DS610CU
Digital Copy Device

User's Manual

(D/N: 250-0886-0 Rev. 1.0)

Avision, Inc

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Warranty

FCC Radio Frequency Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

* Reorient or relocate the receiving antenna.
* Increase the separation between the equipment and receiver. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
* Consult the dealer or an experienced radio/TV technician for help.

FCC CAUTION: To assure continued compliance,(example- use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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10. DS610CU AUTOMATIC DOCUMENT FEEDER (ADF)

1. INTRODUCTION

Congratulations on your purchase of the DS610CU.

The DS610CU produces better printing quality and is free from maintenance, compared with traditional copy machines. Its high copy/scan quality, maintenance-free operation and affordability make DS610CU the best convenience copier solution for office.

The following sections introduce the unpacking, hardware and software installation, the operation, and maintenance information to you. Please spend a few minutes reading through them to keep quality scanning result possible.

Figure 1-1 shows how the DS610CU is packed. Please check all the items against Figure 1-1. If there is any missing or damaged, please contact your nearest dealer immediately for the replacement.
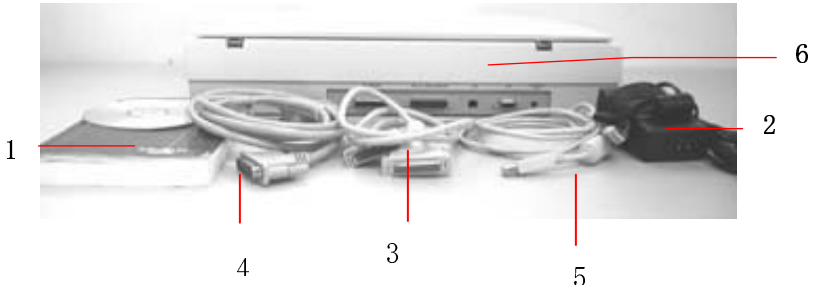
1. **Utilities & Documentation CD**
2. **Power Adapter/Cord**
3. **Parallel Cable for Computer Connection**
4. **Parallel Cable for Printer Connection**
   (not included)

5. **USB Cable**
6. **DS610CU**

Figure 1-1 DS610CU Packing

2. DS610CU INSTALLATION

2.1   PRECAUTIONS

- Keep the DS610CU out of direct sunlight. Direct exposure to the sun or excessive heat may cause damage to the unit.
- Do not install the DS610CU in a humid or dusty place.
- Be sure to use the proper AC power source.
- Place the DS610CU securely on an even, flat surface. Tilted or uneven surfaces may cause mechanical or paper-feeding problems.
- Retain the DS610CU box and packing materials for shipping purposes.

2.2 UNLOCKING THE DS610CU

To protect the scanning head from damage during shipment, the DS610CU is designed with a lock switch beneath the main unit. Therefore, before using the DS610CU, it is required to unlock DS610CU by moving the lock switch to the *Use* position.(See Figure 2-1)
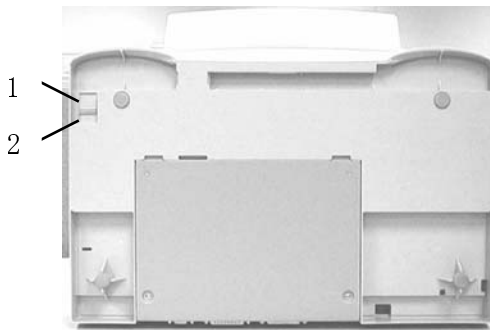
1. "Shipping" Position   2. "Use" Position

Figure 2-1 Unlocking the DS610CU

2.3   CONNECTING THE CABLE

2.3.1 CONNECTING DS610CU TO A PRINTER TO WORK AS A COPIER

Connect the power cable and signal cable as shown below.

Printer Cable   Power Cable

To Printer   To Power Outlet
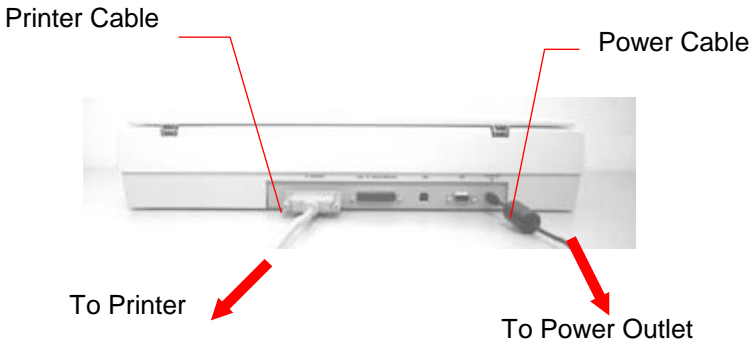
Figure 2-2 Connecting DS610CU to a printer

2.3.2 CONNECTING DS610CU TO A WINDOWS WORKSTATION TO WORK AS A SCANNER

USB Cable

Power Cable

To PC USB Port

To Power Outlet
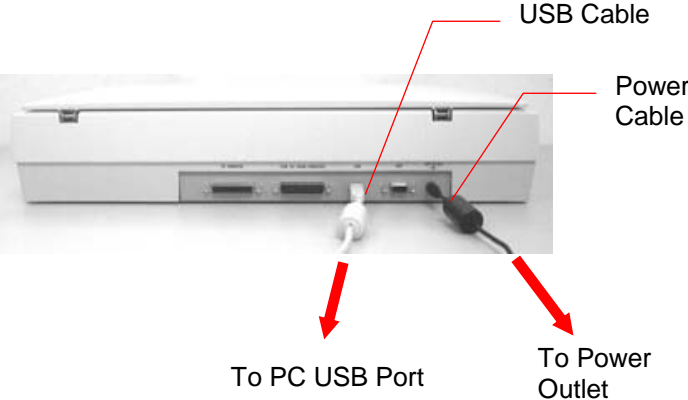
Figure 2-3 DS610CU Cable Connection

2.4 DOCUMENT PLACEMENT

As shown in Figure 2-4, place the document on the glass face (text) down.
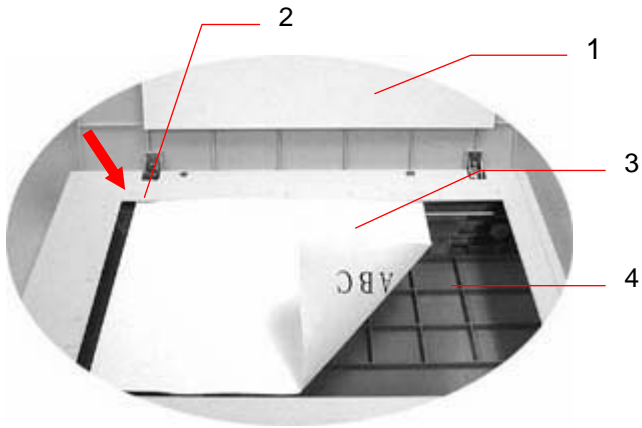
1. Document Cover
2. Home Position Mark
3. Document
4. Document Glass

Figure 2.4 Document Placement

3.   USING DS610CU AS A COPIER

To use the DS610CU as a copier, it is recommended that you follow these tips:

To use other settings than the one displayed in the Message Display window, simply press the button again for that setting to select other options.

Note:

(1). An item message in the Message Display Windows ending with a "∗ " means the last setting.

(2). The default settings are: A4, Normal Print Quality, 100% ratio, 1 copy.

PRINTER MEMORY

To realize the full functionality of the DS610CU, it is recommended to install adequate memory in your laser printer.   If you want to print your document using Quality mode - 600 dpi as your Copy Quality mode, you may need to add more RAM for your printer as using this feature requires more processing time and memory.

See the following chart for printer memory recommendations.

It is strongly recommended that you refer to the following table to ensure a successful color copy.

