QMS SC-200

User's Manual

QMS, Inc

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The manufacturer shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

FCC Radio Frequency Interference Statement

This equipment has been tested and found to comply with the limits for a Class A 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.

Responsible Party: **QMS, Inc.**
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Table of Contents

1. INTRODUCTION

Congratulations on your purchase of QMS SC-200.

The QMS SC-200 produces better printing quality and is free from maintenance, compared with traditional copy machines. Its high printing quality, maintenance-free operation and affordability make QMS SC-200 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 QMS SC-200 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.
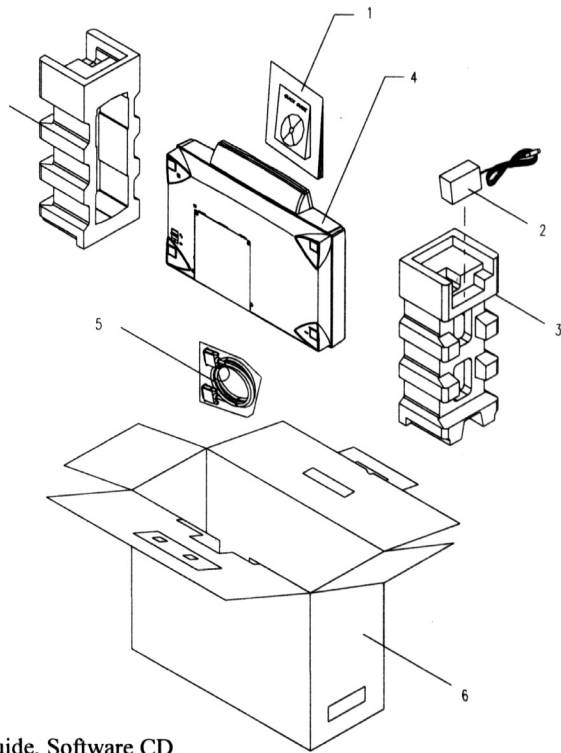
1. Quick Guide, Software CD
2. Power Adapter
3. Cushion
4. QMS SC-200 main unit
5. QMS SC-200 Cable
6. Carton

Figure 1-1 QMS SC-200 packing

Package Contents
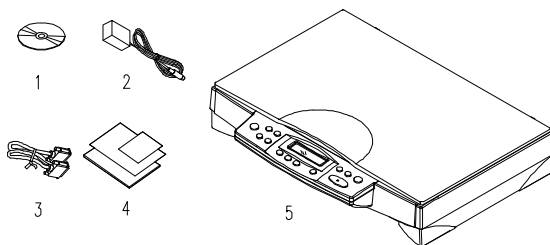
1. Software CD
2. Power Adapter
3. QMS SC-200 Cable
4. Quick Installation Guide
5. QMS SC-200 main unit

2. QMS SC-200 INSTALLATION

2.1 PRECAUTIONS

- Keep the QMS SC-200 out of direct sunlight. Direct exposure to the sun or excessive heat may cause damage to the unit.
- Do not install the QMS SC-200 in a humid or dusty place.
- Be sure to use the proper AC power source.
- Place the QMS SC-200 securely on an even, flat surface. Tilted or uneven surfaces may cause mechanical or paper-feeding problems.
- Retain the QMS SC-200 box and packing materials for shipping purposes.

2.2 UNLOCKING THE QMS SC-200

To protect the scanning head from damage during shipment, the QMS SC-200 is designed with a lock switch beneath the main unit. Therefore, before using the QMS SC-200, it is required to unlock QMS SC-200 by moving the lock switch to the *Use* position.(See Figure 2-1)
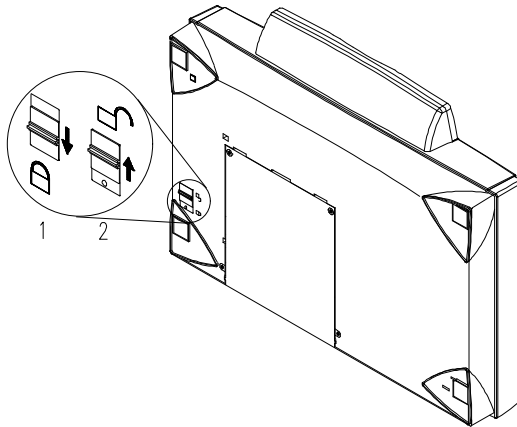
1. "Shipping" Position   2. "Use" Position

Figure 2-1 Unlocking the QMS SC-200

2.3   CONNECTING THE CABLE

2.3.1   CONNECTING QMS SC-200 TO WORK AS A COPIER

Connect the power cable and signal cable as shown below.

