



User's Guide

DrafStation

Drafstation Pro

Full-Color Inkjet Plotter

DrafStation

DrafStation™ Pro

FOR EUROPE ONLY!



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IMPORTANT NOTICE

For users in Europe

This is a Class A product approved for industrial environments.
 In a domestic environment this product may cause radio interference in which case you may be required to take adequate measures.
 Change the direction of the receiving antenna or feeder.

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⚠ Notes ⚠

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ABOUT THIS GUIDE

Purpose and Target Readers

Thank you for purchasing this plotting product. We are so grateful to you!

This guide explains preparations before use and operation procedures for MUTOH's Full Colour Inkjet plotter RJ-900/901C series.

This guide is prepared for the owners and operators of this product.

Before using this plotter, fully understand the contents and directions in this guide.

Guide Configuration

Section	Contents
1 Safety instructions	This chapter explains about the plotter installation, warning terms which the operator needs to know, caution items and warning labels stuck on the plotter main unit.
2 Product overview	This chapter explains about the features of the plotter along with the names and functions of each part.
3 Basic usage	This chapter explains how to handle the plotter.
4 Daily maintenance	This chapter explains the step of the daily maintenance.
5 Troubleshooting	This chapter describes possible troubles during the use of this product and countermeasures.

⚠ Notes ⚠

1 Safety instructions through **3 Basic usage** must be read before using the plotter.
 Read **4 Daily maintenance** through **5 Troubleshooting** if necessary.

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1 REGULARISATION AND SAFETY INFORMATION

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This chapter explains about the plotter installation, warning terms which the operator needs to know, caution items and warning labels stuck on the plotter main unit.

1.1 COMPLY WITH FOLLOWING REGULATIONS



The CE marking is a mandatory European marking for certain product groups to indicate conformity with the essential health and safety requirements set out in European Directives.

By affixing the CE marking, the manufacturer, his authorized representative, or the person placing the product on the market or putting it into service ensures that the item meets all the essential requirements of all applicable EU directives and that the applicable conformity assessment procedures have been applied.



Your product is designed and manufactured with high quality materials and components, which can be recycled and reused.

When this crossed-out wheeled bin symbol is attached to a product it means the product is covered by the European Directive 2002/96/EC – WEEE regulation.

Please inform yourself about the local separate collection system for electrical and electronic products.

Please act according to your local rules and do not dispose of your old products with your normal household waste. The correct disposal of your old product will help prevent potential negative consequences for the environment and human health.

Be sure to read and understand the safety warnings before handling the printer.

1.2 WARNINGS, CAUTIONS AND NOTES

The contents of alarm displays included in this User's Guide and warning label stuck on main body of the plotter are classified into three categories according to degree of danger. Understand the meaning of the following warning terms and follow the contents (instructions) in this guide.

Warnings	Meaning
 WARNING	If ignored, it would lead to dangerous situations where death or serious injury may be caused.
 CAUTION	If ignored, it would lead to dangerous situation, causing slight or middle class illness, or damage to the product or parts of the product.
NOTE	Used for a special caution and for information which needs to be emphasized.

1.3 IMPORTANT SAFETY INSTRUCTIONS

- Do not install the plotter in the following places where there is a possibility that the plotter may be damaged or might fall by chance.
 - On a shaky stand
 - Slanting location
 - Places where vibration of other machines etc. is transmitted
- Do not stand on the plotter or do not place heavy things on top of it. The plotter may be damaged or might fall by chance.
- Cover the plotter with a blanket and cloth like table cloth and do not close the vent. If the vent is closed, the plotter could accumulate heat inside and may cause fire.
- Do not install the plotter in places where the humidity is high and in a dusty environment. It could lead to electric shock and fire.
- Do not use a damaged power cable. It could lead to an electric shock and fire.
- Do not take out or insert the power plug with wet hands. This could lead to an electric shock.
- Do not connect earth cables in the following areas:
 - Gas pipes. Doing so may cause fire or an explosion.
 - Earth terminals for telephone lines or lightning rods. Doing so may cause a large flow of voltage if lightning occurs.
 - Water pipes or faucets. If there is a plastic part in the pipe, the earthing will not work correctly.
- Do not insert or drop metal or objects which are easily combustible through the openings such as fresh air inlet into the plotter. It could lead to an electric shock and fire.
- When foreign substances or liquids such as water entered the plotter, do not use the plotter. It could lead to an electric shock and fire. Immediately switch off the power switch, disconnect the power plug from the electric socket, and contact your local MUTOH dealer.
- While installing optional items, be sure to switch OFF the power of the plotter and pull out the power plug. It could lead to an electric shock.
- Wire the various codes (cable) as explained in the User's Guide. Wrong wiring could cause fire.
- Be sure to use the power cable supplied with the plotter. If other power cables are used, it could cause an electric shock or fire.
- Make sure to use only the specified power supply (AC 100 V - 120 V or AC 220 V - 240 V). If a power supply other than the specified voltage is used, it could cause an electric shock and fire.
- Take power for the plotter directly from the power socket (AC 100 V - 120 V or AC 220 V - 240 V). Do not use complex multiple plugs on the same socket. This could generate heat and might cause fire.
- Be sure to use a dedicated power socket with earth wire for the power supply, and connect it to the earth wire. If the earth wire is not connected, an electric shock or fire may occur.
- Pay attention to the following points, while handling the power cable.
 - Do not do anything forcefully on the power cable.
 - Do not keep heavy objects on the power cable.
 - Do not bend, twist or pull the power cable by force.
 - Do not route the power cable near heating appliances.
- Pay attention to the following points while handling the power supply plug. Any mishandling of the power cable could cause a fire.
 - Make sure that no foreign substances such as dust etc. are stuck to the power plug.
 - Make sure that the power plug is firmly inserted to the edge of the power socket.
- Do not use the media hold lever during plotter initialization. If the carriage and the pressure rollers touch each other, the plotter may break down.

- Be careful that your fingers are not caught between the covers.
- While handling the ink cartridges, pay attention so that the ink does not get into your eyes or stick to your skin. If the ink gets into your eyes or sticks to your skin, immediately wash off with water. It might possibly cause irritation and light inflammation of your eyes. In case of any abnormality, consult a physician immediately.
- Do not disassemble the ink cartridge. If disassembled, there is a possibility that the ink might come into contact with your eyes or skin
- Be careful to see that your fingers are not caught in-between opening and closing the media cover.
- Do not operate the media set lever during plotter initialization. If the carriage portion and the pressurizing roller portion touch each other, there is a possibility that the plotter may break down.
- Do not use volatile solvents such as thinner, benzene, or alcohol. These could damage the paint.
- Be careful that moisture does not enter the plotter. There is a possibility that the electric circuits inside the plotter might get short circuited.
- Do not open covers attached with screws under any circumstance. This could cause an electric shock or plotter breakdown.
- Do not touch the edge of the cutter blade. Doing so may cause injury.
- Do not hit the edge of the cutter blade with hard objects, nor drop the cutter blade. There is a possibility that the cutter blade edge may become blunt or get chipped off.
- Do not make the main body of the plotter slanting or place it in a vertical position or do not keep the plotter upside down. There is a possibility that ink inside the plotter may leak. Moreover, normal operation after shifting (to these positions) cannot be guaranteed.
- Opening and moving the plotter to the installation place should be done by :
 - RJ-901C: 2 or more persons
 - RJ-900C & Drafstation Pro: 3 or more persons
- While taking out the plotter from the container box, make sure to remove the vinyl sheet and hold the handles on the plotter side. If the plotter is lifted with the vinyl sheet attached, there is a possibility that the plotter might fall and might be damaged.
- Installation of the stand to the plotter should be done by :
 - RJ-901C: 2 or more persons
 - RJ-900C & Drafstation Pro: 3 or more persons
- While installing the stand, be sure to switch OFF the plotter power and to pull out the power plug. It could lead to an electric shock.
- If the plotter is not used for a longer period, make sure to pull out the power plug from the power socket for safety reasons.
- Make sure to connect an earth wire to the earth connection which meets the following standards :
 - Earth terminal of power socket
 - Earth wire with copper plate which is buried at 650 mm or more, deep in the ground.
- Set the roll media on an even surface such as a desk etc. If the roll media is set in such a way that the scroller is standing vertical, there is a possibility that the scroller might get damaged.
- Be sure to switch OFF the power, and disconnect the power plug when cleaning the plotter.
- Move the plotter maintaining it in a horizontal position.
- Be careful when handling the power cable:
 - Do not make any modifications to the power cable.
 - Do not place anything heavy on the power cable.
 - Do not bend, twist, or pull the cable.
 - Do not wire the cable near equipment that generates heat.
- Install the windows USB driver of the plotter first, before connecting the USB cable! Refer to: Installing the Windows plotter driver for USB connection.
- DO NOT use downloaded software AND the software from the driver CD together! Always use ONE version of the software!

1.4 WARNING LABELS

In this section, the handling, location and types of warning labels are explained. A warning label is used on parts of the plotter which especially need caution. Understand the locations and the descriptions of the danger associated with each label before operating the plotter.

1.4.1 Handling the operation procedure labels

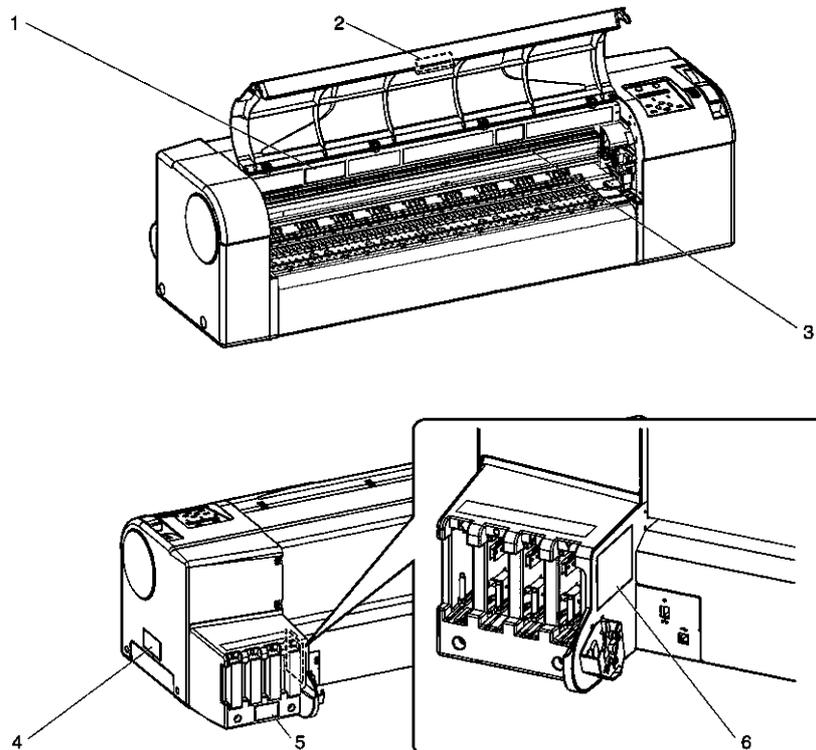
When handling the warning labels, be careful about the following points.

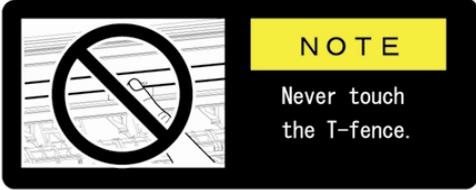
⚠ Notes ⚠

- Check whether all the warning labels can be read. If the letters or illustrations on the label are not clear, remove the dirt from the label.
- Use cloth, water and neutral detergent for removing dirt from the warning label. Avoid either organic solvents or gasoline.
- It is necessary to replace the labels if they are damaged, lost or illegible. If the warning labels have to be replaced, contact your local MUTOH dealer.

1.4.2 Locations and types of warning labels

Locations of the warning labels are shown in the following figures.



