MS6000 MKII / MS7000 MKII

User's Guide　Scanner Driver Software

Ver.5.0

Scanner Driver (32bit) Ver.4.00

Scanner Driver (64bit) Ver.4.00

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1 Getting Ready

1-1 Overview

Thank you for purchasing a TWAIN-supported Microform Scanner. This version of the Scanner Driver supports the following scanners:

- MS6000 MKII Microform Scanner
- MS7000 MKII Microform Scanner

1-2 System Requirements

The following operating environment is required in order to use the Scanner driver.

Computer	Compatible with IBM PC/AT
Operating System	Windows 10: 32 bit, 64 bit Windows 8.1: 32 bit, 64 bit Windows 7: 32 bit, 64 bit SP1 or later
Required CPU/memory	Required CPU: Core 2 Duo or higher Required memory: 2 GB or more
Interface	Hi-Speed USB
CD-ROM drive	
Application software	Application software compatible with TWAIN32

Note The optional interface kit is required to connect MS6000 MKII/MS7000 MKII to the computer.

The MS6000 MKII/MS7000 MKII firmware must be Version 25G117-00 or higher or Version 25G200-00 or higher.

In addition, the Scanner Driver must be Ver.4.00 or later.

If a USB hub is connected, the system may not operate correctly. Use the USB cable included with the interface kit to connect the scanner directly to the USB port of the computer.

2 The Driver Software Installation

This chapter details the procedures for installing the driver software and for connecting the scanner to the computer.

Important!	Do not connect the scanner to a computer before installing the driver software. If you connect the scanner and the **Found New Hardware Wizard** appears, unplug the USB cable from the computer, and then click **Cancel** to close the screen. The MS6000 MKII/MS7000 MKII firmware must be Version 25G117-00 or higher or Version 25G200-00 or higher.

2-1 Installing Scanner Driver

Installing the Driver Software

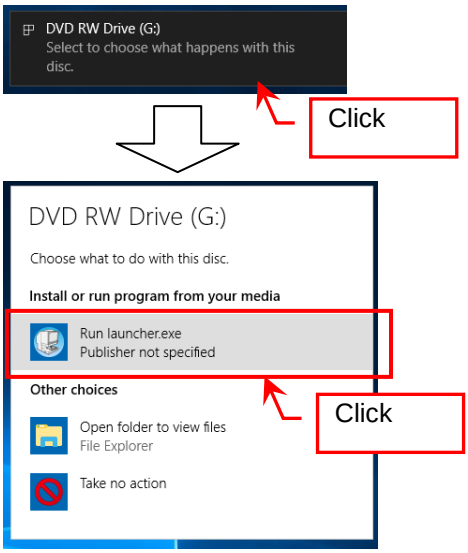
The following procedure shows the driver installation.

Administrative rights are needed for the driver installation.

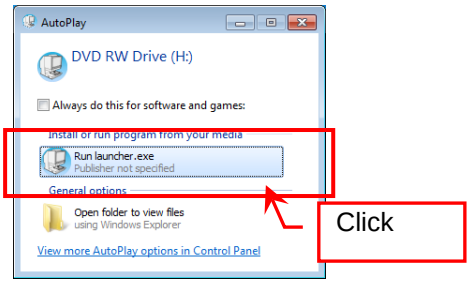
Note Screens may differ slightly depending on the Windows version.

1. Load the installation CD-ROM in the CD-ROM drive of the Personal Computer. The Auto Play screen will automatically appear. Click **Run launcher.exe**.

Windows 8 or later

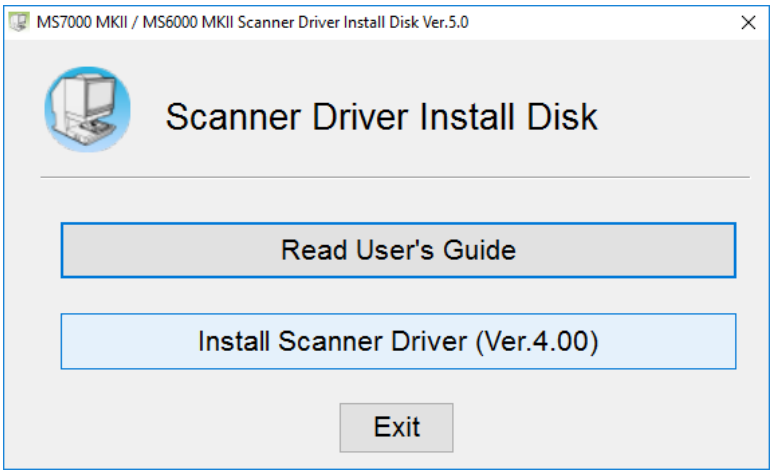


Windows 7



Note When the "Auto Play" function of the computer is “OFF”, this screen will not be displayed. Please execute “launcher.exe” in the CD-ROM and start.

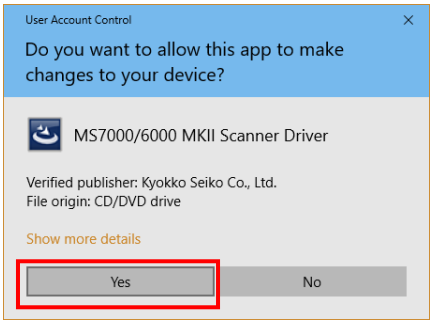
2. When the installation screen appears, click **Install Scanner Driver** to begin driver installation.

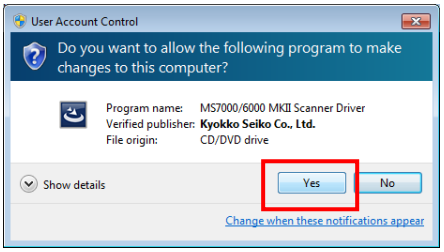


Note Version of the Driver might be different from the screen display.

The 32-bit version of the driver will automatically be installed in a 32-bit OS and the 64-bit version of the driver will automatically be installed in a 64-bit OS.

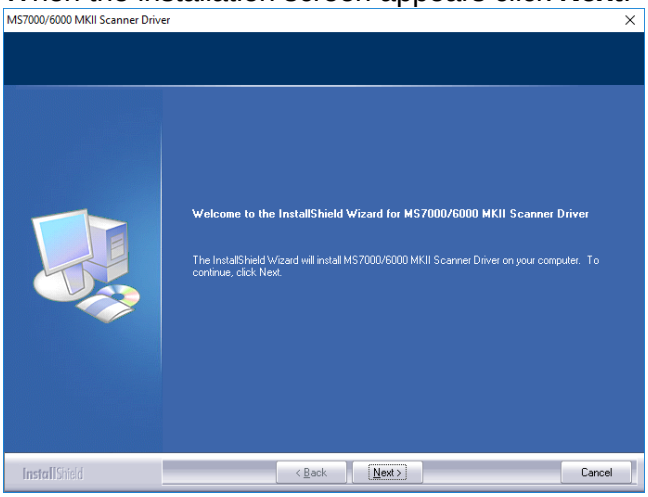
3. If the **User Account Control** screen appears, click **Yes**.





Note This screen may not be displayed, depending on the settings of the computer.

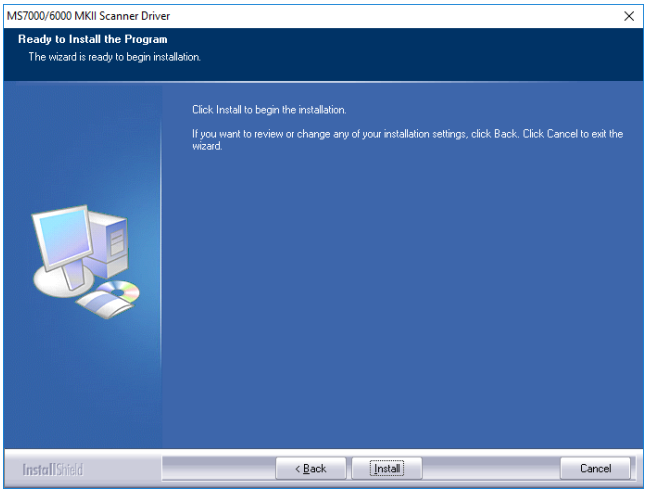
4. When the installation screen appears click **Next**.