1. QMS SC-200 main unit
2. "To Printer" port
3. Printer Cable
4. Power Jack
5. Power Adapter
6. Printer
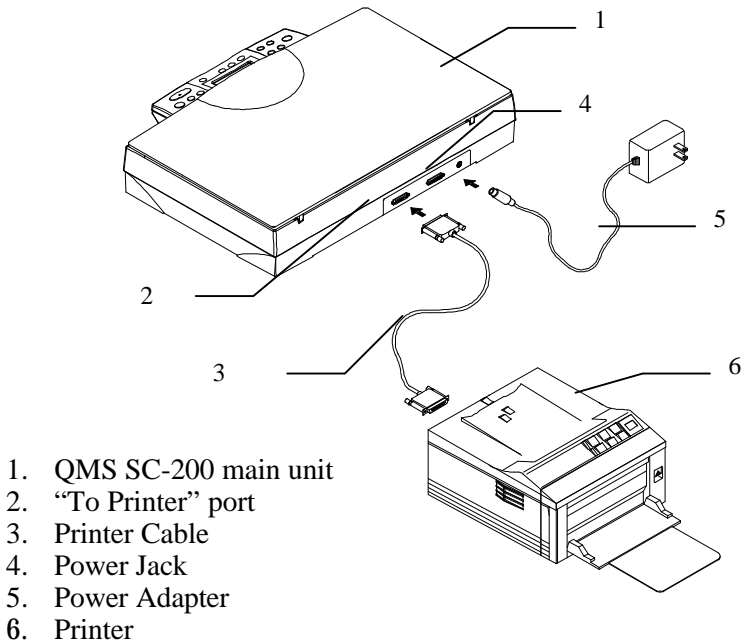
Figure 2-2 Connect QMS SC-200 to a printer

2.3.2 CONNECTING QMS SC-200 TO WORK AS A SCANNER
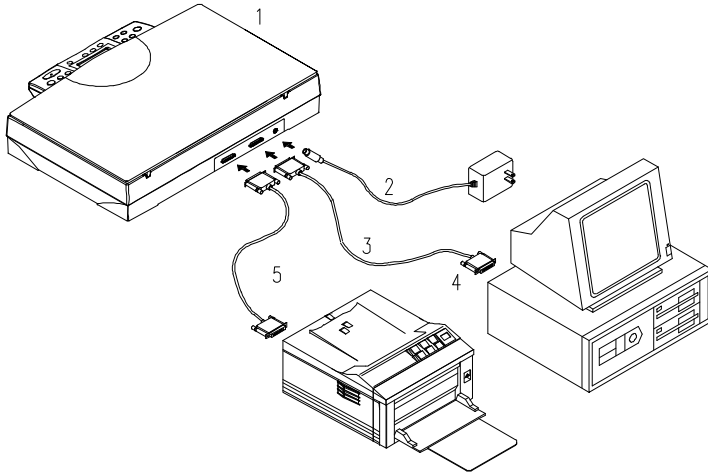
1. QMS SC-200 main unit
2. Power Adapter
3. QMS SC-200 Cable
4. PC Parallel Port
5. Printer Cable

Figure 2-3 QMS SC-200 Cable Connection

2.4   DOCUMENT PLACEMENT

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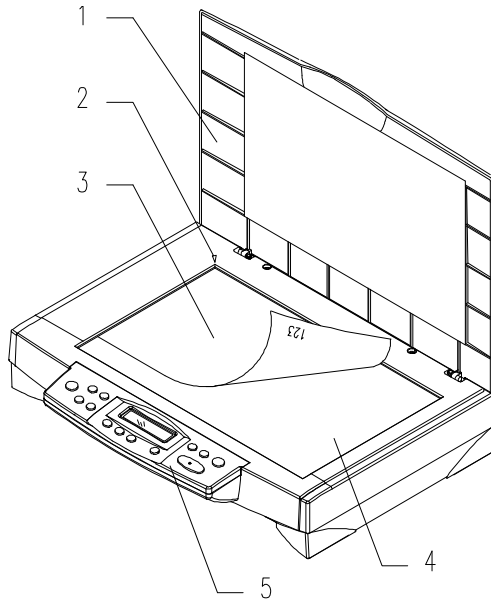
1. Document Cover
2. Home Position Mark
3. Document
4. Document Glass
5. Control Panel

Figure 2.4 Document Placement

3. USING QMS SC-200 AS A COPIER

3.1 THE CONTROL PANEL
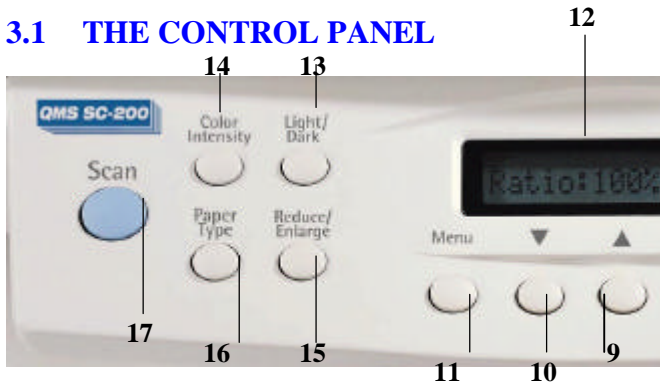
1. **Copy(Color):** Press to start a color copy.

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

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

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

5. **Document Type:** Press to respectively concentrate on photo, text, or auto copying.

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

7. **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.

8. **Select:** Press to select your desired setting. (A star sign, "*", appearing in the right-hand side indicates the latest selection you make .)

9. **▲ :** Go to the next item displayed in the Message Display window or increase the value of the numeric entries.

10. **▼ :** Go to the previous item displayed in the Message Display window or decrease the value of the numeric entries.