No.	Types of warning label
1	
2	<p style="text-align: center;">⚠ Caution</p> <p>In opening/closing the front cover, pay attention not to have your fingers pinched by the cover.</p>
3	
4	<p style="text-align: center;">NOTE</p> <p>When the message "Full Waste Ink Tank" appears, be sure to replace the waste fluid box with a new one.</p> 
5	<p style="text-align: center;">NOTE</p> <p>Do not insert or remove ink cartridge except for the replacement purpose.</p>
6	<p style="text-align: center;">NOTE</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Attach or detach the scroller horizontally.</p> </div> <div style="text-align: center;">  </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">  <p>Do not attach or detach the scroller with a slope.</p> </div> <div style="text-align: center;">  </div> </div>

1.5 OPERATION PROCEDURE LABELS

In this section, the handling, location and types of the operation procedure labels are explained. Operation procedure labels contain items which the operator should be particularly careful while operating the plotter.

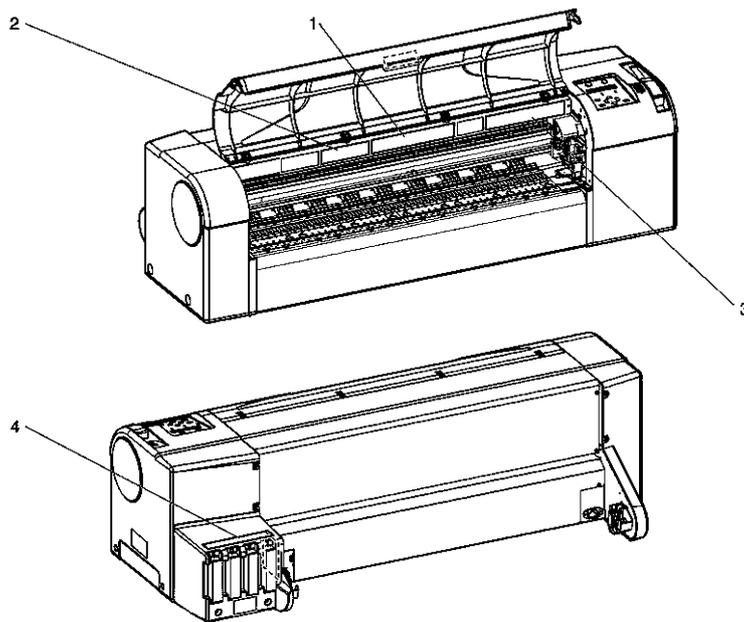
1.5.1 Handling the operation procedure labels

Be careful about the following points, when handling the operation procedure labels.

⚠ Notes ⚠

- Check whether all operation procedure labels can be read. If the letters or illustrations on the labels are not clear, remove the dirt from the label.
- Use cloth, water and neutral detergent for removing dirt from an operation procedure label. Avoid using either organic solvents or gasoline.
- It is necessary to replace the labels if they are damaged, lost or illegible. If the operation procedure labels have to be replaced, contact your local MUTOH dealer.

1.5.2 Locations and types of warning labels



No.	Types of operation procedure labels	Reference
1	<div style="border: 1px solid black; padding: 5px;"> <p>■ Loading roll media</p> </div>	"Loading roll media"
2	<div style="border: 1px solid black; padding: 5px;"> <p>■ Loading sheet media</p> </div>	"Loading sheet media"
3	<div style="border: 1px solid black; padding: 5px;"> <p>■ Replacing cutting blade</p> <p>① Press the "Menu" key on the operation panel, and select the Cutter Change Menu.</p> </div>	"Replacing the cutter blade"
4	<div style="border: 1px solid black; padding: 5px;"> </div>	"Replacing ink cartridges"

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2 PRODUCT OVERVIEW

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This chapter explains the features of the plotter, and the names and functions of each part.

2.1 FEATURES

In this section, the main features of the plotter are explained.

(1) High resolution printing

The plotter incorporates an on-demand piezo head, offering high print quality and high performance. As 1440 dpi and 2880 dpi resolution is realized, sharp and accurate plots can be made, from line drawings to CAD images.

(2) Ink system

The ink cartridges and the ink system are designed to avoid soiling your hands during ink replacement. Black pigment ink is employed, which is abundantly used in line drawings offering high printing quality on different media and an improved weather resistance.

(3) Ultimate working efficiency

This plotter is designed for handling roll media (RJ-901C only) and sheet media, and replacement of ink cartridges is very easy.

(4) Operation efficiency

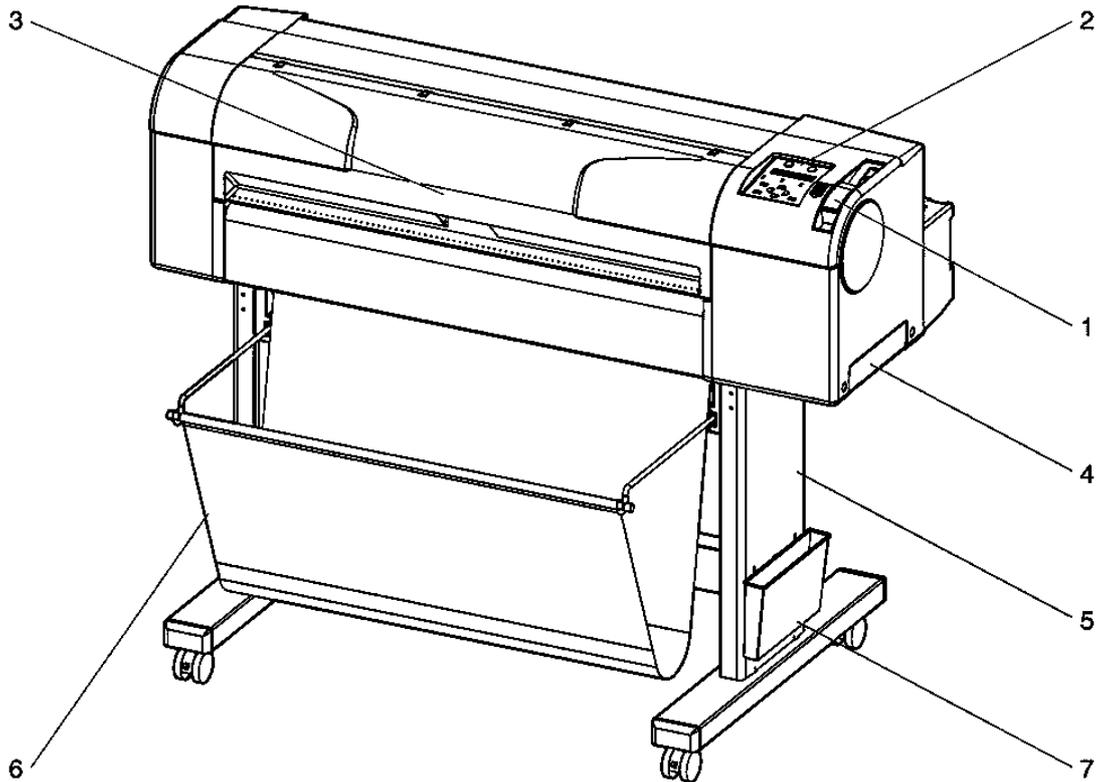
- The plotter configuration is made easy through the LCD panel on the plotter.
- A clear and powerful Windows driver facilitates operation.
- A web monitoring feature is provided to monitor the plotter status from a host PC.

2.2 PART NAMES AND FUNCTIONS

Be sure to read and understand the safety warnings before handling the printer.

In this section, the names and functions of each part are explained.

2.2.1 Front section Drafstation (RJ-901C)

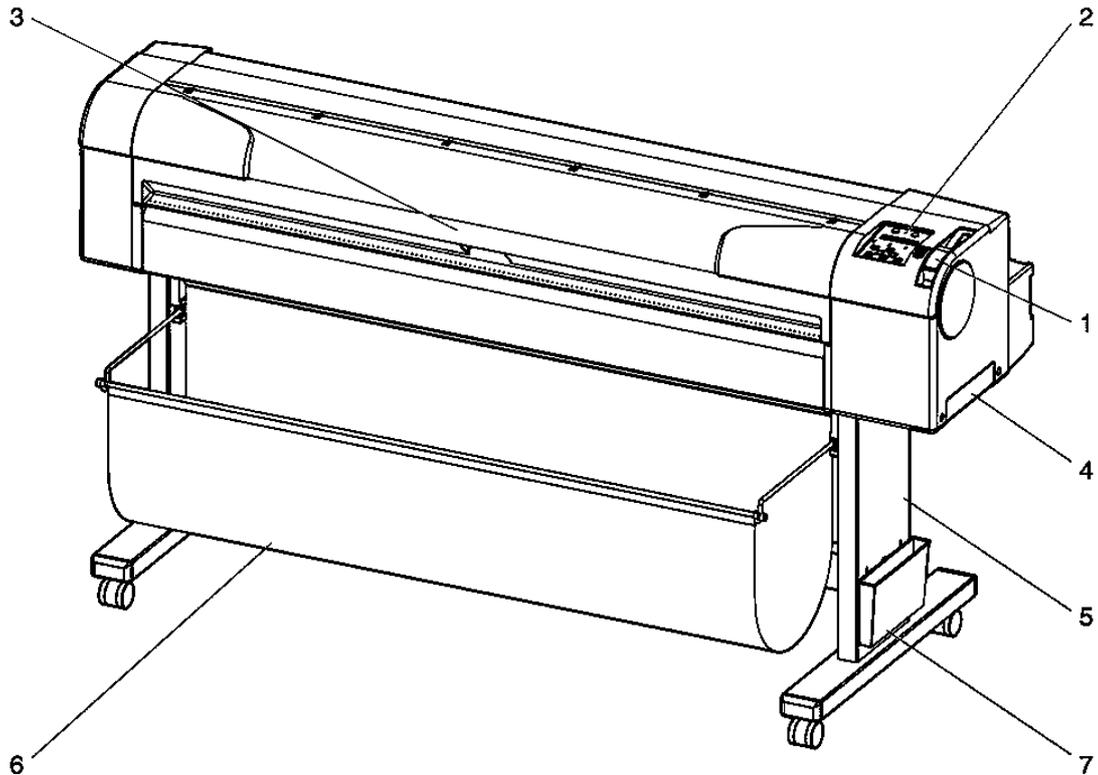


No.	Name	Function
1	Media hold lever	To fix and release media.
2	Operation panel	To set the operation conditions and various function settings.
3	Front cover	To protect the user from coming in contact with the driving mechanism during operation.
4	Waste fluid tank	To collect the plotter's waste ink.

Optional parts:

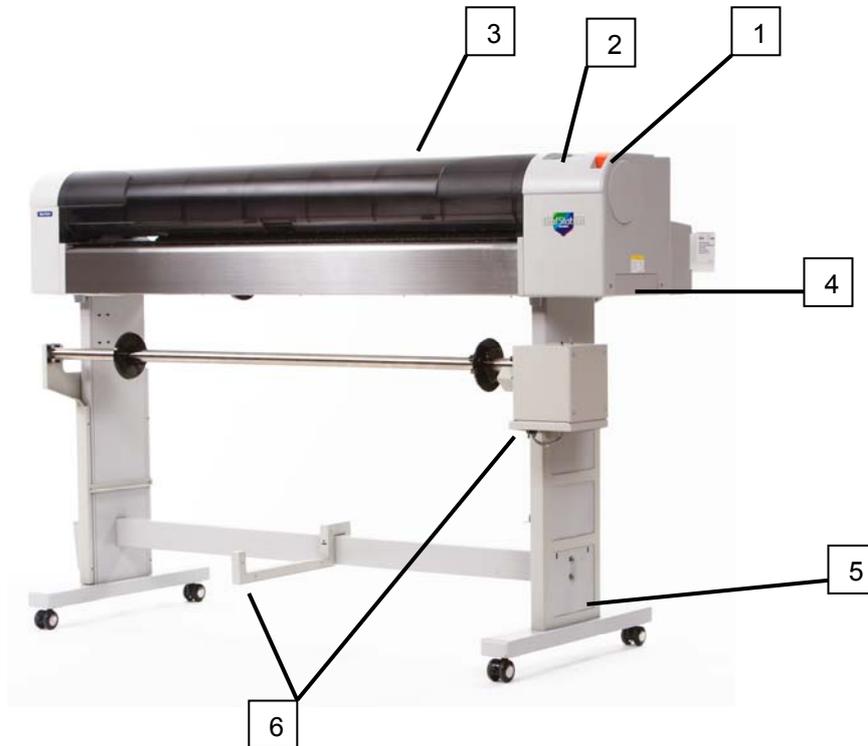
No.	Name	Function
5	Stand	To install the plotter on a levelled floor.
6	Paper basket	To hold the finished plots.
7	Book holder	To store plotter documentation.

