WITEK®

Check scanner SX600
user manual
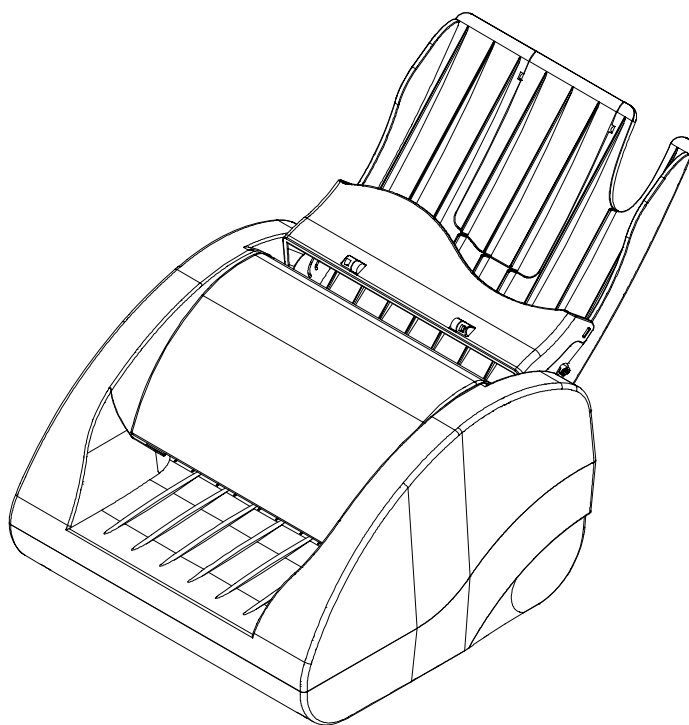
HIGH SPEED
IMAGE SCANNER

WITEK SYSTEM INC

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Information to the user

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 communications. 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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Important safety Instructions

This manual describes important details for users to use this product safely and correctly. Read this manual thoroughly before you start using this product. Be sure to read and fully understand the Safety Precautions in this manual, in particular. In addition, keep this manual handy during use of this product, so that you can refer to it quickly when necessary.

The following instructions pertain to the risk of fire, electric shock or bodily injury. Please read all of these instructions carefully.

1   Save these instructions for later use.

2   Follow all of the instructions and warnings marked on this product or included in this manual.

3   Do not use this scanner on an unstable cart, stand or table. The product may fall, causing serious damage to the product.

4   Don't use this product on a bed, sofa, rug or other similar surface. This product should never be placed near or over a radiator or heat register.

5   Never push objects of any kind into the scanner through the case openings, as they may touch dangerous voltage points or short out parts that could result in a fire or electrical shock. Never spill liquid of any kind on the product.

6   This scanner should only be connected to the + 24V / min. 2.5A DC power source or designated power adapter indicated on your scanner information label. If you are not sure of the type of power source available, consult your dealer or local power company. Only connect this scanner to a power outlet that matches the power requirements of this scanner.

7   Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

8   Do not use this scanner near water.

9.   Do not touch the power plug or USB bus power cable with wet hands. Doing so might cause electric shock.

10.   A damaged power cable or USB bus power cable may cause fire or electric shock. Do not place heavy objects on the power or USB bus power cable, or pull, bend, twist, heat, damage or modify the cable. Do not use damaged power or USB bus power cables or power plugs. Do not use the power cable when the wall socket is loose.

11.   Use only the specified Power, USB bus power, and interface cables. Failure to use the correct cables might cause electric shock and equipment failure.

12. If you detect heat coming from the device or detect other problems such as smoke, strange smells or noises, immediately turn off the scanner and then disconnect its power plug from the power outlet, or unplug the USB bus power cable from the computer. Make sure that the smoking has stopped, and then contact an authorized Witek scanner service provider.

13. Do not place heavy objects on the scanner or use the top surface of the scanner for performing other work. Improper installation might cause injuries.

14. When the scanner is not used for a long period, be sure to disconnect the power plug from the power outlet, or disconnect the USB bus power cable from the computer for safety. Not doing so might cause electric shock or fire.

15. Do not insert or drop metal or flammable foreign objects in to the scanner.
    Do not scan wet documents or documents with paper clips or staples.
    Do not splash or allow the scanner to get wet.

16. To avoid injuries, do not place the scanner in an area where small children may be able to reach.

17. Do not move the scanner with the power and interface cables connected as this might damage the cables, causing fire, electric shock or injuries. Before moving the scanner, be sure to disconnect the power plug from the power outlet, and disconnect interface cables as well. Also, make sure that the floor is free of obstructions.

18. Avoid getting a sleeve, necktie, or hair caught up in any scanner mechanism when scanning as this may cause injuries.

19. Install the scanner away from strong magnetic fields and other sources of electronic noise. Also, protect the scanner from static electricity as this might cause the scanner to malfunction.

20. Do not use the scanner immediately after moving it from a cold place into a warm room. This may cause condensation, which might lead to scanning errors. Let the device dry about one or two hours before you use it.