11. **Menu:** Select a paper size, a printer type, a printer language, an image pattern, or the Mirror function.
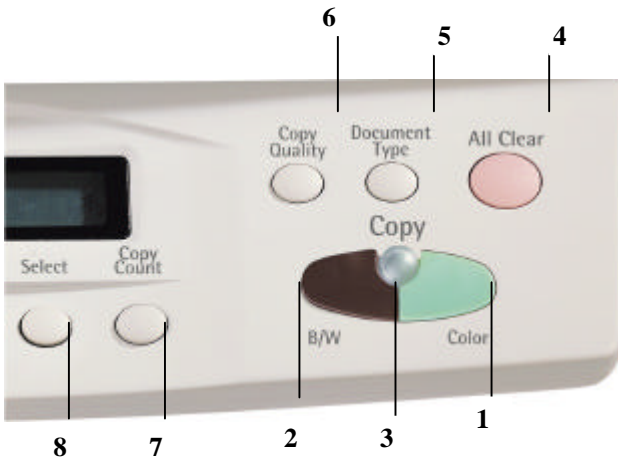
12. **Message Display window:** Display current settings.

13. **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.

14. **Color Intensity:** Intensify the image copied or scanned.
   Increase level of color intensity by the (▲) button.
   Decrease level of color intensity by the (▼) button.

15. **Reduce/Enlarge:** Reduce, enlarge or auto zoom your original document.

   Press to select the preset ratios: 100%, 115%, 122%, 141%, 200%, 400%, Auto, 25%, 50%, and 86%.

   Choose your desired ratio or adjust the ratio in 1% increment by the (▲) or (▼) button.

   Auto: Automatically scale your original document to fit your output paper.

16. **Paper Type:** Press to select one of the preset paper types of your original including Plain paper, Transparency, and Glossy.

17. **Scan:** Press to start the scanning-assistant application - **Quick Selector** or other applications.

Tips:

To use other settings than the one displayed in the Message Display window, simply repress the button of that setting to select other options. (For example, when you choose paper size with the Paper Size button, if the Message Display window shows A4 and you prefer Letter, you can just press the Paper Size button again to select it.)

Note:

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

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

IMPORTANT!

PRINTER MEMORY

To make good use of QMS SC-200, it is recommended to install at least 4 MB of memory in your printer. If you want to print your document using Quality mode - 600 dpi as your Copy Quality mode, you 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	4MB
	Legal Size	8 MB
Quality	Letter Size	16MB
	Legal Size	20MB

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.

3.2 BEFORE MAKING COPIES

QMS SC-200 provides three paper sizes, A4, letter, and legal. Check or select the paper size to match your paper supply to ensure smooth operations.

To check or select paper size,

1. Press the Paper Size button. The Message window displays "Letter   *" (default).   If your current paper supply is Letter size, you can skip the following steps. Otherwise, please do the following steps.
2. Repress the Paper Size button. The Message window displays "A4   ".

   - If your current paper supply is letter size, please press the Select button. The Message window now displays "A4 *".   This means you have successfully changed the default size to A4.
   - If legal size is your current paper supply, please repress the Paper Size button. The Message window displays "Legal   ".   Press the Select button to change the default size to Legal.

➢ **Note:**

Each time when you press the "All Clear"button on the QMS SC-200, the QMS SC-200 automatically returns to the factory default setting. As a result, you may have to reconfigure the factory default setting to custom default settings when you clear the settings on the QMS SC-200.

3.3 MAKING SIMPLE COPIES

The Operating Steps:

1. Place your original face down on the document glass.
2. Press the Copy button. The Message window displays "Copy…" and the Ready LED is flashing.
3. Within a few seconds, 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 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 a normal copier, the QMS SC-200 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%.
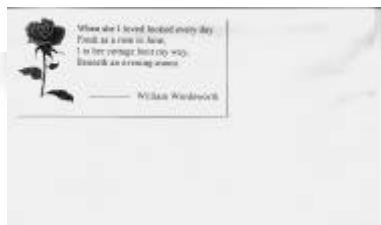
3.4.3 AUTO ZOOMING YOUR ORIGINAL

Auto Zoom is a convenient function to resize your original without giving additional thought to whether the magnification or reduction will be larger than the existing paper size set on the SC-200.

The Operating Steps:

1. Repeat the above Enlargement Step 1 & 2.
2. Repress the "Enlarge/Reduce" button until the Message Window displays "Auto ".
3. Press the Copy button. The printout shows your original automatically scales to your paper size.

Before Auto Zoom (Ratio:100%)   After Auto Zoom
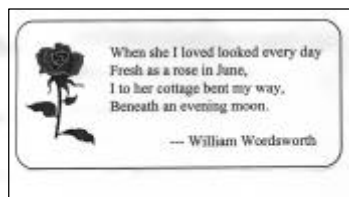
3.4.4 CHANGING YOUR COPY DENSITY

Copy density refers to the degree of darkness which the QMS SC-200 has reproduced. There are times when your original is unsatisfactorily darker or lighter. It is of great advantage to use the density feature to compensate the 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.

3.4.5 CHANGING COLOR INTENSITY

Color intensity refers to the saturation of color reproduced by SC-200 . There are times when the saturation of the original image doesn't fit your preference. By making a great use of this function, you could get the most optimal color preference desired.

The Operating Steps:

1. Place your original face-down on the document glass.
2. Press the "Color Intensity" button. The Message Window displays the default saturation.
3. Repress the "Color Intensity" 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.

3.4.6 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. After a few seconds, you have 3 copies from your printer.

