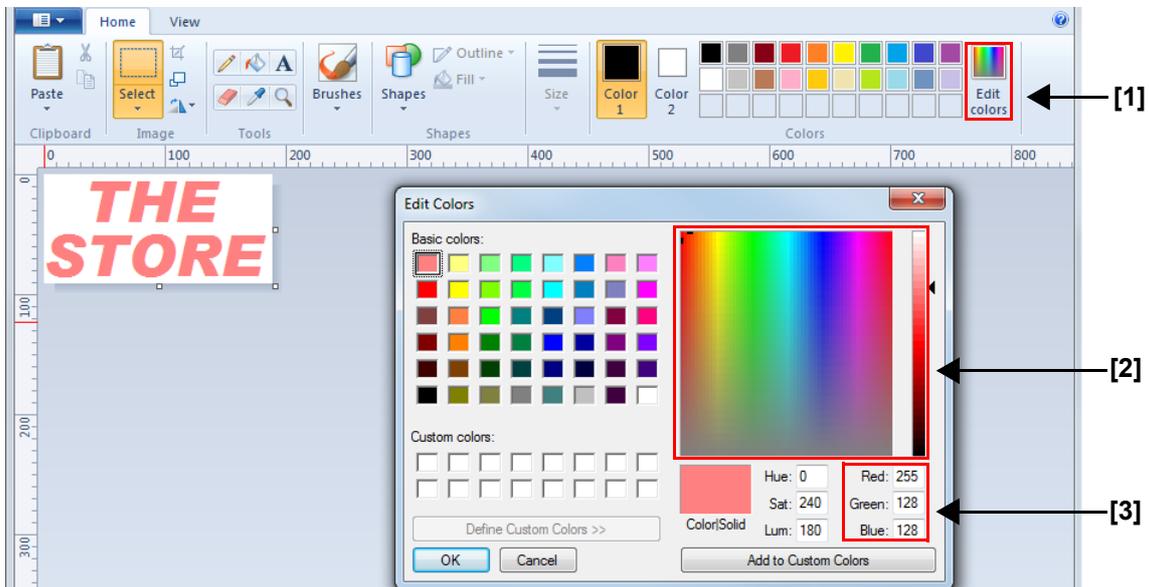
Specify and print the data from the application, or register the data to the printer as an image and print the image.

## 7. Printing (p.16)

# Obtain the RGB Values of the Print Data

Find the RGB values of the color in the original data.

In the following example, obtain "R:255, G:128, B:128" with Paint supplied with Windows.



- 1 Click (Edit Color) to display the (Edit Color) screen.
- 2 Select the color to use for the print data.
- 3 Check and make note of the RGB values of the selected color.

## NOTE

The method of finding the RGB values varies depending on the graphics software. For details, refer to the software manual or help.

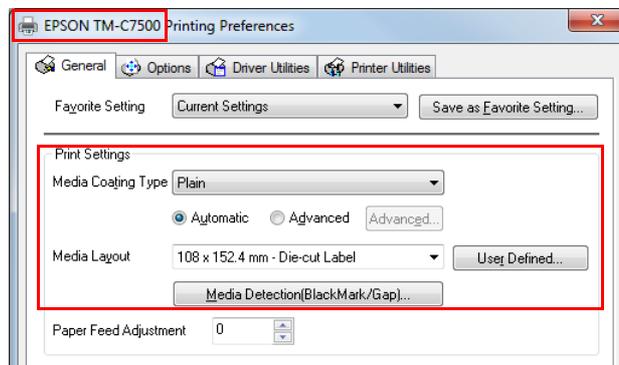
## Connect the Printer

Perform the following procedure.

- ❑ Connect the Epson inkjet label printer to your computer.
- ❑ Load the label paper to be used in the printer.
- ❑ Check that "EPSON" is included in the printer name in the print queue.
- ❑ Check that the settings of the printer driver are configured for printing.

If you have changed the label paper to be used in the printer, set as follows:

- Specify the type of the paper loaded in the printer and the paper layout.  
The (Label width) and (Label length) settings of the paper layout are used when creating sample patterns.
- Specify the paper detection method.

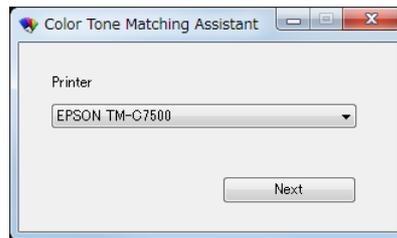
**NOTE**

This describes the printer preferences with the TM-C7500 printer driver. The setting items vary depending on the printer.