Copy Quality	Document Size	Min. Printer Memory
Normal	Letter Size	16 MB
	Legal Size	32 MB
Quality	Letter Size	32 MB
	Legal Size	64 MB

If there is not enough memory in your printer, you may probably encounter the following results:

1.   The printer does not print.

2.   The print quality is bad.

3.1 THE CONTROL PANEL
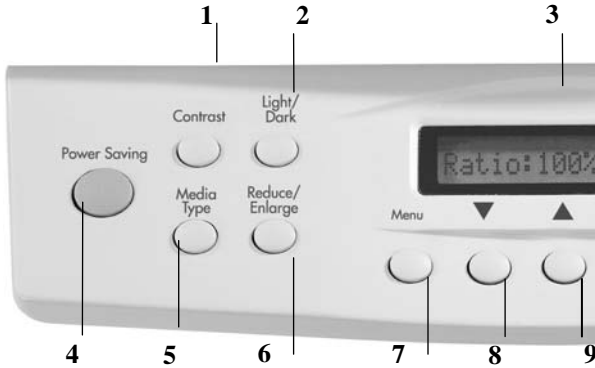
1. **Contrast:** Used to adjust the copied /scanned image contrast .
    Increase level of color contrast by the (▲) button.
    Decrease level of color contrast by the (▼) button.
2. **Light/Dark:** Lighten or darken your image.
    Increase level of brightness or darkness by the (▲) button.
    Decrease level of brightness or darkness by the (▼) button.
3. **Message Display window:** Display current settings.
4. **Power Saving:** Press to enter power saving status.
5. **Media Type:** Press to select your output paper type, eg. Plain paper, Transparency, or Glossy.
6. **Reduce/Enlarge:** Reduce or enlarge your original document.
    Press to select the preset ratios: 100%, 115%, 122%, 141%, 200%, 400%, 25%, 50%, and 86%. Choose your desired ratio or adjust the ratio in 1% increment by the (▲) or (▼) button.
7. **Menu:** Select paper size, printer type, Mirror function, power-saving interval, Duplex, Fit-to-A3, Input Tray, or Output Bin, color balance, depending on various printer models.
8. **▲ :** Go to the previous item displayed in the Message Display window or increase the value of the numeric entries.
9. **▼ :** Go to the next item displayed in the Message Display window or decrease the value of the numeric entries.
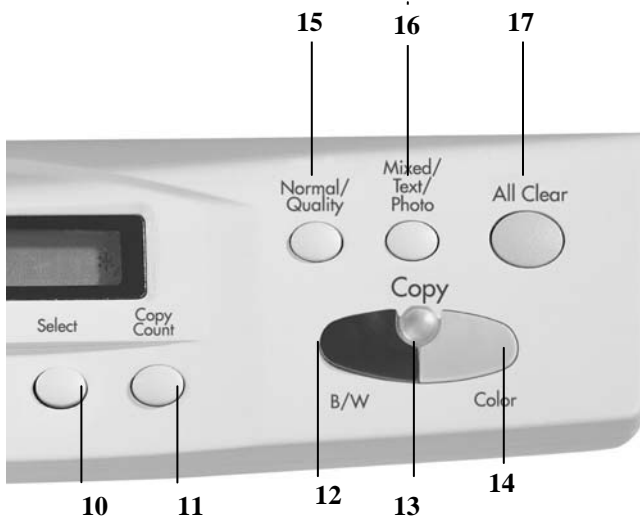
10. Select: Press to determine an item in the Menu to be used or to save the latest custom setting. (A star sign, "*", will appear on screen.)

11. Copy Count: Choose the number of copies from 1 to 99. Increase the value of the numeric entries by the **(▲)** button or decrease the value by the **(▼)** button.

12. Copy(B/W): Press to start a black-and-white copy

13. Power/Copy LED: The LED indicator turns green when power is on and turns flashing during copying.

14. Copy(Color): Press to start a color copy.

15. Normal/Quality: Select your Copy quality: **Normal** (300 dpi), or **Quality** (600 dpi).

16. Mixed/Text/Photo: Press to respectively concentrate on photo, text, or mixed copying.

17. All Clear: Clear your current settings and return to the default settings.

3.2 BEFORE MAKING COPIES

The DS610CU supports multiple paper sizes from A4/letter to legal on the flatbed and through the Automatic Document Feeder (ADF). The DS610CU also supports enlarging a copy (from letter/legal/A4) to larger sizes (such as A3 and ledger) based upon the printer selected. Check or select the paper size to match your paper supply to ensure smooth operations.

To check or select paper size,

1. Press Menu button and select "Size" item. The Message Window displays "A4" as a default setting. If your current paper supply is A4 size, you can skip the following steps. Otherwise, please do the following steps.

2. Keep on pushing ▲ **or** ▼ button until the desired paper size appears. When the desired paper size message is shown in Message Display window, this update paper-size setting is done. In order to help you distinguish every new setting you make from the other preset settings, press Select button and a " * " sign will appear on the right-hand side of the displayed message.

   • For example, if you want Letter as your pape size, press the Select button when the "Size: Letter" appears in Message Display window. A "*" sign shown next to the displayed message on the right side to distinguish the desired paper size, Letter, from the others.

➤ **Note:**

Each time when you press All Clear button, the DS610CU, the DS610CU automatically returns to the factory default setting. As a result, you have to reset any factory default settings you may have set prior to pressing "All Clear".

3.3 MAKING SIMPLE COPIES

The Operating Steps:

1. Place your original face-down on the document glass.
2. Press the Copy button either of Color or of Black and White.The Message Window displays "Copying…", and the Ready LED is flashing.
3. Within a few moments, the copying is done. The Message Window then displays "1 Copy   @100%" and the Ready LED is now steadily on until next task.

3.4 MAKING COPIES WITH COPY FEATURES

3.4.1 MIRROR FUNCTION

This function allows you to horizontally flip the copied image as if the image were reflected in a mirror.

The Operating Steps

1. Place your document face-down on the document glass.
2. Keep on pressing Menu button till the message, "Mirror: off", appears.
3. Press the ▲ **or** ▼ button to get the message, "Mirror: on".
4. Press the Copy button. The printout shows the original image is flipped horizontally as if it were reflected in a mirror.

Mirror function is off   Mirror function is on

3.4.2 ENLARGING OR REDUCING YOUR ORIGINAL

Like most copiers, the DS610CU also features auto enlargement/reduction function to resize your original.

The Operating Steps:

1. Place your document face-down on the document glass.
2. Press the "Reduce/Enlarge" button, the Message Window displays "Ratio:100%".
3. Repress the button to see more options. For example, if you need 150% enlargement, select "141%" then press the "▲" button to increase the percentage to 150 in 1% increment.
4. Press the Copy button. And then the printout shows enlargement of 150% of your original.
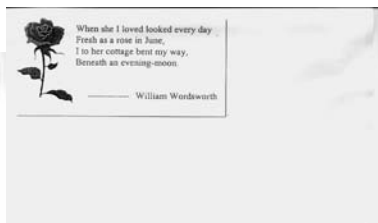
Ratio:100%   Ratio: 150%

➢ **Note:**

- Another option to reduce your original is to firstly repeat the enlargement or reduction steps 1 to 3 and then press the "▼" button to decrease the percentage in 1% increment.
- The maximum magnification rate is 400% while the minimum reduction rate is 25%.

3.4.3 CHANGING YOUR COPY DENSITY

Copy density refers to the degree of darkness that the DS610CU has reproduced. There are times when your original is unsatisfactorily darker or lighter. Use the density feature to compensate for an unsatisfactory original.

The Operating Steps:

1. Place your original face down on the document glass.
2. Press the "Lighter/Darker" button. The Message Window displays the default degree of darkness.
3. Repress the "Lighter/Darker" button to select one of the other levels. Or you may press the "▲" to increase the level, press the "▼" button to decrease the level.
4. Press the Copy button. Your printout shows the darkness or brightness has been compensated.

3.4.4 CHANGING CONTRAST

Contrast refers to the range between the darkest and lightest portions of the image. The greater the contrast , the more the diference between the lighter and darker shades in the image. Use this option to increase or decrease contrast.

The Operating Steps:

1. Place your original face-down on the document glass.
2. Press the "Contrast" button. The Message Window displays the default saturation.
3. Repress the "Contrast" button to select one of the other levels. Or you may press the "▲" to increase the level, press the "▼" button to decrease the level.
4. Press the Copy button.