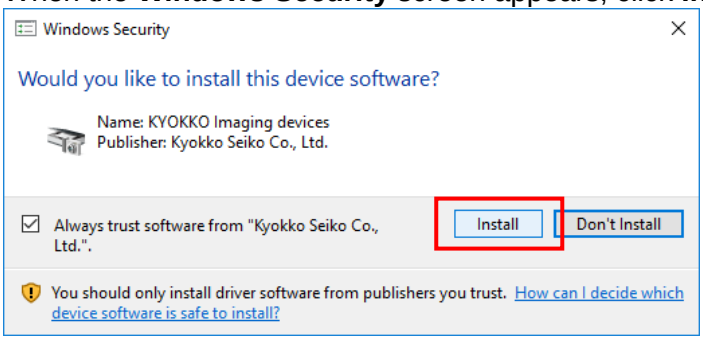
5. Select **I accept the terms of the license agreement**, and click **Next**.



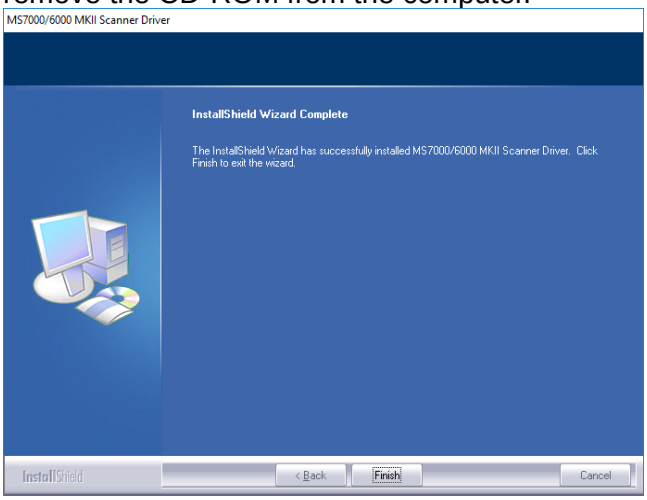
6. Click **Install**.



7. When the **Windows Security** screen appears, click **Install**.



8. When the **InstallShield Wizard Complete** screen appears, click **Finish**, and remove the CD-ROM from the computer.



Connecting to a PC

Note When connecting the scanner to the computer, use the USB cable included with the interface kit.

Windows 8 or later

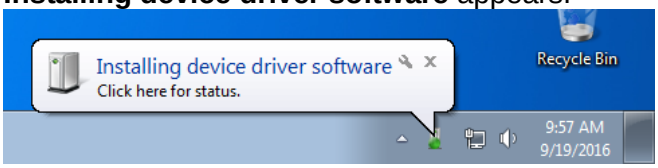
1. Turn on the scanner.
2. Use the USB cable to connect the scanner to the computer.
3. The installation screen is displayed on the taskbar.



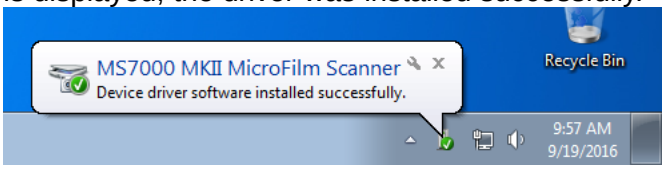
4. When the progress bar reaches termination, and the installation screen disappears, the installation completes.

Windows 7

1. Turn on the scanner.
2. Use the USB cable to connect the scanner to the computer.
3. **Installing device driver software** appears.



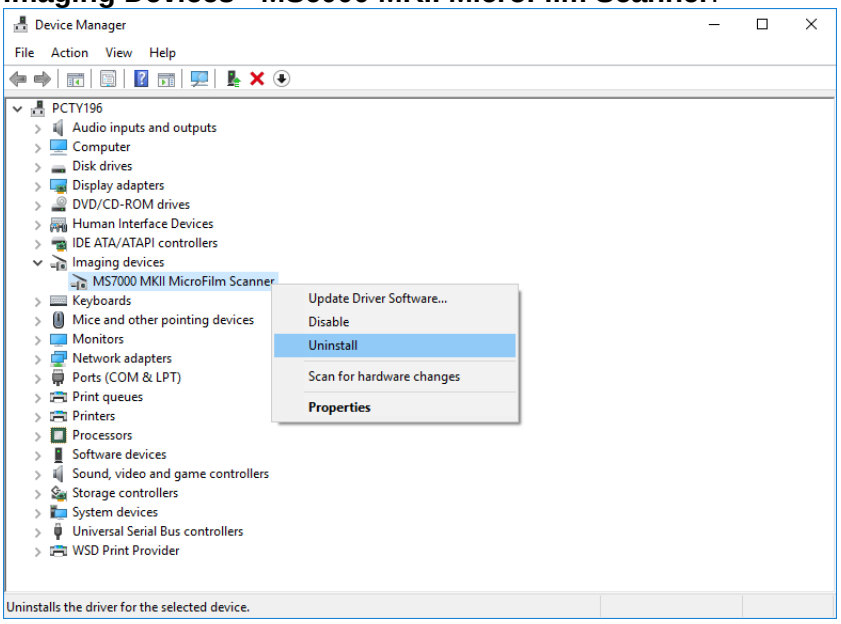
4. When **MS6000 MKII Microfilm Scanner** or **MS7000 MKII Microfilm Scanner** is displayed, the driver was installed successfully.



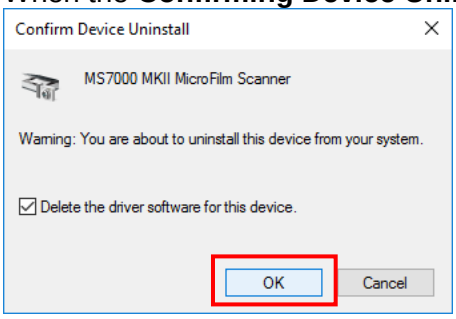
2-2 Uninstall Scanner Driver

When the Driver installed on the computer is no longer needed, use the following procedure to perform the deletion.

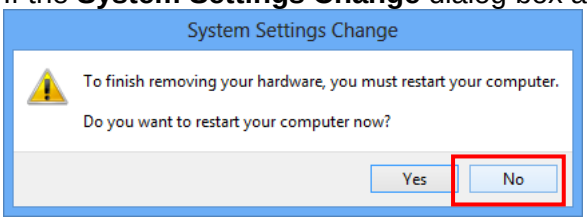
1. Confirm that the computer is connected with the scanner.
2. Turn ON the computer and the scanner.
3. From **start** menu, choose **Control Panel**. Click **System and Security**. Click **Device Manager**.
4. Uninstall the **Imaging Devices** - **MS7000 MKII MicroFilm Scanner** or **Imaging Devices** - **MS6000 MKII MicroFilm Scanner**.



5. When the **Confirming Device Uninstall** dialog box appears, click **OK**.



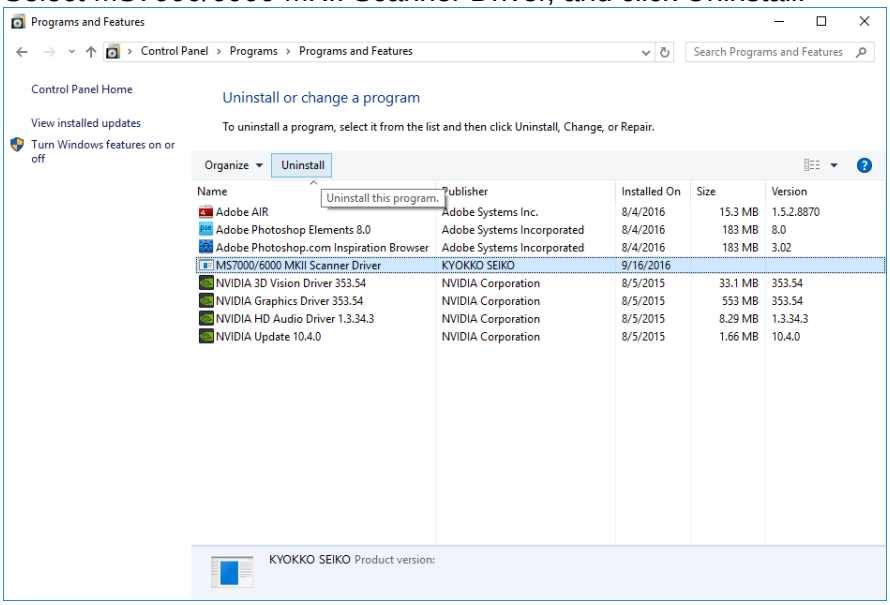
6. If the **System Settings Change** dialog box appears, click **No**.



