Twain Data Source Help Index

Twain Data Source Help provides fast access to information about the settings and commands found in the Hand Scanner dialog box.

Scanner Setting   Displays the current settings of the scanner.

Image Size   Displays the scan width, scan height, and the amount of disk
                                 space the resulting scanned image will occupy if you save it.

Scan Button   Click this button to execute the scan command and start the
                                 image capture process.

Merge Scan Button   Click this button when you wish to join the next scan with the
                                 previous scan.

Effects Button   Click this button to enhance the current scanned image
                                 using the Effects commands of Twain Data Source.

Preferences Button   Click this button when you wish to calibrate the scanner or
                                 change the current image size unit.

[1] **Scanner Setting**

There are two items in the Scanner Setting box. These are **Scan Mode** and **Resolution**. Scan Mode determines how the scanner will read the image while Resolution specifies the scanning resolution in dots per inch.

To change the **Scan Mode**, click the down arrow to display the available options. Select Color to scan the image in 24-bit true color (16.7 million colors). Select Gray to scan the image in 256 gray scales. Select Text to scan text documents or line art.

To change the **Resolution**, click the down arrow to display the available settings. You can set the resolution from 100 to 800 dpi.

[1] HELPID_scanner_setting

[2] **Image Size**

The Scan Size box contains information about the following items:

Scan Width and Scan **Height** show the image size in inches. If you wish to use millimeters instead of inches, click the **Preferences** button and choose **mm** in the dialog box that opens. To change the Scan Width or Scan Height, drag the ruler guides found alongside the rulers. The size values will change automatically as you drag the ruler guides.

Required Space displays the amount of disk space the resulting scanned image will occupy based on the Scan Mode, Resolution, and Image Size values. Changing any of these values will automatically update Required Space.

Related topic:

Preferences Button

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[2] HELPID_image_size

[3] **Scan Button**

Click the **Scan** button when you're ready to scan the document. Make sure you have set the desired Scan Mode, Resolution and Image Size before clicking the Scan button.

See also:

Scanning an Image

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[3] HELPID_scan_button

#4 **Scanning an Image**

Before proceeding with a scan, place the document to be scanned on a flat and even surface.

To start the scanning operation, the steps are:

1. In the Hand Scanner dialog box, select the **scan mode** you wish to use.

2. Next, select the **resolution**.

3. Set the desired **image size** by dragging the ruler guides found alongside the rulers. As you drag the ruler guides, the information in the Image Size box is automatically updated. If you wish to change the image size unit, click **Preferences** and choose millimeters or inches. The rulers will change automatically.

4. Click the **Scan** button in the dialog box when you're ready to start scanning.

5. Press the scanner's Scan button and roll the scanner over the document slowly and steadily. Avoid moving the scanner too quickly or you may lose data, which can result in a distorted image on your monitor.

6. Glance at your monitor display once in a while to make sure you're scanning straight and the image is not distorted.

7. Press any key to stop the scan operation or click **Stop Scan** in the dialog box. The image will then be displayed in the image window of the Hand Scanner dialog box.

At this point you may opt to:

Click the **Rescan** button if you want to discard the image and do a rescan.

Click **OK** to accept the image. This will close the Hand Scanner dialog box and the scanned image will be transferred to the main screen of the host software.

Click the **Cancel** button to discard the image and quit the Hand Scanner dialog box.

Click the **Merge Scan** button to scan a second image that you wish to merge with the first image.

Click the **Effects** button to enhance the image using the Effects commands of Twain Data Source. This will open the Image Effects dialog box.

Related topics:

Merge Scan Button

Effects Button

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[4] HELPID_scanning

#5 **Merge Scan Button**

Click the Merge Scan button when you want to merge your next scan with the previous scan. This button is enabled only when you have a scanned image in the image window of the Hand Scanner dialog box.

Merge Scan is useful for capturing images that are wider than your scanner's scanning width. With Merge Scan, you can join two separate scans to form one complete image.

Twain Data Source gives you two modes for merging images, namely, *Auto* and *Manual*. We suggest you experiment by trying out all three to see how each one works since they give you different degrees of control with varying results.