Maintenance

Repairs should be done by properly trained repair technicians. When this product needs servicing, please contact the authorized Witek Image Scanner service provider.

If the product does not operate normally, adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and may require extensive repair work to restore the product to normal operation.

Unplug this product from the main power outlet and call for service under any of the following conditions:

a   If the power cord or plug is damaged or frayed.

b   If liquid has been spilled into the product.

c   If the product has been exposed to rain or water.

d   If the product has been dropped.

e   If the product exhibits a distinct change in performance, indicating a need for service.

Stop

If you ever have to remove the scanner cover, observe the following precautions :

a   The power supply cord must be unplugged before the scanner cover is removed.

b   Once removed, the cover must be replaced and screwed in position before the power
       supply cord is plugged back in.

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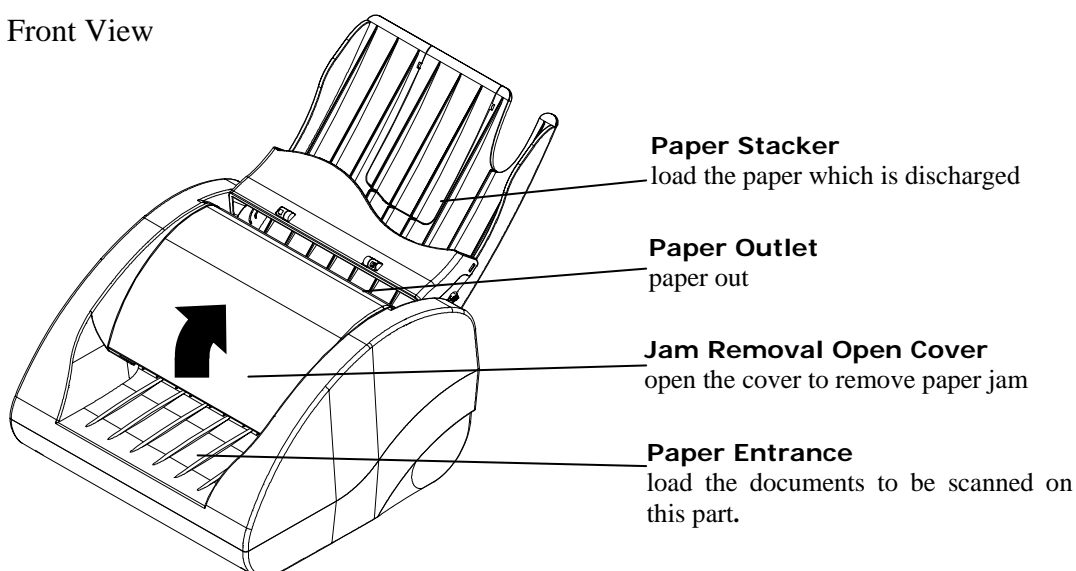
1. Before you start using the scanner

1.1 Unpacking

When you unpack the scanner package, find the packaging list first, and then make sure that the SX600 and all items in the packaging list are present. If anything is missing or damaged, contact the dealer where you purchased the product.
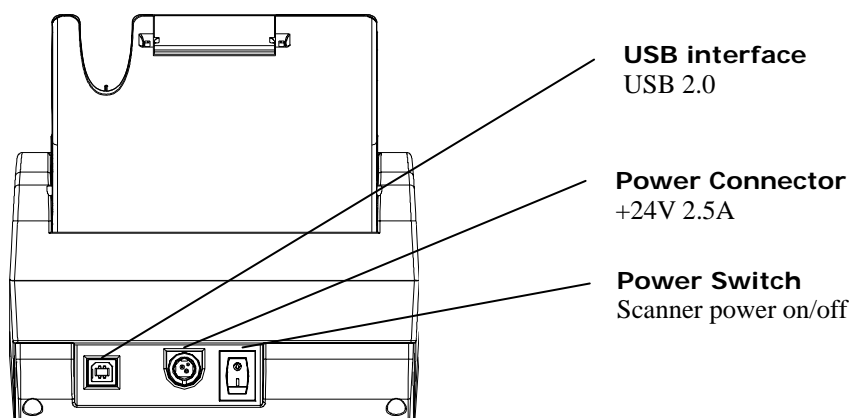
1.2 Part Identifications

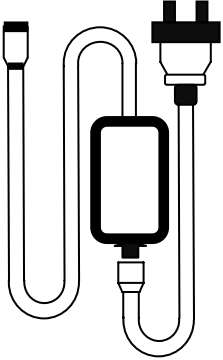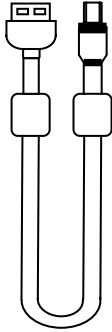This section describes the names of parts and their functions.