➢ **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.

3.4.7 ENHANCING YOUR COPY QUALITY

The QMS SC-200 provides "Quality mode" option to improve your copy quality particularly when your original comes with a photo in it. Quality mode allows your printout to impressively reveals more image(photo) details.

The Operating Steps:

1. Place your document face-down on the document glass.
2. Press the "Copy Quality" button. The Message Window displays "Normal mode".
3. Repress the "Copy 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 v.s. QMS SC-200 in quality mode.

Make copies with a	Make copies with
normal copier	a SC-200 in quality mode

➢ **Note:**

- To proceed copies using quality mode, make sure your printer has at least 4M memory as this requires more processing time.

3.4.8 FOCUS ON PHOTO COPY, TEXT COPY, OR MIXED PHOTO & TEXT COPY

If the content in the original is occupied by photo images only or by photo images with a little text on it, press to select the Photo function to get a photo-concentrated image copy. On the contrary, the Text function helps you get a text-concentrated copy. 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 utilize the Auto function from Document Type 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 "Document Type" button to select any one of these 3 document-type functions, called Photo, Text, and Auto.
3. Press the Copy button, and the printout shows the best reproduction with the document-type concentration selected.

3.4.9 MAKING COPIES OF A 3D OBJECT

The QMS SC-200 solution improves your copy reproduction significantly and even makes a 3D object copies amazingly clear.

The Operating Steps:

1. Place your 3D object on the document glass.
2. Press the "Copy Quality" button and the Message Window displays "Normal mode".
3. Repress the "Copy 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 amazing 3D copy
using the QMS SC-200

3.4.10 AUTOMATIC POWER SAVING

The QMS SC-200 features automatic power saving without unplugging the power cable. If you have not used the SC-200 over an hour, it automatically turns into power saving status. At this moment, the Message Window displays "Power Saving…" while the Ready LED is flashing.

To resume the ready status, press any one of the button 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.

4. USING QMS SC-200 AS A SCANNER

To run QMS SC-200 at optimum speed, the following minimum requirements are recommended:

- IBM compatible PC 386/486, Pentium or later;
- Microsoft Windows 95/98, Windows NT;
- One printer port available :EPP(enhanced parallel port);
- 20 Megabytes of available hard disk space for installation;
- 16 Megabytes of RAM (32 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 QMS SC-200 driver are as follows:

1. Start Windows 98,Windows 95 ,or NT
2. Insert software CD into your CD ROM drive.

3. Press the Start button, choose RUN, type d:\driver\SC-200.exe (d: the CD-ROM drive in use), and then click O.K. (See Figure 3-1,3-2)

4. Follow the on-screen instructions to complete the installation.
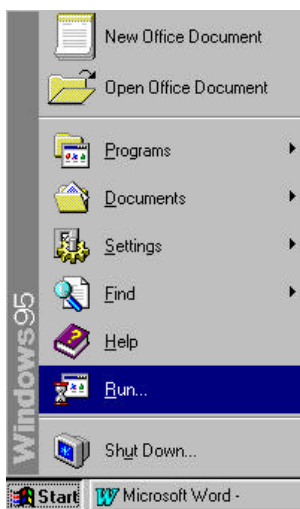
Fig. 3.1
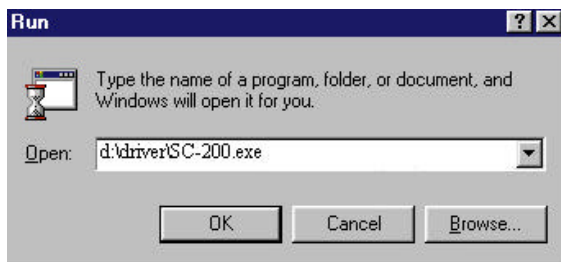
Fig. 3.2

4.2   UNINSTALL THE QMS SC-200 DRIVER

You can uninstall the QMS SC-200 driver by selecting
Start>Programs>QMS SC-200 and clicking the
Uninstall driver icon from QMS SC-200 group.

5. SCANNER OPERATION & DOCUMENT PRINTING

Scanning Images from within an Application (TWAIN)

1. Open your application and choose *Select Source* from the File menu. If the *Select Source* menu options are not available from the File menu, see the user guide of your application to learn how the TWAIN link is used.

2. A dialog box appears containing the different TWAIN sources that you can choose to bring an image into your application.

3. Select *SC-200 /32 Vx.xx* as the source.
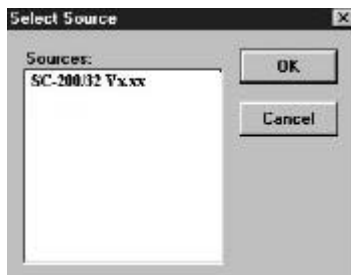
4. When you have used the dialog box to select a different source, you will need to select *QMS SC-200* as the source again before you can reuse the QMS SC-200.

5. Place the image to be scanned face down on the glass.

6. From the File menu, select *Acquire*.
7. The TWAIN user interface will pop up on the screen. Click on the ***Preview*** or ***Scan*** button to get the image.

