AUTO SCAN SPECTROPHOTOMETER

MYIRO-9

En INSTRUCTION MANUAL

⚠ **Before using this instrument, please read this manual.**

Safety Symbols

The following symbols are used in this manual and on the MYIRO-9 to prevent accidents which may occur as a result of incorrect use of the instrument.

Denotes an instruction regarding a safety warning or note. Read the instruction carefully to ensure safe and correct use.

Denotes an instruction regarding the risk of electric shock. Read the instruction carefully to ensure safe and correct use.

Denotes an instruction regarding the risk of fire. Read the instruction carefully to ensure safe and correct use.

Denotes a prohibited action. This action must never be performed.

Denotes an instruction. This instruction must be strictly adhered to.

Denotes a prohibited action. Never disassemble the instrument.

Denotes an instruction. Be sure to disconnect the AC adapter from the AC outlet.

This symbol indicates A.C.

This symbol indicates D.C.

Notes on this Manual

- Copying or reproduction of all or part of the contents of this manual without permission is strictly prohibited.
- The contents of this manual are subject to change without prior notice.
- Every effort has been made in the preparation of this manual to ensure the accuracy of its contents. However, should you have any questions or find any errors, please contact your retailer.
- The manufacturer of this instrument will not accept any responsibility for consequences arising from the use of the instrument.

Safety Precautions

To ensure correct use of this instrument, read the following points carefully and adhere to them. After you have read this manual, keep it in a safe place where it can be referred to anytime a question arises.

⚠ WARNING	Failure to adhere to the following points may result in death or serious injury.		
	Do not use the instrument in places where flammable or combustible gases (gasoline, etc.) are present. Doing so may cause a fire.		Do not disassemble or modify the instrument or the AC adapter. Doing so may cause a fire or electric shock.
	Always use the AC adapter supplied as a standard accessory or the optional AC adapter, and connect it to an AC outlet of the rated voltage and frequency. If an AC adapter other than those specified is used, it may result in damage to the unit, fire or electric shock.		Take special care not to allow liquid or metal objects to enter the instrument. Doing so may cause a fire or electric shock. Should liquid or metal objects enter the instrument, turn the power off immediately, disconnect the AC adapter plug from the AC outlet, and contact your retailer.
	If the instrument will not be used for a long time, disconnect the AC adapter plug from the AC outlet. Accumulated dirt or water on the prongs of the AC adapter's plug may cause a fire and should be removed.		The instrument should not be operated if it is damaged or the AC adapter is damaged, or if smoke or odd smells occur. Doing so may cause a fire. In such situations, turn the power off immediately, disconnect the AC adapter plug from the AC outlet and contact your retailer.
	Do not forcibly bend, twist, or pull the AC adapter power cable. Do not scratch or alter the power cable or place heavy objects on it. Doing so may damage the power cable and cause a fire or electric shock.		Always hold the plug itself when disconnecting the AC adapter plug from the AC outlet. Pulling on the power cable may damage it and cause a fire or electric shock.
	Insert the power plug fully and securely. Incomplete inserting may cause fire or electric shock.		Do not insert or disconnect the AC adapter plug from an AC outlet with wet hands. Doing so may cause electric shock.

⚠ CAUTION	Failing to adhere to the following points may result in injury or damage to the instrument or other property.		
	Do not place the instrument on an unstable or sloping surface. Doing so may result in its falling or overturning, causing injury. Be careful not to drop the instrument when carrying it.		Make sure that the AC outlet is located near the instrument and that the AC adapter plug can be connected to and disconnected from the AC outlet easily.
	Do not open the cover during scanning. If the cover is opened during scanning, there is a risk that your hand might get caught in the instrument, resulting in injury.		When cleaning, disconnect the power plug. Cleaning with the power plug connected may result in electric shock.

Introduction

The Auto Scan Spectrophotometer MYIRO-9 is designed for the rapid automatic scanning of printed materials.

Notes on Use

Be sure to use this instrument properly. Use of this instrument in ways other than those specified in this manual may result in risk of injury, electric shock, instrument damage, or other problems.

Operating Environment

- Use the MYIRO-9 at an ambient temperature of between 10°C and 35°C and relative humidity of 30 to 85% with no condensation. Do not use the instrument in areas subject to rapid temperature changes.
- Do not leave the MYIRO-9 in direct sunlight or near sources of heat, such as stoves, etc. The internal temperature of the instrument may become much higher than the ambient temperature in such cases.
- Do not use the MYIRO-9 in areas where dust, cigarette smoke or chemical gases are present. Doing so may cause deterioration in performance or a breakdown.
- Do not use the MYIRO-9 near equipment which produces a strong magnetic field (such as speakers, etc.).
- The MYIRO-9 belongs to installation category I products (equipment which is powered by an AC adapter connected to commercially available power).
- The MYIRO-9 belongs to pollution degree 2 products (equipment which may cause temporary electrical hazards due to contamination or condensation or products which are used in such an environment).
- Do not use the MYIRO-9 at altitudes higher than 2,000 m.
- The MYIRO-9 and the AC adapter supplied as a standard accessory have been designed exclusively for indoor use. They should never be used outdoors because rain or other factors may damage the instrument.

Measurement

- Make sure that test charts are clean and not dusty.
- When bringing test charts from another location, avoid sudden changes in temperature and allow the test charts to become sufficiently adapted to room temperature before taking measurements. If condensation occurs on the test chart, it may cause sluggish scanning or paper jams.
- Be sure that there are no objects blocking the paper entry or paper exit slots of the MYIRO-9.
- The MYIRO-9 is only for measuring paper test charts or similar subjects. It cannot be used for measuring printed cloth or other subjects with insufficient stiffness.

Power Source

- Make sure that the power switch is set to off (" ○ ") when the MYIRO-9 is not in use.
- Always use the AC adapter supplied as a standard accessory and connect it to an AC outlet of the rated voltage and frequency.
- Use an AC power supply of the rated supply voltage (within ±10%).

System

- Do not subject the MYIRO-9 to strong impact or vibration. Doing so may cause deterioration of performance or breakdown.
- When the MYIRO-9 is not in use, it should be covered to prevent entry of foreign matter.
- The MYIRO-9 may cause interference if used near a television, radio, etc.
- Since the MYIRO-9 uses a microcomputer, external magnetic noise may cause malfunction. In this case, turn the power off, and wait 30 minutes, and then turn it on again.

Notes on Storage

- The MYIRO-9 should be stored at temperatures between 0°C and 40°C, and at a relative humidity of 80% or less (35°C) without condensation. Do not store the instrument in areas subject to high temperatures, high humidity, sudden changes in temperature, or where freezing or condensation may occur, because these circumstances may cause a breakdown. It is recommended to store the MYIRO-9 with a drying agent at a temperature around 20°C.
- Do not leave the MYIRO-9 inside a car such as in the trunk. Otherwise, the temperature and/or humidity may exceed the allowable range for storage during midsummer or midwinter, resulting in a breakdown.
- Keep the packing materials used for shipment and use them to transport the MYIRO-9. This protects the instrument from sudden changes in temperature, vibration, and shock.
- Do not store the MYIRO-9 in areas where dust, cigarette smoke or chemical gases are present. Doing so may cause deterioration in performance or a breakdown.
- Be sure to keep all packing materials (cardboard box, cushioning material, plastic bags, etc.). They can be used to protect the instrument during storage or during transportation to the service facility for maintenance (recalibration, etc.).

Notes on Cleaning

- If the MYIRO-9 becomes dirty, wipe it with a soft, clean dry cloth. Never use solvents such as thinner or benzene.
- If the internal White Calibration Plate becomes dirty, it can be cleaned according to the procedure on p. 35.
- If the MYIRO-9 breaks down, do not try to disassemble and repair it by yourself. Contact your retailer.

Disposal Method

- Make sure that the MYIRO-9 and its accessories and packing materials are either disposed of or recycled correctly in accordance with local laws and regulations.

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Unpacking the MYIRO-9

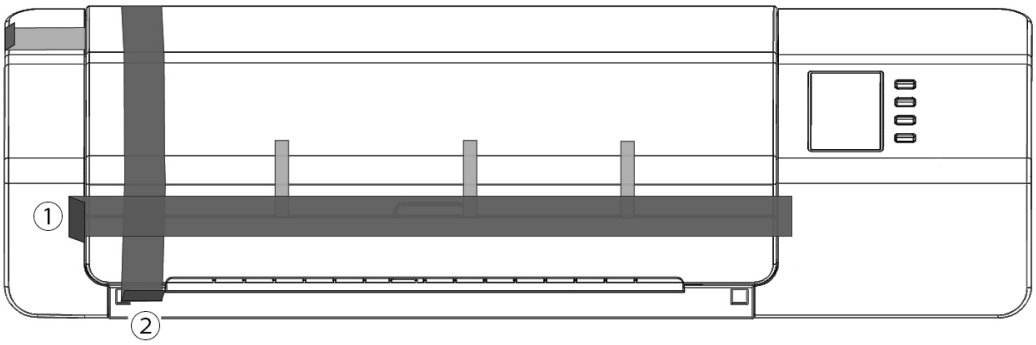
Packing Materials:

Keep all packing materials (cardboard box, cushioning materials, plastic bags, etc.) in a safe place. The MYIRO-9 is a precision measuring instrument. In the event that the instrument needs to be shipped to an authorized service facility, the packing materials can be used to protect the instrument from impact and vibration during shipment. If the original packing materials are lost or damaged, please contact your retailer.

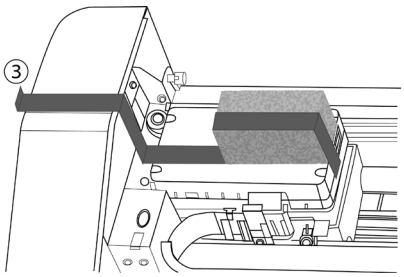
Removing Tapes:

The cover, color measurement sensor unit, and conductive pads of the MYIRO-9 have been taped in position to avoid movement during shipment. The tapes must be removed before use.

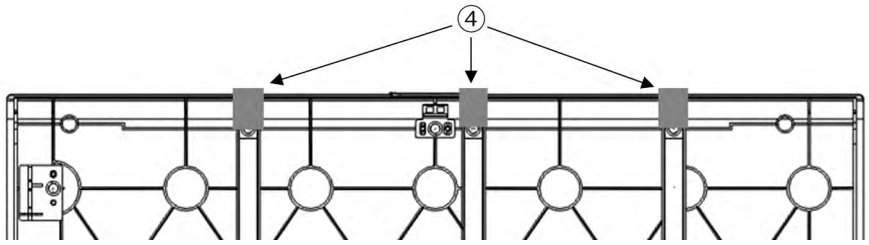
After unpacking the MYIRO-9 and placing it in its final location, remove the tape strips ① and ② as indicated in the illustrations below.



Open the cover and remove tape ③ as shown at right. If power is switched on before tape ③ is removed, the MYIRO-9 may malfunction. After removing tape ③, slide the color measurement sensor unit slightly by hand to check that it moves smoothly. If it does not move smoothly or if there is excessive noise, please contact your retailer.



Carefully remove the tapes ④ as shown in the figure below. Be careful not to remove the conductive pads under the tapes. If tapes ④ are not removed, repeatability may suffer.



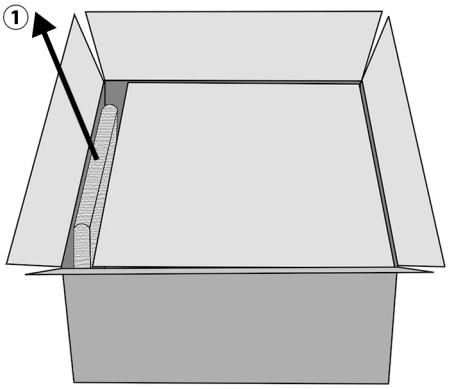
Unpacking the Optional Auto Sheet Feeder FD-A09

Packing Materials

Keep all packing materials (cardboard box, cushioning materials, plastic bags, etc.) in a safe place. In the event that the FD-A09 needs to be shipped to an authorized service facility, the packing materials can be used to protect the product from impact and vibration during shipment. If the original packing materials are lost or damaged, please contact your retailer.