1

■ Front View

Paper Stacker
load the paper which is discharged

Paper Outlet
paper out

Jam Removal Open Cover
open the cover to remove paper jam

Paper Entrance
load the documents to be scanned on this part**.**

■ Rear View

USB interface
USB 2.0

Power Connector
+24V 2.5A

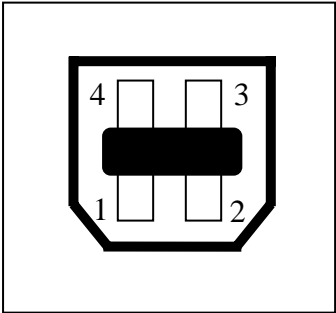**Power Switch**
Scanner power on/off

■ Use the following cables(Options)

|	
The Power cable (Option)　is a combination of the AC adapter and AC cable. ● **NOTE : AC cable is not included in power cable option**	
USB bus power cable(Option)	

■ USB Interface

Pin	Signal	Descriptions
1	+5V	+5V
2	Data -	Scanner transmit data line
3	Data +	Scanner transmit data line
4	GND	System Ground

1.3 Connecting the cables

Connect the SX600 scanner to a power supply in either of two ways below: First, connect to a power supply, and then connect to a host terminal with the USB cable.
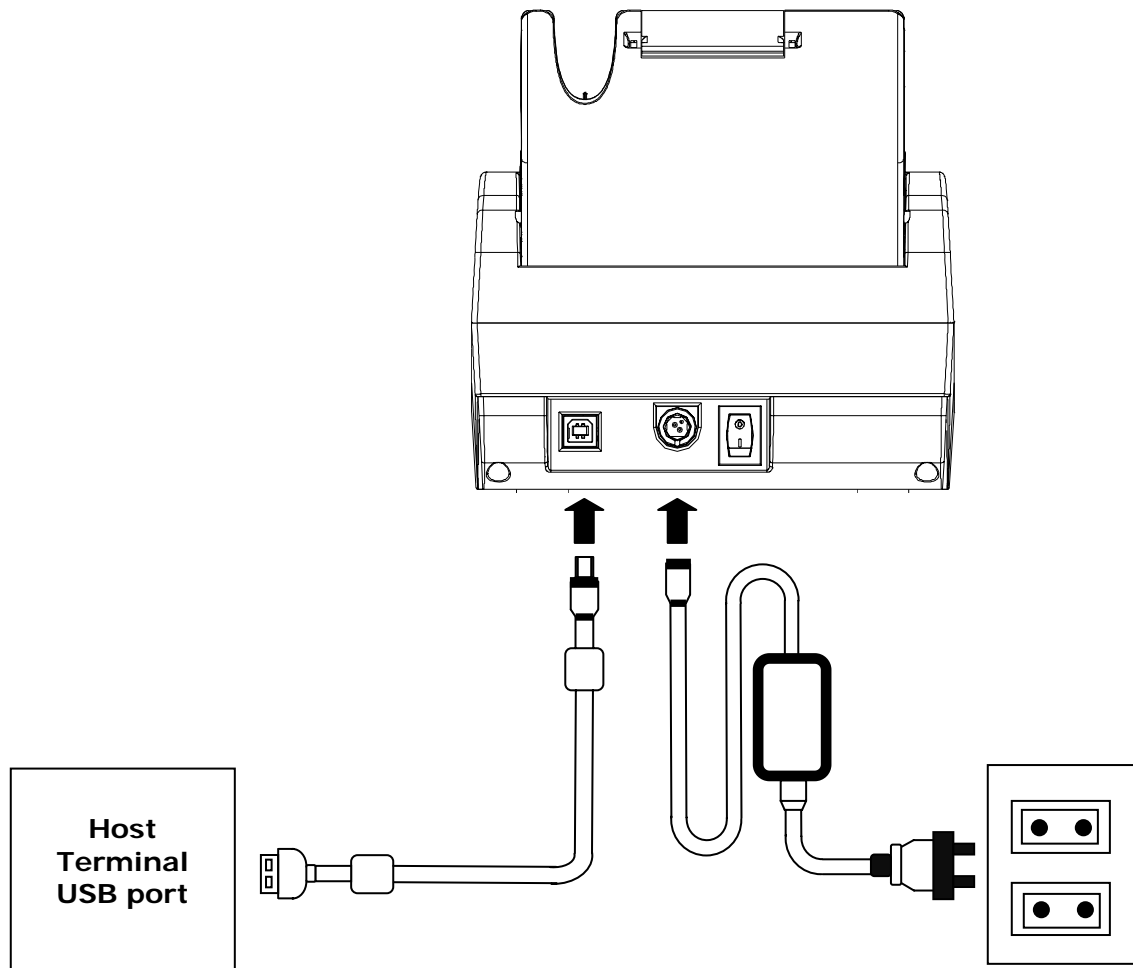
| Attention | ● Be sure to use the supplied AC adapter and your AC cable. |

- Be sure to use the supplied AC adapter and your AC cable.
- Be sure to use the supplied USB cable. The operation with any commercially available USB cable is not guaranteed.
- If only the USB cable is used, the SX600 does not operate. Be sure to use two types of cables, the power and USB cables, to connect the SX600 to a host terminal.
- Connect the Power cable before connecting the USB cable
- When connecting to a USB hub, be sure to use the first stage USB hub that is closest to the computer. If you use the second or later hub stages, the scanner may not operate properly.
- When connecting with a USB 2.0 cable, make sure that the USB port to connect to and hub must be USB 2.0-compliant.