The TWAIN user interface:
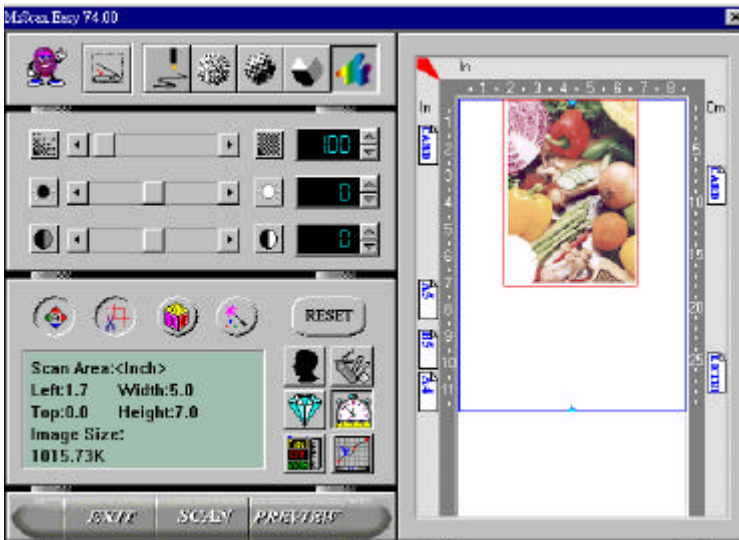
5.1   IMAGE TYPE

The QMS SC-200 provides five image types as explained below:
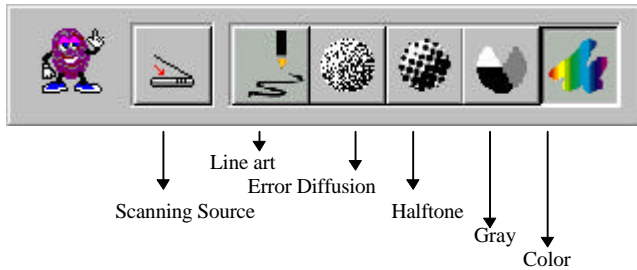
Scanning Source

> Two scanning sources are provided- flatbed as well as transparency.

Line art

> Line art presents the image in black and white only and there are no intermediate shades of gray in between.

Halftone

> In addition to the black and white display, Halftone can present a somehow gray shade of image by using different size of dots.

Error Diffusion

> While taking up but a minimum storage space, error diffusion gives good image texture and excellent image details.

Gray (Internal 4096 levels of gray scale)

> 12-bit Gray presents a 4096 shades of gray in an image.

Color (Internal 68.7 billion colors)

> The 36-bit True Color internally presents 68.7 billion-color levels with much more tonal range and color-image details.

5.2   SCANNING PARAMETERS & IMAGE CONTROL

Resolution

Brightness

Contrast
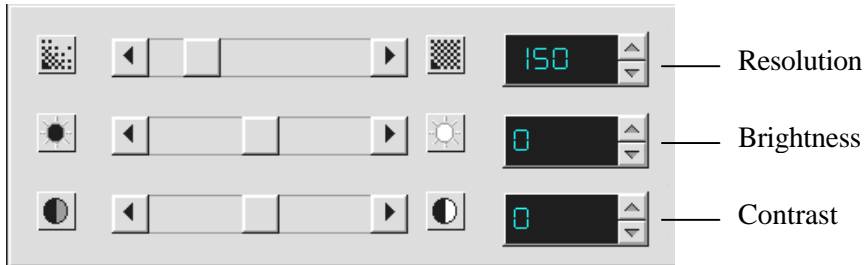
Resolution: The number of dpi (dots per inch) that the QMS
SC-200 uses for a *scan*. Usually the greater the
number, the higher the resolution. Yet up to a
certain level, the resolution will not be visually
increased but the disk space will be increased.

Brightness: Adjusts the lightness or darkness of an image.
The higher the value, the brighter the image.

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

Auto Level   Auto Area   Descreen   Color Matching   Reset

RESET

Scan Area:<Inch>
Left:1.7   Width:5.0
Top:0.0   Height:7.0
Image Size:
1015.73K

Invert
Advance_Settings
Quality Mode
Speed Mode
Pixel/Inch/Cm
Set Gamma

Image Information
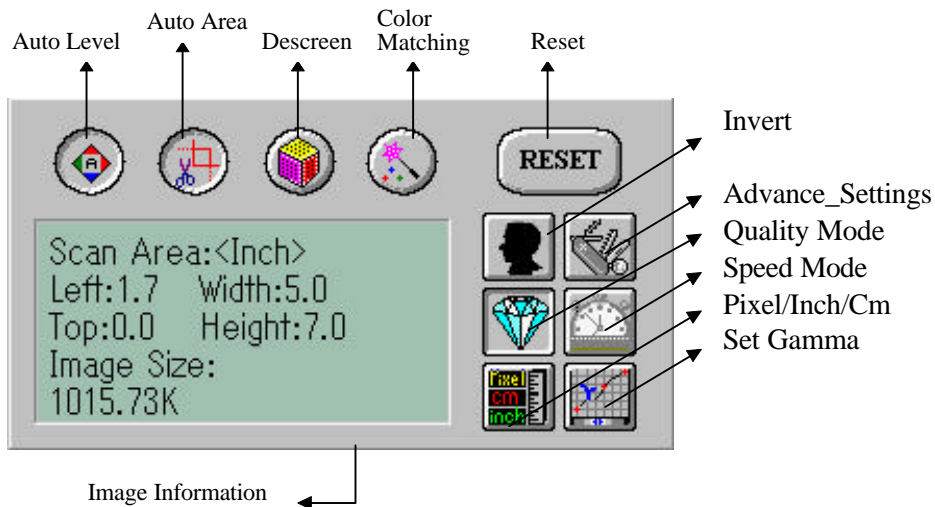
Auto Level: Optimizes the scanned image.