Removing FD-A09 from Box

After opening the box of the FD-A09, remove the output tray as indicated by ① at right before removing any of the other materials.

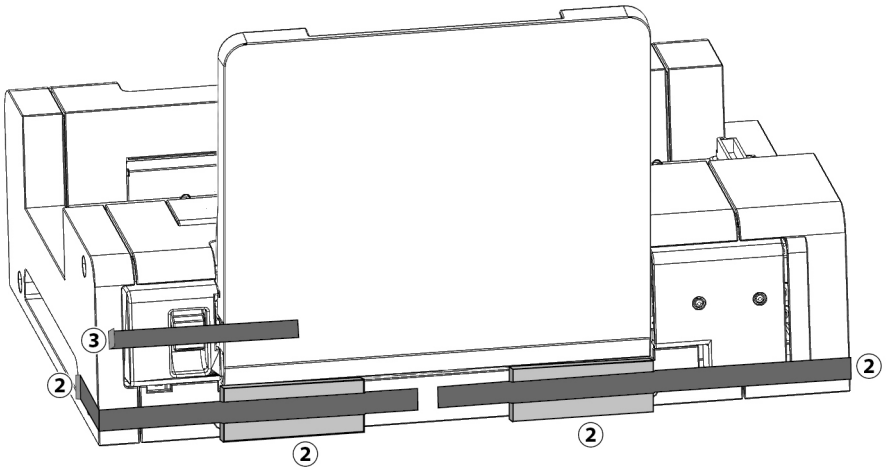


Remove the cardboard inserts and cushioning materials, and then carefully lift the FD-A09 out of the box and place it where it will be used.

Removing Tapes

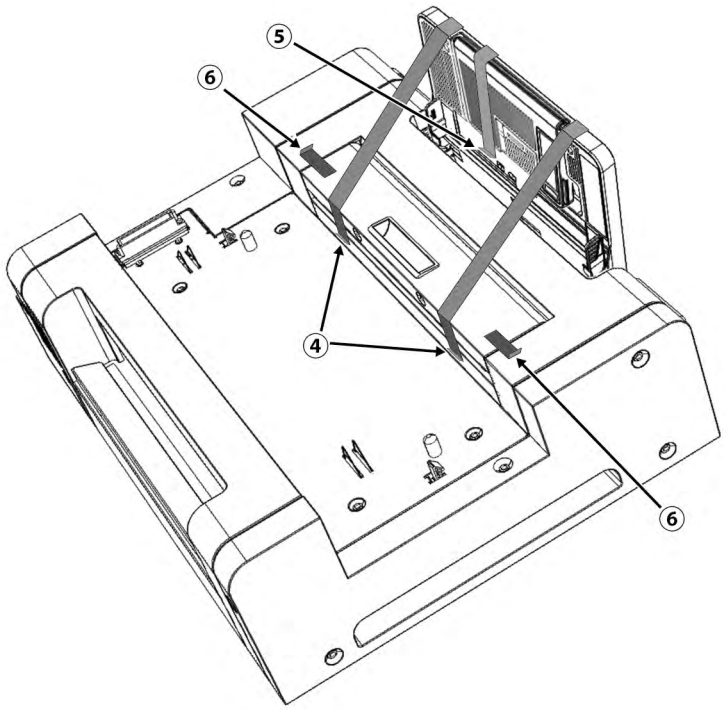
To protect some parts of the FD-A09 and prevent their movement during shipment, spacers have been taped to the FD-A09 or parts have been taped in place. The tapes and spacers must be removed before use. After placing the FD-A09 where it will be used, remove the tapes and spacers in the order specified below.

Remove the two spacers under the supply tray and the tapes holding them in place (② below) and then remove the tape ③ from the supply tray.

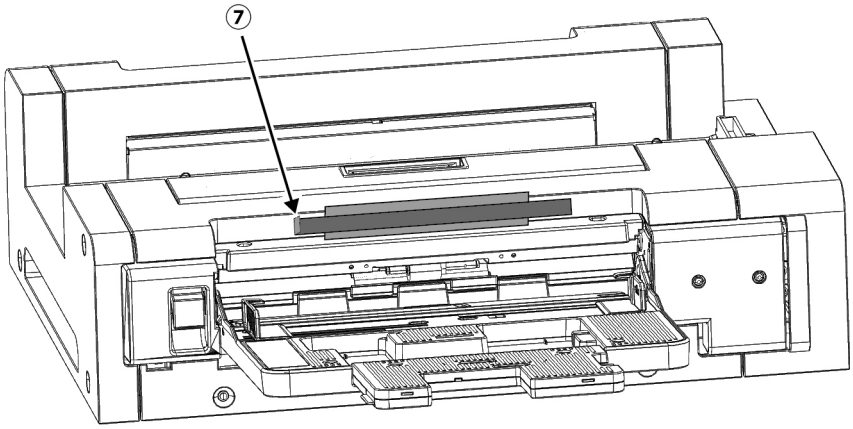


Remove the two tapes ④ holding the supply tray closed against the FD-A09, remove the tape ⑤ holding the extension tray closed, and

then remove the two tapes ⑥ holding the cover closed.

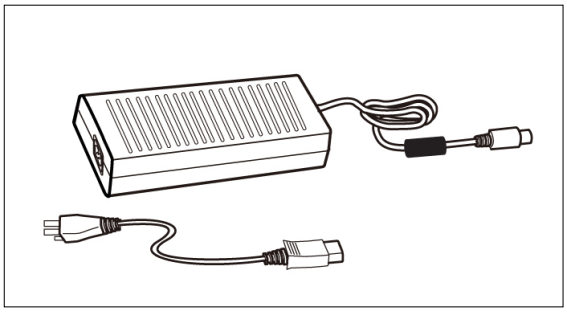


Open the supply tray by tilting it down and remove the tape and cushion indicated by ⑦ below.

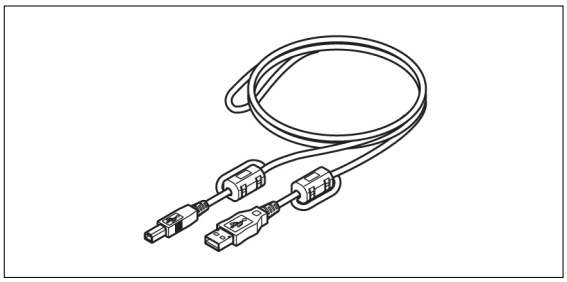


Standard Accessories

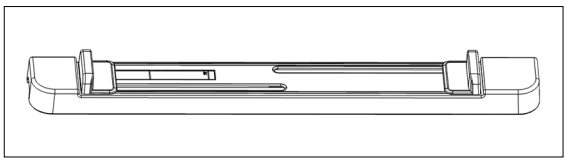
AC Adapter AC-A324F
Used to supply power from an AC outlet to the instrument.
Input: 100 to 240 V ∿ 50/60Hz
Output (Typical): 24 V ⎓ 6.25A
(STD-24050)



USB Cable (3m) IF-A18
Used to connect the instrument to a computer.

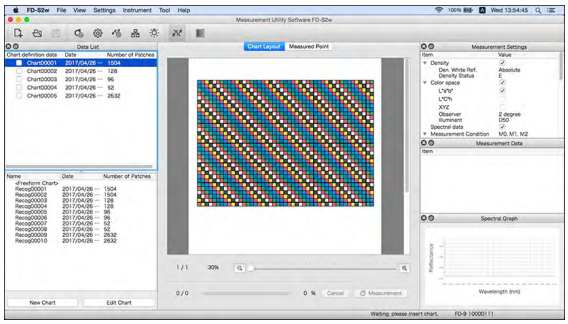


Paper Guide
Used to guide the test chart into the instrument when feeding test charts manually.

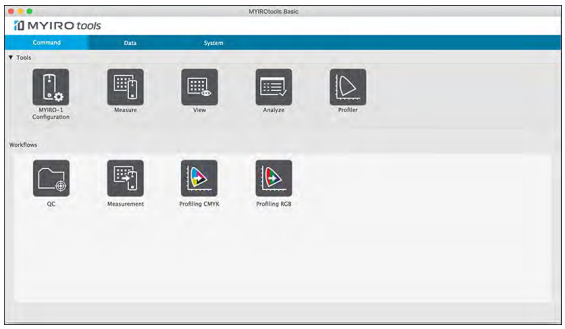


Software

Measurement Utility Software FD-S2w
Used to control the instrument from a computer.
Available for free download from the MYIRO website:
https://www.myiro.com



MYIROtools
A next-generation color management tool offering advanced color management with simple operation. Includes functions to measure charts, create ICC profiles, control print quality, and more. (Sold separately)



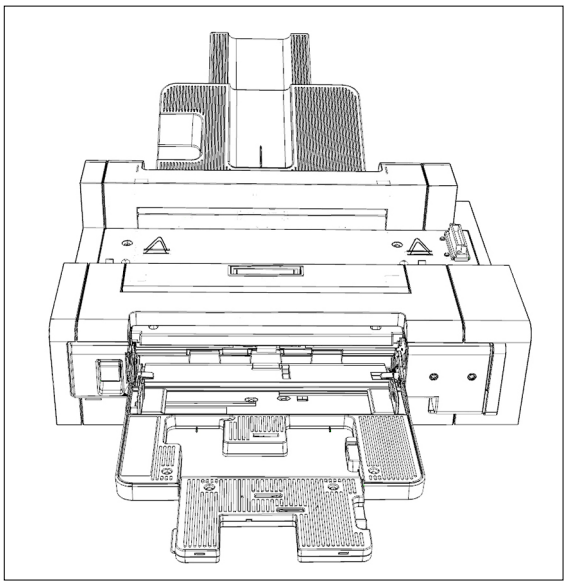
Optional Accessories

Auto Sheet Feeder FD-A09
Used to automatically feed test charts into the instrument.

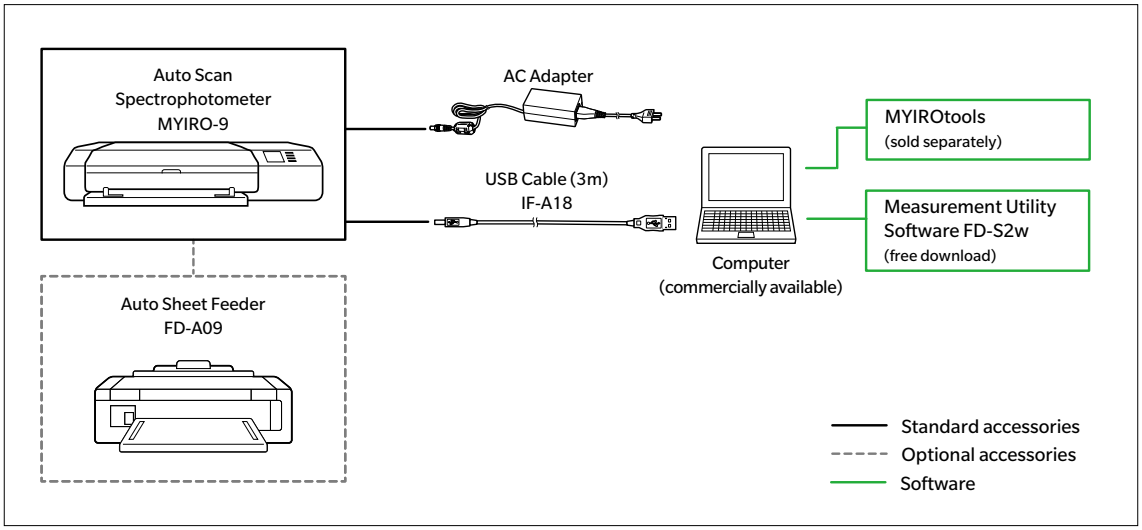
Recommended maximum number of loaded sheets:
Normal paper (80 g/m^2):100 sheets
Heavy paper (130 g/m^2): 70 sheets

Paper size:

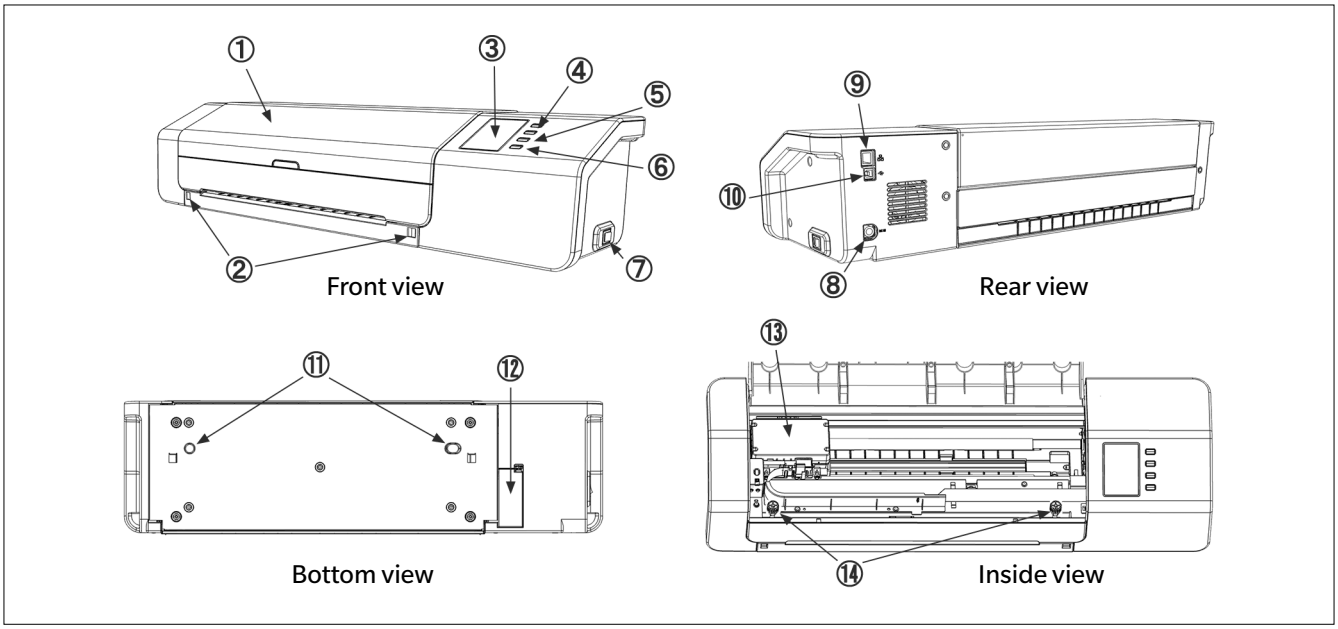
Paper width:	90 to 320 mm
Paper length:	170 to 450 mm
Paper thickness:	0.08 to 0.25 mm



System Diagram



Names and Functions of Parts



1	**Cover**	
2	**Paper guide mounting slots**	For attaching the Paper Guide.
3	**Display panel**	Shows instrument settings, status, error messages, etc.
4	**Up / down buttons**	For selecting items from the setting screen or making numerical settings.
5	OK **button**	For confirming selection or settings.
6	⮌ **(Return) button**	For entering the settings screen or returning from the setting screen.
7	**Power button**	For switching power on and off.
8	**AC adapter input socket**	For connecting to the AC adapter
9	**LAN connection terminal**	For connecting the instrument to a wired network.
10	**USB connection terminal**	For connecting the instrument to a computer via USB.
11	**Auto Sheet Feeder alignment holes**	
12	**Auto Sheet Feeder connector cover**	
13	**Color measurement sensor unit**	Moves back and forth during operation to scan the test chart.
14	**Base mounting screws**	These screws secure the instrument to its base. They can be loosened if necessary to clear jammed paper (see p. 32) or for cleaning (see p. 35). • Be sure that these screws are firmly tightened. If they are loose when measurements are taken, measurement accuracy may suffer.
15	**White calibration plate**	Used for performing white calibration.

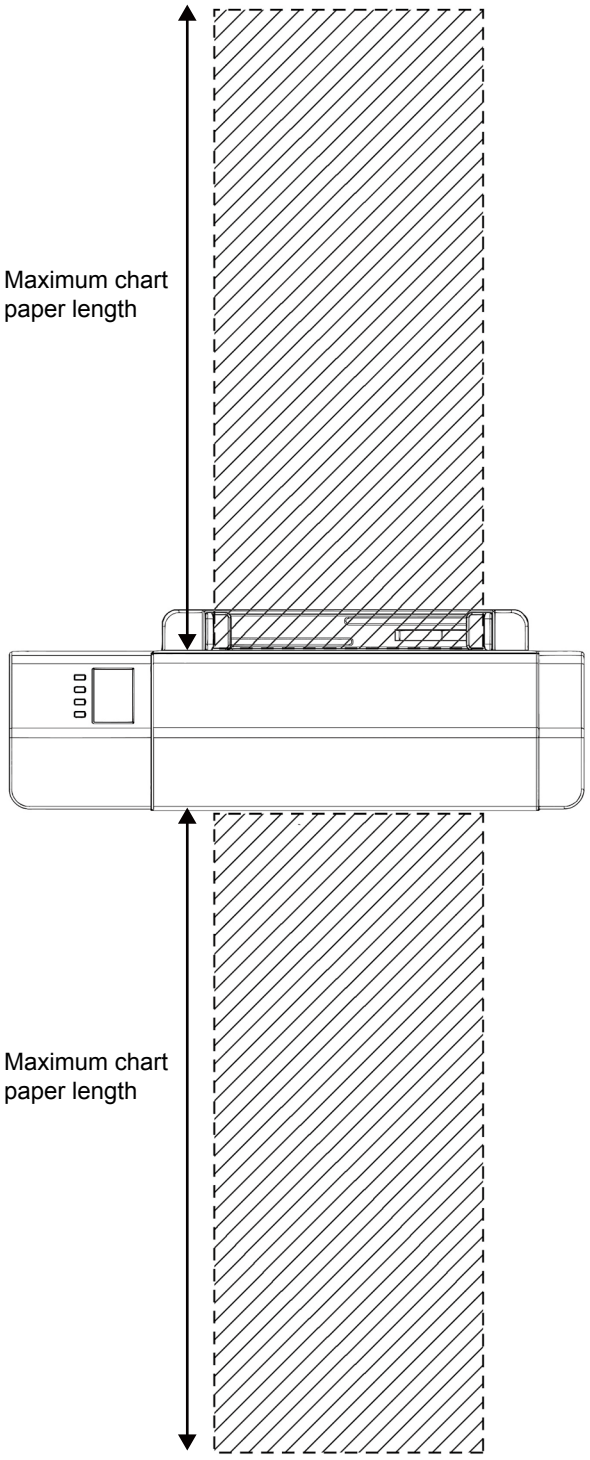
Preparations

Setting up MYIRO-9

The MYIRO-9 should be set up on a flat, level surface with sufficient space for color charts in front of and behind the MYIRO-9. There should be enough space in front of the MYIRO-9 for color charts to be measured to be inserted into and ejected from the MYIRO-9 without any obstacles, and enough space behind the MYIRO-9 for color charts to fully extend from the MYIRO-9 without obstacles. (See below.)

- If the MYIRO-9 is set up on a rough surface or a surface which is not level, measurement accuracy may suffer.
- Obstacles may cause the color chart to bend or be shifted to either side, resulting in damage to the color chart or misalignment during scanning.
- After scanning, the scanned color chart will be ejected from the front of the MYIRO-9. If the MYIRO-9 is placed at the edge of a table, the ejected color chart might fall to the floor and be damaged.

Necessary space



Attaching/Removing Paper Guide

Paper Guide is used when test charts will be fed manually into the MYIRO-9.

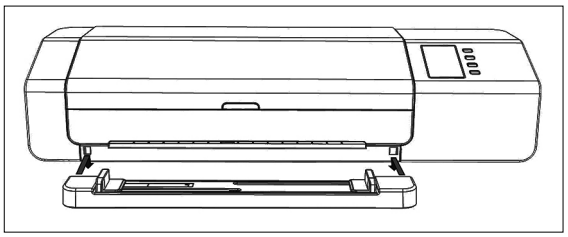
- If the Auto Sheet Feeder FD-A09 will be used, the Paper Guide should be removed.
- When the Paper Guide is not attached to the MYIRO-9, it should be stored carefully where it will not be lost or broken.

Attaching

1 **While gripping the ends of the Paper Guide, align the hooks of the Paper Guide with the paper guide mounting slots of the MYIRO-9, and insert the hooks fully.**

2 **Slide the Paper Guide straight down until the Paper Guide clicks in place.**

- Be careful to slide the Paper Guide straight down. Twisting the Paper Guide or tilting it away from the MYIRO-9 may cause the hooks to be broken.

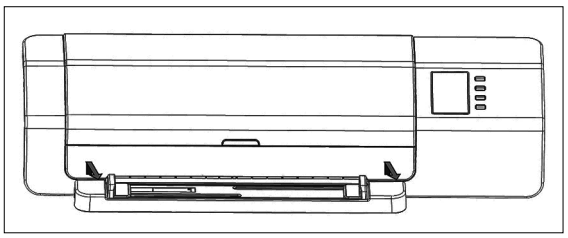


Removing

1 **While gripping the ends of the Paper Guide, slide the Paper Guide straight up.**

- Be careful to slide the Paper Guide straight up. Twisting the Paper Guide or tilting it away from the MYIRO-9 may cause the hooks to be broken.

2 **Remove the hooks from the paper guide mounting slots.**

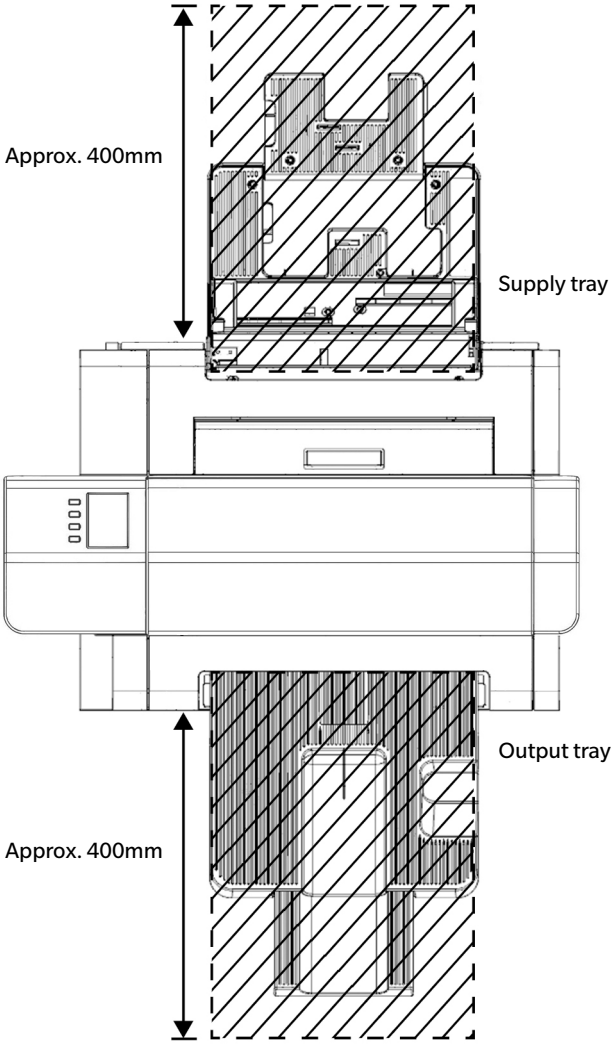


Setting Up Auto Sheet Feeder FD-A09 (optional accessory)

The optional Auto Sheet Feeder FD-A09 can automatically feed a stack of test charts into the MYIRO-9. Up to 100 test charts can be placed in the Auto Sheet Feeder, and they will be automatically fed into the MYIRO-9 one by one to be scanned.