1.4 Driver Installation

■ Before Installing the SDK & Driver for SX600

Before Installing the SDK & Driver for SX600, perform the following preparations. :

1. Check your system
   The system requirements for the SX600 are as follows
   One of the following operating system is required :

   Windows XP
   Embedded XP
   Linux

   ♦ Host terminal

   * For Windows 2000,Windows XP and Linux :
     Recommended: Intel® Celeron® M 430 1.73 GHz or higher
     Minimum: Intel® Pentium® III 600 MHz or higher

   * USB port (USB 2.0/1.1)

   ♦ RAM

   * For Windows 2000 and Windows XP:
     Recommended: 512 MB or more
     Minimum: 256 MB or more

   ♦ Free disk space
     Minimum100 MB

2. Make sure that the SX600 is not yet connected to your host terminal.

3. Start your computer.
   Log on as a user with "Computer administrator" privileges.

4. Exit all programs and close all windows.

■ Installing the ("SX600_setup.exe") and the Driver for SX600

Attention | These instructions are for Windows XP (which we highly recommend with our USB Interfaces).   Installation under embedded XP is similar, but not necessarily identical. If you are using Linux, then you should contact your dealer or Witek Technical team, We may send you Linux driver.
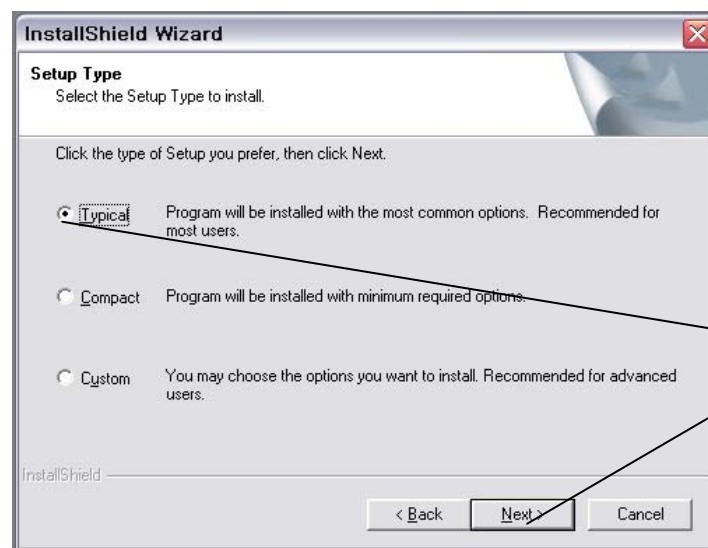
SDK Installation
1. Make sure you have a "SX600_setup.exe" that dealer or Witek distributor provided. If not, You may download   "SX600_setup.exe" from Witek website as www.witek.co.kr

2. Execute "SX600_setup.exe".
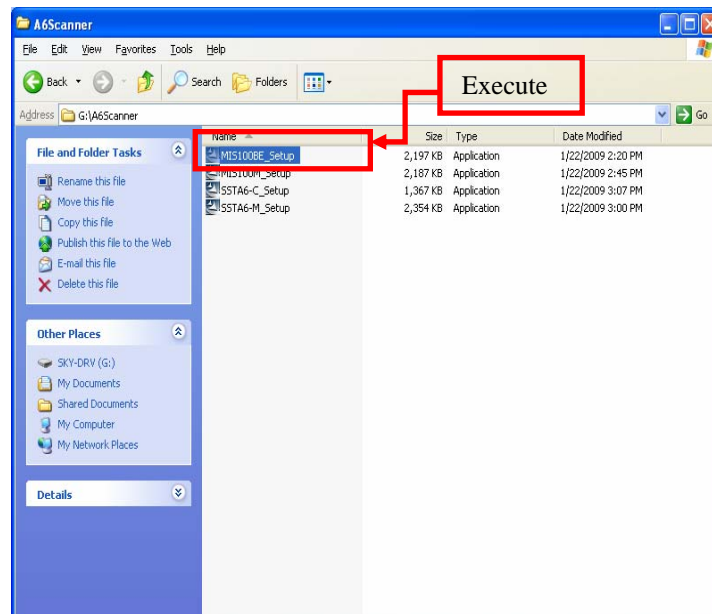
3. Click the [**Next >**] button

4. The following dialog should appear;

You should select typical and then click "next" button

5. The following dialog should appear ;

6. Click the [**Finish**] button to complete the installation

> **Note** After installation of SX600_setup.exe. You may find the following
> folders under
>
> C:\Witek\Driver
> \ SX600 \
> \lib
> \firmware
> \cfg
> \program
> \driver
>
> You may execute SX600.exe in the ..\program folder.