3.4.5 CHOOSING YOUR COPY QUANTITY

The Operating Steps:

1. Place your original face-down on the document glass.
2. The default copy count is 1. If you need to make 3 copies, for example, press the "Copy Count" button and the Message Window displays "2 copy   @100%".
3. Repress the "Copy Count" button and the Message Window displays "3 copy …".
4. Press the Copy button. 3 copies will print.

➢ **Note:**

- Another option to change your copy quantity is to press the "▲" button to increase the number or the "▼ " button to decrease the number.
- The maximum copy quantity is 99.

3.4.6 ENHANCING YOUR COPY QUALITY

The DS610CU provides "Quality mode" option to improve your copy quality. This is particularly useful when the original has a photograph. Quality mode allows your printout to reveal more image(photo) details using a higher resolution.

The Operating Steps:

1. Place your document face-down on the document glass.
2. Press the "Normal/Quality" button. The Message Window displays "Normal mode".
3. Repress the "Normal/Quality" button and the Message Window displays "Quality mode".
4. Press the Copy button. The copying begins processing with the Quality mode.

   See following photo/text reproduction between normal copier versus the DS610CU in quality mode.

| Make copies with a normal copier | Make copies with a DS610CU in quality mode |

➢ **Note:**

- To proceed copies using Quality Mode, make sure your printer has adequate memory as this requires more processing time.
- Copies made using QualityMode take longer to print than copies made utilizing Normal Mode.

-

MIXED/TEXT/PHOTO

Content can vary widely. The DS610CU can be configured to maximize the copy operation based upon the content of the original.

If the content of the original is a photograph images only or has photograph images with a little text on it, select the Photo function to get a photo-concentrated image copy.

The Text function optimizes the copy if the original is mostly text.

However, if the proportion of the photo image is almost the same as that of text in the original to be copied, it is recommended to use the Auto function from Auto/Text/Photo *button in order to get the most optimal printout with photo and text mixed.*

The Operating Steps:

1. Place your document face-down on the document glass.
2. Keep on pressing "Mixed/Text/Photo" button to select any one of these 3 document-type functions, called Photo, Text, and Mixed.
3. Press the Copy button, and the printout shows the best reproduction with the document-type concentration selected.

3.4.7 MAKING COPIES OF A 3D OBJECT

The DS610CU solution improves your copy reproduction significantly and even makes 3D object copies amazingly clear.

The Operating Steps:

1. Place your 3D object on the document glass.
2. Press the "Normal/Quality" button and the Message Window displays "Normal mode".
3. Repress the "Normal/Quality" and the Message Window displays "Quality mode".
4. Press the Copy button.   Your 3D object copy is done.

The 3D copy
using a normal copier

The 3D copy
using the DS610CU

3.4.8 AUTOMATIC POWER SAVING

The DS610CU features automatic power saving without unplugging the power cable. If you have not used the DS610CU over a selected power-saving interval (15 minutes, 2 hours, or 4 hours,Off), it automatically turns into power saving status.

To resume the ready status, press any one of the buttons on the Control Panel. The Message Window displays "Warming up…" and then "1 Copy   @100%", the ready status. The Ready LED now turns steadily on.

The DS610CU can also have the power saving mode disabled entirely.

To change the DS610CU power saving mode, press the Menu button and select Sleep.   Using the "▲" button or the "▼" button, display the setting that you want to select. Once your desired choice is displayed, press the Select button to select your choice.

3.4.9 COLOR BALANCE

This function allows you to calibrate the output color for the chosen printer,so that it comes close to that of the original. Adjusting will be different , depending on the printer model connected to DS610CU.

The Operating Steps

1.   Place your document face-down on the document glass.
2.   Press the menu button till the message,"ColorBalance Adj",appears.
3.   Press Select button to display one of three color channels (Color R , G,B).
4.   Press the ▲ **or** ▼ button to choose the desired channel ,and press Select.
5.   Press the ▲ **or** ▼ button to set a proper number from -10 to +10.
6.   Press Select if you want to save the updated color balance settings.

4.   USING DS610CU AS A SCANNER

To operate the DS610CU at optimum speed, the following minimum requirements are recommended:

- IBM compatible PC (Pentium or later);
- Microsoft Windows 98/Me, Windows 2000/XP;
- One USB port available
- 100 Megabytes of available hard disk space for installation;
- 32 Megabytes of RAM (64 Megabytes or higher recommended);
- A video graphics array (VGA) monitor;
- A Microsoft Windows-compatible pointing device (e.g., mouse);
- A CD-ROM drive.

4.1   INSTALLATION PROCEDURE

Installation procedures of the DS610CU driver and utilities are as follows:

1.   Start Microsoft Windows.

2.   Insert the Utilities and Documentation CD-ROM into your CD ROM drive.

3.   The CD-ROM will autolaunch on most systems. However, if you system does not support autolaunching CD-ROMs, press the Start button, choose RUN, type d:\driver\setup.exe (d: the CD-ROM drive in use), and then click OK. (See Figure 3-1,3-2)

4.   Follow the on-screen instructions to complete the driver installation (You may need to follow the instructions shown on the Add New Hardware Wizard to let Windows identify your new USB device before or after the driver installation.).
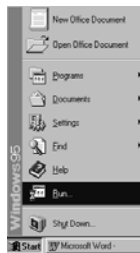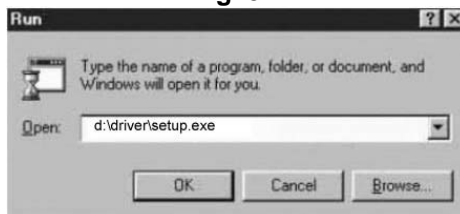

Fig. 3.1

Fig. 3.2

4.2 DOWNLOADING PRINTER PROFILE

Download compatible printer color table files to DS610CU before making copy with DS610CU. Do the following steps to complete downloading printer profiles , which are compatible to your printer connected to DS610CU.

To Install the Download Utility and import the available printer profiles to Your Computer,

1). Turn off your DS610CU, and your computer.

2). Connect the DS610CU to your computer by plugging one end of the supplied USB cable to the USB port of the DS610CU and the other end to the USB port of your computer.

3). Turn on the DS610CU and your computer.

4). Insert the supplied CD-ROM into your CD-ROM drive and double-click the **"Printer profile Download Kit.exe"** from the **"Printer profile Download Kit" folder** . (If your CD automatically launches, select the menu option **"DS610CU Printer profile Download Utility"**).
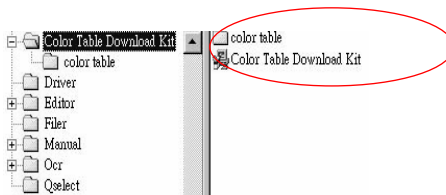
5).   Follow the instructions on the screen to complete installing
        the Download Utility and importing all printer profiles
        to your PC. When all of these installation steps are finished,
        the DS610CU Download Utility screen pops up, as shown below.
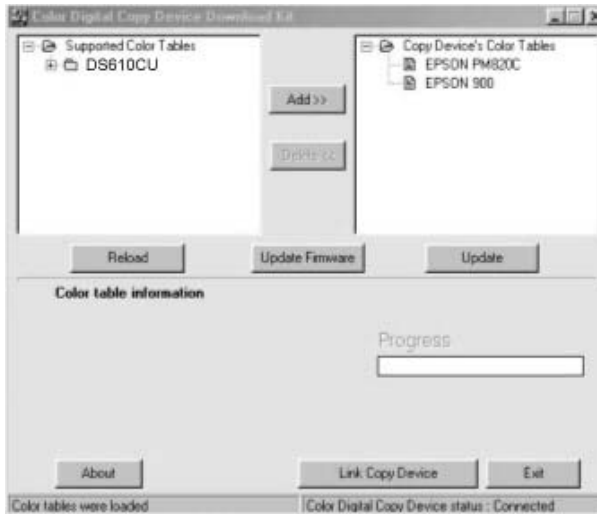
4.3 TO CUSTOMIZE PRINTER PROFILES ON DS610CU,

1). Press Start>Programs> DS610CU Download Utility> DS610CU Download Utility . DS610CU Download Utility screen appears as below.