Auto Area: Automatically sets the whole document as the scan area, no matter what its size.

Descreen: Eliminates the Moire patterns commonly found in printed matter.

Before descreen   **After descreen**

Color Matching:

Adjusts the color quality of the image to make it close to the original. This function uses default parameters to adjust the image.

Reset: Resets the scanning parameters you set.

Invert: 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*.

Advance Settings:

The Advance Settings provide several functions such as Dynamic Background Removal and Color Drop-out.These functions are briefly explained as below:

1). DBR(Dynamic Background Removal) - Apply exclusively when you need to scan as an Lineart image . The DBR function incorporates a few enhanced options to allow you to remove background color to sharpen your text or drawing.

Original(Color picture)   After applying DBR option
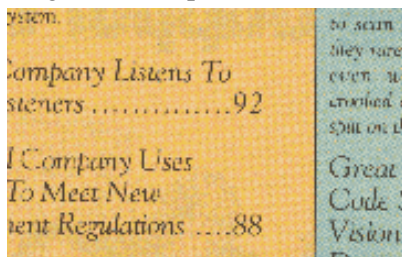
2). Color drop-out - Apply exclusively when you need to scan as a black and white image

The Color drop-out function allows you to remove one of the R(Red), G(Green), or B(Blue) color or to convert all the color data into Neutral Gray. For example, if you want to remove the text or background in blue color, simply check the Blue Channel then the text or background in blue color will be removed. On the other hand, if your original contains various color data, then check the Neutral Gray to retain all the color data in gray since removing either one of the red, green, or blue color will inadvertently affect the rest color data as every color contains different elements of each of the red, green, and blue channel. See the result below:

Your original with blue color background   After click the B(Blue) channel
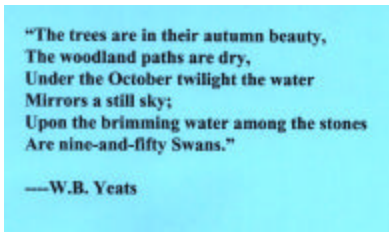
"The trees are in their autumn beauty,
The woodland paths are dry,
Under the October twilight the water
Mirrors a still sky;
Upon the brimming water among the stones
Are nine-and-fifty Swans."

----W.B. Yeats

"The trees are in their autumn beauty,
The woodland paths are dry,
Under the October twilight the water
Mirrors a still sky;
Upon the brimming water among the stones
Are nine-and-fifty Swans."

——W.B. Yeats

Your original with red watermark   After click the R(Red) channel

Marketing

ABC Inc. distributes and sells its product worldwide
through OEMs/ODMs, and distributors.
As of June 1999, ABC has employed over 21 well trained
marketing, sales, and support personnel.

To better serve its customers, ABC has assigned an
account manager for each of its OEM/ODM customers.
These account managers are responsible for effectively
coordinate the outstanding issues in sales, manufacturing,
or development and assure the status of each customer's
product is properly monitored. Our goal is to achieve and
maintain complete customer satisfaction.

Marketing

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To better serve its customers, ABC has assigned an
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These account managers are responsible for effectively
coordinating the outstanding issues in sales,
manufacturing, or development and assuring the status
of each customer's product is properly monitored. Our
goal is to achieve and maintain complete customer
satisfaction.

Quality/Speed Mode:

Users can select the mode to perform scanning
according to their own need. Select quality mode
scanning if your emphasis is on the quality of the
scanned image. Or you can select speed mode
scanning if you want to speed up the scanning
process.

Pixel/Inch/Cm:

Represents the different measuring systems to be
used in each scan.

Set Gamma: Adjusts the midtone of the image yet without losing details of the lightest and the darkest areas at the same time.

Image Information:
Gives related information of the scanned image.

5.3   SCANNING

Preview: Previews your image roughly and allocates the
                       area to be scanned.
Scan: Executes the scan action.
Exit: Cancels the current job.
Document Size: To designate the size of your document, just
                       click on its icon on the margin of the preview
                       window.

As shown in the figure below, in the Preview window, you can
define the area to be scanned by dragging the four cursor
auxiliary lines.