The Driver Installation

7. Plug SX600 Scanner USB Interface to your host terminal USB port . A message like this should appear on your terminal PC's Taskbar:
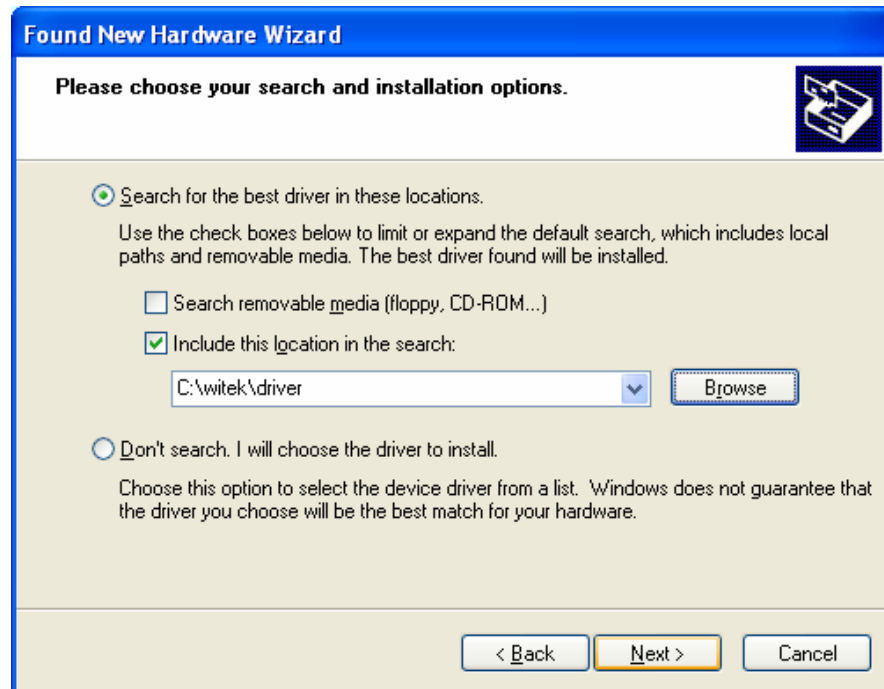
Attention   If the new Hardware Found Wizard popup does not appear when you plug in your interface, go into Device Manager and look for the interface. In Windows XP, you can typically find the Device Manager by **RIGHT-CLICKING** on My Computer then selecting Manage. Your Witek CIS SCANNER USB Interface should be under **Universal Serial Bus (USB) Controllers** or under **Other Devices**.   If it's there, Right-Click it and then select **Update Driver**.   Then you can start at Step 3 in the instructions below.

8. The New Hardware Found Wizard should appear:

On the screen left, select "**Install from a list or specific location (Advanced)**" then click the [**Next >**] button

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Found New Hardware Wizard

Please choose your search and installation options.

◉ Search for the best driver in these locations.

Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.

☐ Search removable media (floppy, CD-ROM...)

☑ Include this location in the search:

C:\witek\driver   [Browse]

○ Don't search. I will choose the driver to install.

Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.

[< Back] [Next >] [Cancel]