2). Choose the brand name and model name of your new printer on the left side and click the "Add" button to insert the model to the right side.
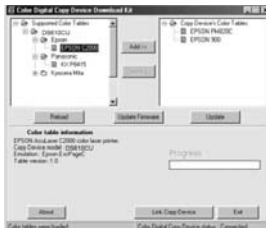
3). If you attempt to load more than 6 color tables to the DS610CU, the following warning message appears.

Choose one printer model from the right side and click the **"Delete"** button to delete one table and free some memory.

4). If the warning message does not appear, choose your new printer model from the right side and click the **"Update"** button to download the color table to your Color Copy Device.

5). When the status bar shows 100%, this means you have successfully downloaded the color table to DS610CU.

6). Connect the DS610CU to your printer and turn on the printer.

7). On the Control Panel of your DS610CU, press the "Menu" button until **Printer Select** is visible. Press the **Select** key. Use the "▲"or " ▼" button until the printer model that the DS610CU will be connected to is visible. Press the **Select** key.
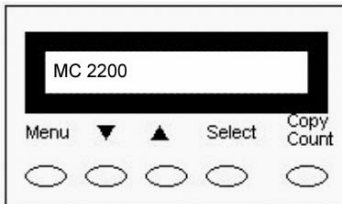

Updating the DS610CU's firmware :

From time to time, the DS610CU will be upgraded to have greater compatibility range such as supporting more printers , including variety of color tables, etc.. Therefore, downloading your DS610CU's firmware occasionally from our website (www..com) is recommended.

To update the firmware,

1. Download the new firmware directly to the DS610CU Download Utility folder.

2. Click the Update Firmware button on the Download Utility screen.

4.4 UNINSTALL THE DS610CU DRIVER

You can uninstall the DS610CU driver by selecting Start>Programs> DS610CU and clicking the *Uninstall* driver icon from DS610CU group.

5. SCANNER OPERATION & DOCUMENT PRINTING

1. Open your TWAIN scanning application.

2. Pull down the File menu and choose **Select Source**.

   If the Select Source command is not available on the File menu, see your application's user's guide to determine how the TWAIN link is used.

   A dialog box with a list of scanning sources appears.

3. Select **DS610CU/32Vx.xx**.

   You need to select the source only once, unless you want to choose another scanner.

4. Place the document to be scanned in the ADF or on the flatbed glass platen.

5. Pull down the File menu and choose **Acquire**.

   A dialog box containing scanning features appears.

6. Select the scanning method you want to use on the **Scan Method** drop-down menu.

7. Select the mode you want to use for your scans on the **Image Type** drop-down menu.

8. Select a scanning resolution on the **Resolution** drop-down menu.

9. Select the settings for the scanning features (e.g., Sharpen, Descreen, etc.) that you want to use.

10. Click on the **Preview** or **Scan** button to preview or scan your document(s).

6. USER INTERFACE

6.1 SCAN METHOD

Select how you want to scan on the **Scan Method** drop-down menu.

Simplex/One-page—use this setting if you are using the automatic document feeder (ADF) to scan a single-page document at a time.

Simplex /Multi-page—use this setting if you are using the automatic document feeder (ADF) to scan batches of single-page document at a time.

Flatbed—use this setting if you are using the flatbed to scan one page at a time.

6.2 DETERMINING YOUR RESOLUTION

 A good control of the resolution results a satisfactory detail of an image that scans. The resolution is measured by dots per inch(dpi). Normally, the greater the dpi number, the higher the resolution and the image file size.

 Be aware that the greater resolution takes more time, memory and disk space, therefore, up to a certain degree of dpi, the resolution will not visually be improved, on the contrary, it makes your files more unmanageable.

Resolution: 50 dpi

Resolution: 100 dpi

Tips:

1. *For your information, an A4 size color image scanned at 300 dpi at True Color mode consumes approximately 25 MB of disk space. A higher resolution (usually means over 600 dpi) is recommended only when you need to scan a small area at True Color mode.*

2. *You can also refer to the following table to choose a proper resolution while applying your image to other application.*

Scanner Settings Application	Image Type	Resolution (dpi)
Scan **Your Document**	LineArt	200
Scan **Your Color Picture**	True Color	100
OCR* Your Document	LineArt	300

***OCR:** Stands for **O**ptical **C**haracter **R**ecognition, the process to convert an image to a text format.*

6.3 SELECTING A PROPER IMAGE TYPE

 Select image type through the mode from the **scanner user interface** for your own purpose.

Each image type is described as follows:

Line art(Black and White)

LineArt presents the image in black and white only and there are no intermediate shades of gray in between. That means each pixel of the image is 100% black or 100% white.   LineArt is the best choice of image type if you want to scan text, pen or ink drawing. Since only 1-bit of black or white information is required for each *pixel**, the disk space required for saving lineArt image is only about 1/24 of that required to save 24-bit true color images.

Lineart Image

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*Pixel: A combination of two words: picture and element, a pixel is a single dot on a computer display or in a digital image.

Halftone

In addition to the black and white display, Halftone simulates gray scale by using different size of dots. Particularly when you view the image at a certain distance, it looks very closely like a gray image yet it consumes the least disk space. Halftone is the picture that we usually see in newspapers or magazines. Since Halftone is one type of black and white image, the disk space required to save a halftone image is 1/24 of that required to save a 24-bit true color image.

Halftone Image

8-Bit Gray

A single-channel image consists of at least 256 shades of gray. An 8-bit scanner produces a grayscale image with 1024 shades of gray between pure black and pure white. Choose this option if you are scanning black-and-white photographs.

With 8 bits of color information per pixel, the file size of an image is eight times larger than a *Black and White* image and 1/3 the size of a *24-Bit Color* image.

Gray Image

8-Bit Color

an *8-Bit Color* image provides 256 color hues in the image. The file size of a 256 color image is 1/3 the size of a *24-Bit Color* image.

8-Bit   **Color Image**

24-Bit Color

A *24-Bit Color* image consists of three 8-bit color channels. The red, green, and blue channels are mixed together to create a combination of one billion colors which give a more true-to-life quality to the image. Choose *24-Bit Color* if you are scanning color photos.

24-Bit   **Color Image**

6.4 ENHANCING YOUR IMAGE

 Brightness: Adjusts the lightness or darkness of

an image. The higher the value, the brighter the image.

Increase your Brightness

6.5 CONTRAST

 Adjusts the range between the darkest and
the lightest shades in the image.
The higher the contrast, the bigger the different
gray scales.

Increase your Contrast

6.6 INVERT IMAGE

The invert command reverses the brightness and the color in the image. For color images, each pixel will be changed into its complementary color at the command of *Invert*.
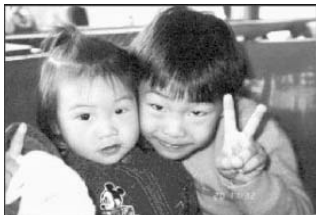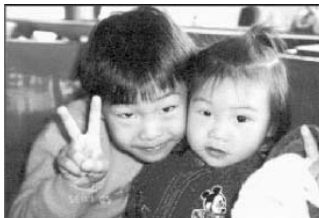
Original

After Invert

6.7 MIRROR

 Click on the **Mirror** button to reverse the image (create a mirror image).

Mirror function is off

Mirror function is on

6.8 PREVIEW AUTO-AREA:

Clicking on the **Preview Auto-Area** button automatically crops the preview scan area to the previewed document. This will then be the cropping area for all of the scanned documents.