2.2.2 Front section Drafstation (RJ-900C)



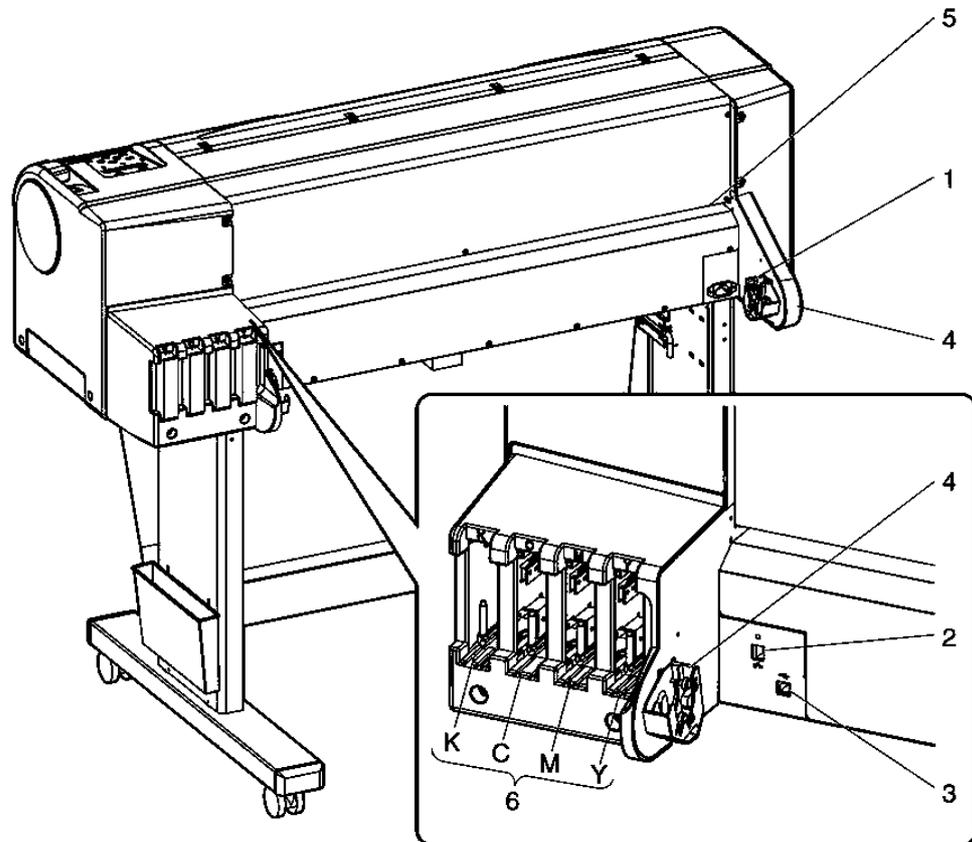
No.	Name	Function
1	Media hold lever	To fix and release media.
2	Operation panel	To set the operation conditions, and various function settings.
3	Front cover	To protect the user from coming in contact with the driving mechanism during operation.
4	Waste fluid tank	To collect the plotter's waste ink.
5	Stand	To install the plotter on a levelled floor.
6	Paper basket	To hold the finished plots.
7	Book holder	To store plotter documentation.

2.2.3 Front section Drafstation Pro



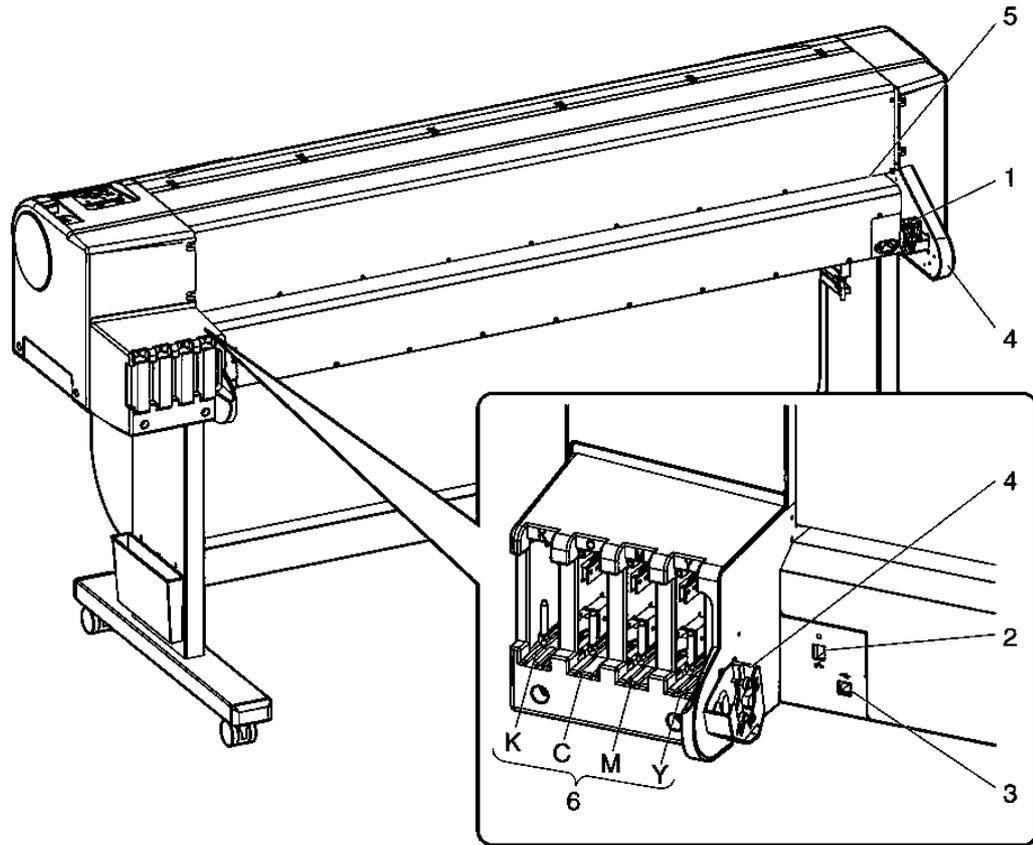
No.	Name	Function
1	Media hold lever	To fix and release media.
2	Operation panel	To set the operation conditions, and various function settings.
3	Front cover	To protect the user from coming in contact with the driving mechanism during operation.
4	Waste fluid tank	To collect the plotter's waste ink.
5	Stand	To install the plotter on a levelled floor.
6	Take-Up system	To Roll up the finished plots.

2.2.4 Rear section Drafstation (RJ-901C)



No.	Name	Function
1	AC inlet	To connect the power cable.
2	Network interface connector	To connect the network interface cable.
3	USB connector	To connect the USB cable.
4	Scroller receiver	To install the scroller with roll media.
5	Media feed slot	To insert roll media.
6	Ink cartridge slots	To install the ink cartridges.

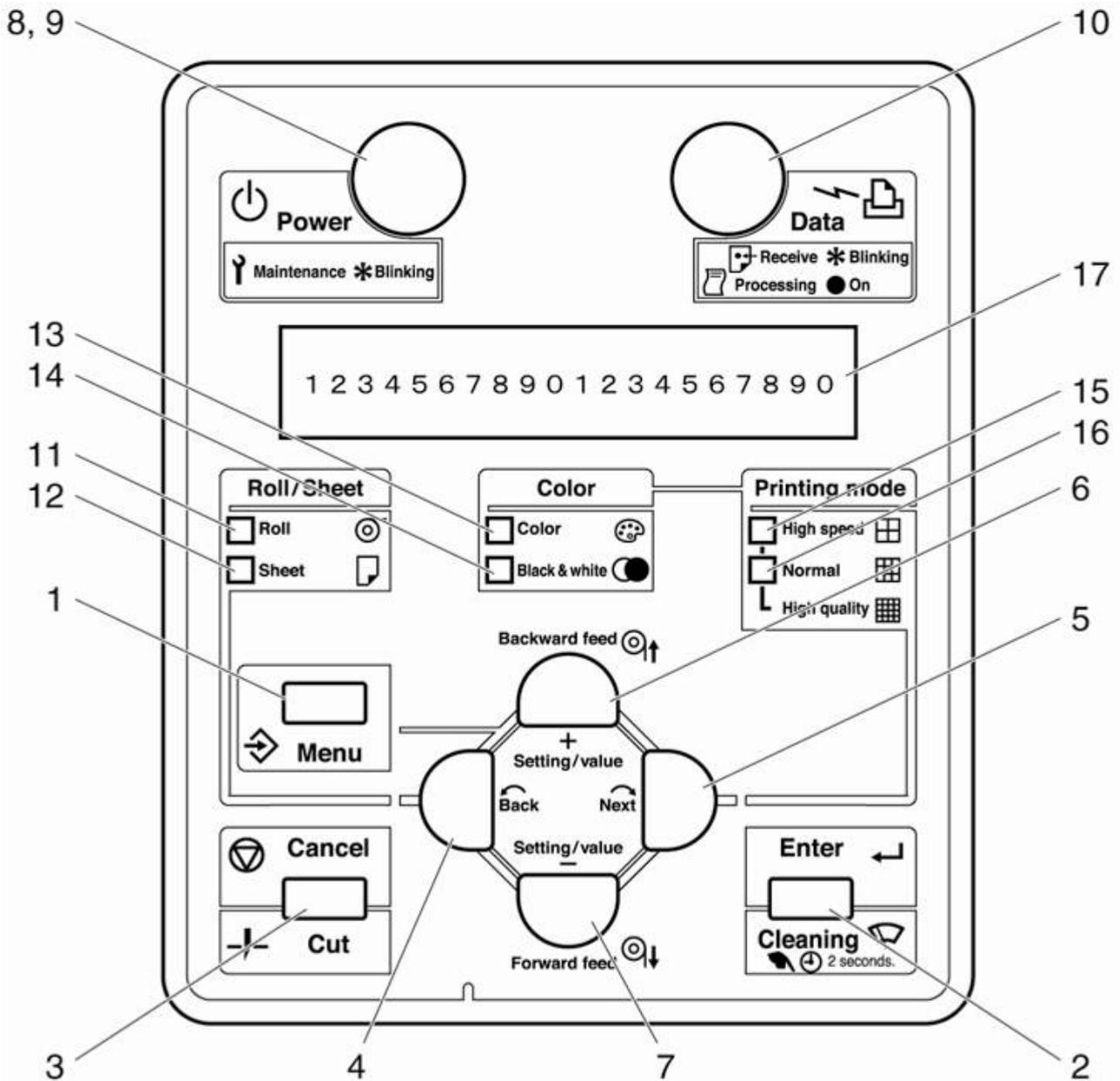
2.2.5 Rear section Drafstation (RJ-900C) and Drafstation Pro



No.	Name	Function
1	AC inlet	To connect the power cable.
2	Network interface connector	To connect the network interface cable.
3	USB connector	To connect the USB cable.
4	Scroller receiver	To install the scroller with roll media.
5	Media feed slot	To insert roll media.
6	Ink cartridge slots	To install the ink cartridges.