1

10. On the screen above:
    Select "**Search for the best driver in these locations**"
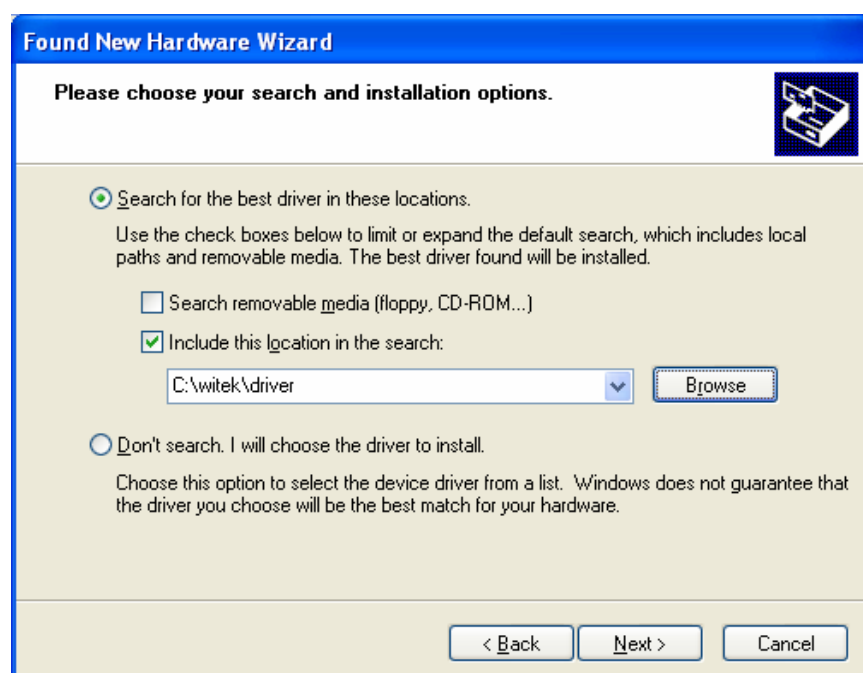   Check "**Include this location in the search**:"
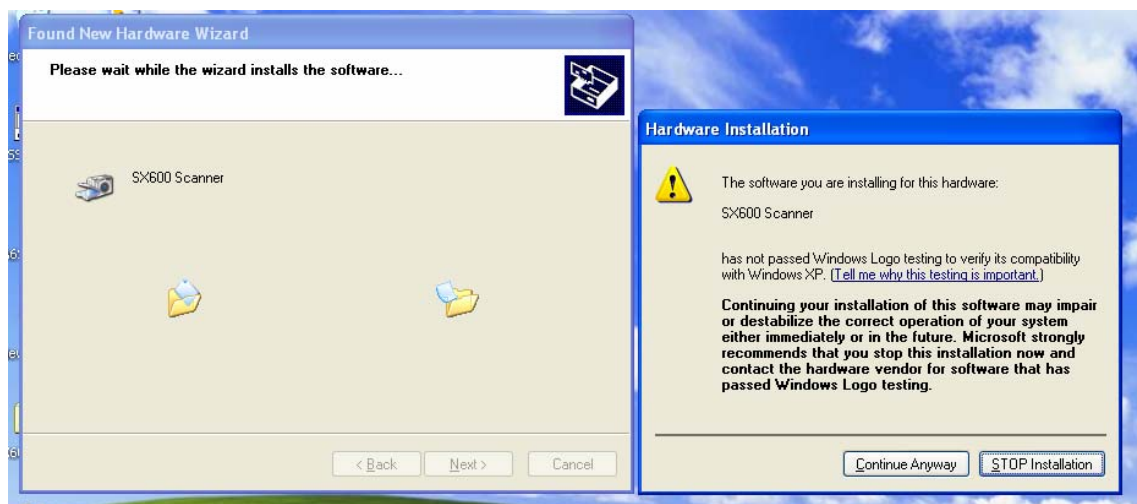   Use the [**Browse**] button to find the SX600 folder
   (Usually **C:\Program Files\ SX600 \driver**)
    Click [**OK**]

11. The following dialog should appear:

Found New Hardware Wizard

Please choose your search and installation options.

◉ Search for the best driver in these locations.

Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.

☐ Search removable media (floppy, CD-ROM...)

☑ Include this location in the search:

C:\witek\driver   [Browse]

○ Don't search. I will choose the driver to install.

Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.

[< Back] [Next >] [Cancel]

12. Click the [**Next >**] button
13. The following dialog should appear:

14. This dialog warns you that we haven't paid Microsoft a pound of flesh to certify the driver. You're going to have to click the [**Continue Anyway**] button..:-)

15. The following dialog should appear:
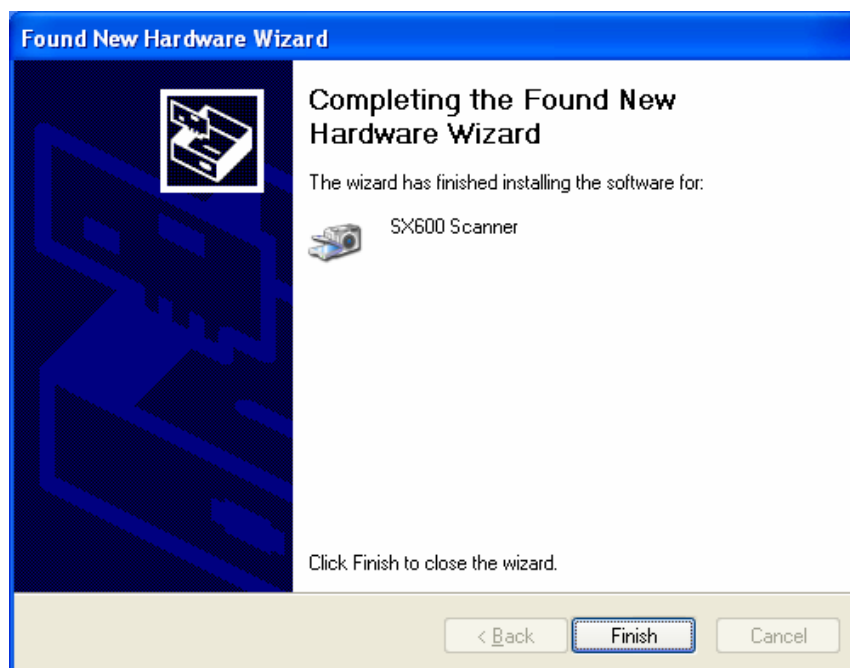
16. Click the [**Finish**] button to complete the installation

2. Installation Specifications

The following table summarizes the installation specifications of this scanner.