According to the Merge mode selected, Twain Data Source will search for a match point where the two scans will be joined. The match point is the image area where the two scans are most identical. If the program cannot find a match point, the merge will be unsuccessful and you are encouraged to try again by either making adjustments or by using a different Merge mode.

To use Merge Scan, the steps are:

1. Scan the first half of your document following the steps described in *Scanning an Image*. The scanned image will appear in the image window.

2. Click the **Merge Scan** button.

3. Scan the second half of the document making sure you have enough overlapped region. The overlapped region is the image area where the two scans are identical. At the end of the second scan, the images will be displayed in the Merge Images dialog box.

4. In the Merge Images dialog box, select the **Merge mode** you wish to use.

    If you choose **Auto**, Twain Data Source will search for a match point where the two scans will be automatically joined.

    If you choose **Manual**, you must use the scroll bars to align the two scans.

5. Click the **Merge** button.

    If you have selected Manual Merge, the Merge Images dialog box closes and the complete image is displayed in the image window of the Hand Scanner dialog box.

    If you have selected Auto Merge, Twain Data Source will search for a match point and align the two scans. Click the **OK** button to accept the result.
    If merge is unsuccessful, you will receive an error message. You are encouraged to try again by either making adjustments or by using a different Merge mode.

Related topics:

Auto Merge

Manual Merge

Scanning an Image

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5 HELPID_merge_scan

[6] **Auto Merge**

In Auto Merge mode, Twain Data Source searches the entire image area of both scans to find a match point. This process can take very long especially if the scans are 24-bit color images.

If you plan to use Auto Merge for your scans, be sure to have enough overlapped region. The overlapped region is the area where the two scans are identical. For a higher success rate in Auto Merge, have between 0.5 to 0.8 inch of overlapped region if you're scanning at 200 or 300 dpi.

Click the **Merge** button to start the search process. Once a match point is found, the images are aligned and you can click the **OK** button to accept the result. If a match point is not found, you will receive an error message. In this case, we suggest you try out a different Merge mode.

Related topics:

Manual Merge

Scanning an Image

[6] HELPID_auto

[7] **Manual Merge**

Manual Merge involves aligning the two scans using the scroll bars. Unlike Auto Merge, Manual Merge takes the shortest time since the program does not have to search for a match point. Clicking the **Merge** button will simply join the two scans at the point of alignment.

Related topics:

Auto Merge

Scanning an Image

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[7] HELPID_manual

[8] **Effects Button**

Twain Data Source includes image enhancement commands that can improve the appearance of scanned images. To access any of these commands, click the **Effects** button in the Hand Scanner dialog box. Take note that the Effects button is only enabled when you have already scanned an image. The Effects commands are:

Contrast/Brightness

Gamma

Level Adjustment

See also:

The Image Effects Dialog Box

[8] HELPID_effects_button

[9] **The Image Effects Dialog Box**

The Image Effects dialog box appears when you click the Effects button.

The dialog box shows the available Effects commands on the left side and the scanned image on the right side. Take note that the contents of the middle box in the dialog box change according to the selected Effects command.

Image Effects Dialog Box Options

Channel - Refers to the red, green, and blue layers that make up a color image. You can choose to apply the Effects commands on the channels individually or choose RGB to change all channels equally and simultaneously. Since a grayscale image has only one channel, the Gray option is automatically selected if the scanned image is grayscale.

Effects - Shows the available commands you can use on the image. For black-and-white images, only the Rotate command is available. *It is important to note that only one Effects command can be applied to the image at a time.*

OK - Click the OK button to accept the current settings in the Image Effects dialog box.

Preview - Click the Preview button to see the effects of your changes on the image.

Reset - Click the Reset button to discard any changes you have made to the image.

Cancel - Click the Cancel button to quit the Image Effects dialog box and discard any changes you have made to the image.

Related topics:

Contrast/Brightness

Gamma

Level Adjustment

[9] HELPID_effects_dialog

[#10] **Contrast/Brightness**

By adjusting the contrast and brightness of an image you can generally improve scanned images that are too dark, too light, or that have very high or very low contrast.