2.2.6 Operation panel

This section explains the name and the function of each operation key and status light.



The operation keys have 2 different functions, depending on the plotter mode:

Mode	Key functions
Normal mode	Various functions for printing can be performed on the operation panel.
Menu mode	Various setup items (e.g. IP address, HPGL settings, pen setup, etc...) can be set on the operation panel.

For details on the plotter mode, refer to "Plotter mode. "

(1) Operation keys in the Normal mode

No.	Key	Function.
1	[Menu]	Changes to Menu mode.
2	[Enter]	--
	[Cleaning]	Cleans the plotter head when pressed for two seconds or more.
3	[Cancel]	<ul style="list-style-type: none"> • During printing: Printing is terminated and the remaining data is deleted. • During receiving/analysis: Data that has been received and analyzed already is deleted and the data which is being received of the next print file is ignored. • Ink dry timer wait: Ink dry timer wait is cancelled and the media is ejected.
	[Cut]	Sheets off the roll media.
4	[Back]	Sets the media type. The indication light of media setup (Roll/Sheet) lights up (green).
5	[Next]	Sets the printing and colour mode. The indication lights of print mode (High Speed/Normal/High quality) and set colour mode (colour/Black&White) light up green.
6	[Backward feed↑]	Feeds the media in reverse direction.
	[Setting value +]	--
7	[Forward feed↓]	Feeds the media in forward direction.
	[Setting value-]	--
8	[Power]	Switches the plotter ON / OFF.

(2) Operation keys in the Menu mode.

No.	Key	Function.
1	[Menu]	Shifts from Menu mode to Normal mode.
2	[Enter]	<ul style="list-style-type: none"> · Selects a specific menu or submenu. · The value is entered and saved.
	[Cleaning]	--
3	[Cancel]	<ul style="list-style-type: none"> · Returns to the previous hierarchy in the menus structure. Changes in the setup value will not be saved. · Shifts from the Menu mode to Normal mode.
	[Cut]	--
4	[Back]	Goes to the previous menu.
5	[Next]	Goes to the next menu.
6	[Backward feed↑]	--
	[Setting value +]	The numerical value is increased.
7	[Forward feed↓]	--
	[Setting value-]	The numerical value is decreased.
8	[Power]	Switches the plotter ON / OFF.

⚠ Notes ⚠

- For details on how to work with the operation panel, refer to the following topics:
 - When working in the Menu mode.
 - See “Menu setup on the operation panel“
 - When working in the Normal mode.
 - See “Operating from the operation panel. “

(3) Status lights

No.	Light	Colour	Status	Description
9	Power	Green	Light ON	Power ON.
			Light blinks	An error has occurred. The error message is displayed on the LCD.
			Light OFF	Power OFF.
10	Data	Orange	Light ON	· Analyzing received data. · Printing.
			Light blinks	Receiving data.
			Light OFF	Data is not received/analyzed.
11	Roll media	Green	Light ON	Media is set to roll media.
			Light OFF	Media is set to sheet media.
12	Sheet media	Green	Light ON	Media is set to sheet media.
			Light OFF	Media is set to roll media.
13	Colour	Green	Light ON	Colour mode is set to Colour.
			Light OFF	Colour mode is set to Black&White.
14	Black & white light	Green	Light ON	Colour mode is set to Black&White.
			Light OFF	Colour mode is set to Colour.
15	High speed	Green	Light ON	· The print mode is set to high speed. · When Normal light is also on, the print mode is set to high quality.
			Light OFF	The print mode is set to normal.
16	Normal	Green	Light ON	· The print mode is set to normal. · When the high speed light is also on, the print mode is set to high quality.
			Light OFF	The print mode is set to high speed.
17	LCD display section	--	--	Operation status of the plotter or error message is displayed.

⚠ Notes ⚠

- When an error requiring a restart (fatal malfunction of the plotter operation) occurs, all lights will blink. Contact your local MUTOH dealer if the malfunction cannot be solved. Refer to: "Error requiring a restart. "

2.3 IN-THE-BOX CONTENTS DRAFSTATION RJ-900 / RJ-901

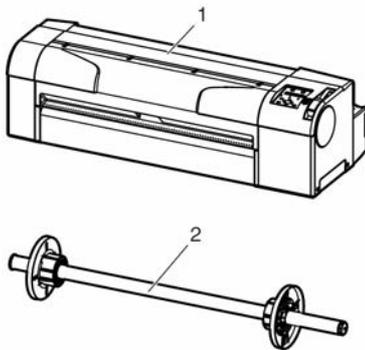
After unpacking, please verify that the product is not damaged and that no components are missing.

⚠ Notes ⚠

- If any items are damaged or missing, contact your local MUTOH dealer.

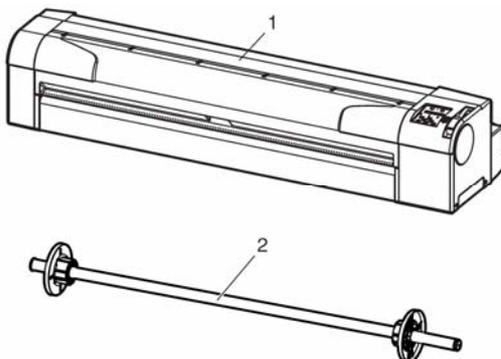
2.3.1 Items in the plotter box

(1) RJ-901C



No.	Name	Quantity
1	Plotter body	1
2	A1 Scroller 2 inch	1

(2) RJ-900C



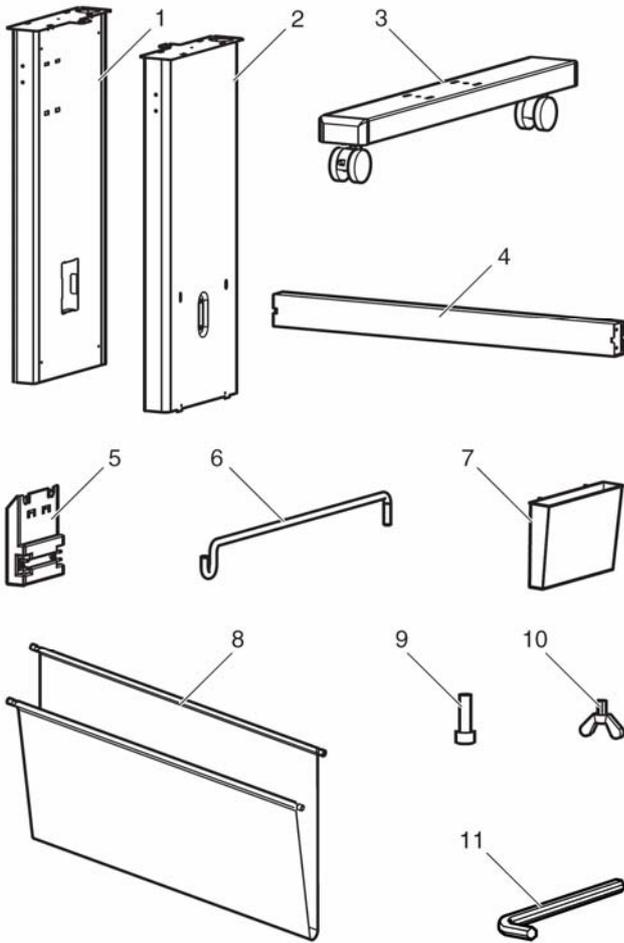
No.	Name	Quantity
1	Plotter body	1
2	A0 Scroller 2 inch	1

2.3.2 Items in the Starter kit



No.	Name	Quantity
1	Power Cable Europe	1
2	Power Cable UK	1
3	USB cable	1
4	User's Guide	1
5	Installation CD and drivers	1
6	CD with Mutoh manuals	1
7	Ink starter set (4 cassettes)	1
8	Flange spacer 3 inch	2

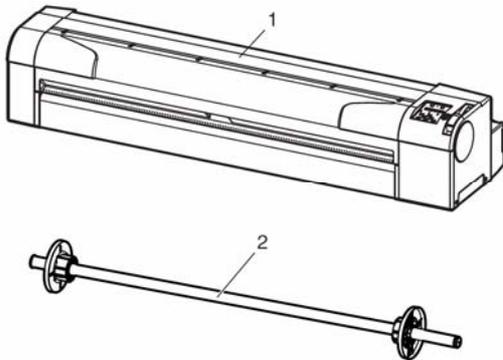
2.3.3 Items in the stand box



No.	Name	Quantity
1	Left support	1
2	Right support	1
3	Caster section (left, right)	2
4	Central beam	1
5	Basket support holder	2
6	Basket support	2
7	Book holder	1
8	Paper basket	1
9	Hexagon head cap screw	8
10	Butterfly bolt	2
11	Hexagonal wrench	1

2.4 IN-THE-BOX CONTENTS DRAFSTATION PRO

2.4.1 items in the plotter Box



No.	Name	Quantity
1	Plotter body	1
2	A0 Scroller 2 inch	1

2.4.2 Items in the Starter kit

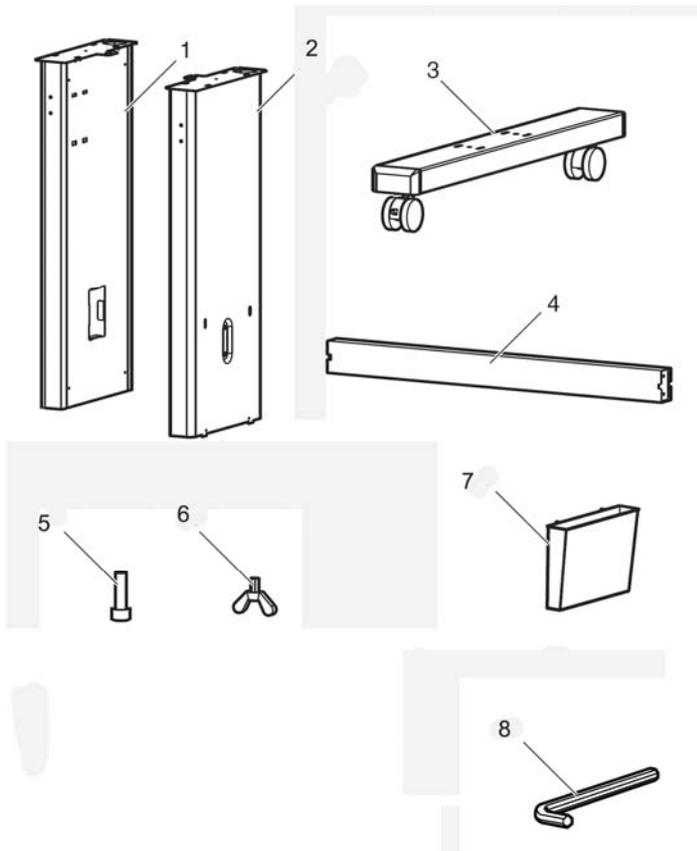


No.	Name	Quantity
1	Power Cable Europe	1
2	Power Cable UK	1
3	USB cable	1
4	User's Guide	1
5	Installation CD and drivers	1
6	CD with Mutoh manuals	1
7	Ink starter set (4 cassettes) *	1
8	Flange spacer 3 inch	2

⚠ Notes ⚠

* Depending on your choice you will have an ink starter set with 110ml cassettes or a set with 220ml cassettes.