6.9 PAPER SIZE:

Select a size on the **Paper Size** list of frequently used scan sizes, or your current scan area to perform an immediate selection of your scan size.

```
Card - 4 x 2.5 in
Photo - 5 x 3.5 in
Photo - 3.5 x 5 in
Photo - 6 x 4 in
Photo - 4 x 6 in
B5 - 18.2 x 25.7 cm
A5 - 14.8 x 21.0 cm
A4 - 21.0 x 29.7 cm
Letter - 8.5 x 11 in
Legal - 8.5 x 14 in
Scanner Maximum
```
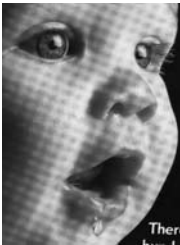
6.10 UNITS

The **Units** button indicates the measuring system that is in use(Inch, Cm, or Pixel).

6.11 DESCREEN

 Click on the **Descreen** button to access a drop-down menu that allows you to specify the type of document you are scanning in order to eliminate the moiré pattern* commonly found in printed matter. You can specify *Newspaper*, *Magazine*, or *Catalog*.

Before Descreen   After Descreen

*Moiré pattern—an undesirable pattern resulting from the incorrect screen angle of the overprinting halftone.

6.12 SHARPEN

 Click on the **Sharpen** button to access a drop-down menu that allows you to specify a level to sharpen the scanned image. You can specify a Sharpen setting of *Light*, *More*, *Heavy*, or *Extra Heavy*.

6.13 COLOR ADJUSTMENT

Click on the **Color Adjustment** button to enable the button for the **Hue**, **Saturation**, and **Lightness** feature.

NOTE: The **Advanced Settings** button must be enabled in order to use the **Hue**

Saturation, and **Lightness** feature.

6.14 AUTO LEVEL

Click on the **Auto Level** button to add shadow to reveal more details in an image.

6.15 ADVANCED SETTINGS

Click on the **Advanced Settings** button to view the advanced settings buttons for Highlight / Shadow, Curves, Color Balance, Hue / Saturation / Lightness, Color
Drop-out, and Custom Settings (six buttons on the right side of the TWAIN dialog box).

Highlight / Shadow

This feature is available when *8-Bit Gray*, *8-Bit Color*, or *24-Bit Color* is selected on the **Image Type** drop-down menu. Highlight refers the lightest point in a scanned image; shadow refers the darkest point.

Click on the **Highlight / Shadow** button to access the Highlight / Shadow Levels dialog box. You can type values in the text boxes or you can place the mouse cursor over the line, click the right mouse button, and drag the line to specify the values you want.
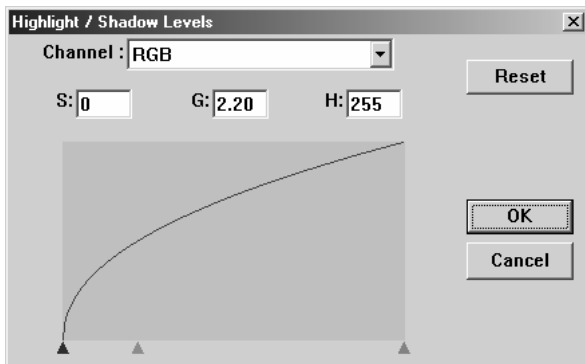

Use the **Highlight** and **Shadow** settings together to extend the range of color and reveal more details in a color image.

Curves

 When you select the **Curves** button, a dialog box appears that allows you to adjust the midtone of the image without losing details in the lightest and darkest areas.

Select the *Curve* or *Line* button, depending on if you want a curved or an angled setting. Place the mouse cursor over the line, click the right mouse button, and drag the line to set the curve you want.
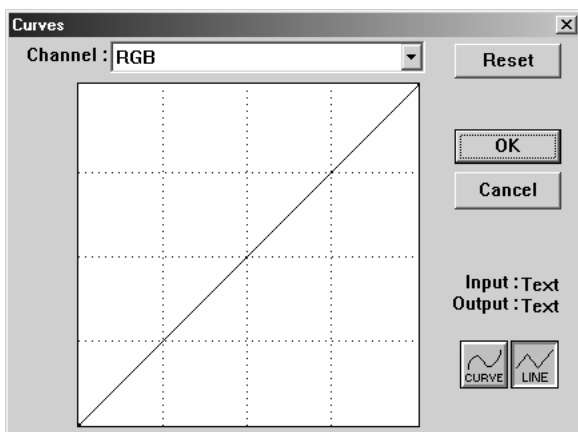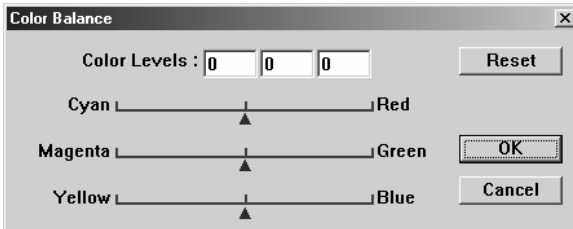
```
Color Balance
```

 When you select the **Color Balance** button, a dialog box appears that allows you to adjust the color of the image so that it comes close to that of the original.

The default parameters are used to adjust the image. You can type values in the *Color Levels* text boxes or you can drag the sliding arrow under the color.

Hue /Saturation /Lightness

 Click on this button to adjust the hue, saturation, and lightness of an image. This button is enabled when the **Color Adjustment** button is selected. You can type values in the text boxes or you can drag the sliding arrow under the each item.
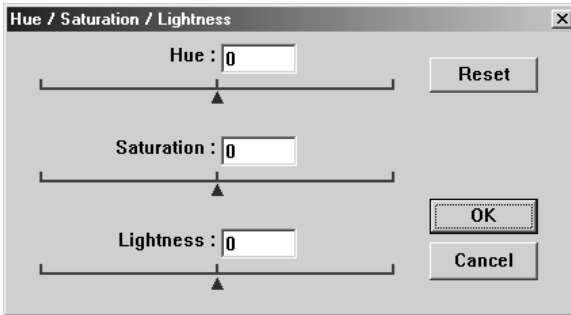
Hue—specify a value in the **Hue** box to adjust the hue up to 360° by clicking on the desired color on the color wheel or selecting a setting on the drop-down menu.

Note that the level of intensity for a color simultaneously changes when the hue adjustment is made.

Saturation—specify a value in the **Saturation** box to adjust the saturation level of the color. The level of saturation indicates whether the color is pale or rich.

Lightness—specify a value in the **Lightness** box to adjust the color strength.

NOTE: These options are available only when the

Color Adjustment button is enabled.

```
Color Drop-out
```

 This feature is available when *Black and White*, *Halftone*, or *8-Bit Gray* is selected on the **Image Type** drop-down menu. Click on the **Color Drop-out** button to access a dialog box that allows you to choose to remove the R (Red), G (Green), or B (Blue) color channel while scanning.
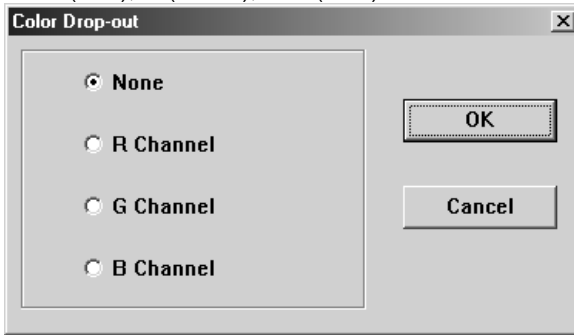
For example, if your image contains red text or a red background, choose **R channel** (red) to remove the red text or red background.

This feature is applicable only for black-and-white and grayscale images. Make sure that you have selected a black-and-white or grayscale image type (on the **Image Type** drop-down menu) when you use this option.

Tip

Increasing the brightness after removing one of the color channels will make the image clearer.
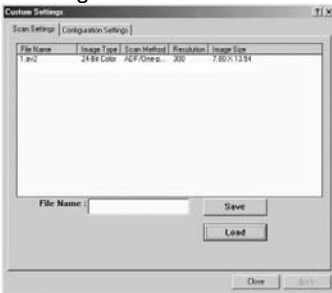
Custom Settings

 Click on the Custom Settings button to access a dialog box where you can save your scan settings and configuration settings. There are two tabs: Scan Settings and Configuration Settings.

Scan Settings

The Scan Settings tab allows you to save your scanning feature settings in a file, load an existing file, or delete an existing file.