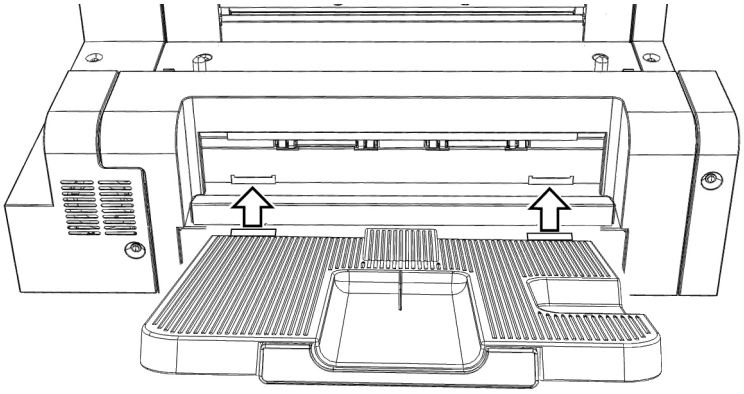
The FD-A09 should be set up on a flat, level surface with sufficient space for both the supply tray and the output tray to be fully opened. There should be enough space for the color charts to be placed in the supply tray in front of the FD-A09 before measurement and for the charts to be ejected from the MYIRO-9 and lay in the output tray after measurement. (See below.)

Necessary space for Auto Sheet Feeder FD-A09



Attaching Output Tray to Auto Sheet Feeder FD-A09

To attach the output tray to the FD-A09, hold the tray tilted upward, and insert the two tabs at the base of the tray into the corresponding slots on the back of the FD-A09 as shown below.

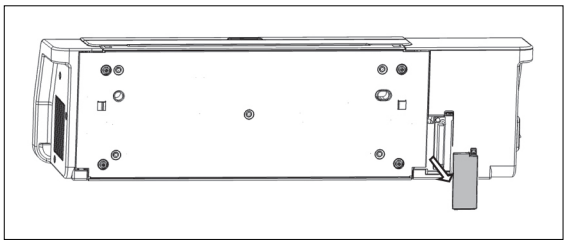


Mounting MYIRO-9 on Auto Sheet Feeder FD-A09

- If the Paper Guide is attached to the MYIRO-9, remove it before proceeding. See p. 15.

1 **Unplug all cords and cables (AC adapter power cord, USB cable, LAN cable) from the MYIRO-9.**

2 **While holding the cover of the MYIRO-9 closed, tilt the MYIRO-9 back so that it rests on its back side.**



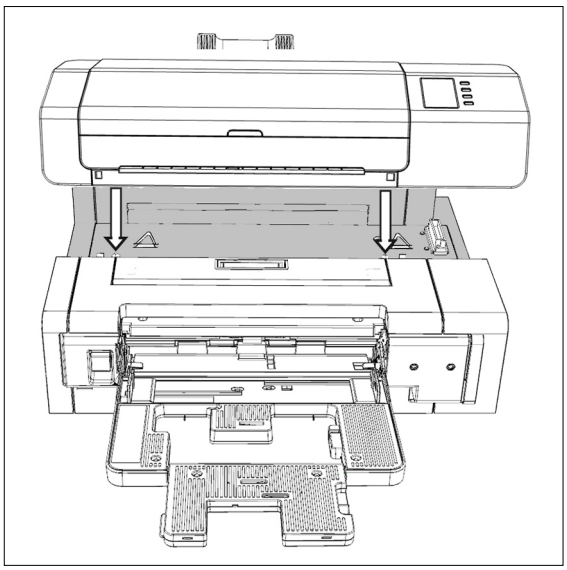
3 **Push down on the tab of the Auto Sheet Feeder connector cover, pull the cover open, and remove it.**

- Please store the cover carefully so that it will not be lost or broken.

4 **Return the MYIRO-9 to the normal upright orientation.**

5 **Place the Auto Sheet Feeder FD-A09 on a flat surface.**

6 **Lift the MYIRO-9 up, align the Auto Sheet Feeder alignment holes on the bottom of the MYIRO-9 with the alignment pegs on the Auto Sheet Feeder, and slowly lower the MYIRO-9 straight down onto the Auto Sheet Feeder until it clicks in place.**

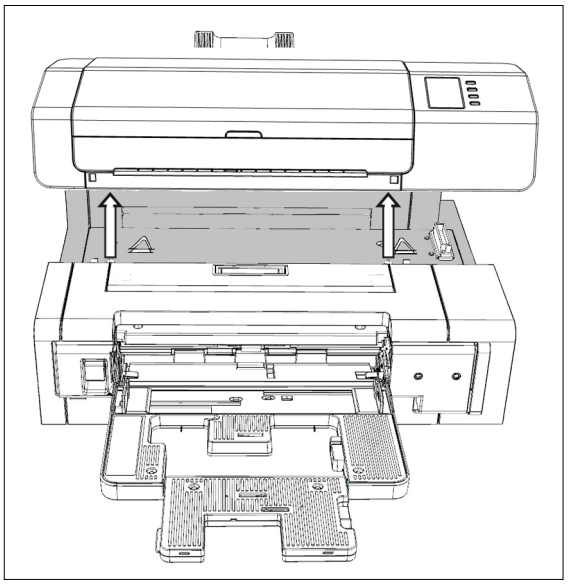


Removing MYIRO-9 from Auto Sheet Feeder FD-A09

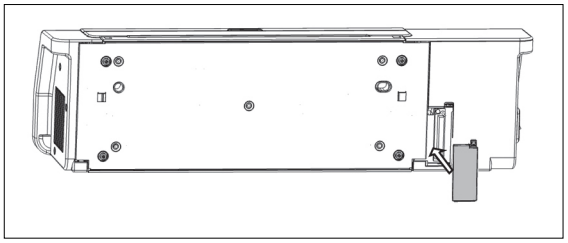
1 **Switch off the power of the MYIRO-9.**

2 **Unplug all cords and cables (AC adapter power cord, USB cable, LAN cable) from the MYIRO-9.**

3 **Lift the MYIRO-9 straight up off of the Auto Sheet Feeder.**



4 **Replace the Auto Sheet Feeder connector cover on the MYIRO-9.**



Connecting the AC adapter

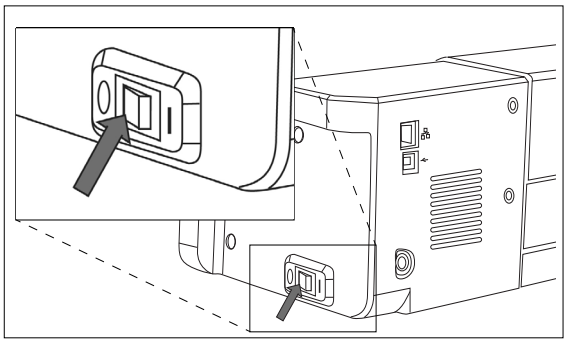
Warning

- Always use the AC adapter supplied as a standard accessory or a specified replacement AC adapter, and use the AC adapter only with an AC outlet of the rated voltage and frequency. Failure to do so may damage the MYIRO-9 or AC adapter, or may cause electric shock or fire.
- If the MYIRO-9 will not be used for a long period of time, disconnect the AC adapter from the AC outlet.
- When plugging the AC adapter into an AC outlet, be sure that the prongs of the plug are clean and dry. Accumulated dirt or moisture on the prongs of the plug may cause a fire and should be removed.
- When plugging in or unplugging a cord, be sure to hold the plug, not the cord. Do not pull on or forcibly bend the cord. Doing so may result in broken wires.
- Do not plug in or unplug the AC adapter with wet hands. Doing so may cause electric shock.
- Be sure to insert plugs fully and securely. Incomplete insertion may cause fire or electric shock.
- Do not disassemble or modify the AC adapter or cords. Doing so may cause fire or electric shock.
- Do not unplug or plug in the AC adapter with the instrument's power set to "ON" (|) Doing so may cause a malfunction.

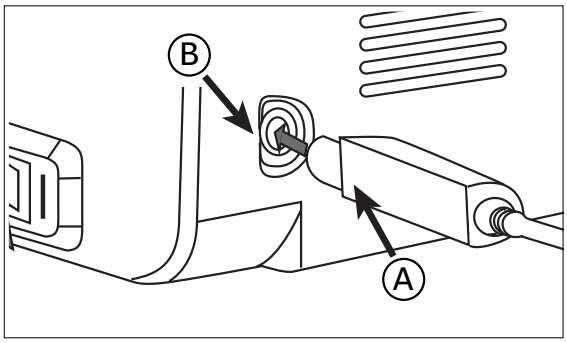
Procedure

1 **Make sure that the power switch of the MYIRO-9 is set to off (○).**

2 **Insert the output plug of the AC adapter power cord into the power cord inlet of the AC adapter as shown.**



3 **Insert the output plug of the AC adapter into the AC adapter inlet of the MYIRO-9 as shown. Be sure the plug is oriented correctly. Align the flat side of the plug Ⓐ aligned with the straight side of the AC adapter inlet Ⓑ, and insert the plug fully as far as it will go in a straight line without twisting.**



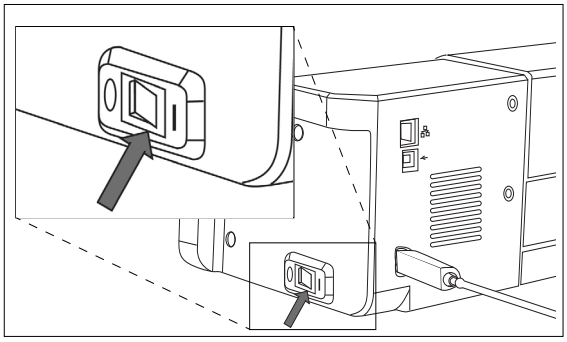
4 **Insert the input plug of the AC adapter power cord into an AC wall outlet.**

- When disconnecting the AC adapter, make sure that the power switch is set to off (○).

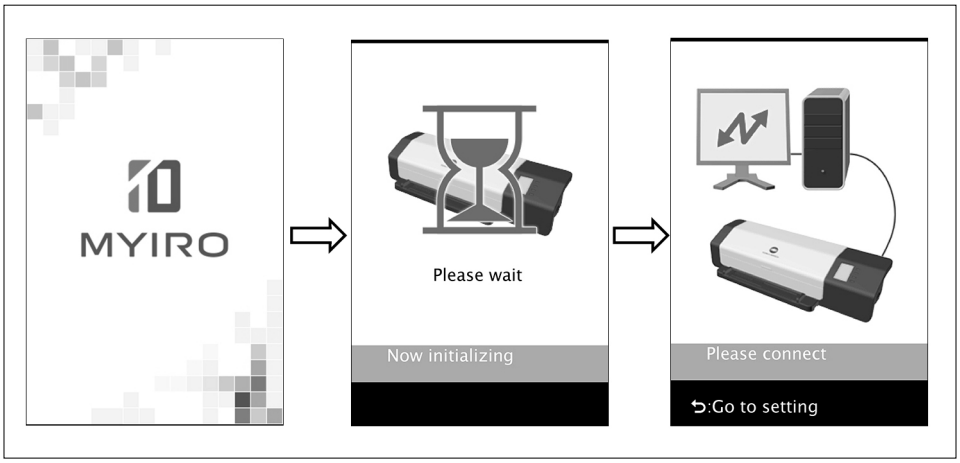
Switching Power On/Off

Switching power on

1 **Press the on (|) side of the power switch. The MYIRO-9 will start up.**

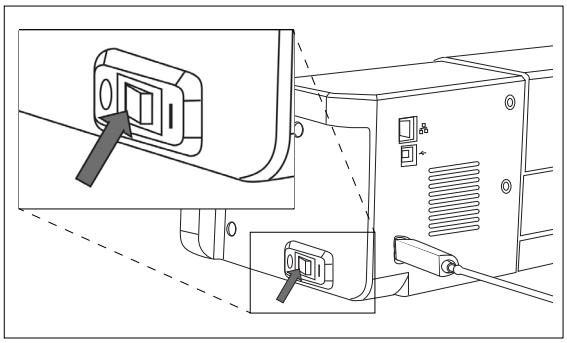


The MYIRO logo will be displayed for a few seconds, followed by the initialization display. When initialization has been completed (after about 25 seconds), the “Please connect” display will be shown.