2.4.3 Items in the stand box



No.	Name	Quantity
1	Left support	1
2	Right support	1
3	Caster section (left, right)	2
4	Central beam	1
5	Hexagon head cap screw	8
6	Butterfly bolt	2
7	Book holder	1
8	Hexagonal wrench	1

2.4.4 Items in the Take-up system box



No.	Name	Quantity
1	Left bracket	1
2	Right bracket with drive mechanism	1
3	Sensor bracket	1
4	Sensor cable	1
5	Scroller bar with 2"-3" flanges	1
6	Power cable EU	1
7	Power cable US	1
8	Hexagon ball wrench	1
9	User's Guide Take-up	1
10	Cable guide	3
11	Locking cable tie	8

2.5 INSTALLATION REQUIREMENTS

Install the plotter in an appropriate place with reference to the following:

⚠ Important ⚠

- **Do not install the plotter in the following places :**
 - **On a shaky stand**
 - **Sloping surfaces**
 - **Places where vibration of other machines, etc. are transmitted.**
- **Do not stamp on the plotter and do not place heavy things on top of it. The plotter may be damaged.**
- **Cover the plotter with a blanket or a cloth like tablecloth and do not close the ventilation hole. If the vent is closed, the plotter could accumulate heat inside and may cause fire.**
- **Do not install the plotter in a location that has high humidity or is dusty. It could lead to electric shock and fire.**

2.5.1 Environmental conditions for installation

Floor strength of installation place	More than 2940 Pa (300 kg/m ²)	
Power Specifications	Power Supply	AC90V – 132V/198V – 264V
	Frequency Range	50/60Hz ± 1Hz
	Power Capacity	More than 10 A
Environmental conditions	Operative Condition	Temperature: 10°C to 35°C Humidity: 20% to 80%, no condensation
	Guaranteed range of printing accuracy	Temperature: 15°C to 28°C Humidity: 40% to 60%
	Change rate	Temperature: within 2°C per hour Humidity: within 5% per hour
	Archiving environment	Temperature: -20°C to 60°C Humidity: 5% to 85% (No Condensation, Ink unfilled)

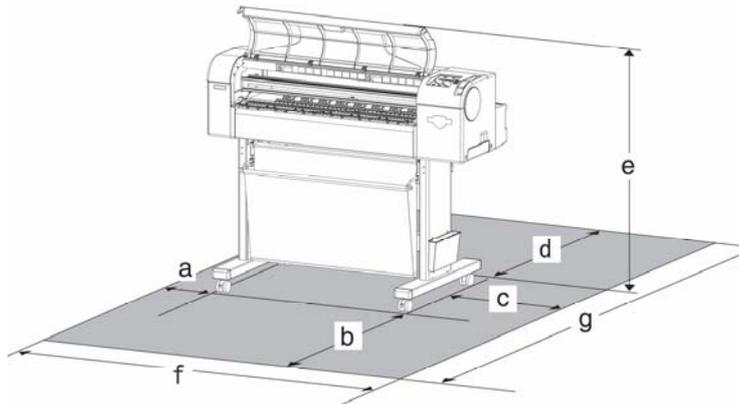
⚠ Notes ⚠

- Concerning temperature and humidity, avoid following locations :
 - Places where temperature or humidity may rapidly change, even though within the required conditions.
 - Places that receive direct sunlight, increased illumination or direct air, for example from an air conditioner.
- To keep the temperature and humidity constant, install this product in a location where the air condition is adjustable.

2.5.2 Installation space

(1) When using the Drafstation or the Drafstation Pro with the stand.

Install the plotter on a levelled floor which has enough strength to support the weight of the plotter and the stand.

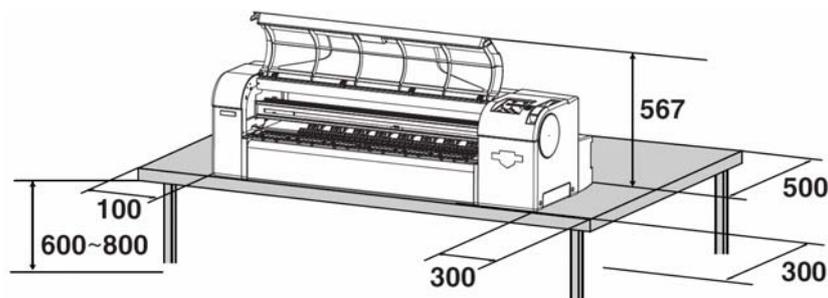


RJ-901C、RJ-901M	RJ-900C
a=180mm	a=180mm
b=450mm	b=450mm
c=680mm	c=680mm
d=500mm	d=500mm
e=1200mm	e=1200mm
f=1780mm	f=2360mm
g=1610mm	g=1610mm

(2) When using the plotter only (RJ-901C only)

Install the plotter on a levelled table which has fulfils the following conditions:

- The table is strong enough to support the weight of the plotter.
- The required length for the sheet media is available at the back of the machine.
- The height from the floor is 600 mm to 800 mm.
- The space in the front is more than 300 mm.



3 BASICS

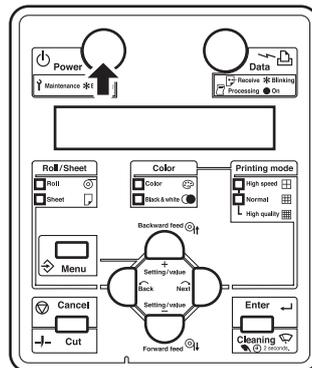
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3.1 SWITCHING THE POWER ON/OFF

3.1.1 Switching the power ON

Power ON the printer according to the procedure below.

Step 1 : Press the [Power] key on the operation panel, to power ON the unit.



Step 2 : The unit will start the initial start up operations.

Step 3 : After finishing the initial start up operations, the unit will enter the normal operation condition

3.1.2 Switching the power OFF

Power OFF the printer according to the procedure below.

Step 1 : Verify the following according the operational conditions of the unit.

- There is no printing operation being performed.
- The operation panel is in the main screen

Step 2 : Press the [OFF] key on the operation panel to power OFF the printer.

Step 3 : The printer will perform the power OFF operation.

Step 4 : All lamps and the LCD of the operation panel will switch OFF.

Step 5 : The printer will automatically power OFF.

3.2 LOADING MEDIA

3.2.1 Installing roll media

Be sure to read and understand the safety warnings before handling the printer.

⚠ Notes ⚠

- Only use the scroller supplied with this plotter.
- For media with a three inch core, three-inch core adapters have to be used.

⚠ Notes ⚠

- It is possible to load the following roll media on the plotter's scroller :
- RJ-901C: two inches diameter media core (outer diameter less than 100 mm, weight less than 5 kg)
- RJ-900C and Drafstation Pro: three inches diameter media core (outer diameter less than 150 mm, weight less than 19 kg)
- When using the three-inch core adapter on the scroller, the following roll media can be loaded:
 - RJ-901C: three inches diameter media core (outer diameter less than 100 mm)
 - RJ-900C and Drafstation Pro: three inches diameter media core (outer diameter less than 150 mm)
- For details, refer to the following topics: "Product specifications" and "Options/Supplies"

⚠ Notes ⚠

- Set the roll media on a flat and levelled surface.
- If the roll media and scroller are placed in a vertical position, the scroller might get damaged.

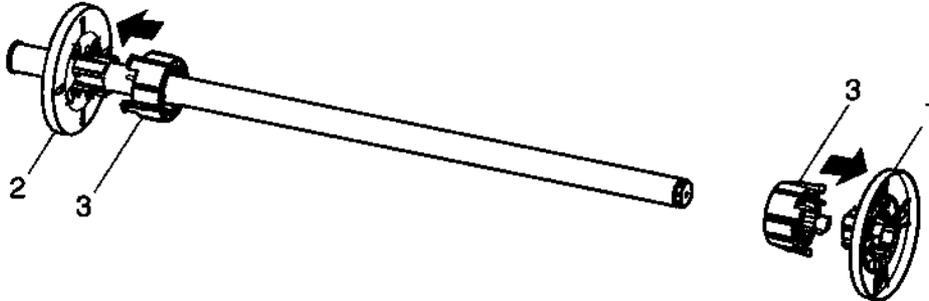
⚠ Notes ⚠

- Refer to the User's Guide of the Take-up system to know how to install roll media on the Drafstation Pro.

Step 1 : Remove the movable flange from the scroller.

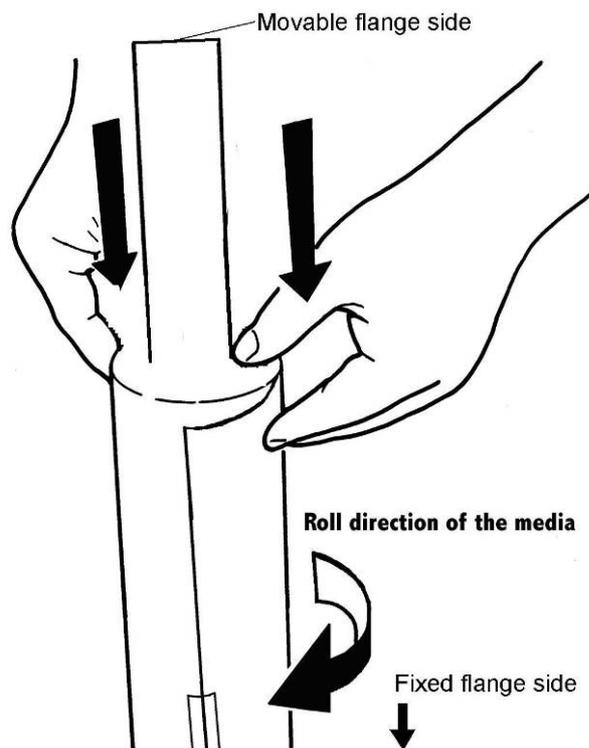
Step 2 : Install the optional three-inch core adapters :

- If using media on a 2 inch core: Don't use the three-inch core adapters, go to step 3.
- If using media on a 3 inch core : Click a three-inch core adapter (3) on the fixed flange (2) and the movable flange (1) as shown on the image below.



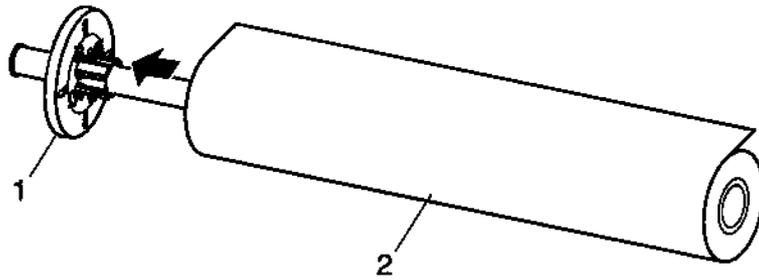
No.	Name
1	Movable flange
2	Fixed flange
3	Three-inch core adapter

Step 3 : Put the roll media on the scroller. See image below for the correct roll direction.



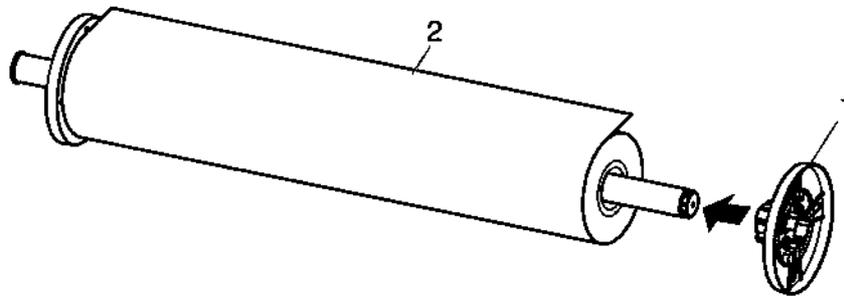
Printable side outside

Step 4 : Push the roll media (2) on the scroller and slide it over the fixed flange (1).