Scan	Descriptions
Scan source	Dual-sided image capture using Contact Image Sensor
Scan size	Width : up to 104mm(lottery application : 82.55mm) Length : up to 290mm
Scanning Resolution	200dpi
Scanning Speed	Max. 400mm/sec at B/W ,256Gray
Out put Format	1bit(b/w), 4bit(16gray), 8bit(256gray)
Image format	Bmp, jpg, tif and raw image data
Interface	USB 2.0 & 1.1 (WINDOW, LINUX DRIVER SUPPORT)
Paper thickness	0.1mm ~ 0.2mm
Power	+24DC /2.5A
MTBF	50,000hours(CIS only)
Dimension	162mm(W) x 110.5mm(H) x 155mm(D)
Weight	1.7 kg
Temperature / Humidity	Temp. : -20(^{o}C) ~ 60(^{o}C) Humidity(%) : 10% ~90% non-condensing
Scanner SDK	API Programming support(library files) Linux/window available
Option	Paper Stacker Franking MICR Reader Thermal Brander Shade free Scan Image processing Library OMR Library Barcode Recognition Library UV Sensor light for counterfeit detection

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3. Using the scanner

3.1 Basic flow of Operations

With the document, such as check, omr card, loaded on the SX600, simply insert the the document, and you can save the scanned documents to files via your program using Witek SDK or test program (SX600)
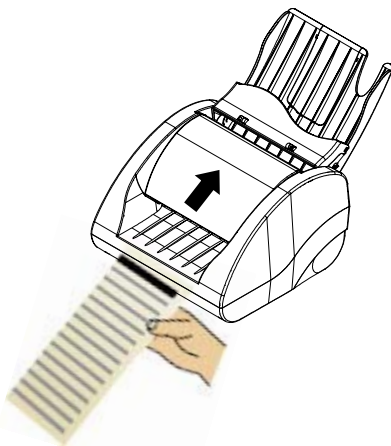
Attention	Make sure that the Power cable or USB bus power cable is connected to the SX600 scanner

|	
Note	Do not scan the following types of documents:

- Document with paper clips and/or staples (Remove clips and staples to scan these documents.)
- Documents folded in half
- Materials other than paper such as the fabric, metal foil, transparency, or plastic card
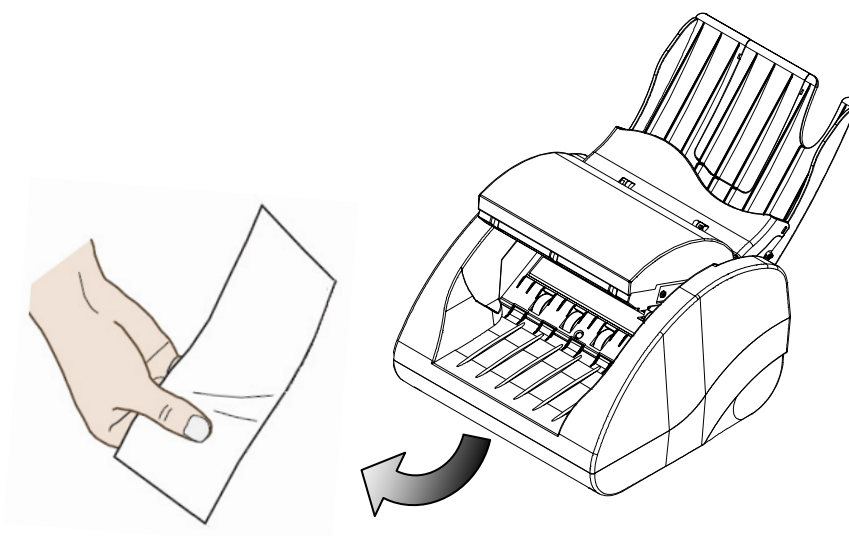
4. Troubleshooting

4.1 Clearing Paper Jams

If a paper jam occurs during scanning, follow the procedure below to remove the jammed document.

Jam Removal Open Cover
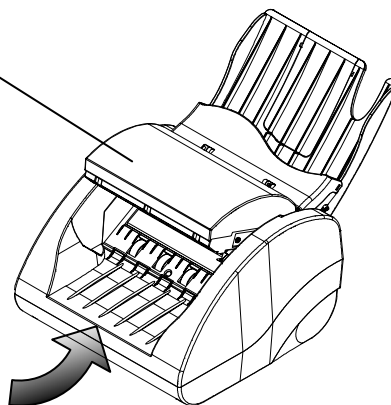
1. Open the Jam removal cover
2. Remove the jammed paper in the scanner

3. Close the Jam removal cover

4.2 Troubleshooting check list

This section describes common problems that may occur during usage of the SX600 and how to solve the problems. Before you call a repair service, perform simple troubleshooting steps in the table below. If performing these troubleshooting steps does not resolve your problem, contact an authorized Witek scanner service provider or dealer.