# Create and Print an RGB Sample Pattern

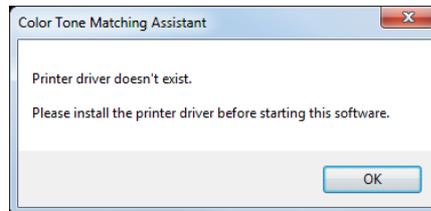
Use the following procedure to create and print a sample pattern.

- 1 Run Color Tone Matching Assistant.
- 2 Select the printer to use, and click (Next).



## NOTE

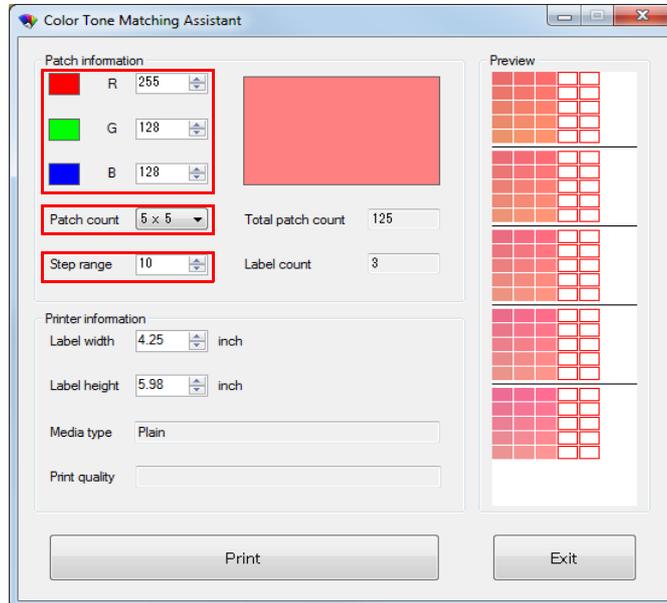
A printer with "EPSON" in the name is displayed in the print queue. If the target printer name does not exist, the following error message appears and the utility closes.



In this case, change the printer in the print queue to a name that includes "EPSON". In addition, change the settings of the printer driver to be used.

### 3 Create a sample pattern by making the following settings.

- Enter the (RGB) values.
- Select a (Patch count).
- Enter the (Step range).



| Setting Item        | Description   |
|---------------------|---|
| Patch information   | Sets the color sample pattern to be created.  |
| RGB                 | Enter the RGB values.   |
| Patch count         | Select the color sample array.<br>Setting value <ul style="list-style-type: none"> <li>• 5x5: A sample pattern with 125 colors is displayed in (Preview).</li> <li>• 3x3: A sample pattern with 27 colors is displayed in (Preview).</li> </ul> |
| Step range          | Set the deviation in RGB values for the color of the sample pattern to be created. For a more detailed color scheme, set a smaller value for (Step range).  |
| Total patch count   | Displays the number of sample patterns to be printed.   |
| Label count         | Displays the number of labels required for printing.  |
| Printer information | Specify the paper loaded in the printer.  |
| Label width         | Specify the label width of the label paper to be printed.   |
| Label height        | Specify the label length of the label paper to be printed.  |
| Media type          | Displays the paper layout specified in the printer driver.  |
| Print quality       | Displays the print quality specified in the printer driver.   |