Saving a scan settings file

Type a name for your settings in the **File Name** text box and click on the **Save** button. Your settings will be saved and the file name will appear in the list box.

Using a scan settings file

You can use an existing settings file. Right-click on the file name for the settings you want to use and click on the **Load** button. The settings in the file will automatically be specified in the scanning features dialog box.

Deleting a scan settings file

Right-click on a file name and press the **Delete** button on the computer keyboard to delete the file.

Configuration Settings

The Configuration Settings tab allows you to customize some special settings.

Energy Saving Mode—check the **Enable** box to enable energy savings. You can specify a time delay in the **Minutes** box. Click on the **Apply** button to save the changes.

Hint Setting—check the **Show Hints** box if you want to have flags that show the name of an item appear when you place the mouse cursor on an item in the dialog box. Click on the **Apply** button to save the changes.

6.16 MISCELLANEOUS

Width : Shows the current image width.

Height: Shows the current image height.

Size: Shows the current file size of the scanned image.

Lock scale

Click on this button to fix the output width and height despite the selected scan size.

The scale value automatically changes when you apply this option and simultaneously resize the selected area.

Information

Click on the Information button to access a window that gives you information about the scanner and driver.

Preview: Click on the **Preview** button to scan a document so you can review the scanned image. This allows you to specify an area to be scanned and any scanning feature settings to be used for future scans. When a scanning feature is changed and applied, the Preview image is updated for a real-time view of the change.
You can define the area to be scanned by dragging the cursor lines with the mouse.

Zoom view: Click on the **Zoom view** button to preview a selected area.

Scan: Click on the **Scan** button to scan the area with the specified parameters.

You can define the area to be scanned by dragging the cursor lines with the mouse.

Exit: Click on the **Exit** button to cancel the current job.
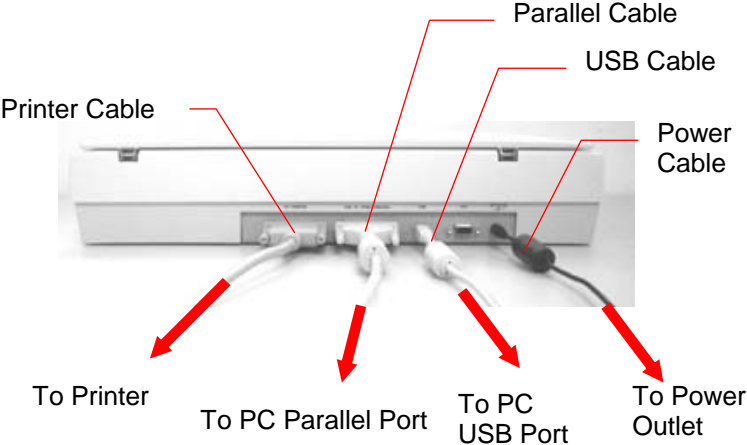
6.17 PRINTING

Parallel Cable

USB Cable

Printer Cable

Power Cable

To Printer

To PC Parallel Port

To PC USB Port

To Power Outlet

Figure 5.1 DS610CU Cable Connection

Caution:

 **Do not scan and print at the same time.**

7.   MAINTENANCE

Cleaning:

The DS610CU is designed to be maintenance-free. However, it still needs to be cleaned occasionally to ensure optimum image quality and performance.

Procedure

1.   Open the document cover as shown in Figure 6-1.
2.   Dip a soft clean cloth with isopropyl alcohol (95%).
3.   Gently wipe the document glass and the white sheet beneath the document cover to remove the dust or any toner particles.
4.   Close the document cover. The DS610CU is now ready for use.
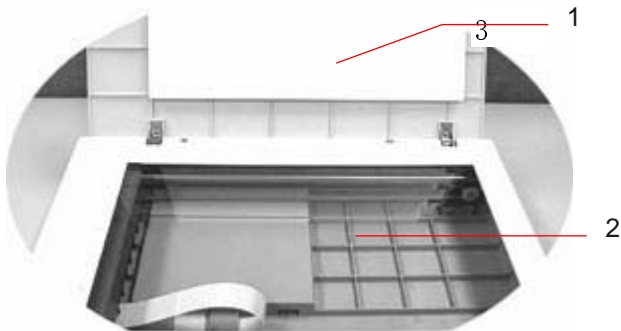
1.   Document Cover
2.   Document Glass

Figure 6-1 Cleaning

8.   TROUBLESHOOTING

If you have any operational problem, please refer to the following troubleshooting hints.

8.1   QUESTIONS AND ANSWERS

Question: Why does the scanned image always come out to be too dark?

Answer: 1) Modify the Gamma setting to 1.8 for your monitor and, when printing, set Gamma to 2.2 for your printer. 2) Use the Brightness setting of the TWAIN user interface to get a brighter image.

Question: The printer does not print the documents. Why?

Answer: Pass-through printing may pose a problem for some printers. It is suggested to add a second printer card for printing purpose, or you may call your authorized local dealer for further support.

Question: Why my GDI printer does not work with the DS610CU?

Answer: Disable the *Auto Scan* function in the application, then your printer will function in normal working condition.

Question: Why some parallel port devices and software's keypro do not work with the DS610CU?

Answer: The DS610CU do support pass-through printing, but the pass-through printing may not work if you connect the parallel port with devices other than printer. Therefore, if you would like to connect some parallel port devices other than printer, please do not connect them to the same parallel port that the DS610CU currently uses. It is suggested to use other parallel ports to connect these devices or keypro. For instance, you can connect the DS610CU to LPT1, and connect other parallel port devices to LPT2. Or you can add a data switch to avoid the problem.

8.2 TECHNICAL SERVICE

Technical support for scanner is provided at the Technical Assistance Centers. Before you contact us, please prepare the following information for a quick solution:

- Scanner serial & revision number (located on the bottom of the scanner);
- Hardware configuration (e.g., your host CPU type, RAM size, free disk space, display card, interface card);
- The name and version of your scanning software application;
- The version of your scanner driver.
- The model name of your printer.

AVISION LABS INC.

6815 Mowry Ave. Newark CA 94560, USA
TEL: +1 (510) 739-2369
FAX: +1 (510) 739-6060
Web Site: http://www.avision.com
E-mail: support@avision-labs.com

AVISION INC.

No. 20 Creation Rd. 1, Science-Based Industrial Park,
Hsinchu 300, Taiwan, R.O.C.
TEL: +886 (3) 578-2388
FAX: +886 (3) 577-7017
Web Site: http://www.avision.com.tw
E-mail: service@avision.com.tw

9.   SPECIFICATIONS

DS610CU specification

Optical Resolution   600x600dpi

Enhanced Resolution   9600x9600dpi

Copy Area   Max. 8.5"x 14.0" (Legal size)

Copy Features   Zooming from 25%~400%

Scan Interface   USB

Printer Interface   IEEE 1284
                                            ECP/SPP

Power Source   24V DC

Power Consumption   < 20 W

Physical Dimension   Flatbed unit:476 x 356 x 91 mm
                                           ADF unit: 446.5x201x88 mm

Weight: Flatbed unit: 4.3 kg (9.5 lbs)
                                            ADF unit: 1.4kg(3.1 lbs)

ADF Spec.

Speed	10 PPM (page per minute) (mono mode)
Paper tray capacity	25 pages
Document size	Max: Legal size (8.5" x 14")
	Min: 4.5" x 5.5"
Document thickness	0.002 "~ 0.006"

EC Declaration of Conformity

According to EN55022 and EN55024

Manufacturer's Name: Inc.

Manufacturer's Address: 1 Magnum Pass
                            Mobile, AL 36618

declare that the product

Model Number :   DS610CU

conforms to the following Product Specifications:

Emission: EN 50081-1
                          EN 55022
                          EN 61000-3-2
                          EN 61000-3-3

Immunity:
                          EN 55024
                          IEC 61000-4-2
                          IEC 61000-4-3
                          IEC 61000-4-4
                          IEC 61000-4-5
                          IEC 61000-4-6
                          IEC 61000-4-8
                          IEC 61000-4-11

10. DS610CU AUTOMATIC DOCUMENT FEEDER (ADF) USER'S GUIDE

The DS610CU Automatic Document Feeder (ADF) is a convenient addition to your current DS610CU. With the ADF, you can automatically copy or scan up to 25 pages at a time.