Switching power off

1 **Press the off (○) side of the power switch to switch off the power.**



Connecting MYIRO-9 to Computer

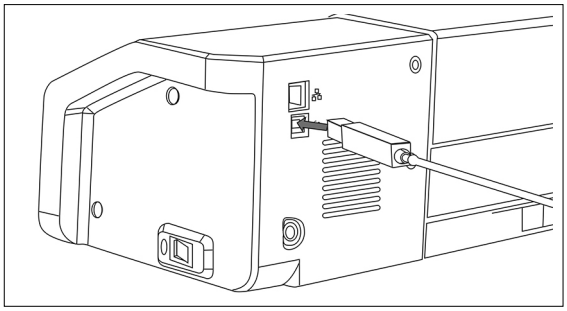
The MYIRO-9 can be connected to the computer directly using a USB cable or via a LAN.
When connecting via a LAN, either DHCP or a fixed IP address can be used.

Connecting MYIRO-9 to Computer using USB cable

- Use the included USB Cable IF-A18 (3m) to connect the MYIRO-9 and computer.
- It is recommended that the software to connect to and control the instrument (such as Measurement Utility Software FD-S2w) be installed prior to connecting the MYIRO-9.
- The USB communication port of the instrument conforms to USB 2.0.
- When connecting the instrument and computer, the USB driver for the instrument needs to be installed. If it is not installed with the software, you will be prompted to install the driver when the instrument is first connected to the computer and switched on.
- The instrument is not designed to be powered via the USB cable. The AC adapter must be used.
- Make sure that the USB connector plugs are properly oriented and connected securely. Check the shapes of the receptacle and plug, and insert the plug fully into the receptacle.
- When connecting/disconnecting the USB cable, always hold onto the connector plug. Do not pull on or forcibly bend the cable. Doing so may result in wire breakage.
- Make sure that the cable has sufficient length. Putting tension on the cable may cause connection failure or wire breakage.

In general, a USB cable can be connected/disconnected while the instrument and computer are switched on, but in the procedure below the MYIRO-9 and computer are switched off.

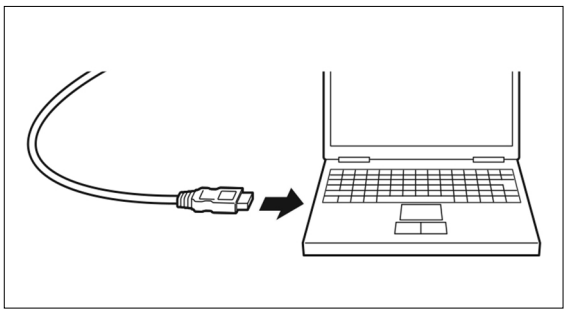
1 **Plug the USB Type B plug of the USB Cable into the USB connection terminal on the back of the MYIRO-9.**



2 **Plug the USB Type A plug of the USB Cable into the USB port of the computer.**

3 **Connect the AC adapter and switch on the MYIRO-9 and computer.**

- When you are prompted to install the USB driver, specify the USB driver included with the software.



Determining connected USB port number

The number of the USB port assigned to the MYIRO-9 is required when connecting to the MYIRO-9 via USB.
To see which port has been assigned, follow the steps below.

On Windows 7:

1. **Open Control Panel.**
2. **Select System and Security.**
3. **In System, click Device Manager.**
4. **Click on the ▷ next to Ports (COM & LPT). The list of connected devices will appear.**
5. **"Measuring Instruments" will appear in the list, followed by the assigned COM port in parentheses.**

On Windows 8, Windows 8.1, or Windows 10:

1. **Point to the lower-left corner of the screen and then right-click in the window that appears.**
2. **In the menu that appears, click "Device Manager" to open the Device Manager.**
3. **Click "Ports (COM & LPT)" to expand it, and check the COM port assigned to "Measuring Instruments".**

On Mac OS X:

1. **Press and hold the Option key on your keyboard, and click the Apple menu.**
2. **Choose "System Information" or "System Profiler".**
3. **In the window that appears, select "USB" from the left column and check the COM port assigned to "Measuring Instruments".**

Setting Network Settings for Connecting MYIRO-9 to Computer via a LAN

The MYIRO-9 can be connected to a LAN and shared by multiple computers. When connecting the MYIRO-9 to a LAN, network settings can be performed directly or DHCP (Dynamic Host Configuration Protocol) can be used.

- Network settings can also be performed from Measurement Utility Software FD-S2w when the MYIRO-9 is connected via USB.

Setting network settings directly

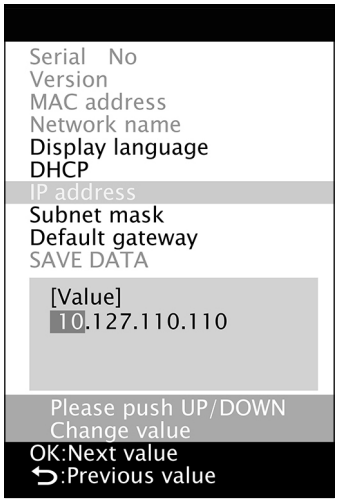
The IP address, subnet mask, and default gateway can be set directly in the settings screen.

- It is not possible to set the network name directly using the MYIRO-9 buttons.

1 **Press ⮌ to open the settings screen.**

2 **Press ▽ or △ repeatedly to select "IP address" and press OK. The first number of the IP address will be highlighted.**

- "IP address" will be disabled if "DHCP" is set to "ON". To change the setting to "OFF", see p. 26.



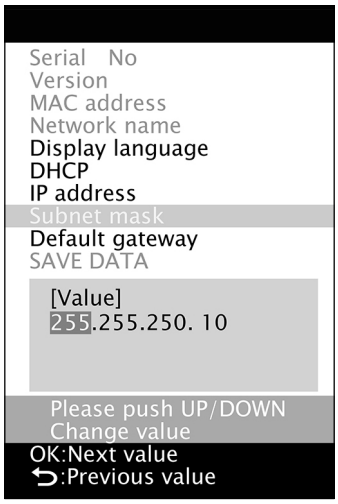
3 **Press ▽ or △ repeatedly to set the desired value for the first number.**

- Holding ▽ or △ pressed will cause the value to change continually.
- Values between 0 and 255 can be set. If ▽ or △ is pressed again when the lowest or highest value has been reached, the number will change to the highest or lowest value.

4 **Press OK to move to the next number.**

5 **Repeat steps 3 and 4 until all numbers have been set for the IP address.**

6 **Press ▽ to select "Subnet mask" and press OK. The first number of the subnet mask will be highlighted.**



7 **Press ▽ or △ repeatedly to set the desired value for the first number.**

- Holding ▽ or △ pressed will cause the value to change continually.
- Values between 0 and 255 can be set. If ▽ or △ is pressed again when the lowest or highest value has been reached, the number will change to the highest or lowest value.

8 **Press OK to move to the next number.**

9 **Repeat steps 3 and 4 until all numbers have been set for the subnet mask.**

10 **Press ▽ to select "Default gateway" and press OK. The first number of the default gateway will be highlighted.**

11 **Press ▽ or △ repeatedly to set the desired value for the first number.**

- Holding ▽ or △ pressed will cause the value to change continually.
- Values between 0 and 255 can be set. If ▽ or △ is pressed again when the lowest or highest value has been reached, the number will change to the highest or lowest value.

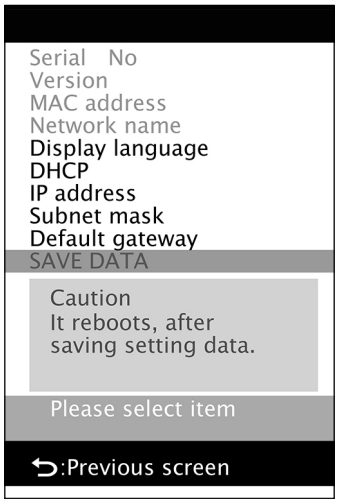
12 **Press OK to move to the next number.**

13 **Repeat steps 3 and 4 until all numbers have been set for the default gateway.**

14 **Press ▽ to select "SAVE DATA" and press OK. The message "Caution: It reboots after saving setting data" will be shown.**

15 **Press OK to save the settings and reboot the MYIRO-9.**

Once these values have been set, connection to the MYIRO-9 from within the same subnet can be performed by specifying the IP address during connection.



Setting network settings via DHCP

If your network has DHCP enabled, you can set DHCP on the MYIRO-9 to "ON" and allow your system to automatically allot the IP address, subnet mask, and default gateway.
Changing the DHCP setting

1 **Press ⮌ to open the settings screen.**

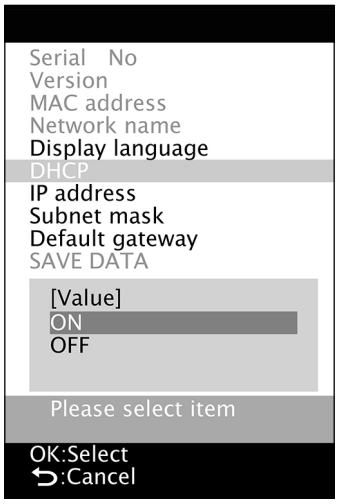
2 **Press ▽ or △ repeatedly to select "DHCP" and press OK.**

3 **Press ▽ or △ to change the setting to the desired setting.**

ON: Network settings are performed automatically via DHCP.
OFF: Network settings are not performed automatically.

4 **Press ▽ to select "SAVE DATA" and press OK. The message "Caution: It reboots after saving setting data" will be shown.**

5 **Press OK to save the settings and reboot the MYIRO-9.**

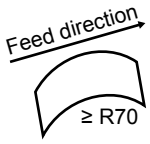


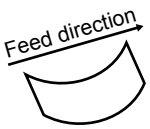
Taking measurements

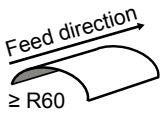
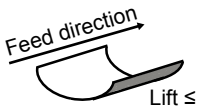
Measurements with the MYIRO-9 are controlled from software, such as Measurement Utility Software FD-S2w. For details on taking measurements, please refer to the instruction manual for the software that you are using.

Feeding Test Charts into MYIRO-9

- If the MYIRO-9 base mounting screws inside the cover are loose when measurements are taken, measurement accuracy may suffer. Be sure that the screws are firmly tightened.
- When bringing test charts from another location, avoid sudden changes in temperature and allow the test charts to become sufficiently adapted to room temperature before taking measurements. If condensation occurs on the test chart, it may cause sluggish scanning or paper jams.
- The following test charts should not be fed into the MYIRO-9 or loaded in the optional Auto Sheet Feeder FD-A09. Doing so may cause jams or may damage the MYIRO-9 and/or the FD-A09.
  - Wrinkled, folded, or torn charts
  - Charts with staples or paper clips
  - Charts bound together in booklet form
  - Charts that are glued together
  - Charts with cutouts removed or which are cutouts
  - Charts which are adhesive labels
- Permissible curl amount:

<table>
<tr><th></th><th colspan="2">Downward curl</th><th colspan="2">Upward curl</th></tr>
<tr><td>Curl in feed direction</td><td> 
</td><td rowspan="2">

Curl radius when paper is stood on edge</td><td> 
</td><td rowspan="2">

Lift when paper is laid flat on table.</td></tr>
<tr><td>Curl in scan direction</td><td> 
</td><td> 
</td></tr>
</table>

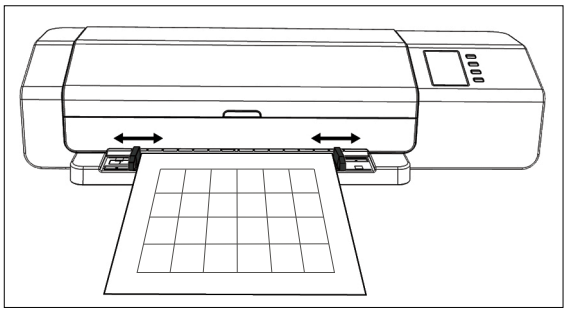
- When using test charts which are easily scratched, such as test charts on glossy paper, it is recommended that they be fed into the MYIRO-9 by hand instead of using the optional Auto Sheet Feeder FD-A09. If the FD-A09 is used, the chart may become scratched.

Feeding test charts when using the MYIRO-9 alone

- For information on feeding test charts when using the optional Auto Sheet Feeder FD-A09, please see below.