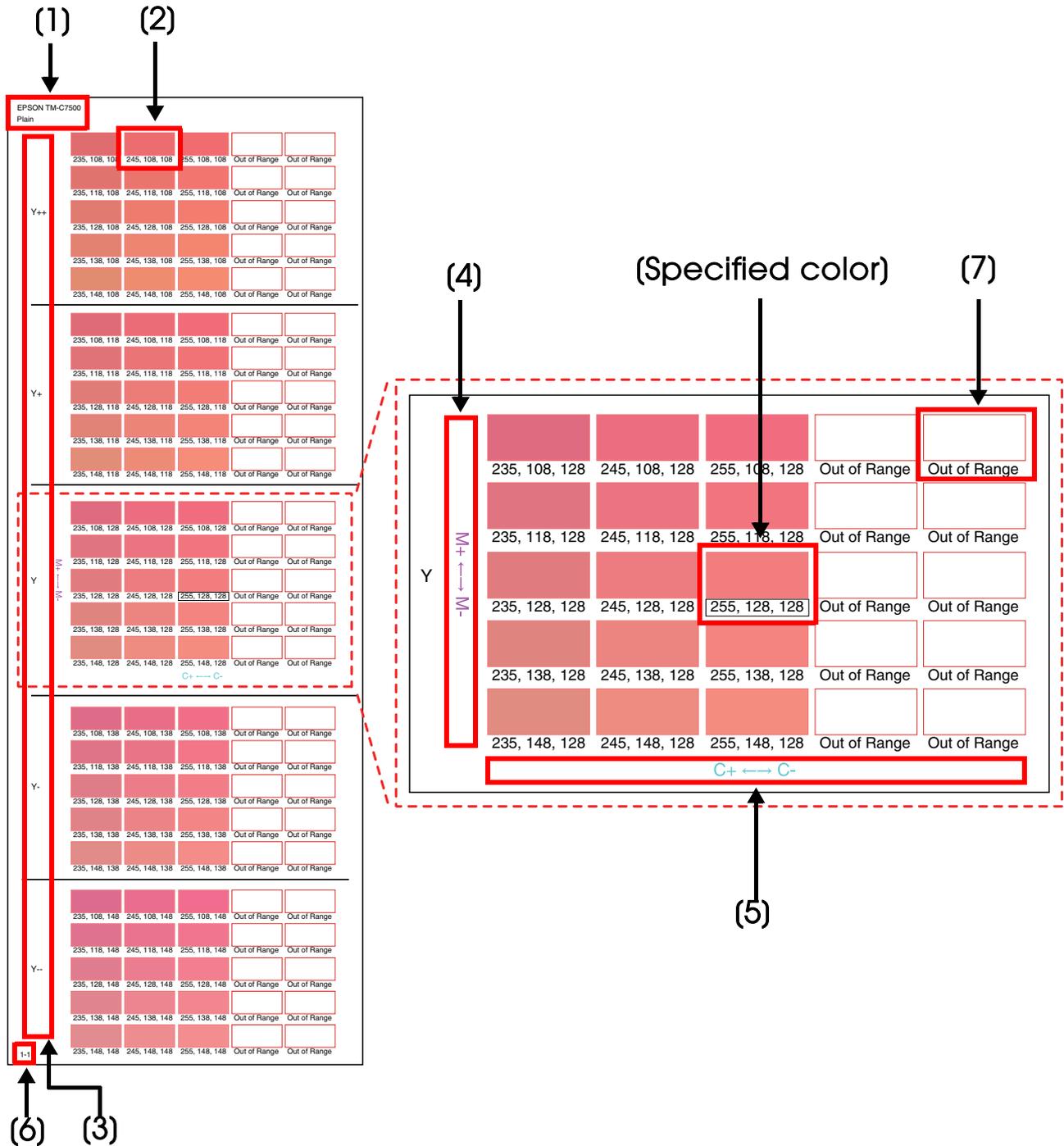
#### CAUTION

Depending on the printer model, some setting values cannot be obtained.

- ### 4 Click (Print).
- The sample pattern is printed.

# Check the Sample Pattern

The sample pattern is printed as shown below. The color is printed with each element of the color increased and decreased. Find the desired color, and make note of the RGB values of that color.



See below for the content printed in the sample pattern.

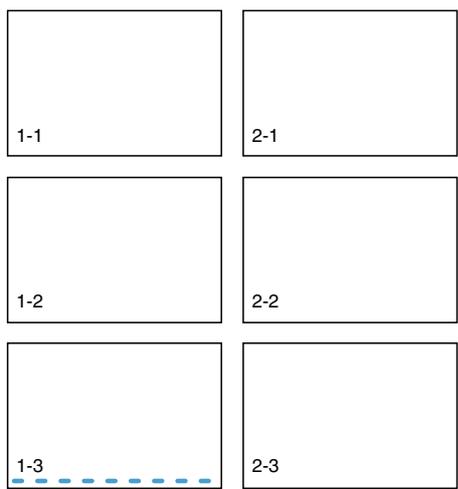
| Item         | Description   |
|--------------|---|
| 1            | Printer name and paper name.<br>This identifies the printing environment of the sample pattern.   |
| 2            | Color sample and RGB values.<br>When you find the desired color scheme, set the RGB values to the print data.   |
| 3            | This indicates a strengthening of the yellow tone as the B value decreases with "+" and "-" notation.   |
| 4            | This indicates a strengthening of the magenta tone as the G value decreases with "+" and "-" notation.  |
| 5            | This indicates a strengthening of the cyan tone as the R value decreases with "+" and "-" notation.   |
| 6            | Page number of the label of the printed sample pattern.<br>This indicates the coordinate numbers when the horizontal patch has two or more columns.<br>When the label paper size is small with respect to the sample pattern, the sample pattern is printed on multiple labels. You can check the number of labels to be printed in (Label count) in Color Tone Matching Assistant. For details, refer to <a href="#">Create and Print an RGB Sample Pattern (p.10)</a> . |
| 7            | This indicates that a color cannot be expressed when one of the RGB values is 0 or 255.   |
| Cutting line | When the printing label range is narrow with respect to the number of sample patterns, horizontally aligned patterns are divided and printed on multiple labels.<br>This is printed at the bottom of the label where the label array switches.  |

**NOTE**

If the label width is small with respect to the sample pattern, the horizontal color sample is divided and printed. In this case, a blue dotted line is printed to align the labels horizontally. In addition, letters set to the page number are printed. (Example: 1-1, 1-2, 1-3, 2-1, 2-2, 2-3)

When dividing and printing the entire sample pattern on six pages, the sample pattern is printed in the order shown below.