To adjust Contrast/Brightness, the steps are:

1. In the Effects list box, make sure **Contrast/Brightness** is selected.

2. Click the channel you wish to modify. If the image is grayscale, the Gray option is automatically selected.

3. Drag the scroll bars to adjust the contrast and brightness. Values range from -10 to +10.

4. Click the **Preview** button to see the effect of your changes. Readjust the settings if necessary. Click **Reset** if you want to discard the changes and go back to the original image.

5. Click **OK** when you're finished making adjustments. The Image Effects dialog box closes and you will return to the Hand Scanner dialog box.

[10] HELPID_contrast_brightness

[11] Brightness refers to the lightness or darkness of an image.

[11] WORDID_brightness

[12] Contrast refers to the range between the lightest and the darkest shades in an image.

[12] WORDID_contrast

[13] **Gamma**

The Gamma command allows you to selectively adjust the brightness of an image by specifying a gamma value. A high gamma value increases brightness in the image while a low gamma value decreases brightness. However, take note that the midtone areas are affected more than the highlight and shadow areas by gamma value changes.

To adjust Gamma, the steps are:

1. In the Effects list box, select **Gamma**.

    To the right of the Channel box is a color/gray map. The values on the horizontal or x-axis represent the input color/gray image values while the values on the vertical or y-axis represent the output color/gray image values. The values range from 0 (darkest) to 255 (brightest). The shape and slant of the Gamma curve (diagonal line) reflect the brightness ratio between the input and output values.

2. Click the channel you wish to modify. If the image is grayscale, the Gray option is automatically selected.

3. Drag the scroll bar to adjust the Gamma value. The value ranges from 0.1 to 7.9.

4. Click the **Preview** button to see the effect of your changes. Readjust the settings if necessary. Click **Reset** if you want to discard the changes and go back to the original image.

5. Click **OK** when you're finished making adjustments. The Image Effects dialog box closes and you will return to the Hand Scanner dialog box.

[13] HELPID_gamma

Level Adjustment

Using the Level Adjustment command is another way of adjusting the <u>contrast</u> and <u>brightness</u> of an image. With separate selections for shadow, midtone, and hilight, you can easily modify an entire range of picture elements (<u>pixels</u>), from the darkest to the brightest.

To use Level Adjustment, the steps are:

1. In the Effects list box, select **Level Adjustment**.

   To the right of the Channel box is a <u>histogram</u>, which shows the distribution of the color/gray values in the image. Each point in the horizontal or x-axis represents a color or gray value in the image, from the darkest (far left) to the brightest (far right). The vertical or y-axis shows the relative number of pixels for each color or gray value. The histogram helps you check for optimum brightness and contrast when you adjust the color/gray values of the image.

2. Click the channel you wish to modify. If the image is grayscale, the Gray option is automatically selected.

3. Adjust the Shadow, Midtone, or Hilight.
   * **Shadow** adjusts the shadow pixels. Click the top button to increase the shadow.
   * **Midtone** adjusts the middle range pixels. Click the top button to decrease brightness, or click the bottom button to increase brightness.
   * **Hilight** adjusts the light pixels. Click the bottom button to make the hilights more prominent.

   The **Black Ratio** value shows the percentage of black pixels in the resulting image.

4. Click the **Preview** button to see the effect of your changes. Readjust the settings if necessary. Click **Reset** if you want to discard the changes and go back to the original values.

5. Click **OK** when you're finished making adjustments. The Image Effects dialog box closes and you will return to the Hand Scanner dialog box.

[15] Pixel is the smallest element (dot) on a computer display screen which is used to form an image.

[15] WORDID_pixel

[16] Histogram is a graphic representation of pixel concentration and dispersion based on their color/gray values.

[16] WORDID_histogram

[17] **Preferences Button**

The Preferences button is used to access the scanner calibration function or to change the Image Size unit.

Calibrating the Scanner

For best scanning results, we recommend that you calibrate the scanner the very first time you use it. The calibration procedure involves scanning a white sheet of paper and adjusting the brightness control until you get a Calibration OK message. After this you don't need to calibrate again unless you notice a significant decrease in scan quality.

To calibrate the scanner, the steps are:

1. Set the Brightness Control of your scanner to the middle position.

2. In the Hand Scanner dialog box, click the Preference button. The Preference dialog box appears.

3. Click the Calibration button and follow all onscreen instructions.

Related topics:

Image Size

[17] HELPID_preferences