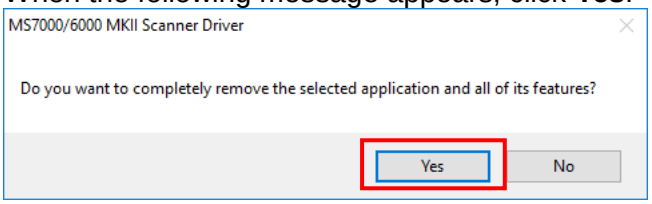
7. When uninstallation is completed, turn OFF the scanner.

8. From start menu, choose Control Panel. Click Uninstall a Program.

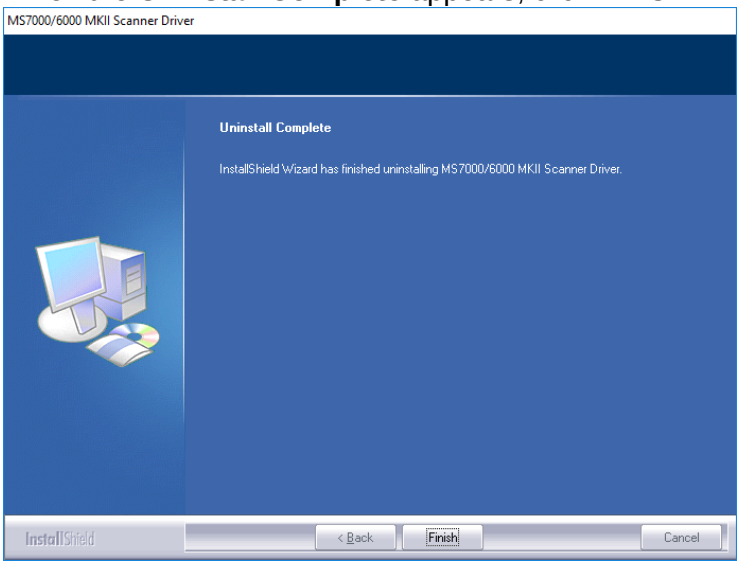
9. Select MS7000/6000 MKII Scanner Driver, and click Uninstall.



10. When the following message appears, click **Yes**.



11. When the **Uninstall Complete** appears, click **Finish**.



The driver was uninstalled successfully.

2-3 Update Scanner Driver

The following procedure shows the driver update

Administrative rights are needed for the driver update.

Important! If the Scanner Driver is updated from Ver.3.30 or earlier versions, please be noted the Firmware should be updated and the setting change is required on the scanner.

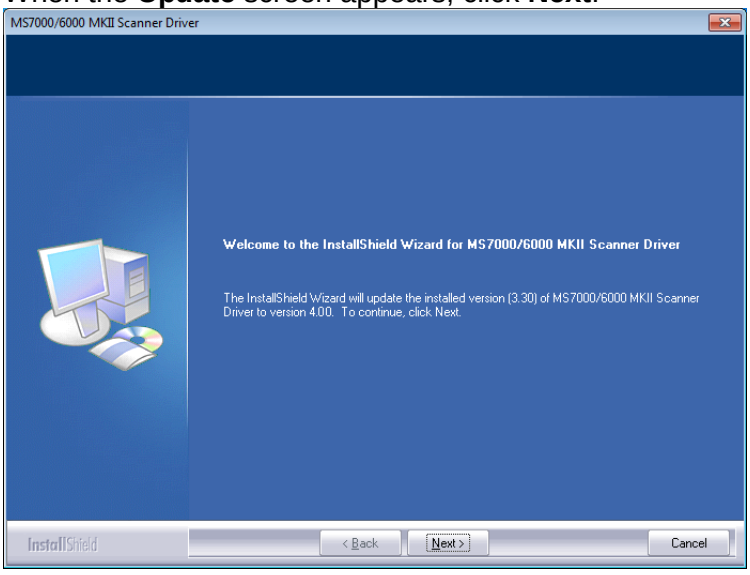
Contact the authorized dealer for details.

Note When updating the scanner driver, the uninstallation of the driver of the previous version is unnecessary.
Screens may differ slightly depending on the Windows version.

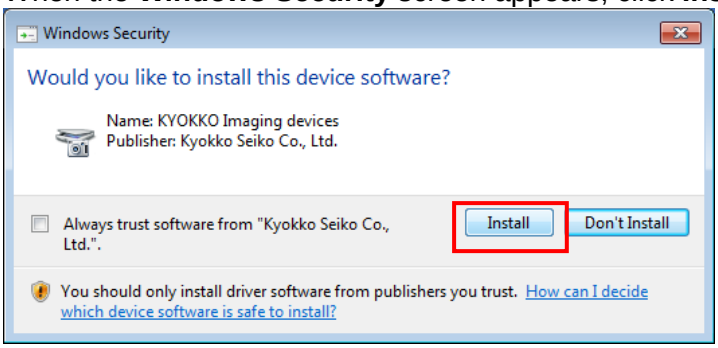
1. Turn on the computer without turning on the scanner.
2. Load the installation CD-ROM in the CD-ROM drive of the Personal Computer. The Auto Play screen will automatically appear. Click **Run launcher.exe**.
3. When the installation screen appears, click **Install Scanner Driver** to begin driver installation.
4. If the **User Account Control** screen appears, click **Yes** or **Continue**.

Note Please refer to 1-3 of the "3-1 Installing Scanner Driver" for details.

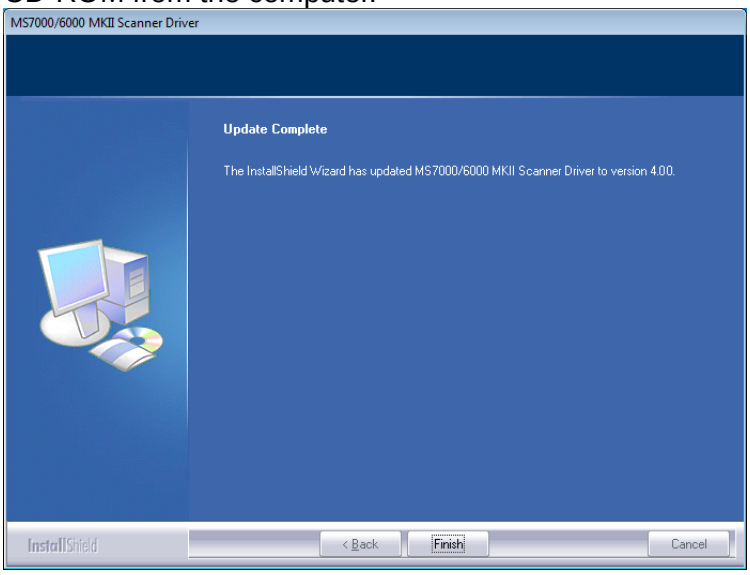
5. When the **Update** screen appears, click **Next**.



6. When the **Windows Security** screen appears, click **Install**.



7. When the **Update Complete** screen appears, click **Finish**, and remove the CD-ROM from the computer.

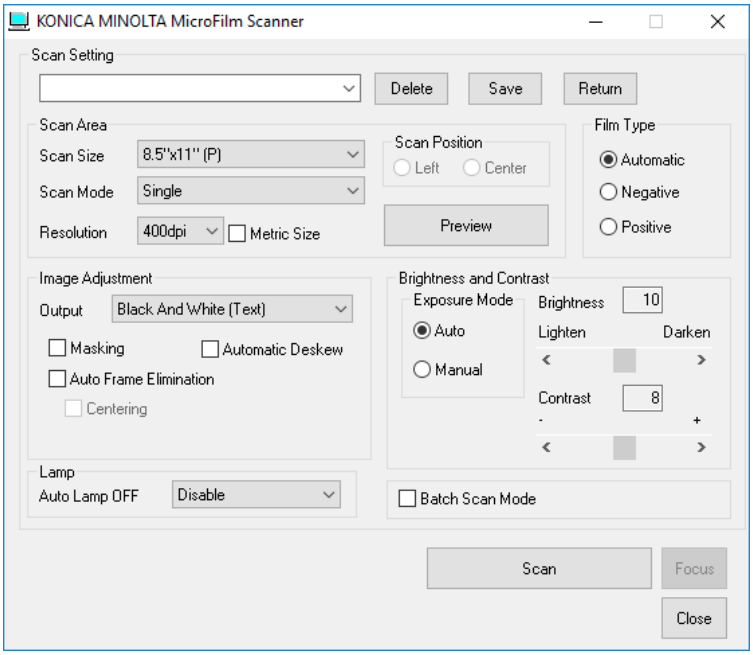


The driver was updated successfully.