Document Size

Cursor Auxiliary
Lines

Preview Window
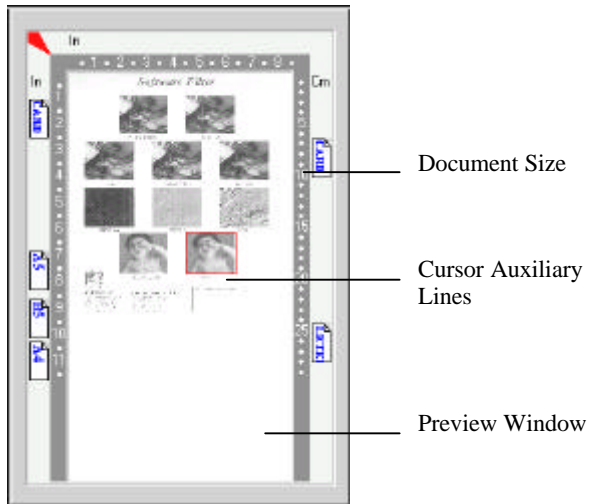
5.4   PRINTING

Connect the printer cable as shown below.
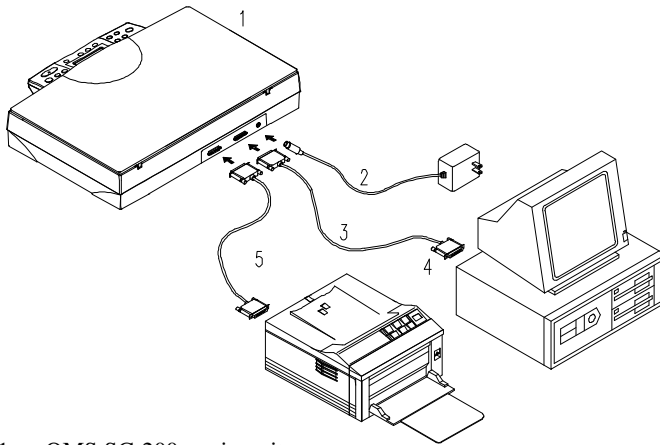
1.   QMS SC-200 main unit
2.   Power Adapter
3.   QMS SC-200 Cable
4.   PC Parallel port
5.   Printer Cable

Figure 5.1 QMS SC-200 Cable Connection

Caution:

1. **<u>Be sure to power on the QMS SC-200 if you want to do pass-through printing.</u>**
2. **<u>Do not scan and print at the same time.</u>**
3. If your PC does not support EPP mode or has pass-through compatibility problem, please contact your authorized local dealer for an EPP card or an additional interface card.

6. MAINTENANCE

Cleaning:

The QMS SC-200 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 QMS SC-200 is now ready for use.
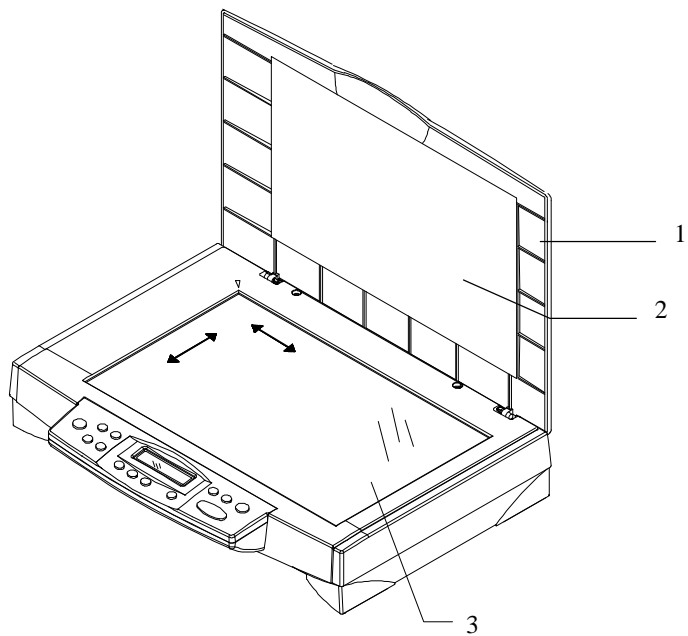
1. Document Cover
2. White Sheet
3. Document Glass

Figure 6-1 Cleaning

7. TROUBLESHOOTING

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

7.1 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 scanning speed of my QMS SC-200 is much slower than that of those installed at other computers. Can I speed it up?

Answer: Set you PC printer port to the EPP mode from BIOS setting.

Question: Why does my QMS SC-200 scan at a very low speed?

Answer: If you have installed *Works for Windows,* it will install Window Printing System (WPS) in your WIN.INI file. This will take up the printer port time remarkably. You can remove the WPS from your WIN.INI file, as follows:

From:

[MS Text Converters]

MSWorksWin=Works for Windows 2.0,C:\WINDOWS\MSAPPS\TEXTCONV\worksdos.cnwps
Works for Dos 2.0=Works for DOS 2.0 MSAPPS\TEXTCONV\workswin.comwps

To:

[MS Text Converters]

MSWorksWin=Works for Windows 2.0,C:\WINDOWS\MSAPPS\TEXTCONV\worksdos.cnv
Works for DOS 2.0=Works for DOS 2.0, C:\WINDOWS\MSAPPS\TEXTCONV\workswin.con

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: Does it take long for the QMS SC-200 to initialize itself ?

Answer: If your printer port supports SPP mode only, it takes about two minutes for the QMS SC-200 to initialize itself. If your printer port supports EPP mode, the initialization speed is much faster, about 20 seconds.

Question: Why sometimes pass-through printing does not work at all?

Answer: It may be that you fail to power on the QMS SC-200. When doing pass-through printing, please be sure to power on the QMS SC-200. Else, without power, the QMS SC-200 can not transfer the printing data/signals to the printer.

Question: Why my GDI printer does not work with the QMS SC-200?

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 QMS SC-200?

Answer: The QMS SC-200 do pass-through printing all right , 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 QMS SC-200 currently uses. It is suggested to use other parallel ports to connect these devices or keypro. For instance, you can connect the QMS SC-200 to LPT1, and connect other parallel port devices to LPT2. Or you can add a data switch to avoid the problem.