These numbers are the coordinate numbers. In this case, a cutting line is printed at the bottom of "1-3" where the column changes.



## If the desired color does not exist in the printed sample pattern

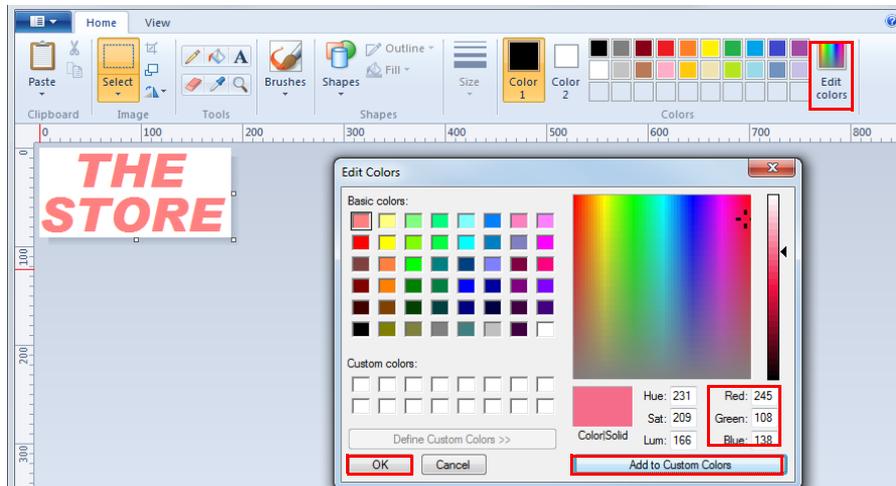
If the desired color does not exist in the printed sample pattern, find a color while referring to the information below.

- ❑ When the sample pattern has a color close to the desired color  
The deviation in RGB values might be too large for the sample pattern.  
In this case, using Color Tone Matching Assistant, set the RGB values of the closest color to the center RGB values, set (Step range) to a smaller value, and print again.  
Refer to [Create and Print an RGB Sample Pattern \(p.10\)](#).
- ❑ When the color closest to the desired color is not the outermost shell of the gamut  
(when the desired RGB values are separated from the center RGB values)  
In this case, using Color Tone Matching Assistant, set the RGB values of the closest color on the edge of the sample pattern to the center RGB values, set (Step range) to a smaller value, and print again.  
Refer to [Create and Print an RGB Sample Pattern \(p.10\)](#).
- ❑ When a color close to the desired color is on the outermost shell of the gamut  
(outermost color that can be reproduced and one of the RGB values is 0 or 255)  
This color cannot be reproduced with the printing conditions of this printer.

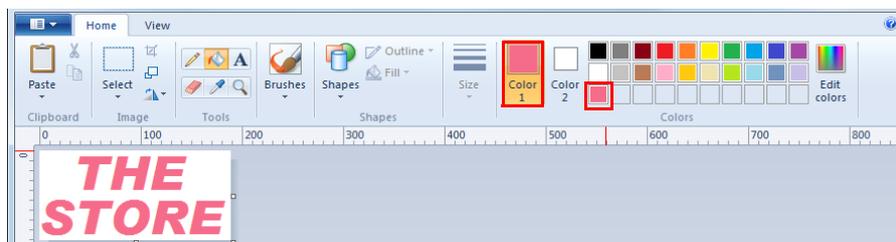
## Set the RGB Values to the Print Data

Set the RGB values to the print data using a graphics software or other software.

Use the following procedure the specify the RGB values in Paint supplied with Windows.



- 1 Click (Edit Color) to display the "Edit Color" screen.
- 2 In (RGB), enter the RGB values of the desired color in the sample pattern.
- 3 Click (Add to Custom Colors) and (OK).
- 4 Select the added color, apply it to the print data, and save the data. This completes the color adjustment of the print data.



---

# Specifying Print Data from an Application

You can specify color adjusted print data from an application and print the data.

You can also print an image file using pre-print or a template by registering the image file to the printer. For details, refer to the Technical Reference Guide of the printer.

## Printing

Print the data in the actual environment and check whether the print data is printed with the desired color.

If further color adjustment is necessary, repeat the color adjustment process ([p.7](#)) from step 3.