3 The MS6000 MKII TWAIN Driver User's Guide

3-1 The MS6000 MKII Scanner User Interface Setup

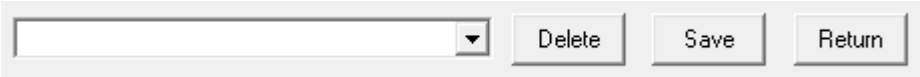
By installing a TWAIN compatible application on a personal computer, the Scanner can be operated by starting the TWAIN driver.
When selecting the TWAIN driver, the following basic screen appears. Check and select the **Scan Setting** according to your configurations.



3-2 Scan Setting

Template

When registering preset contents, input the registration name on the Registration Name column as below.

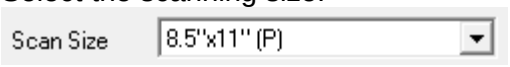


- ***Save*** - Save the registration name.
  The scanner driver's configurations that are selected by the user are saved as a template.
- ***Delete*** - Delete the registered name.
  Select the registration name to be deleted. Clicking the **Delete** button, the selected registration name and the template are deleted.
- ***Return*** - Return to the registered name.

Note The template file is preserved in the following folder.
C:\Users\[user name]\AppData\Roaming\MicroDS

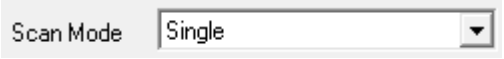
Scan Size

Select the scanning size.



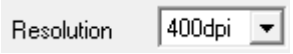
Scan Mode

Select the scanning mode. (Only "Single" can be selected on MS6000MKII.)



Resolution

Select the resolution of the image.



Note 800dpi is effective only when 8.5"x11" (P) and A4 (P) are selected.

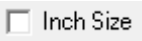
Metric Size (United States)

The scanner can be set to metric size in Scan Size.



Inch Size (Other Countries)

The scanner can be set to inch size in Scan Size.

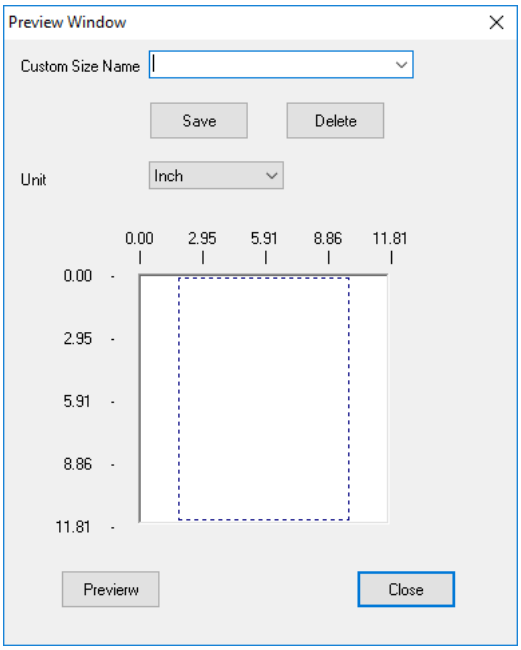


Preview

Click the **Preview Window** (see below).



3-3 The Preview Window



Custom Size Name

When registering a preset specified scanning size, input the name on the Custom Size Name column.

- ***Save*** - Save the name and configuration which is specified on range of the Preview Window.
- ***Delete*** - Delete the saved name and data which is selected on the **Custom Size Name** column.

Rulers

- ***Unit*** - When specifying the scanning size area in a preview window an inch or millimeter measure can be chosen from the **Unit** column.

The Window

The specified scanning size (reading area of the scanner for the screen) is displayed on the preview window as a dashed line.

The scanning size of the dashed line can be specified by using a mouse.

The Action Buttons

- ***Preview*** - The full screen is scanned with low resolution, and the result is displayed on the preview window.
- ***Close*** - Closes the **Preview Window**.

3-4 Film Type

Select the polarity of the read Film Type.

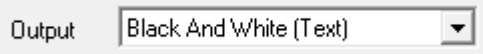


- ***Automatic*** - Select when using automatic film type detection.
- ***Negative*** - Select when using the negative film.
- ***Positive*** - Select when using the positive film.

3-5 Image Adjustment

Output

Select the processing mode of the output image.

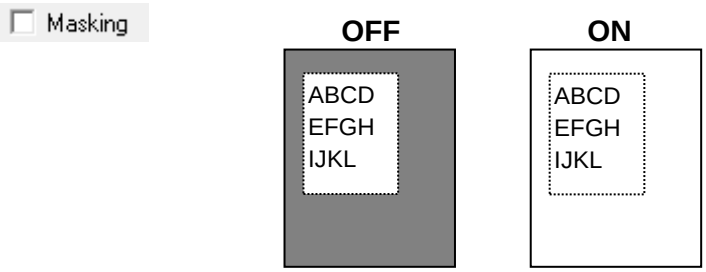


- ***Black And White (Text)*** - For use with text images.
- ***Black And White (Photo)*** - For use with photo images.
- ***Black And White (Fine mode1), Black And White (Fine mode2)*** - For use with lower grades of film.
- ***Grayscale (Text), Grayscale (Photo), Grayscale (Fine mode1), Grayscale (Fine mode2)*** - Suitable mode for use with gradation images, because the image data is converted to grayscale data, and the image size becomes large.

Note Optional Grayscale Memory Board is needed for Grayscale mode.

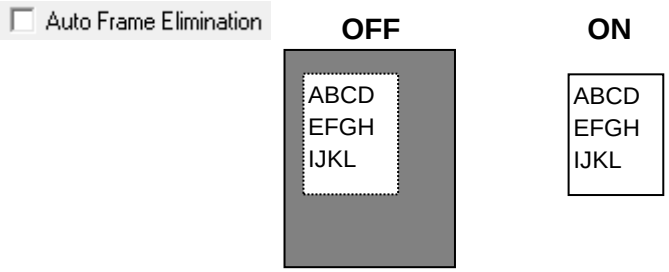
Masking

When a scanning size that is bigger than the image has been selected, an outside portion of the image is deleted in the **Masking** mode.



Auto Frame Elimination

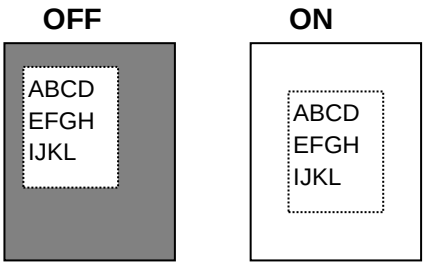
When a scanning size that is bigger than the image has been selected, a surplus frame around the image is cut out in the **Auto Frame Elimination** mode.



Centering

When selecting the **Centering** mode, the outside of the image is masked out, and the remaining image is centered.





Automatic Deskew

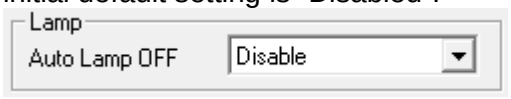
The skewed image will be corrected.



3-6 Lamp

Auto Lamp OFF

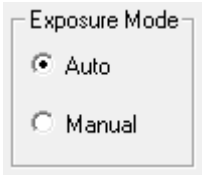
When the **Auto Lamp OFF** mode is selected, the lamp turns off automatically. The initial default setting is "Disabled".



3-7 Brightness and Contrast

Exposure Mode

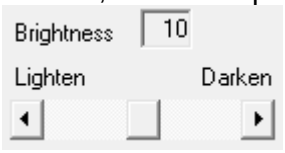
Select "Auto" or "Manual" as the exposure control



- ***Auto*** - The density is controlled automatically in corresponding with the original.
- ***Manual*** - The density can be manually controlled.

Brightness

The **Brightness** can be adjusted by the scroll bar. It is available in 37 steps for Manual, and 19 steps for Auto.



Contrast

The **Contrast** can be adjusted by the scroll bar. It is available in 15 steps.