1 **Place the end of the test chart on the Paper Guide with the printed surface facing up, and slide the paper guides so that they are positioned touching the sides of the test chart as shown.**

- For details on chart conditions, see p. 37.



2 **Slide the test chart gently between the guides and into the MYIRO-9. When the test chart enters the MYIRO-9 by a certain amount, it will be automatically pulled into the MYIRO-9 for measurements. When the MYIRO-9 starts pulling the test chart in, let go of the test chart.**

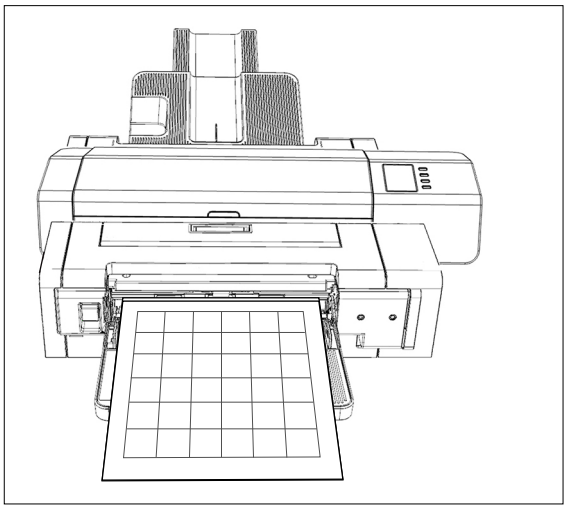
- Be sure to slide the test chart in straight. If the paper guide positions are too narrow or if the test chart goes in at an angle, the test chart may ride up onto the paper guides, which may cause measurement accuracy to suffer.

Feeding test charts when using optional Auto Sheet Feeder FD-A09

1 **When using the Auto Sheet Feeder, place the test charts in the supply tray with the printed surface facing up and slide the paper guides so that they are positioned touching the sides of the test charts as shown.**

Recommended maximum number of loaded sheets:
Normal paper (80 g/m^2):100 sheets
Heavy paper (130 g/m^2): 70 sheets
Paper size:
Paper width: 90 to 320 mm
Paper length: 170 to 450 mm
Paper thickness: 0.08 to 0.25 mm

- For more details on chart conditions, see p. 37.



Feeding of the test charts from the supply tray into the MYIRO-9 is controlled by the software. For details, please refer to the software instruction manual.

Settings screen

The settings screen shows instrument information, error messages, etc. and enables setting of some instrument settings.

Opening/closing settings screen

If the settings screen is not shown, press ⮌ to open the settings screen.
When the settings screen is shown, press ⮌ to close the settings screen and cancel any incomplete settings.

Settings screen layout

The settings screen is divided into 4 main parts.

Selection area for selecting the item to view or set.

Value/setting area for displaying the value and changing the setting of the selected item.

Message area for showing messages related to operation of the display panel.
Key function description area describing the functions of the keys in the current operation.

Setting items

Serial No.	The serial number of the instrument. Not changeable.
Version	The version of the MYIRO-9 firmware. Not changeable.
MAC address	The MAC address of the MYIRO-9's network interface board. Not changeable.
Network name	The network name assigned to the MYIRO-9. It can be set or changed from within the software. For details, refer to the software instruction manual.
Display language (See p. 31.)	English: English 日本語: Japanese 中文: Chinese (Simplified) Deutsch: German Français: French Español: Spanish Italiano: Italian polski: Polish Русский: Russian Português: Portuguese • Change is applied immediately after [OK] is pressed.
DHCP (See p. 26.)	ON: The network settings are automatically assigned using DHCP OFF: Use of DHCP is disabled
IP address (See p. 24.)	IP address (xxx.xxx.xxx.xxx) set on MYIRO-9. It can be set using the [△], [▽], and [OK] buttons or from software when MYIRO-9 is connected. • Disabled if DHCP is set to "ON" • Changes made using the buttons are not applied until SAVE DATA is performed.
Subnet mask (See p. 24.)	Subnet mask (xxx.xxx.xxx.xxx) set on MYIRO-9. It can be set using the [△], [▽], and [OK] buttons or from software when MYIRO-9 is connected. • Disabled if DHCP is set to "ON" • Changes made using the buttons are not applied until SAVE DATA is performed.
Default gateway (See p. 24.)	Default gateway (xxx.xxx.xxx.xxx) set on MYIRO-9. It can be set using the [△], [▽], and [OK] buttons or from software when MYIRO-9 is connected. • Disabled if DHCP is set to "ON" • Changes made using the buttons are not applied until SAVE DATA is performed.
SAVE DATA	Saves changes to network settings (DHCP, IP address, subnet mask, and default gateway), and reboots the MYIRO-9 to apply the new settings.

Selecting and changing settings

Press [▽] or [△] to move the cursor to the desired item. The value or current setting of the selected item will appear in the value/setting area.

To change the selected item, refer to the page specified for that item in the table above.

- Setting items which are shown in gray in the settings screen cannot be changed.

Setting display language

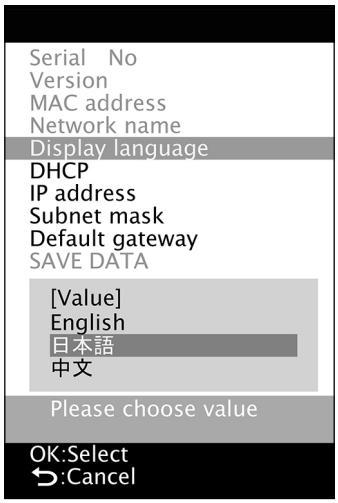
The language shown on the display panel can be selected according to the following procedure.

1 **Press ⮌ to open the settings screen.**

2 **Press ▽ or △ repeatedly to select "Display language" and press OK. A list of the language selections will appear, with the current setting highlighted.**

3 **Press ▽ or △ repeatedly to select the desired language.**

4 **Press OK to confirm the selection. The display screen will change immediately to the selected language.**



Troubleshooting

Error messages

The messages below may be displayed when using the instrument. When one of these messages appears, please take the action indicated below. If the message continues to appear even after taking the recommended action, contact your retailer.

Error message	Possible cause/problem	Action
Paper jammed	Paper has jammed in the MYIRO-9.	Follow the procedure below to clear the paper jam.
	Paper has jammed in the Auto Sheet Feeder.	Follow the procedure on p. 32 to clear the paper jam.
Cover opened	Cover of MYIRO-9 is open.	Close the cover and wait until MYIRO-9 initialization is complete.
Fatal Error Error code: ******** Warning code: ********	A fatal error has occurred.	Switch off the MYIRO-9, wait 30 seconds, and then switch it back on. If the error continues to occur, note the Error code and Warning code numbers, and contact your retailer.

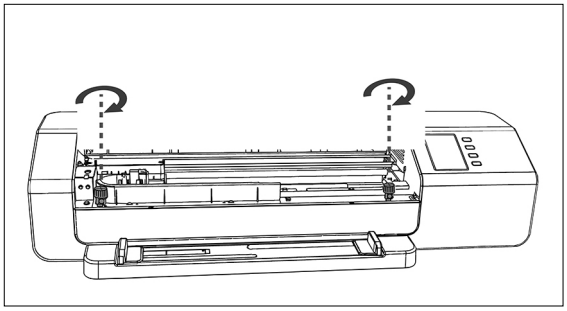
Clearing paper jams

If the paper becomes jammed during measurement, follow the procedures below to remove the jammed paper.

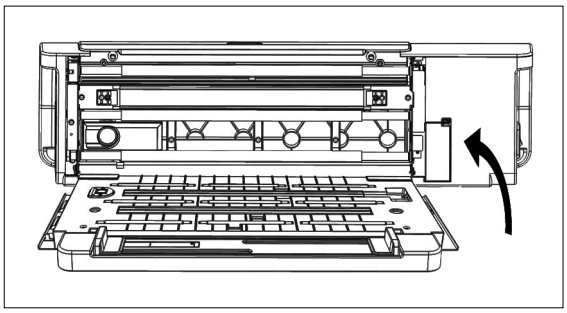
When using MYIRO-9 without Auto Sheet Feeder

When using the MYIRO-9 without the Auto Sheet Feeder, the location of paper jams is usually where the paper is fed between the base and the scan mechanism.

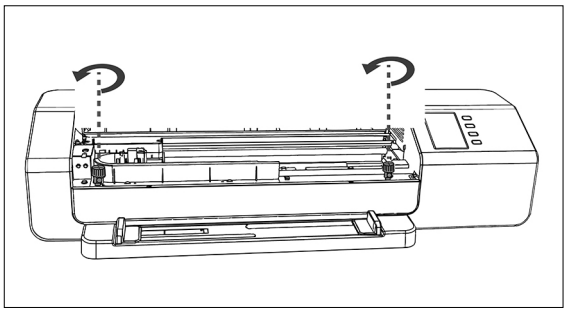
1. **Press ⮌ to eject the paper. If the paper cannot be ejected by the MYIRO-9, continue with the steps below to manually clear the paper jam.**
2. **Switch off the MYIRO-9.**
3. **Disconnect all cables (USB cable, LAN cable, AC adapter cable).**
4. **Open the cover.**
5. **Loosen the two screws as shown completely so that they are free of the base.**
6. **Close the cover.**



7. **Grasp the ends of the MYIRO-9 and tilt the MYIRO-9 body backward as shown. The base should stay flat.**
8. **Remove the jammed paper.**



9 **Grasp the ends of the MYIRO-9 and tilt the MYIRO-9 body onto the base again.**



10 **Open the cover**

11 **Tighten the two screws as shown until snug.**

- If the screws are loose when measurements are taken, measurement accuracy may suffer.
- Do not overtighten.

12 **Close the cover.**

13 **Reconnect the cables and switch the MYIRO-9 back on.**

When using MYIRO-9 with Auto Sheet Feeder

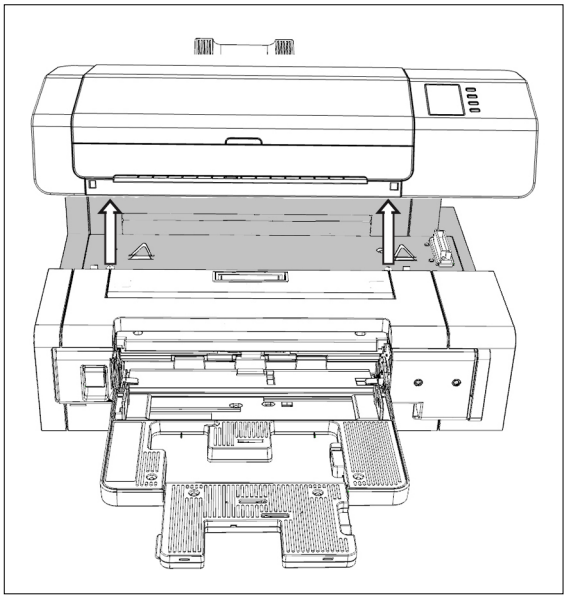
When using the MYIRO-9 with the Auto Sheet Feeder, the location of paper jams is usually in one of the following locations: Where the paper feeds from the supply tray into the Auto Sheet Feeder and then into the MYIRO-9, within the MYIRO-9, or where the paper feeds from the MYIRO-9 through the Auto Sheet Feeder into the exit tray. To clear paper jams, check each section.

1 **Switch off the MYIRO-9.**

2 **Disconnect all cables (USB cable, LAN cable, AC adapter cable).**

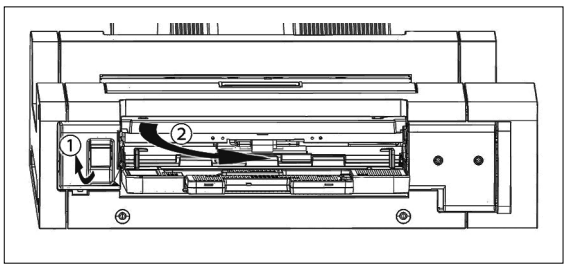
3 **Remove the MYIRO-9 from the Auto Sheet Feeder.**

- If the paper jam is inside the MYIRO-9, follow the procedure in the preceding section “When using MYIRO-9 without Auto Sheet Feeder” to remove the jammed paper.