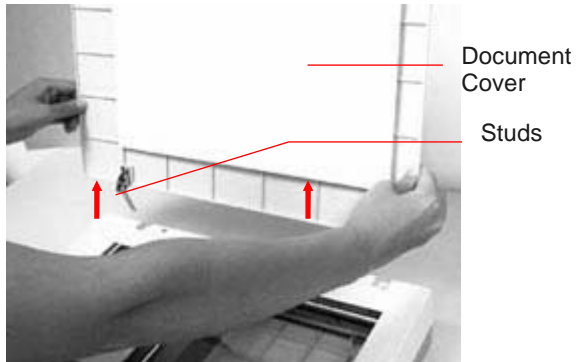## 10.1 INSTALLING THE ADF

10.1.1 UNPACK THE ADF

1. ADF Document Cover
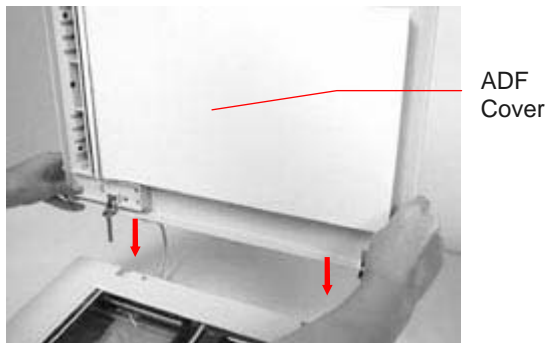
2. ADF Paper Tray

3. ADF Paper Support
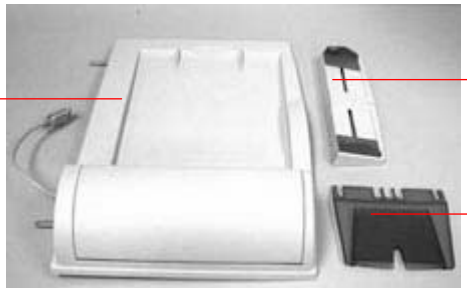
10.1.2 INSTALLING THE ADF

1. Turn off your DS610CU. Lock the scanning unit.
2. Disconnect the power cable.
3. Remove the document cover by opening the cover and lifting the studs from the hinge holes at the rear of the DS610CU.

Document Cover

Studs

*Note: Please store the document cover on a flat surface in a safe place.*

4. Hold the ADF document cover and insert its studs to the hinge holes at the rear of the DS610CU.

ADF Cover

5. Insert the notched corners of the ADF Paper Support to the clip-joints on the ADF Paper Tray.

Paper Tray
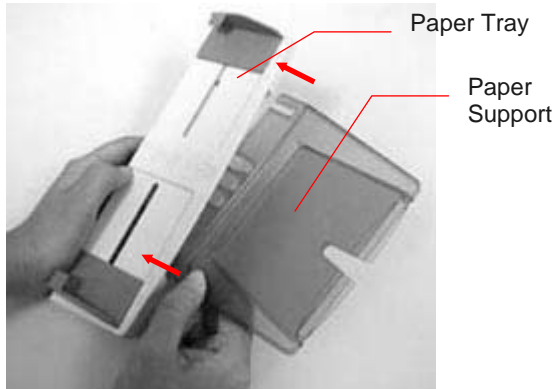
Paper
Support

6. Insert the notched corners of the ADF Paper Tray into the clip-joints on the ADF document cover.
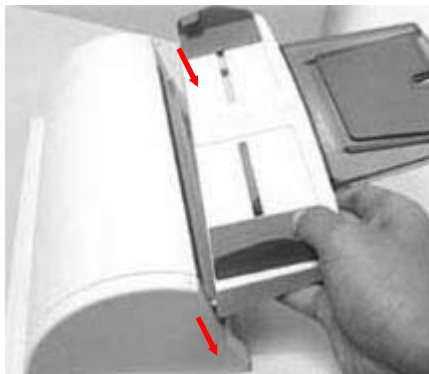
10.1.3 UNLOCKING THE DS610CU

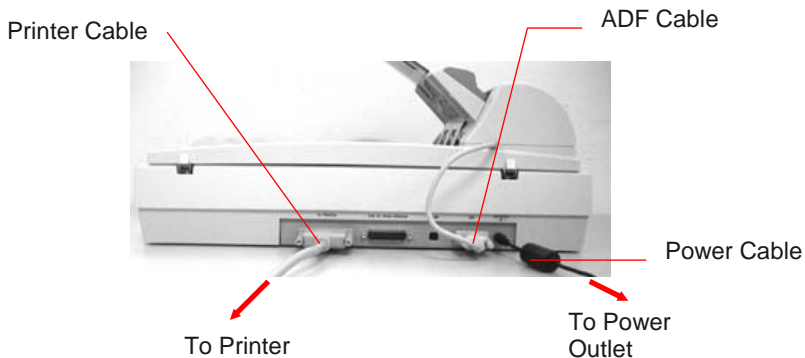Slide the Lock Switch on the bottom of the DS610CU to unlock the scanning unit.

1. "Shipping" Position   2. "Use" Position

10.1.4 CONNECTING THE CABLES

10.1.4.1 Connecting DS610CU to work as a Copier

Connect the ADF cable, the power cable, and the printer cable (not included) respectively.

Printer Cable

ADF Cable

Power Cable

To Printer

To Power
Outlet

10.1.4.2 Connecting DS610CU to work as a Scanner

Connect the ADF cable, the power cable, the included USB cable for connection to the computer, and the included parallel printer cable respectively.
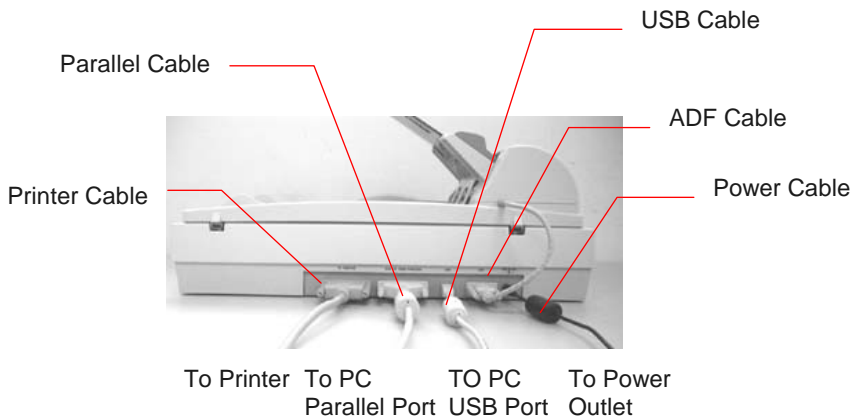
10.2 USING THE ADF

10.2.1 FANNING PAPER BEFORE USAGE

Standard paper should be fed easily.   To prevent occasional paper jams when automatically feeding multi-page documents, fan the paper before loading.
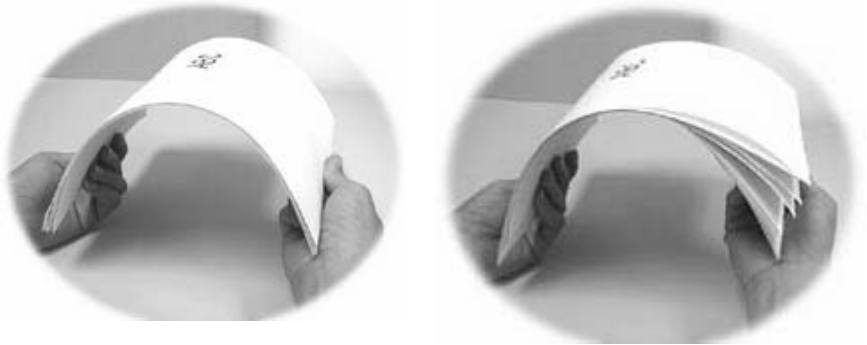

Paper which can not be properly fed by the ADF:

- Paper with clip or staple attached;
- Paper with ink not totally dry;
- Paper with inconsistent thickness, such as envelopes;
- Paper with wrinkles, curls, folds or tears;
- Coated paper;
- Carbonless paper;
- Paper narrower than 4.5" or wider than 8.5"; Shorter than 5" or longer than 14"
- Paper thinner than 0.07mm; thicker than 0.15mm
- Items other than papers, such as cloth, metal or OHP film;
- Notched paper;
- Paper with an odd (non-rectangular) shape;

Please use the flatbed to copy or scan documents that cannot be fed by the ADF.