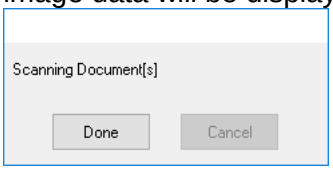
3-8 Batch Scan Mode

When utilized this application can continue to initiate scans upon completion of the initial scan.



When selected the **Batch Scan Mode** will cause the driver to remain open and will place a **Done** button in the Status Window. While the Status Window is displayed you can continue to initiate scans and make setting changes from the front panel of the scanner.

When the Done button is pressed, the Status Window and Driver UI will close and all image data will be displayed in the scanning application.

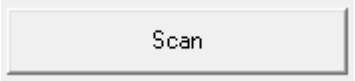


Note If Batch Scan Mode is used, the 2nd and all subsequent scans are executed with the scanner.

3-9 The Action Buttons

Scan

The scanning begins. It becomes **Scan Stop** button while scanning.



Note While scanning, do not change the panel settings of the scanner or the driver settings.

Close

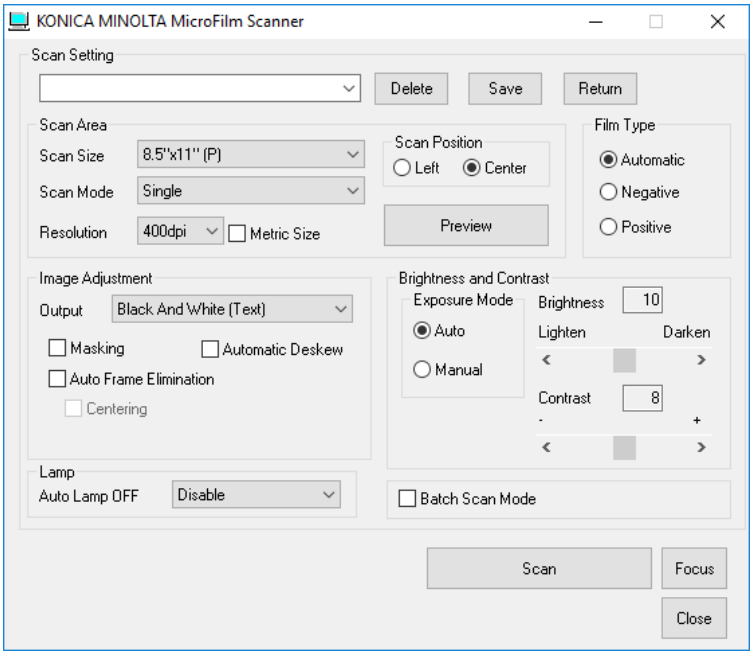
When the **Close** button is clicked, the Status Window and Driver UI is closed.



4 The MS7000 MKII TWAIN Driver User's Guide

4-1 The MS7000 MKII Scanner User Interface Setup

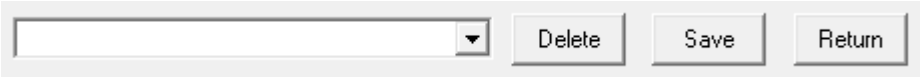
By installing a TWAIN compatible application on a personal computer, the Scanner can be operated by starting the TWAIN driver.
When selecting the TWAIN driver, the following basic screen appears. Check and select the **Scan Setting** according to your configurations.



4-2 Scan Setting

Template

When registering preset contents, input the registration name on the Registration Name column as below.

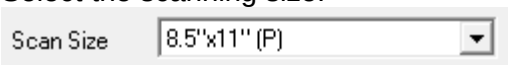


- ***Save*** - Save the input registration name.
  The scanner driver's configurations that are selected by the user are saved as a template.
- ***Delete*** - Delete the registered name.
  Select the registration name to be deleted. Clicking the **Delete** button, the selected registration name and the template are deleted.
- ***Return*** - Return to the registered name.

Note The template file is preserved in the following folder.
C:\Users\[user name]\AppData\Roaming\MicroDS

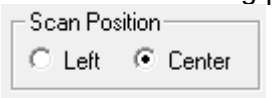
Scan Size

Select the scanning size.



Scan Position

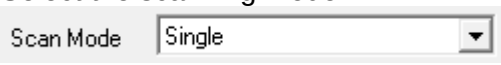
Select the scanning position.



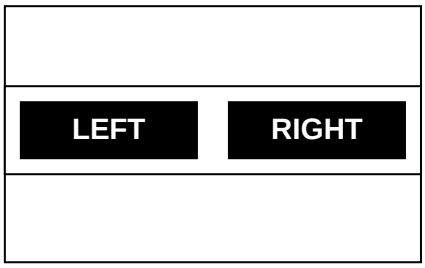
- ***Center*** - It scans based on the center position of the screen.
- ***Left*** - It scans based on the left end position of the screen.

Scan Mode

Select the scanning mode.



The Screen of the Scanner



- ***Single*** - Delivers one image as defined by the screen of the scanner.
- ***Single (Check)*** - Delivers one image as defined by combined images (left and right) on the screen of the scanner.
  When selecting **Masking** with narrow pitched frame images, two separate images will be detected.

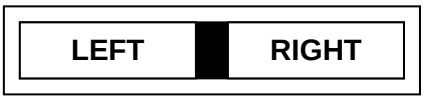
Single [Masking OFF]



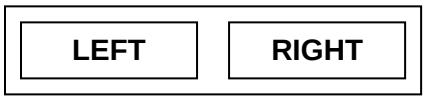
Single (Check) [Masking OFF]



Single [Masking ON]



Single (Check) [Masking ON]



Note When selecting the Single (check), Auto Frame Elimination and Automatic Deskew can not be enabled.

- ***Dual (Check)*** - Delivers two images as defined by separated images (left and right) on the screen of the scanner.
  When selecting **Masking** with narrow pitched frame images, two separate images will be detected.

Note When selecting the Dual (check), Auto Frame Elimination can not be enabled.

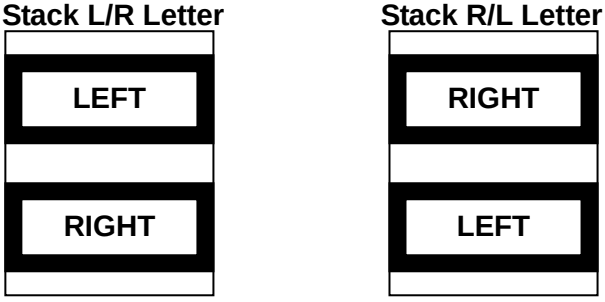
- ***Dual*** - Delivers two images as defined by separated images (left and right) on the screen of the scanner (for viewing two standard size images side by side).

Dual



- ***Stack L/R Letter, Stack R/L Letter*** - Changes position of images from left/right positions, to a stacked top/bottom position in Letter size.

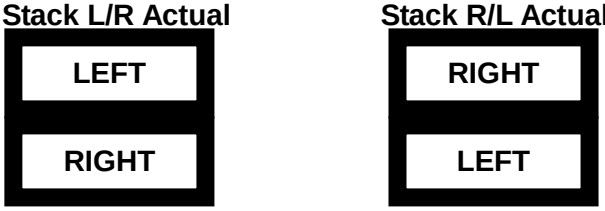
Stack L/R Letter **Stack R/L Letter**



Note Grayscale can not be enabled in the Stack Letter modes.
When selecting the Stack Letter modes, Auto Frame Elimination can not be enabled.

- ***Stack L/R Actual, Stack R/L Actual*** - Changes position of images from left/right positions, to a stacked top/bottom position.

Stack L/R Actual **Stack R/L Actual**



Note Grayscale can not be enabled in the Stack Actual modes.
When selecting the Stack Letter modes, Auto Frame Elimination can not be enabled.

Note When selecting Auto 11x17"-8.5x11" or Auto A3-A4, only Single can be enabled.

Resolution

Select the resolution of the image.



Note 800dpi is effective only when 11"x8.5" (L), 8.5"x14" (L), 3 2/3"x17" (L), Check (L), and A4 (L) are selected.

Metric Size (United States)

The scanner can be set to metric size in **Scan Size**.



Inch Size (Other Countries)

The scanner can be set to inch size in **Scan Size**.