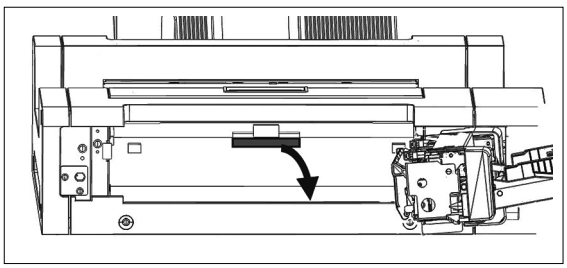


4 **If paper is still jammed, lift the lever on the left side of the supply tray and swing the supply tray mechanism out to the right.**

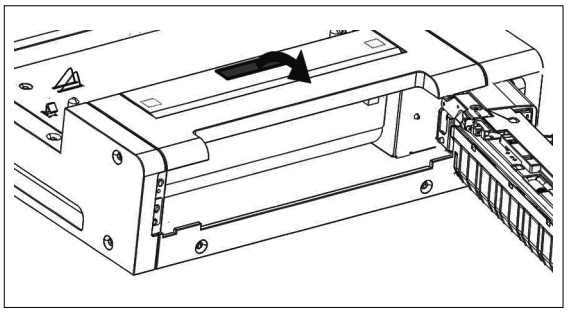
5 **Remove any paper from inside the Auto Sheet Feeder.**



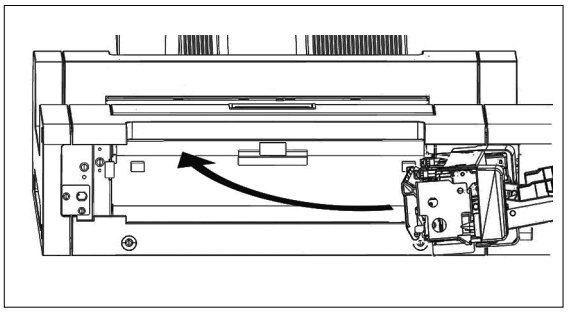
6 **Pull the handle on the inside cover to open the inside panel and check that there is no paper inside the panel. If there is paper there, remove it.**



7 **Pull up on the handle to open the top cover and check that there is no paper inside the panel. If there is paper there, remove it.**



8 **Close the top cover and inner cover, and then swing the supply tray mechanism closed again.**



9 **If there is paper jammed on the exit tray side, remove it.**

10 **Replace the MYIRO-9 in the Auto Sheet Feeder, connect all cables again, and switch the MYIRO-9 back on.**

Cleaning the white calibration plate

If the white calibration plate becomes dirty, it will affect measurement accuracy. If the white calibration plate becomes dirty, it should be cleaned as described below.

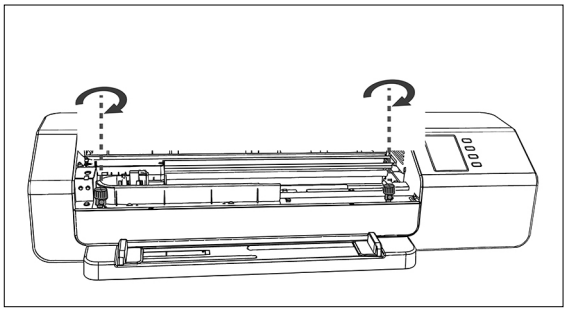
1 **Make sure that the MYIRO-9 is switched off.**

2 **Disconnect all cables (USB cable, LAN cable, AC adapter cable).**

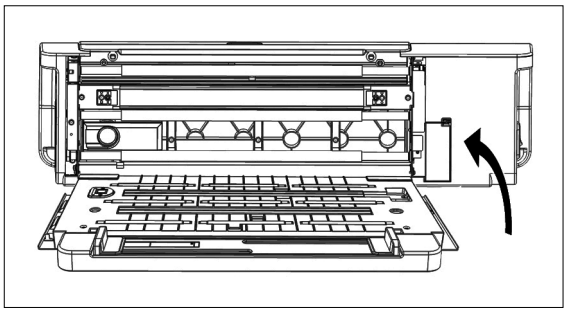
3 **Open the cover.**

4 **Loosen the two screws as shown completely so that they are free of the base.**

5 **Close the cover.**

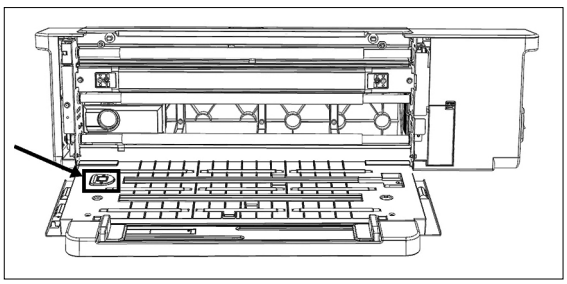


6 **Grasp the ends of the MYIRO-9 and tilt the MYIRO-9 body backward as shown. The base should stay flat.**



7 **Wipe the surface of the white calibration plate with a clean, dry, soft, lint-free cloth or lens-cleaning tissue.**

- If the white calibration plate is stained, lens-cleaning fluid may be used to try to remove the stain.
- Never use benzene or other solvents to clean the white calibration plate. Doing so may cause discoloration or damage to the plate.
- If a stain cannot be removed, contact your retailer.

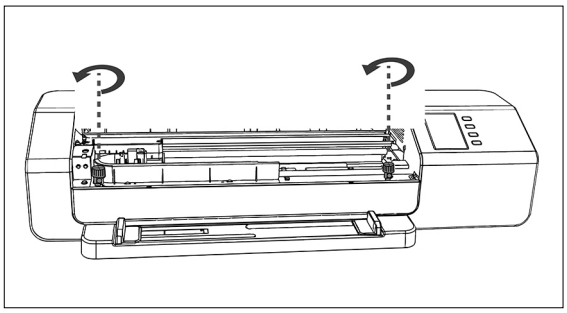


8 **Grasp the ends of the MYIRO-9 and tilt the MYIRO-9 body onto the base again.**

9 **Open the cover**

10 **Tighten the two screws as shown until snug.**

- If the screws are loose when measurements are taken, measurement accuracy may suffer.
- Do not overtighten.



11 **Close the cover and reconnect cables.**

Cleaning inside the MYIRO-9

If paper dust, etc. accumulates inside the MYIRO-9, it may cause paper jams or problems with patch recognition. If paper jams or patch recognition problems start to occur more frequently, the inside of the MYIRO-9 should be cleaned according to the procedure below.

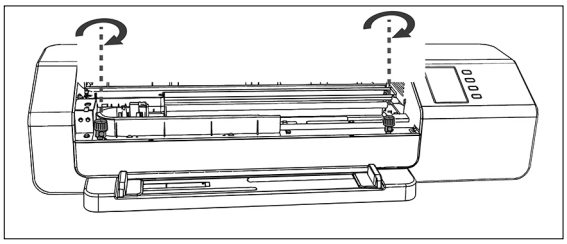
1 **Make sure that the MYIRO-9 is switched off.**

2 **Disconnect all cables (USB cable, LAN cable, AC adapter cable).**

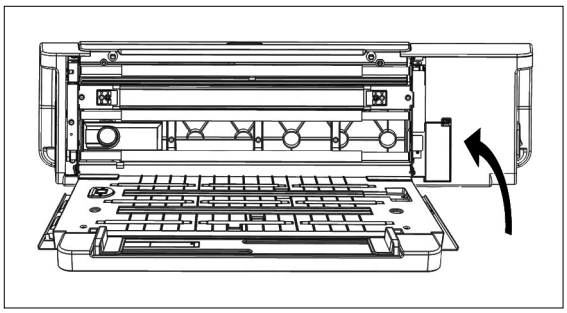
3 **Open the cover.**

4 **Loosen the two screws as shown completely so that they are free of the base.**

5 **Close the cover.**

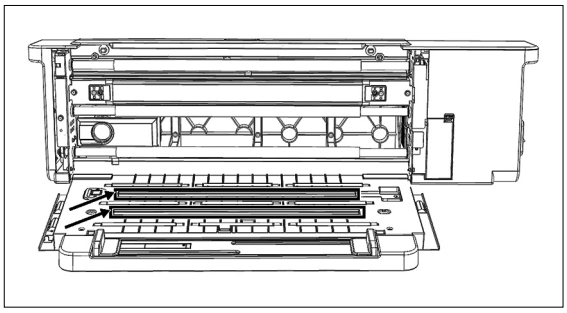


6 **Grasp the ends of the MYIRO-9 and tilt the MYIRO-9 body backward as shown. The base should stay flat.**

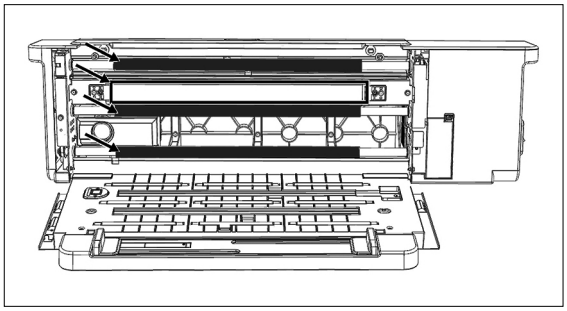


7 **Clean the cover glass of the line sensor and the white backing and other plastic surfaces with a clean, dry, soft, lint-free cloth.**

- If the white backing is extremely dirty, clean the white backing with a soft cloth moistened with alcohol.



8 **Wipe off the rubber rollers with a soft cloth moistened with alcohol to clean and condition them.**

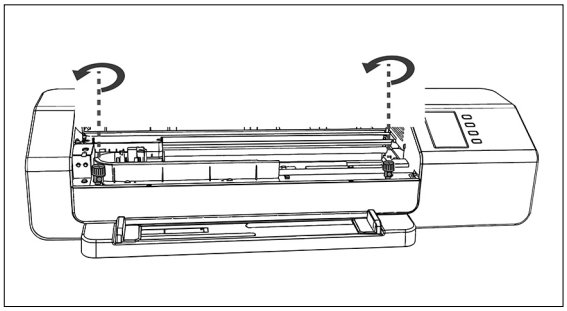


9 **Grasp the ends of the MYIRO-9 and tilt the MYIRO-9 body onto the base again.**

10 **Open the cover**

11 **Tighten the two screws as shown until snug.**

- If the screws are loose when measurements are taken, measurement accuracy may suffer.
- Do not overtighten.



12 **Close the cover and reconnect cables.**

Scan Measurement Chart Conditions

The MYIRO-9 can scan charts conforming to the following conditions:

- Even if paper conditions and chart layout conditions meet the conditions below, some charts may not be measurable.