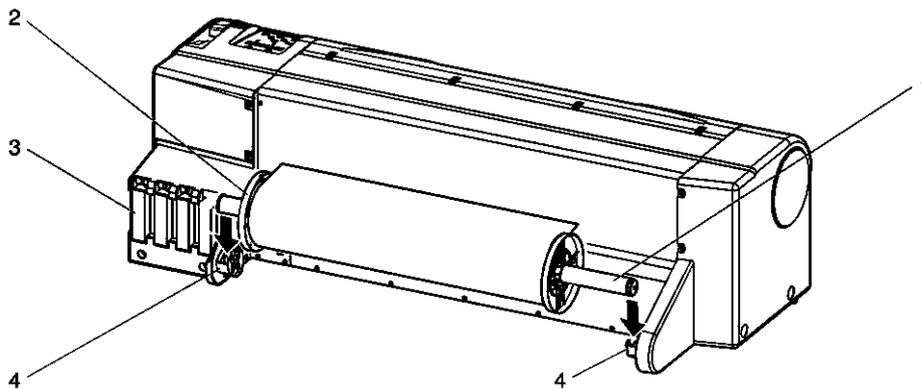
No.	Name
1	Fixed flange
2	Roll media

Step 5 : Move the movable flange (1) over the scroller and firmly press the flange inside the roll media core. See image below.



1	Movable flange
2	Roll media

Step 6 : Put the scroller (1) on the plotter's scroller receiver (4) so that the fixed flange (2) is facing the ink cartridge slot side. See image below.



No.	Name
1	Scroller
2	Fixed flange
3	Ink cartridge slot
4	Scroller receiver

3.2.2 Loading roll media

Be sure to read and understand the safety warnings before handling the printer.

⚠ Notes ⚠

- Refer to the User's Guide of the Take-up system to know how to load roll media on the Drafstation Pro.

⚠ Notes ⚠

- When using the RJ901 or RJ900, a paper basket can be used. When using the paper basket, set the paper basket as described in: "Paper basket setting".
- When using the Drafstation Pro, a Take-up system can be used. For installing and using the Take-up system, refer to the user's guide of the Take-up system.

To load the roll media, follow the steps below.

Step 1 : Switch ON the plotter.

Result:

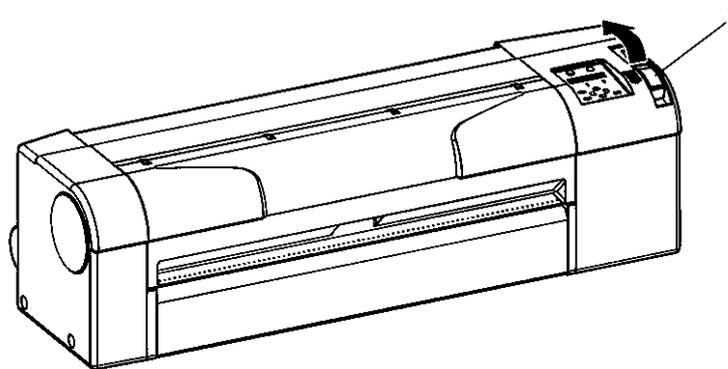
- · The plotter initializes.
- · The operation panel displays "Paper End".

Step 2 : Press the [Back] key on the operation panel and select "Roll". Result: The Roll media light lights up.

⚠ Notes ⚠

- If "sheet" is selected on the operation panel when loading the roll media, the media will not be correctly loaded.

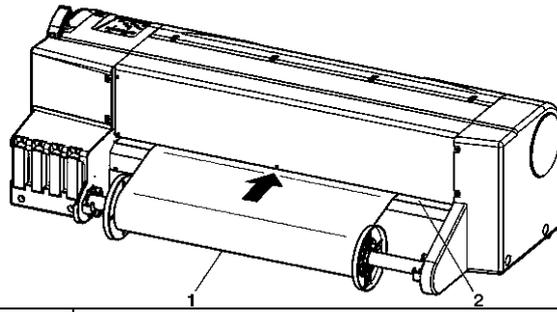
Step 3 : Push the media hold lever (1) backward as indicated on the image below.



No.	Name
1	Media hold lever

Result: The operation panel displays "Lever Up".

Step 4 : Slide the roll media (1) into the media feed slot (2) as shown on the image below.

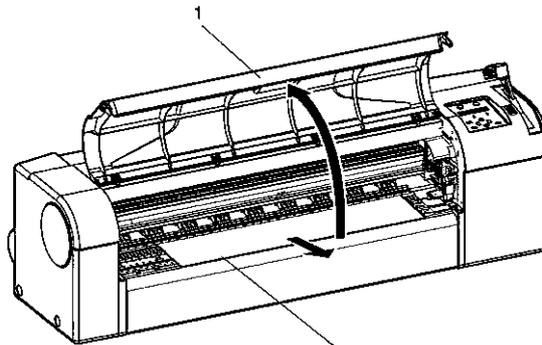


No.	Name
1	Roll media
2	Media feed slot

⚠ Notes ⚠

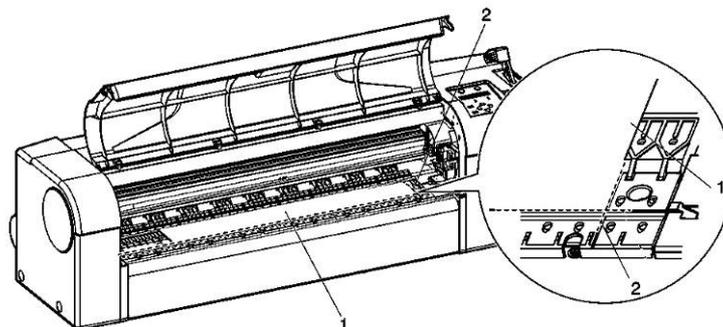
- Make sure the roll media is properly wound up on the media core.
- If the front edge of the roll media is not straight, cut it straight, using the cutter blade.
- If the front edge of the roll media is curled, cut it of, using the cutter blade.
- For the cutting method, refer to topic "Cutting media"

Step 5 : Open the front cover (1), and pull out the roll media (2) about 0,5 m.



No.	Name
1	Front cover
2	Roll media

Step 6 : Verify that the right edge of the roll media does not cover the media loading mark (2). See image below.

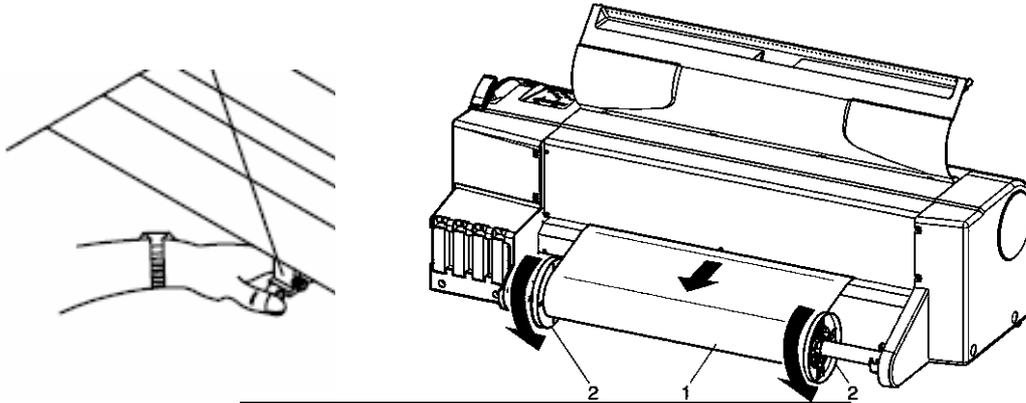


No.	Name
1	Roll media
2	Media loading mark

⚠ Notes ⚠

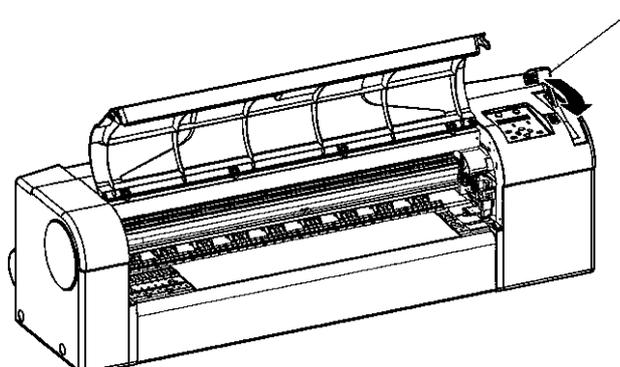
- Do not match the roll media's right edge with the loading mark using force; this could cause the media to slant.

Step 7 : Wind back the roll media (1) with the scroller (2) while pressing down (see left image) the media at the front side of the plotter. This will reduce bending and avoid slant of the media. See images below.



No.	Name
1	Roll media
2	Scroller

Step 8 : Pull the media hold lever (1) forward as shown on the image below.



No.	Name
1	Media hold lever

⚠ Notes ⚠

- If the front edge of the roll media is not straight, cut it straight. For the cutting method, Refer to: "Cutting media".
- If the length of the edge to be cut is set on the media setup menu, the roll media edge will be automatically cut after the media initialization. For the setting method, Refer to: "MediaSet Menu"

Step 9 : Close the front cover (1).

Result: The operation panel displays the Media setup menu.

3.2.3 Loading sheet media

Be sure to read and understand the safety warnings before handling the printer.

The following sizes of sheet media can be used with the plotter:

RJ-901C

- Media width: A4 size to A1 plus size (210 mm to 610 mm)
- Media length: Maximum 1200 mm

RJ-900C and Drafstation Pro

- Media width: A4 size to A0 plus size (210 mm to 1080 mm)
- Media length: Maximum 1600 mm

⚠ Notes ⚠

- When roll media is loaded, wind back the roll media before loading sheet media.
- When using the paper basket, refer to: "Paper basket setting" the paper basket can not be used if the Take-up system is mounted

To load sheet media, follow the steps below.

Step 1 : Switch ON the plotter.

Result :

- The plotter initialises.
- The operation panel displays "Paper End".

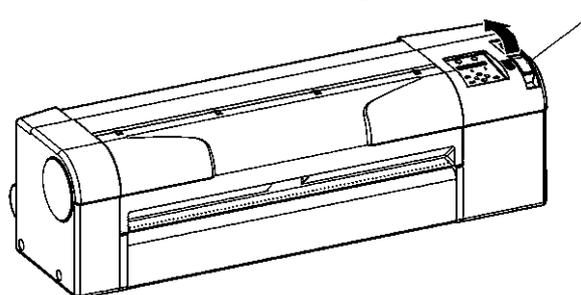
Step 2 : Press the [Back] key of operation panel, and select "Sheet".

Result: The sheet media light lights up.

⚠ Notes ⚠

- If "Roll" is selected on the operation panel when loading sheet media, the media may not be correctly loaded.

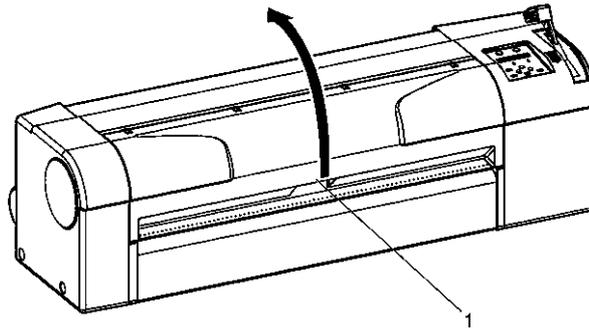
Step 3 : Push the media hold lever (1) backward. See image below.



No.	Name
1	Media hold lever

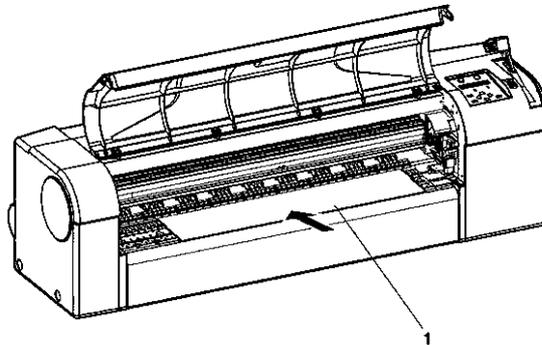
Result: The operation panel displays "Lever Up".

Step 4 : Open the front cover (1). See image below.