| Symptom	Check this item	Resolution
The scanner cannot be turned on	Are the power or USB bus power cable and the USB cable connected correctly?	Correctly connect the power or USB cable and USB bus power cable to the computer. When using a hub, check the hub's power supply. If you connect to a non-powered hub, the scanner may not work properly.
		Disconnect and then re-connect the power
Scanning does not start.	Is the USB cable connected correctly?	Connect the USB cable correctly.
	Is the device driver installed correctly?	Re-install the SX600 device driver
The document is not fed properly or gets jammed.	Is the inside of the scanner dirty? Or, did you insert any paper that is torn, or bent?	Clean the dirty locations. Do not insert the paper that is torn or bent
Black lines are produced on the scanned document.	Is the scanned document written with a pencil?	Black lines may be produced on scanned documents written with a pencil, making the rollers dirty or causing improper paper feeding. To avoid such troubles, clean rollers as often as possible.
For more information, You may contact a authorized Witek service provider or dealer		

5. Cleaning the inside of the Scanner

Clean inside of the scanner with a soft lint-free cloth. In an alternating succession of scanning documents, the accumulated paper-powder and dust inside the scanner causes a scanning error.

Attention

- Do not use water or neutral detergent to clean the inside of the scanner.
- Do not use aerosol sprays to clean the scanner. Aerosol sprays cause dirt and dust to enter the scanner, resulting scanner failure and malfunction.
- When cleaning the scanner parts, dampen a cloth with modest quantities of the cleaner. In addition, wipe off the cleaner completely with a soft lint-free cloth to leave no residue on the surface of the cleaned parts.

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6. Dimension
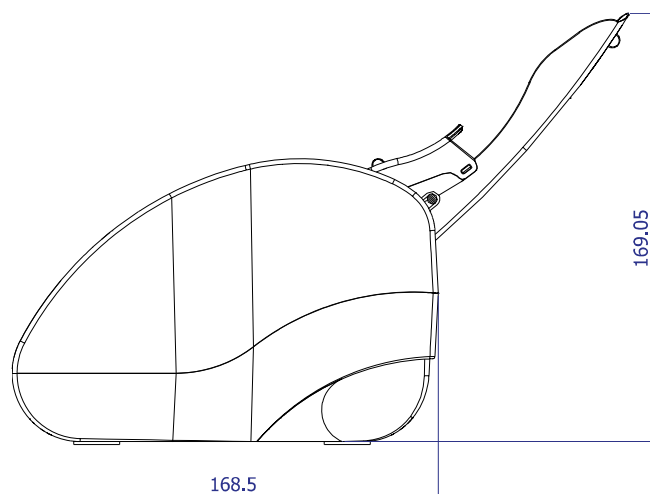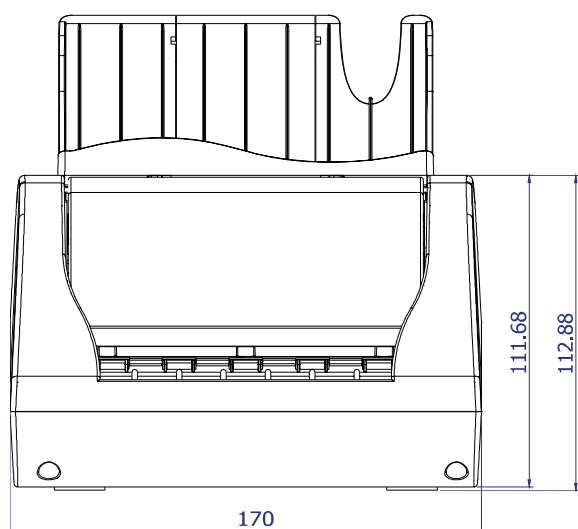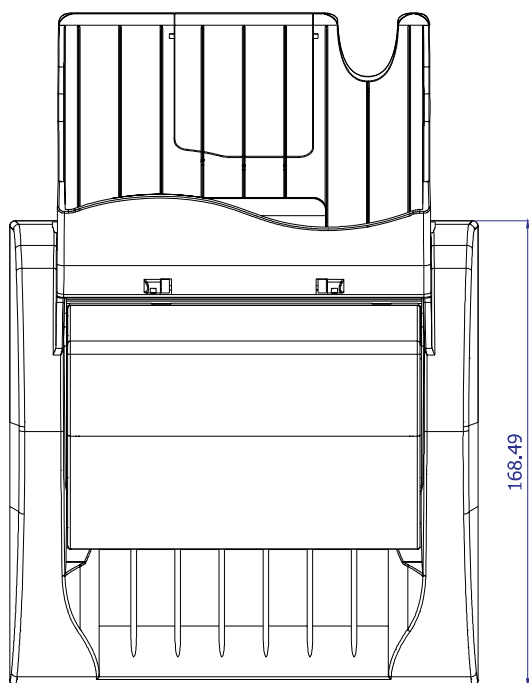
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7. Repair

Contact the dealer or distributor where you purchased your SX600 or an authorized service provider for performing repairs on this product.

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SX600 User's Guide
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