7.2   TECHNICAL SERVICE

Technical support for QMS scanner is provided at the QMS 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 brand and model name of your printer.

Corporate	**QMS, Inc.** 1 Magnum Pass Mobile, AL 36618 Phone: 334-633-4300 Fax: 334-633-4866
Product Information	Phone: 800-523-2696 Email: info@qms.com
QMS Technical Support	Phone: 877-778-2687 Fax: 334-633-3716 service@qms.com
QMS Service Dispatch: Contacts:	800-858-1597 800-762-8894

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QMS United Kingdom and Ireland	(+44) 1784-442255
QMS Netherlands and all unlisted countries	(+31) 346-551333
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QMS Japan

General Contact	(+81)-3 3779-9600
Fax	(+81)-3 3779-9650
Internet	http://www.qmsj.co.jp

8.　SPECIFICATIONS

<u>Preliminary QMS-200　Technical Specification</u>

Copier specifications:

Scan Type	**Flatbed**
Scan Resolution	**up to 600 x 600 dpi**
Print Resolution	**Normal: 300x300dpi/360x360dpi** **Quality: 600x600dpi/720x720dpi**
Print Area	**Max. 8.5"x 14.0" (Legal size)**
Zooming	**25% up to 400%(1% increment)** **with 10 pre-settings** **(100%, 115%, 122%, 141%,** **200%, 400%, 86%, 50%** **25% and Auto Zoom)**
Density Control	**7 levels density control** **(lighter/darker control)**
Color Intensity Control	**7 levels intensity control**
Background Removal	**Yes**
Display	**16-character LCD**

Printer Supported	**PCL, PostScript, GDI, Esc/p, and BJC capable printer**
Printer Interface	**IEEE 1284 (bi-directional) ECP/SPP**

Power Requirement

Power Source	**100 - 240V (International)**
Frequency	**50 - 60 Hz**
Power Supply	**Switching Adapter**
Power Consumption	**< 15 W**

Scan Accuracy :

1. Leading Edge	**< -1 ~ + 2mm**
2. Side Edge	**< -1 ~ +2mm**
3. Skew:	**< 1mm**
4. Magnification Rate Tolerance	
Total	**-1.5% ~ +1.5%**

Physical Dimension:

Width : 457mm (18")
Depth : 356 mm (14")
Height : 91 mm (3.6")

Weight: **3.7 kg (8.1 lbs)**

Environment

Operating	**10°C to 35 °C (50°F to 95 °F) 20% to 80% R.H.**
Storage	**- 20°C to 60 °C (-4°F to 140 °F) 10% to 90% R.H.**

Random Vibration
Unpacked non-op: **10-200Hz, 0.005 P.S.D.**
(G^2/Hz)

Package:	**5-200Hz, 0.015 P.S.D. -6dB/oct one hour in 3 major axes**
Bump:	**Severity: 25g/6ms, 1000times in each direction**
Drop	**Must meet NSTA specification Drop Point: 1 corner, 3 edges and 6 surfaces Total 10 times**
Acoustic Noise	**Operating : 50 dBA or less**
Electrostatic Discharge	**IEC 1000-4-2 ESD Standard**
Safety Regulation	**CSA, C-UL (UL 1950, 3rd Edition) EN60950 (IEC 950)**
EMI regulation	**FCC Part 15 Subchapter J Class A, CE Marking**

Reliability Conditions
1. Monthly Scan Volume	**1,500 scans**
2. Power-on Time	**8.0 hours/day 20 days/month**
3. Environment	**20 - 30 °C 40 - 70% RH (Relative Humidity)**

MTBF	**> 5000 hours**
Scanner Life	**5 years or 90,000 scans**
MTTR	**< 30 minutes**

Scanner specifications:

Scanner Type	**Flatbed Scanner**
Resolution	**600 x 1200 dpi**
Enhanced Resolution	**9600x9600 dpi**
Scan Speed	**2 PPM (page per minute) at 300dpi, color, Letter size** **4 PPM at 300dpi, gray, Letter size**
Scan Method (CCD)	**Color Charged-Coupled Device**
Light Source (CCFL)	**Cold Cathode Fluorescent Lamp**
CPU	**RISC CPU**
Scan Area	**Max. 8.5"x 14.0" (Legal size)**
Image Types	**36-bit color(internal)** **12-bit gray(internal)** **1-bit Lineart, Dither, Error Diffusion**
PC Interface	**IEEE 1284 (bi-directional) ECP/EPP/SPP**

EC Declaration of Conformity

According to EN45014

Manufacturer's Name: QMS, Inc.

Manufacturer's Address: QMS , Inc.
1 Magnum Pass
Mobile, AL 36618
334-633-4300

declare that the product

Model Number :   QMS SC-200

conforms to the following Product Specifications:

Emission: EN 50081-1 (1992)
EN 55022 (Class A)
(Conducted Radiated) (1994)

Immunity:
EN 60555-2 (Harmonics) (1987)
EN 60555-3 (Flicker) (1987)
EN50082-1 (1992)
IEC 1000-4-2 (ESD) (1995)
IEC 1000-4-3 (RS) (1995)
IEC 1000-4-4 (EFT/Burst)
(1995)
IEC 1000-4-5 (SURGE) (1995)