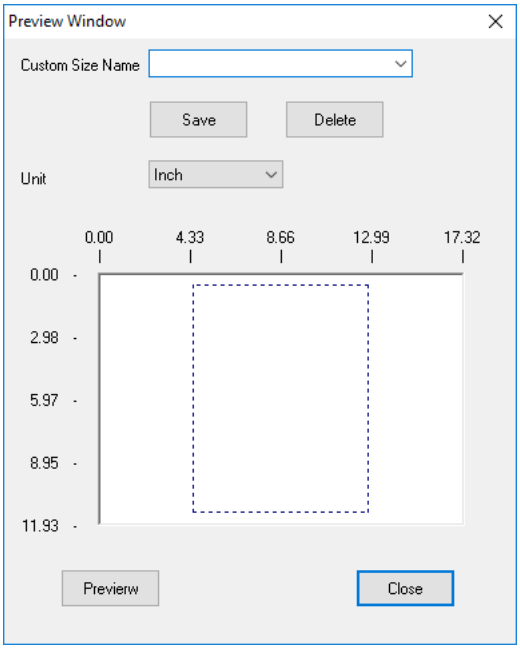


Preview

Click the **Preview Window** (see below).



4-3 The Preview Window



Custom Size Name

When registering the preset specified scanning size, input the name on the Custom Size Name column.

- ***Save*** - Save the name and data which is specified on range of the **Preview Window**.
- ***Delete*** - Delete the saved name and data which is selected on the **Custom Size Name** column.

Rulers

- ***Unit*** - When specifying the scanning size area on a preview window an inch or millimeter measure can be chosen on the **Unit** column.

The Window

The specified scanning size (reading area of the scanner for the screen) is displayed on the preview window as a dashed line.

The scanning size of a dashed line can be specified by using a mouse.

The Action Buttons

- ***Preview*** - The full screen is scanned with low resolution, and the result is displayed on the preview window.
- ***Close*** - Close the **Preview Window**.

4-4 Film Type

Select the polarity of the read Film Type.

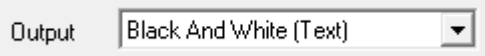


- ***Automatic*** - Select when using automatic film type detection.
- ***Negative*** - Select when using the negative film.
- ***Positive*** - Select when using the positive film.

4-5 Image Adjustment

Output

Select the processing mode of the output image.

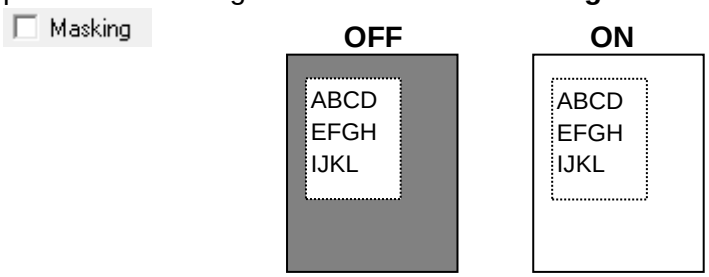


- ***Black And White (Text)*** - For use with text images.
- ***Black And White (Photo)*** - For use with photo images.
- ***Black And White (Fine mode1), Black And White (Fine mode2)*** - For use with lower grades of film.
- ***Grayscale (Text), Grayscale (Photo), Grayscale (Fine mode1), Grayscale (Fine mode2)*** - Suitable mode for use with gradation images, because the image data is converted to grayscale data, and the image size becomes large.

Note Optional Grayscale Memory Board is needed for Grayscale mode.

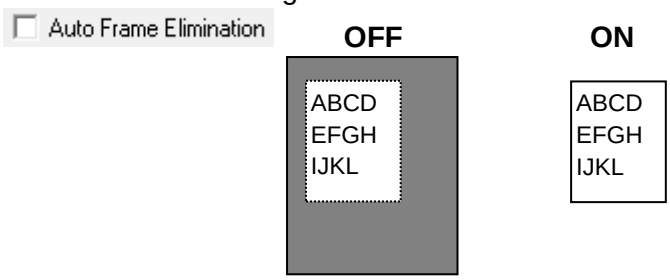
Masking

When a scanning size that is bigger than the image has been selected, an outside portion of the image is deleted in the **Masking** mode.



Auto Frame Elimination

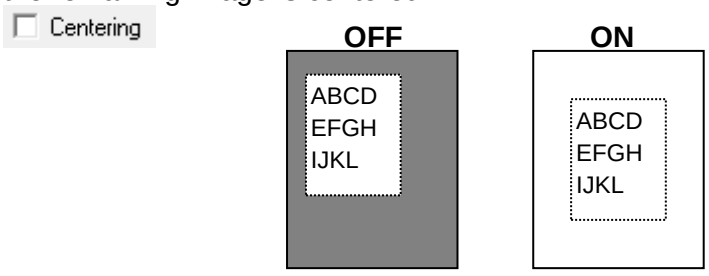
When a scanning size that is bigger than the image has been selected, a surplus frame around the image is cut out in the **Auto Frame Elimination** mode.



Note When Scan Mode is Single or Dual, the Auto Frame Elimination can be used.

Centering

When selecting the **Centering** mode, the outside of the image is masked out, and the remaining image is centered.



Automatic Deskew

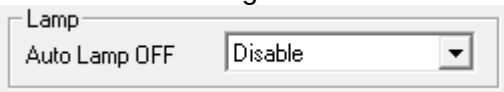
The skewed image will be corrected.



4-6 Lamp

Auto Lamp OFF

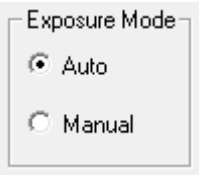
When the **Auto Lamp OFF** mode is selected, the lamp turns off automatically. The initial default setting is "Disabled".



4-7 Brightness and Contrast

Exposure Mode

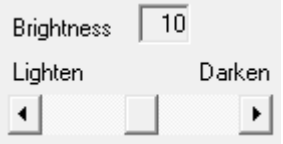
Select "Auto" or "Manual" as the exposure control



- ***Auto*** - The density is controlled automatically in corresponding with the original.
- ***Manual*** - The density can be manually controlled.

Brightness

The **Brightness** can be adjusted by the scroll bar. It is available in 37 steps for Manual, and in 19 steps for Auto.



Contrast

The **Contrast** can be adjusted by the scroll bar. It is available in15 steps.



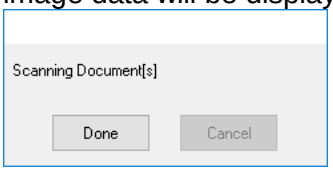
4-8 Batch Scan Mode

When utilized the application can continue to initiate scans upon completion of the initial scan.



When selected the **Batch Scan Mode** will cause the driver to remain open and will place a **Done** button in the Status Window. While the Status Window is displayed you can continue to initiate scans and make setting changes from the front panel of the scanner.

When the Done button is pressed, the Status Window and Driver UI will close and all image data will be displayed in the scanning application.

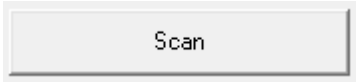


Note If Batch Scan Mode is used, the 2nd and all subsequent scans are executed with the scanner.

4-9 The Action Buttons

Scan

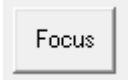
The scanning begins. It becomes **Scan Stop** button while scanning.



Note While scanning, do not change the panel settings of the scanner or the driver settings.

Focus

The focus is adjusted automatically.



Note Do not perform any other operation while using focus.

Close

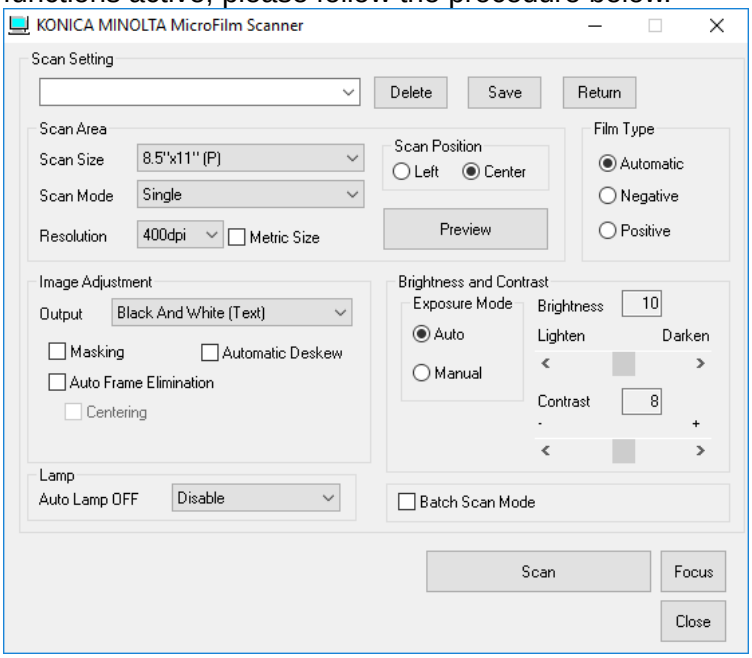
When the **Close** button is clicked, the Status Window and Driver UI is closed.