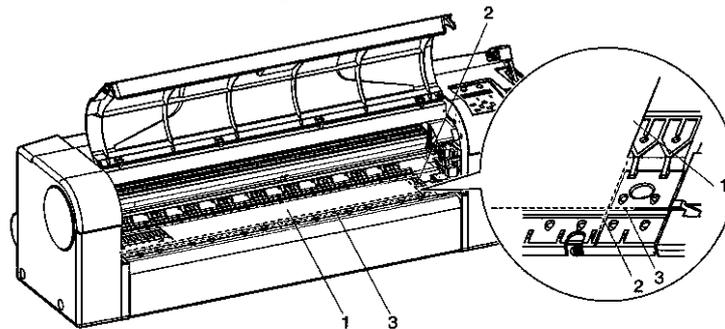
No.	Name
1	Front cover

Step 5 : Insert the sheet media (1) into the media feed slot at the front side of the plotter. See image below.



No.	Name
1	Sheet media

Step 6 : Align the right hand side of the sheet to the media loading mark (2), and align the front edge to one of the platen steps (3). See image below.

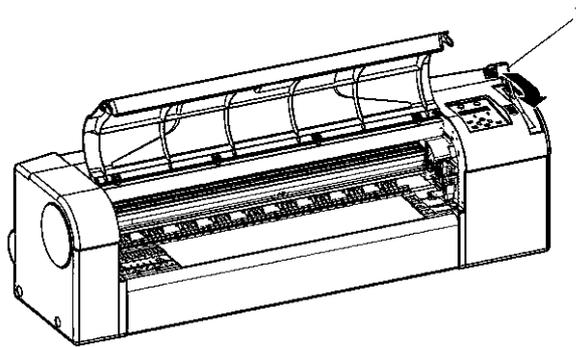


No.	Name
1	Sheet media
2	Media loading mark
3	Platen step

⚠ Notes ⚠

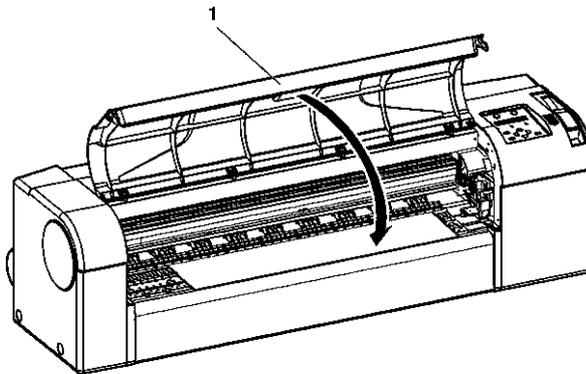
- Load the media within a $\pm 5\text{mm}$ range left or right from the loading mark, otherwise a media loading error will occur.

Step 7 : Pull the media hold lever (1) forward. See image below.



No.	Name
1	Media hold lever

Step 8 : Close the front cover (1). See image below.



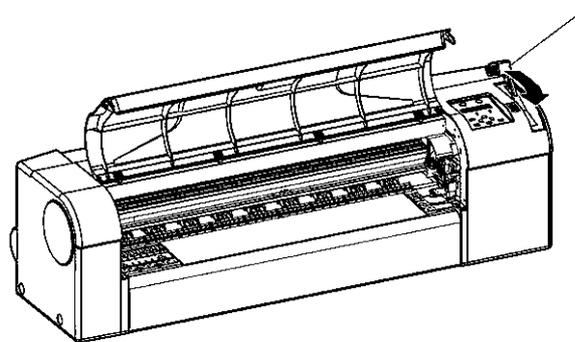
No.	Name
1	Front cover

Result: The operation panel displays the "Media type" setup menu.

3.2.4 Setting media type

Introduction:

When you have loaded the media in the Drafstation, you'll have to set the media type. The Media setup menu is displayed after the media hold lever is pushed from the backward position to the forward position.



No.	Name
1	Media hold lever

⚠ Notes ⚠

- The plotter starts the media initialisation without setting the media type when
 - The [Cancel] key of the operation panel is pressed.
 - No key operations are performed on the operation panel for 10 seconds.

Procedure:

Step 1 : Verify that the printer has been switched ON, and the media has been loaded.

Result: After the media is loaded, the display shifts to the Media setup menu.

Step 2 : Press the [Setting value +] key or [Setting value-] key on the operation panel to select the correct media type:

- User1, User2, User3, User4
- MonoTrac
- Col.Trac
- Plain
- Coat
- Film
- Photo

Step 3 : Press the [Enter] key on the operation panel to confirm your choice.

Result: · The media type is determined.

- · The operation panel displays "Paper Initial", and media initialisation starts.

3.2.5 Head height adjustment

Be sure to read and understand the safety warnings before handling the printer.

When used ?

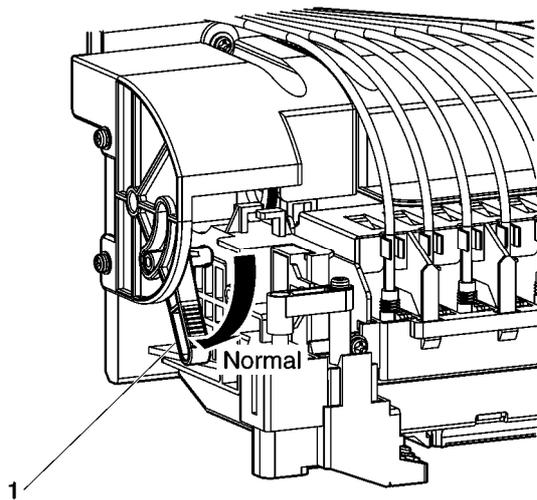
Use the head height adjustment to prevent the print head from touching the media, when printing at high speeds or when using strongly curved media.

- ⚠ Notes ⚠**
- If the head height adjustment lever is raised, high print quality will not be guaranteed.
 - Do not open the front cover nor change the head height during printing. If the head height is changed, the head alignment will be changed and high print quality will not be guaranteed.

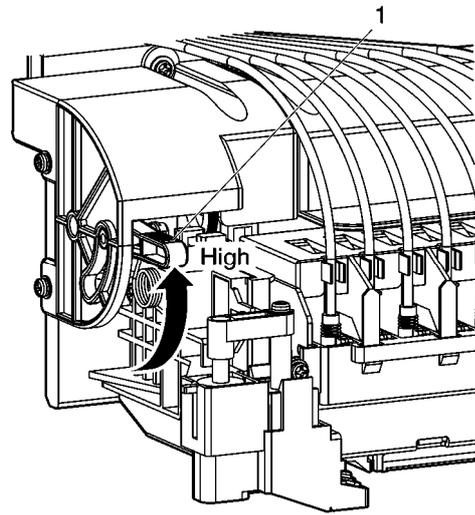
Procedure:

Step 1 : Open the front cover.

Step 2 : Change the head height by moving the head height adjustment lever (1). See images below.



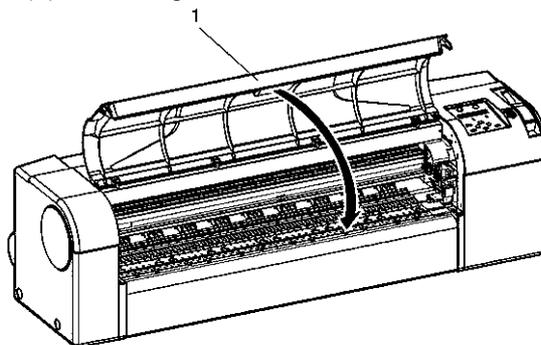
Normal head height



Head height: High

No.	Name
1	Head height adjustment lever

Step 3 : Close the front cover (1). See image below.



No.	Name
1	Front cover

3.3 PAPER BASKET SETTING

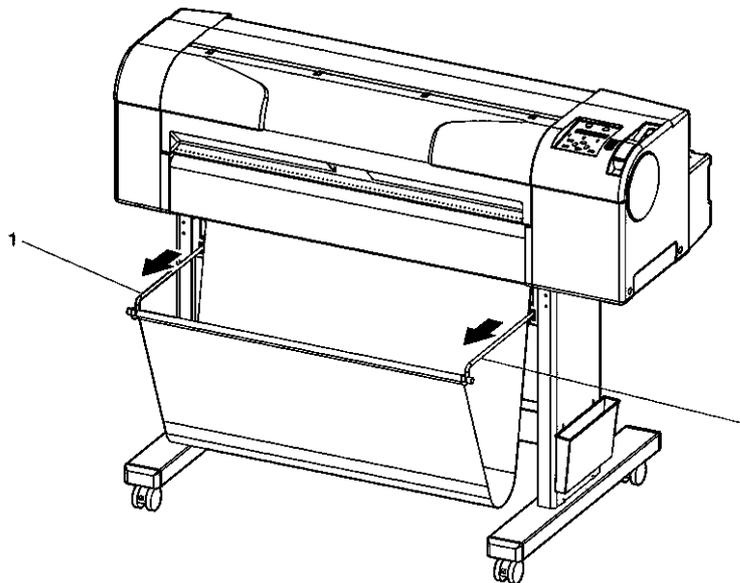
Be sure to read and understand the safety warnings before handling the printer.

The Paper basket supplied with the dedicated stand can be used to keep finished prints, preventing them from spotting or folding.

Notes

- The paper basket can not be mounted when you are using a Drafstation Pro with take-up system.

Action: Pull out the tray hook as far as possible.



No.	Name
1	Tray hook

Notes

- To set the Take-up system for the Drafstation Pro, refer to the User's Guide of the Take-up system.

This section describes how to make the fully-installed plotter "ready-to-print". For details on how to obtain a fully installed plotter, see chapter "Installing the unit".

3.4 SETTING THE PLOTTER DRIVER

This section describes how to perform settings on the plotter driver.

3.4.1 Plotter driver setup procedure

Be sure to read and understand the safety warnings before handling the printer.

To print to the plotter, the plotter driver must be set according to the printing conditions.

Step 1 : Select the plotter driver.

Step 2 : Set the plotter driver.

- Click on [Help] in the plotter driver setup screen.
- Read the instructions to set the plotter settings.

3.4.2 Plotter driver setup items

This section describes the plotter driver setup items.

Setup item	Description
Basic setup	To set up the basic setup items of printing and to check the setup list.
Advanced setup	To set up the advanced settings of the printing conditions and to check the setup list.
Options	To perform the setup items relating to initialization, call, storage of parameters and to check settings.
Utilities	To perform a cleaning and to activate the status monitor software tool.

Notes

- For details of setup items, refer to the plotter driver's help file. The file will be displayed by clicking [HELP] in the plotter driver setup screen.

3.5 REPLACING ROLL MEDIA

Be sure to read and understand the safety warnings before handling the printer.

⚠ Notes ⚠

- To replace media on a Drafstation Pro when using the Take-up system, refer to the User's Guide of the Take-up system.

Describes the replacement time and replacement method for roll media.

(1) Replacement time

Replace roll media if...

...the roll media runs out.

- The operation panel displays "End of Roll".
- If the media runs out during printing, the plotter stops printing.

...you want to change the media type.

(2) Type

⚠ Notes ⚠

- For types and details of roll media, refer to: "Options/Supplies"

(3) Replacement steps

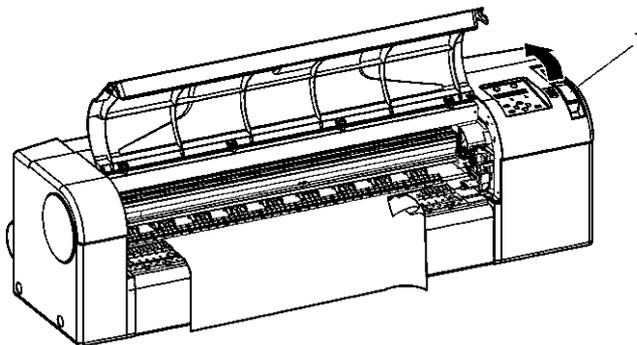
To replace roll media, follow the procedure below. Note that the procedure consists of **2** parts.