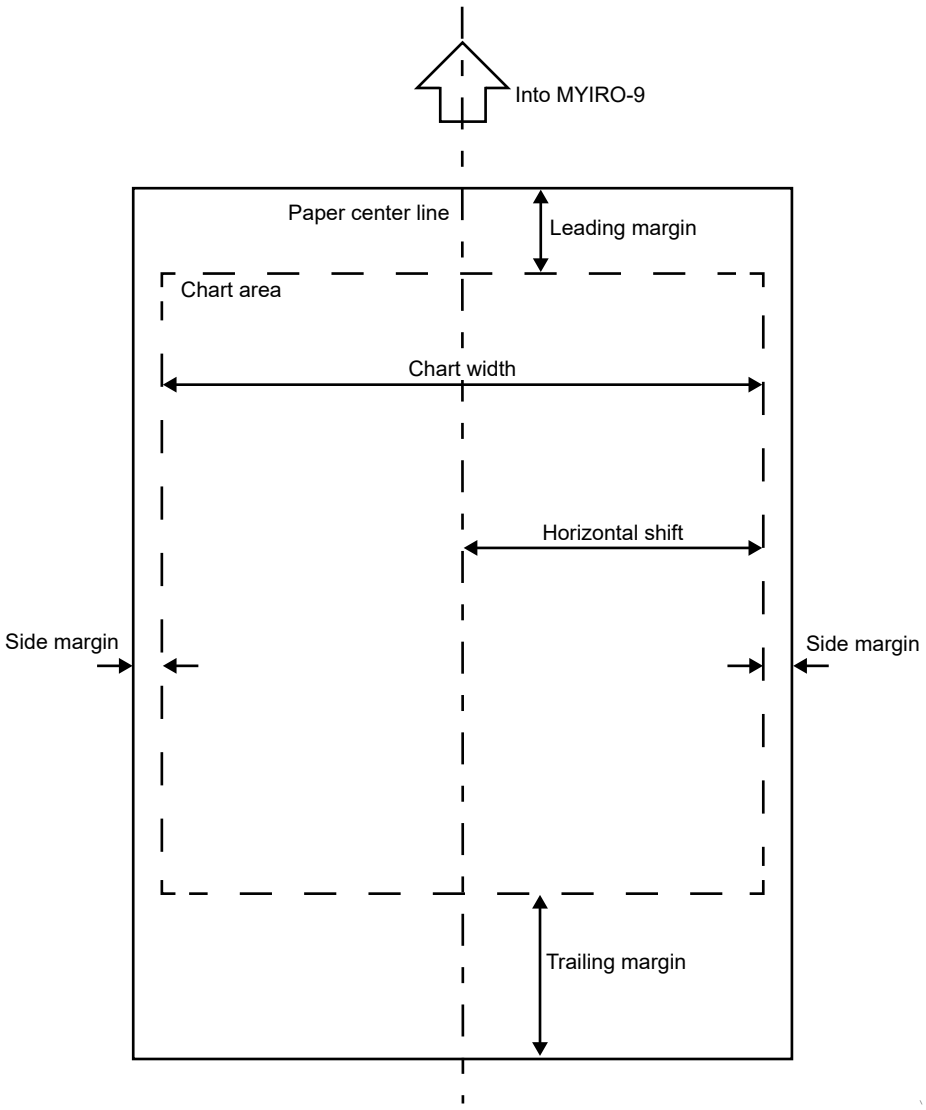
	When feeding test charts using MYIRO-9 alone	When using optional Auto Sheet Feeder FD-A09
Paper width	45 to 330 mm	90 to 320 mm
Paper length	170 to 1500 mm	170 to 450 mm
Paper thickness	0.05 to 0.6 mm	0.08 to 0.25 mm *1
Minimum patch size	6 × 6 mm	
Maximum number of patches per page	A4-size paper: 1394 A3-size paper: 2928	

- Positioning markers are not necessary.

*1 When using optional Auto Sheet Feeder FD-A09, the maximum recommended number of loaded sheets is:
Normal paper (80 g/m^2):100 sheets
Heavy paper (130 g/m^2): 70 sheets

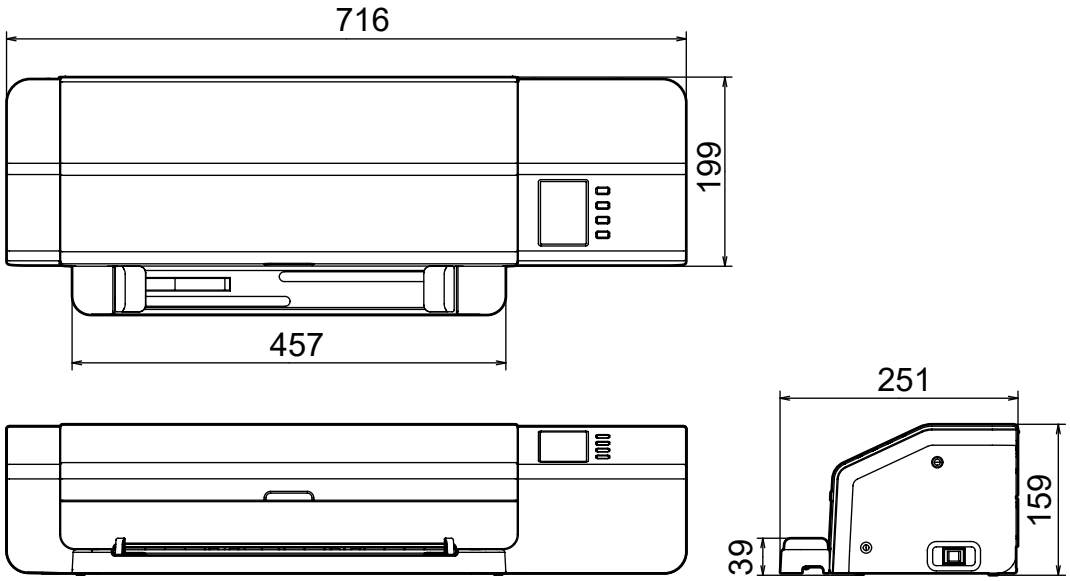
The layout of the chart on the paper must conform to the following layout. (See below.)

Minimum leading margin	23 mm
Minimum tailing margin	33 mm
Minimum side margins	4 mm
Horizontal shift	Within 150 mm of paper center line

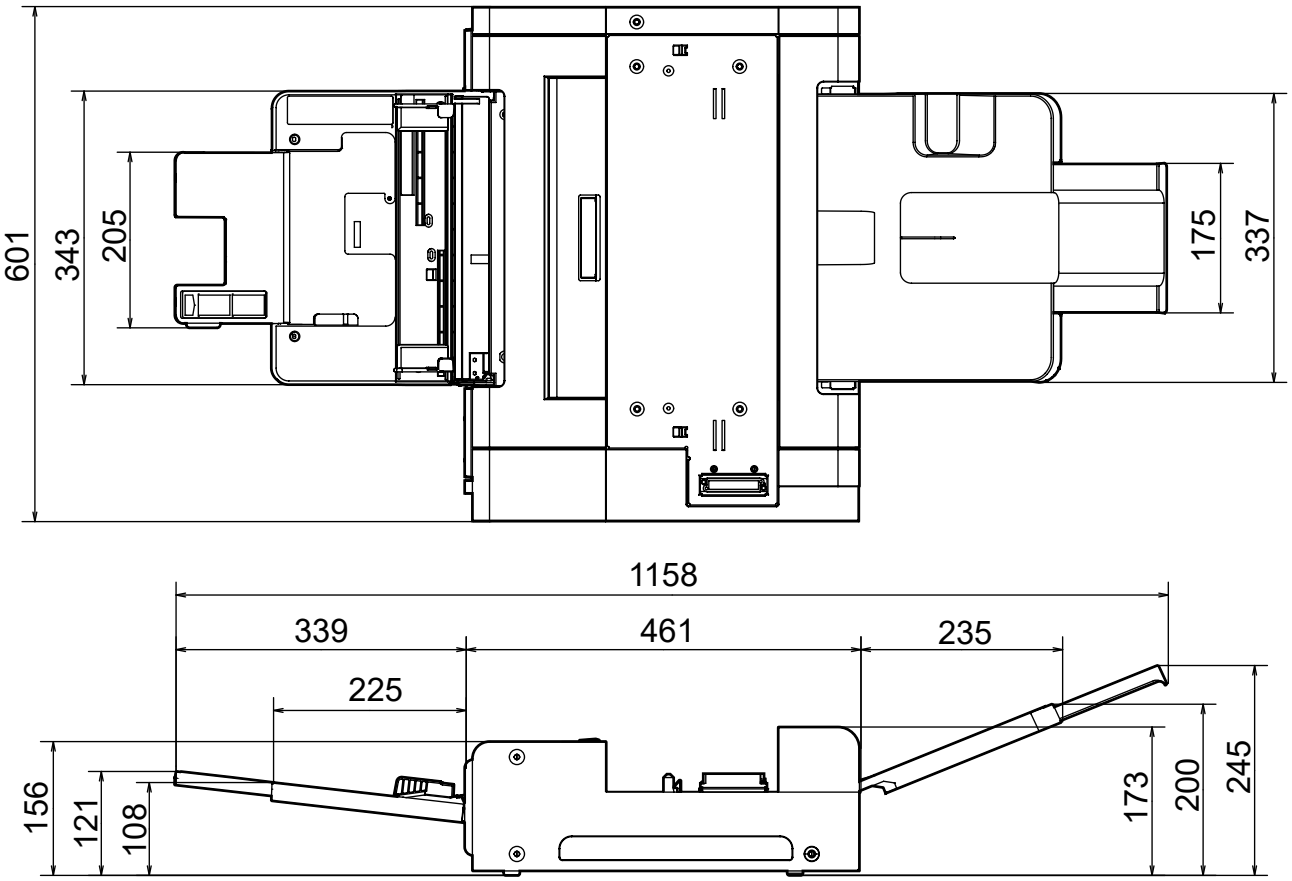


Dimensions

Auto Scan Spectrophotometer **MYIRO-9** (mm)



Auto Sheet Feeder **FD-A09**



Specifications

Model	MYIRO-9	
Illumination/ viewing system	45°a:0° (annular illumination) *1 Conforms to CIE No. 15, ISO 7724/1, DIN5033 Teil 7, ASTM E 1164, and JIS Z 8722 Condition a for reflectance measurements.	
Spectral separation device	Concave grating	
Wavelength range	380 to 730 nm	
Wavelength pitch	10 nm	
Half bandwidth	Approx. 10 nm	
Measurement area	Approx. Ø3 mm	
Measurement light source	LED	
Measurement range	Reflectance: 0 to 150%	
Short-term repeatability	Colorimetric: Within σΔE00 0.05 (Under standard test conditions where a white calibration plate is measured 30 times at 10-second intervals after white calibration has been performed.)	
Inter-instrument agreement	Within ΔE00 0.3 (Average of 12 BCRA Series II color tiles compared to values measured with a master body under standard conditions.)	
Measurement time	Approx. 4 min. for 1500 patches (According to standard conditions) *3	
Measurable charts *4 (When manually feeding charts)	Paper width	45 to 330 mm
	Paper length	170 to 1500 mm
	Paper thickness	0.05 to 0.6 mm
	Minimum patch size	6 × 6 mm
	Maximum number of patches per sheet of paper	A4-sized paper: 1394 A3-sized paper: 2928
	Margins (minimum)	Leading: 23 mm; Trailing: 33 mm; Left/right sides: 4 mm each
Output item	Spectral reflectance	
Illumination conditions *2	M0 (A), M1 (D50), M2 (A+UV filter), C, ID50, D65, ID65, F2, F6, F7, F8, F9, F10, F11, F12, User-defined illuminant	
Backing condition	White backing, compliant with ISO 13655	
Interface	USB2.0; 100Base-TX	
Power	Dedicated AC adapter: Input: AC 100 to 240 V 50/60 Hz Output: DC 24 V 5 A	
Dimensions (W × D × H)	Main body only: 716 × 251 × 159 mm Auto Sheet Feeder FD-A09 (optional accessory) only: 601 × 1158 (with trays extended) × 245 mm	
Weight	Main body only: Approx. 10.5 kg Auto Sheet Feeder FD-A09 (optional accessory) only: Approx. 18.0 kg	
Operating temperature/ humidity range	10 to 35°C, 30 to 85% relative humidity with no condensation	
Storage temperature/ humidity range	0 to 45°C, 0 to 85% relative humidity with no condensation	
Standard accessories	AC adapter, USB cable, Paper Guide	
Software	Measurement Utility Software FD-S2w (free download), MYIROtools (sold separately)	
Optional accessories	Auto Sheet Feeder FD-A09	

*1 Illumination for wavelengths below 400 nm is unidirectional.

*2 M0, M1, and M2 illumination conditions conform to the illumination conditions in ISO 13655 Section 4.2.2 Illumination requirements and measurement conditions.

*3 Paper size: A3; Patch size: 6 × 6 mm; Patch distribution: 32 rows × 47 columns

*4 Even if paper size and margins are within the ranges specified, some charts may not be measurable.

< CAUTION >

THE MANUFACTURER WILL NOT BE LIABLE FOR ANY DAMAGES RESULTING FROM THE MISUSE, MISHANDLING, UNAUTHORIZED MODIFICATION, ETC. OF THIS PRODUCT, OR FOR ANY INDIRECT OR INCIDENTAL DAMAGES (INCLUDING BUT NOT LIMITED TO LOSS OF BUSINESS PROFITS, INTERRUPTION OF BUSINESS, ETC.) DUE TO THE USE OF OR INABILITY TO USE THIS PRODUCT.

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