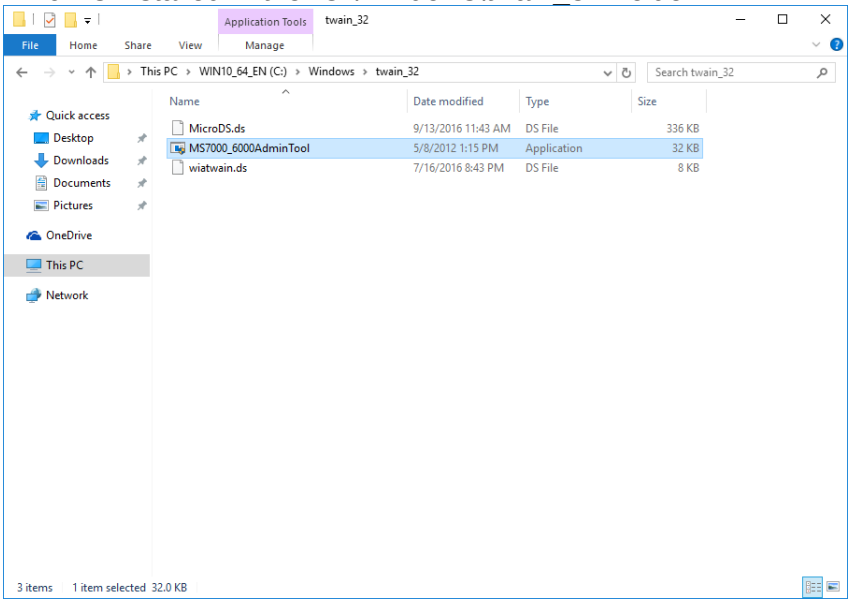
5 Special Function

5-1 Activating the special functions

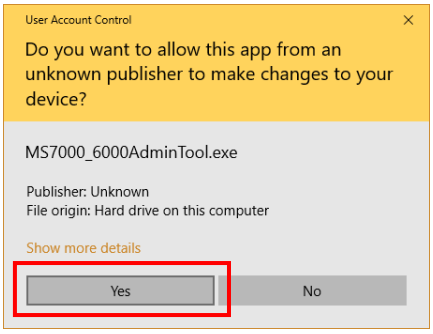
After the driver is installed, the special functions are disabled. To make the special functions active, please follow the procedure below.

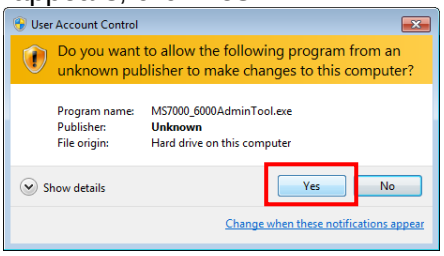


1. Double-click the “MS7000_6000AdminTool.exe”, the tool for the administrator which is installed in the “C:\Windows\twain_32” folder.

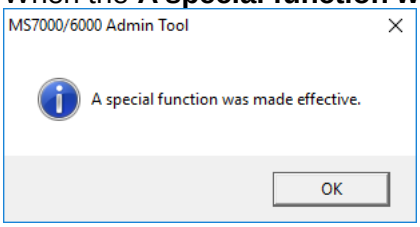


2. If the **User Account Control** dialog box appears, click **Yes**.



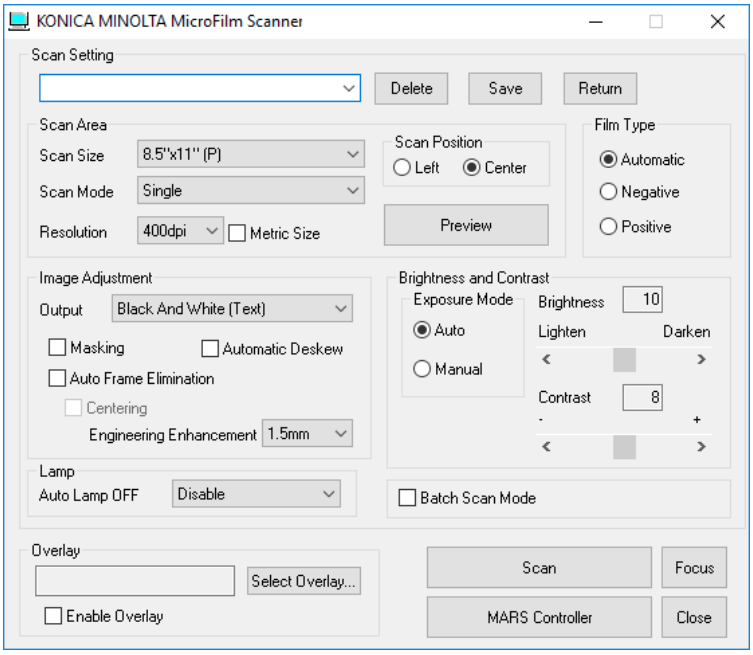


3. When the **A special function was effective** dialog box appears, click **OK**.



4. When the above procedure is completed, the following special functions are effective.

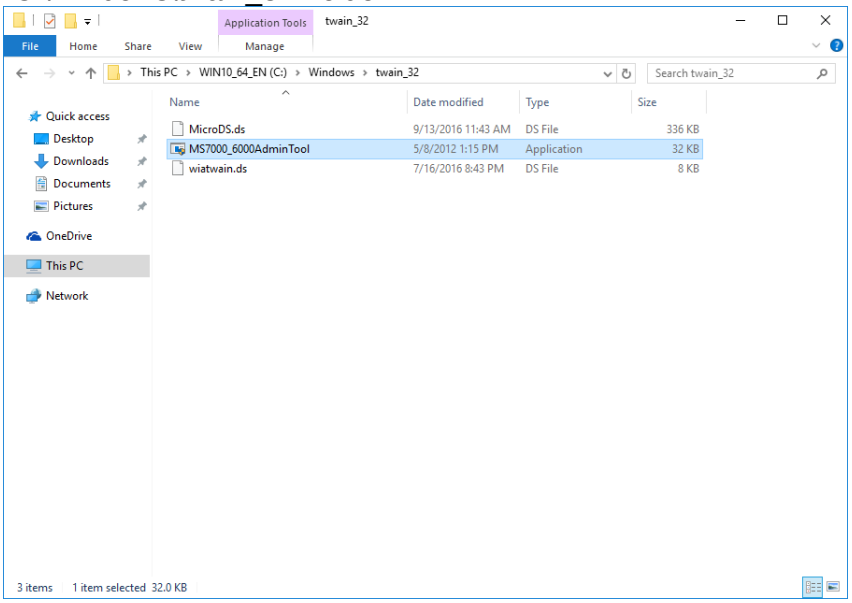
- Engineering Enhancement
- Overlay
- MARS Controller



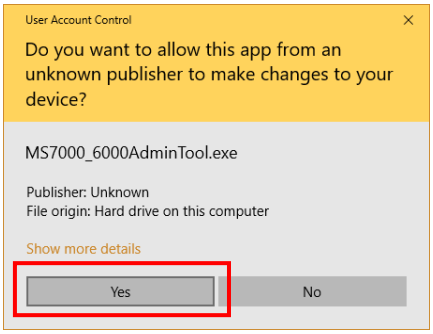
5-2 Disabling the special functions

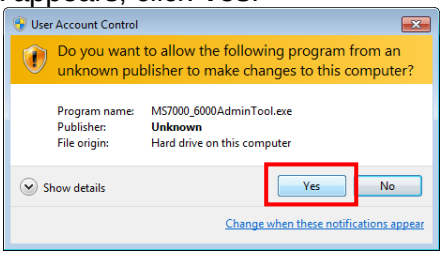
Please follow the procedure below to de-activate the special functions.