10.2.2 LOADING THE PAPER

Place your document with the text face up and make the top of the page to the left side as shown below.

Feed Direction

Top of Page
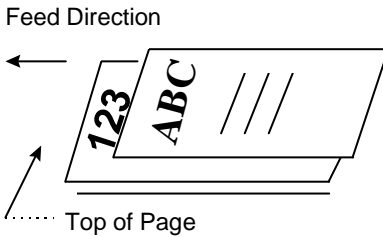
10.2.3 STARTING YOUR FIRST COPY

10.2.3.1 Copying Multi-page Document

After the installation of the ADF unit is completed and you have properly placed a stack of your document on the ADF Paper Tray, just a touch of the Copy button on the Control Panel of DS610CU, then your task is done in a minute.

Control Panel

Copy Button
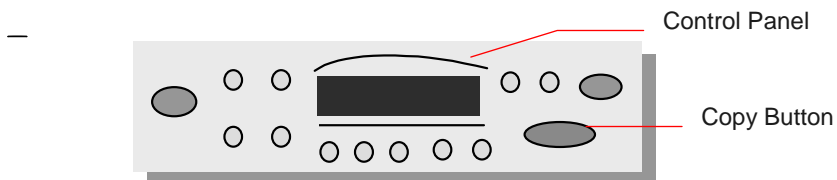
To apply copy features displayed on the Control Panel, please refer to the previous section, *Making Copies with Copy Features*.

10.2.3.2 Scanning Multi-page Document

1. Place your document with the text face up on the ADF Paper Tray.
2. Start your image editing application by clicking the Start button on the task bar and select the name of the application.
3. Choose Acquire from the File menu and click Select TWAIN Source, for example, please select DS610CU V.X.xx. (The command to open the TWAIN source may vary due to different application. Please refer to the user manual of your TWAIN application.)
4. In a minute, the TWAIN window will be displayed.
5. Press the Source button to switch the scanning source to Simplex/Multi-page at the TWAIN window.
6. Press the Preview button to get an initial scanned image at a low resolution to allocate your selected scan area.
7. Open the ADF document cover to take out the document and then position it on the first page of the document on the ADF Paper Tray.
8. Finally press the Scan button on the bottom of TWAIN window or the Scan button on the Control Panel.
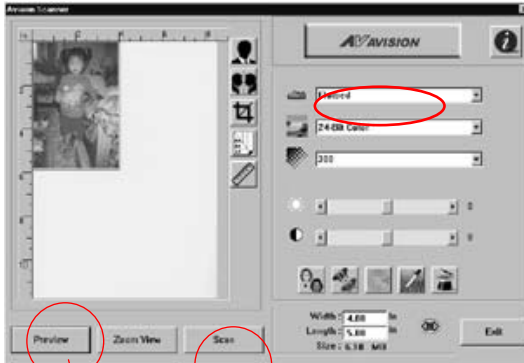
The Scan Button

The Preview Button

10.3 MAINTAINING THE ADF

10.3.1 CLEANING THE ADF

The DS610CU is designed to be maintenance free. However, it still needs to be cleaned occasionally to ensure optimum image quality and performance.

From time to time the pad assembly and feeding rollers may become contaminated with ink, toner particles or paper dust. In this case the DS610CU may not feed documents smoothly. If this occurs please follow the cleaning procedures to return your Scanner to its original state.

The cleaning procedures:

1.   Moisten a cotton swab with isopropyl alcohol (95%).
2.   Gently open the ADF front cover. Wipe the feeding rollers by moving the swab from side to side. Rotate the rollers forward with your finger and repeat the above cleaning procedures until the rollers are clean. Be careful not to snag or damage the pick springs.
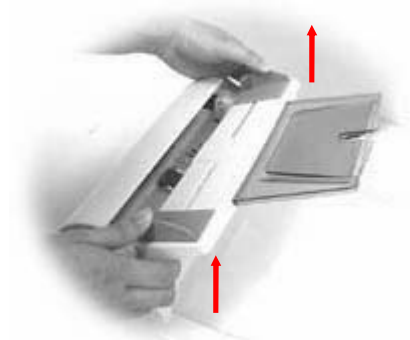
3. Wipe the pad in the direction from top to bottom. Be careful not to hook the pick springs.
4. Close the ADF unit. Your DS610CU is now ready for use.

Feeding Roller

ADF Pad
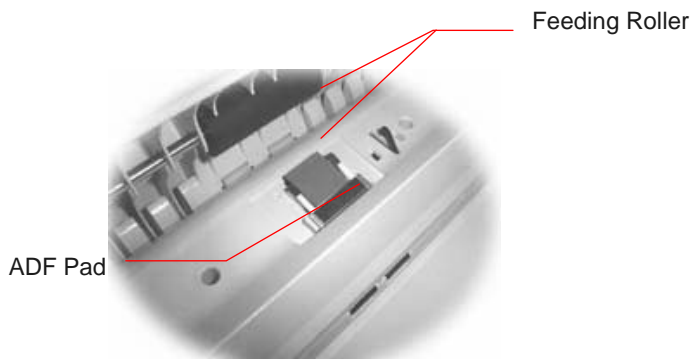
10.3.2 REPLACING THE ADF SNAP-IN PAD MODULE

After scanning approximately 20,000 pages through the ADF, the pad may be worn out and you may experience problems with document feeding. In this case, it is highly recommended to replace the pad module with a new one. For ordering the pad module, please consult your nearest dealer and follow the procedure below to replace it.

Disassembling Procedure

1.   Gently open the ADF front cover to the left.

2.   Press both arms of the ADF snap-in pad module inwardly with your two fingers to pull out the ADF snap-in pad module.
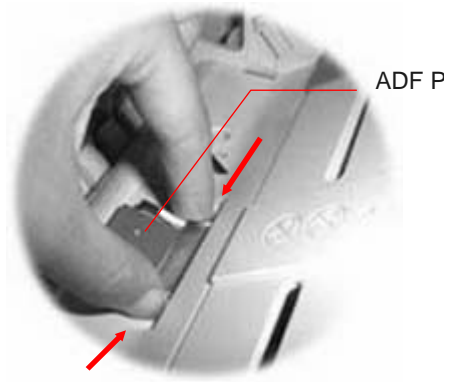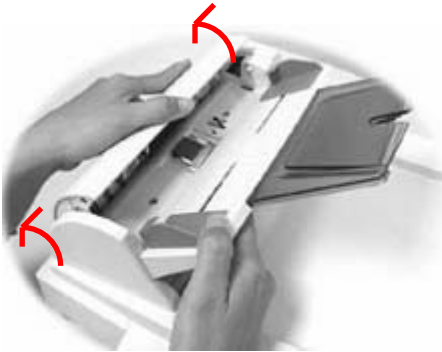
ADF P

Assembling Procedure

1. Take out the ADF pad module from the box.

2. Press both arms of the ADF snap-in pad module inwardly with your two fingers

3. Place it into the holes until it snaps into place.

10.4 HOW TO CLEAR THE PAPER JAM

In the event of a paper jam, follow the procedures below to remove the paper:

1. Turn the DS610CU off by disconnecting the power cable.

2. Gently open the ADF front cover to the left.

3. Carefully pull the paper out of the ADF unit.

4. Close the ADF front cover.

5. Turn on the DS610CU by reconnecting the power cable. Your DS610CU is now ready to use.