1. Double-click the “MS7000_6000AdminTool.exe”, which is installed in the “C:\Windows\twain_32” folder.

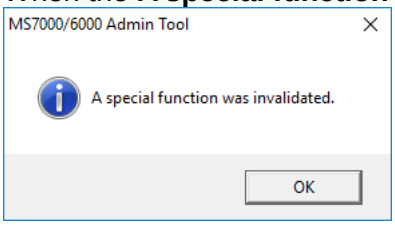


2. If the **User Account Control** dialog box appears, click **Yes**.



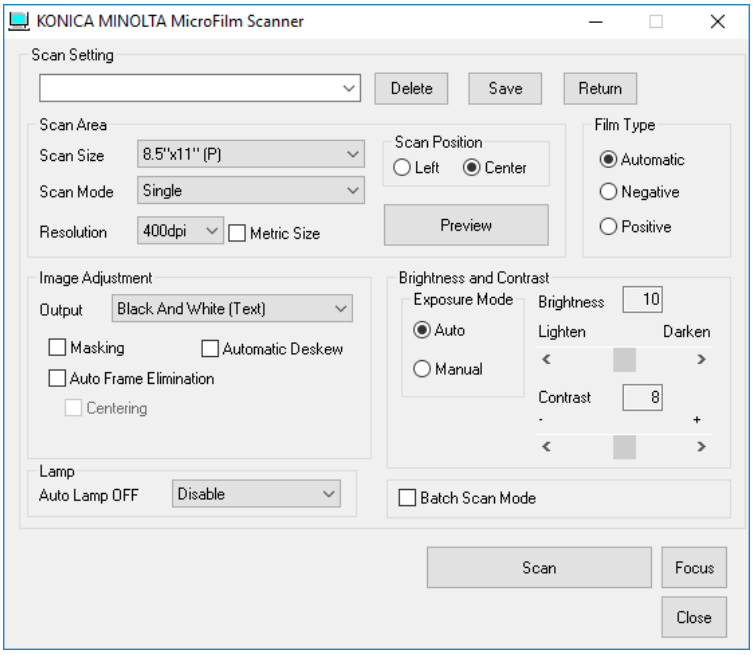


3. When the **A special function was invalidated** dialog box appears, click **OK**.



4. When the above procedure is completed, the following special functions are de-activated.

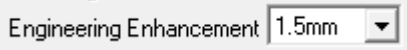
- Engineering Enhancement
- Overlay
- MARS Controller



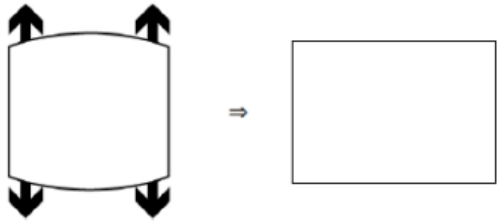
5-3 Image Adjustment

Engineering Enhancement

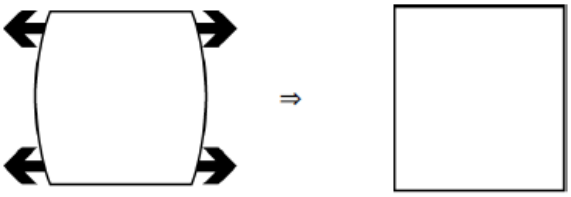
Corrects the image distorted to the barrel type.



MS7000 MKII: The image distorted to the barrel type as follows is corrected.



MS6000 MKII: The image distorted to the barrel type as follows is corrected.



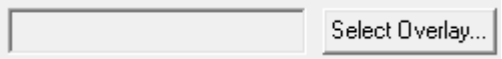
Note	The above-mentioned illustrations are exaggerated and drawn rather than actually produced distortion.

5-4 Overlay

When outputting directly from the scanner to the printer, the specified character can be printed.

Select Overlay

When the “Select Overlay” window is selected, the character overlay dialog is started.



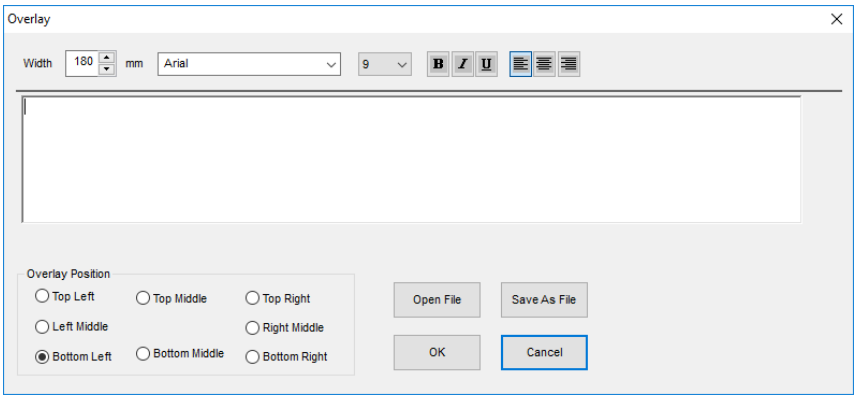
Enable Overlay

When printing directly from the scanner to the printer, the Font that is specified in the “Character Selection” is printed out.



Note	It takes about 30 seconds to one minute to communicate with the scanner.

5-5 Overlay Window



- ***Setting of character*** - Selects the character area, font, font-size and others, and input the prints.
- ***Overlay Position*** - Select the overlay position. There are eight places in total**:** four corners of the paper and the center of four sides.
- ***Open File*** - Open the file which specified the contents of overlay.
- ***Save As File*** - Save the specified contents as files.
- ***OK*** - Determine the contents of the overlay.
- ***Cancel*** - Cancels the determined contents.

Note	Please set the value from 5 to 190mm when prompted on the screen. Please do not perform other operations while setting the value.

5-6 The Action Buttons

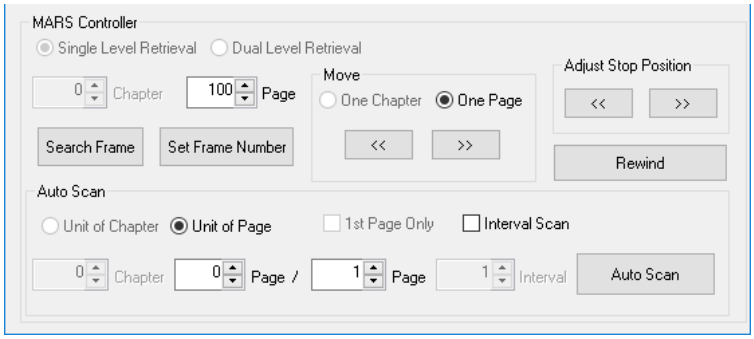
MARS Controller

When the MARS controller is connected, the MARS Controller screen is displayed under the Scan Setting screen.



5-7 MARS Controller

It is a function of the PC to control the Mars controller. This function cannot be utilized when not connected with the Mars controller.



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Note The MARS CONTROLLER 4 firmware must be version 4.5 or 5.5 or higher.
The MARS MINI CONTROLLER 2 firmware must be version 1.6 or 26G100-00 or higher.

- ***Single Level Retrieval, Dual Level Retrieval*** - Select the type of film retrieval with Single Level Retrieval or Dual Level Retrieval.

Note The MARS mode selection should be matched to the type of film being used.

- ***Chapter Frame Number Box*** - Displays the current frame number “Chapter” as reported by the MARS Controller.
- ***Page Frame Number Box*** - Displays the current frame number “Page” as reported by the MARS controller.

Note Chapter can be input only at Dual Level Retrieval.

- ***Search Frame*** - Search the specified frame number.
- ***Set Frame Number*** - Change the present frame number to the specified frame number.
- ***Rewind*** - Rewind the film. When the film is not set, it becomes "Film Set" button.

Move

- ***One Chapter***, ***One Page*** - Select the unit of the frame movement by the chapter unit and the page unit.
- **<<, >>** - The frame is sent back and forth by the page unit or the chapter unit.

Adjust Stop Position

- **<<, >>** - The film stop position is fine-tuned back and forth.

Auto Scan

- ***Start Chapter Number Box*** - Sets the desired beginning Chapter number to start with when using “Dual Level Retrieval”.
- ***Start Page Number Box / End Page Number Box*** - Sets the desired beginning frame number “Page” and the end frame number “Page”.
- ***1st Page Only*** - When dual level is retrieved, only the first frame chapter is scanned.
- ***Interval Scan*** - It scans continuously while skipping the frame at the specified interval.
- ***Auto Scan*** - Starts the continuous scan. While continuously scanning, it becomes “Scan Stop” button.

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