1. Remove the installed roll media.

Step 1 : Verify that

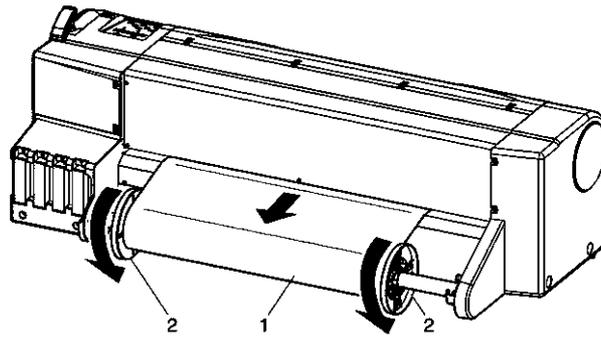
- the plotter has been switched ON,
- the plotter is in Normal mode, and
- The plotter does NOT print.

Step 2 : Push the media hold lever (1) backward (lever up). See image below.



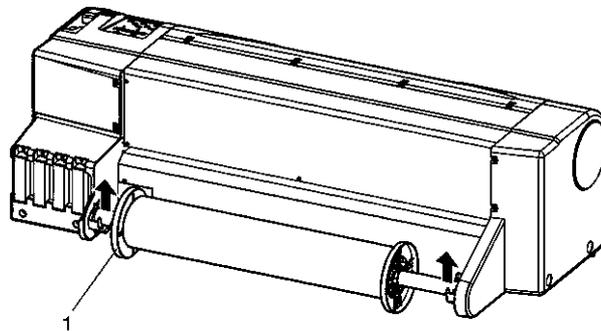
No.	Name
1	Media hold lever

Step 3 : Lift up both ends of the scroller (2), and guidely rewind the roll media (1). See image below.



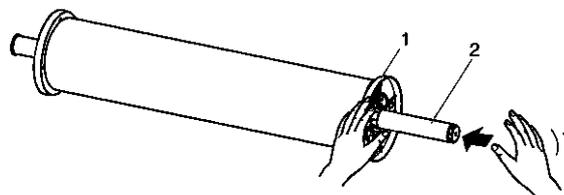
No.	Name
1	Roll media
2	Scroller

Step 4 : Remove the scroller (1) from the scroller receiver as illustrated below, and place it on a horizontal surface.



No.	Name
1	Scroller

Step 5 : Hold the movable flange (1), and tap the scroller (2) as illustrated below to remove the movable flange.

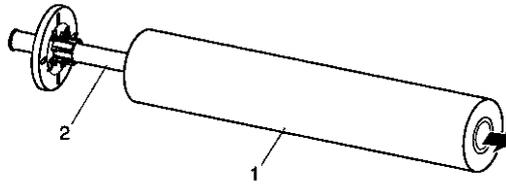


No.	Name
1	Movable flange
2	Scroller

⚠ Notes ⚠

- When removing roll media, do not drop it. Doing so may damage the scroller.

Step 6 : Remove the roll media (1) from the scroller (2). See image below.



No.	Name
1	Roll media
2	Scroller

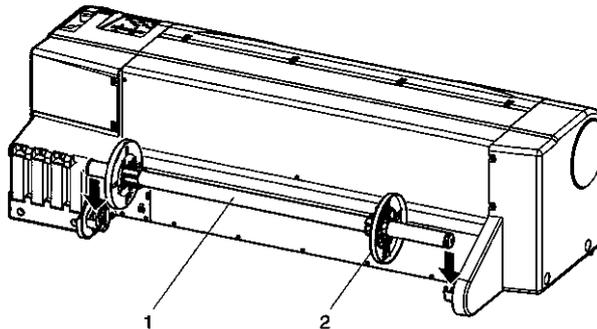
2. Install the new roll media.

⚠ Notes ⚠

- For loading the roll media, refer to: "Handling and installing Media"
- For storing media, store it according to: "Notes on storing media"

⚠ Notes ⚠

- When you do not load roll media, then attach the movable flange to the scroller, and set the scroller on the plotter. See image below.



No.	Name
1	Movable flange
2	Scroller

3.6 REPLACING INK CARTRIDGES

Be sure to read and understand the safety warnings before handling the printer.

This section describes the replacement time and replacement method for the ink cartridges.

(1) Replacement time

- a. When the operation panel displays "[KCMY] InkNearEnd"
 - This message will be displayed when the ink level in an ink cartridge gets low.
 - b. When the operation panel displays "[KCMY] Ink End"
 - This message will be displayed when the ink in an ink cartridge ran out.
- Immediately replace the ink cartridge with a new ink one.

⚠ Notes ⚠

- The display will indicate which ink colour has become low or ran out :
 - K: Black
 - C: Cyan
 - M: Magenta
 - Y: Yellow
- Only remove and insert ink cartridges at the time of replacement. Not doing so may result in incorrect printing behaviour due to failures such as nozzle loss, or air which might come in the ink tubes.
- If "Ink End" appears, it is not possible to print until the new ink cartridge has been inserted.
- If there is no new ink cartridge for replacement, then leave the empty ink cartridge into the plotter. Leaving the plotter without ink cartridges inside the ink cartridge slots may result in head clogging.

3.6.1 Cartridge types for Drafstation

Description	Part No.
Ink cartridge K (Black: 110 ml)	RJ9-INK BK
Ink cartridge C (Cyan: 110 ml)	RJ9-INK C
Ink cartridge M (Magenta: 110 ml)	RJ9-INK M
Ink cartridge Y (Yellow: 110 ml)	RJ9-INK Y

3.6.2 Cartridge types for Drafstation Pro

When buying a Drafstation Pro it is possible to choose between to ink configurations.

Configuration 1:

Description	Part No.
Ink cartridge K (Black: 110 ml)	RJ9-INK BK
Ink cartridge C (Cyan: 110 ml)	RJ9-INK C
Ink cartridge M (Magenta: 110 ml)	RJ9-INK M
Ink cartridge Y (Yellow: 110 ml)	RJ9-INK Y

Configuration 2:

Description	Part No.
Ink cartridge K (Black: 220 ml)	RJ9D-22-BK
Ink cartridge C (Cyan: 220 ml)	RJ9D-22-C
Ink cartridge M (Magenta: 220 ml)	RJ9D-22-M
Ink cartridge Y (Yellow: 220 ml)	RJ9D-22-Y

⚠ Notes ⚠

- There is a difference in Firmware between a Drafstation and a Drafstation pro. Because of this, it is only possible for the Drafstation Pro to load two different ink types. The Drafstation is not able to do so.

⚠ Notes ⚠

- When replacing ink cassettes on the Drafstation Pro, be aware to insert the same ink cassettes as those who were in previous.
- If you insert the second configuration without performing a cleaning, the printer will be defected.
- When you want to switch from 1 configuration to another, you need 4 cleaning cassettes RJ9-22-CLN. And you need to contact your local Mutoh dealer to perform the necessary cleaning.

⚠ Notes ⚠

- Only use Mutoh original ink.
This plotter has been developed for use of genuine ink cartridges. In case of using non genuine ink cartridges, notice the following :
 - Printing might become blurred and the end of ink in the cartridge might no longer be correctly detected.
 - The problems caused by doing so will not be covered by the warranty and repair expenses will have to be paid by the customer.
- For types and details of ink cartridges refer to “Options/Supplies. “
- When the ink cartridge is moved from a cold place to a warm place, keep the ink cartridge unused for three hours or more in the printing environment.

(3) Replacement steps**⚠ Notes ⚠**

- Do not shake ink cartridges. Doing so may cause ink leakage.
- When an ink cartridge is moved from a cold place to a warm place, keep the ink cartridge unused for three hours or more in the printing environment.
- Do not refill the ink cartridges.
Doing so may result in incorrect printing.
- Insert or remove the ink cartridge at the time of replacement only.
Inserting or removing ink cartridges except at the time of replacement may result in incorrect printing.

To replace ink cartridges, follow the steps below.

Step 1 : Verify that the plotter has been switched ON.

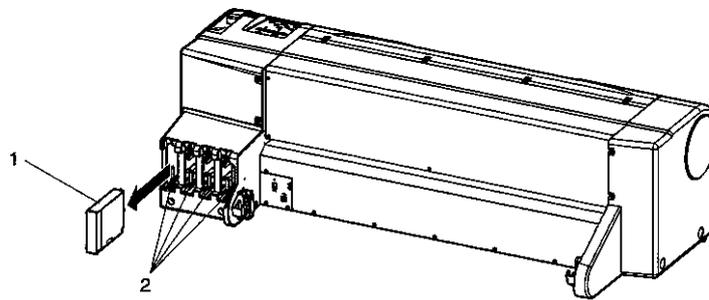
⚠ Notes ⚠

- Do not replace ink cartridges when the plotter is switched OFF. Doing so may result in incorrect detection of the remaining ink and result in abnormal printing behaviour.

Step 2 : Remove the empty ink cartridge(s) (1) from the ink cartridge slot (s) (2).

⚠ Notes ⚠

- A used ink cartridge should be put in a vinyl bag or bag used for this kind of waste. Disposal of an ink cartridge has to be done in compliance with the regulations and instructions of the local authorities.



No.	Name
1	Empty ink cartridge
2	Ink cartridge slot

Step 3 : Unpack the new ink cartridge(s).

⚠ Notes ⚠

- When replacing ink cassettes on the Drafstation Pro, be aware to insert the same ink cassettes as those who were in previous.
- If you insert the second configuration without performing a cleaning, the printer will be defected.
- When you want to switch from 1 configuration to another, contact your local Mutoh dealer.

⚠ Notes ⚠

- Use the ink cartridges within 2 years from the date printed on the package. Using an ink cartridge after this period may affect the print quality.
- Replace the ink cartridge within 6 months after installing it into the plotter.

Step 4 : Insert the new ink cartridge(s).

Step 5 : Verify that the plotter returns to Normal mode.

⚠ Notes ⚠

- The plotter resumes printing when you have replaced (an) ink cartridge(s) after an ink end occurred during printing.

3.7 REPLACING THE CUTTER BLADE

Be sure to read and understand the safety warnings before handling the printer.

Describes the replacement time and replacement method for the cutter blade.

(1) Replacement time

Replace the cutter blade if...

...the media cannot be clearly cut.

- Failure in cutting media, results in "Paper Cut Error" on the operation panel.

...fuzz, etc. appears on the cut section.

...the cutter's life cycle has ended. See "MaintenanceRecordPlot"

(2) Type

See below for the genuine cutter blade.

Description	Model No.
Substitute cutter blade	RJ3-CBS

(3) Replacement steps

To replace the cutter blade, follow the steps below.

Step 1 : Verify that the plotter is switched ON.

Step 2 : Press the [Menu] key on the operation panel to display the setup menu.

⚠ Notes ⚠

- For key operations on the setup menu, refer to "Menu setup on the operation panel."

Step 3 : Go to the "CutterChange" menu.

Step 4 : Select "CutterChange: YES", and press the [Enter] key on the operation panel.

Result: The cutter change process starts.

Step 5 : Open the front cover.

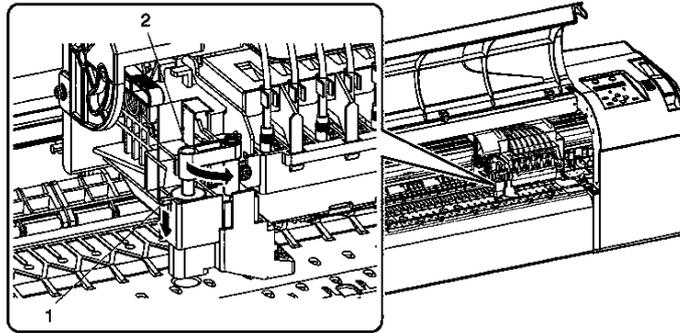
Result:

- The carriage moves to the cutter change position.
- "Cutter Changed?" will be displayed on the operation panel.

⚠ Notes ⚠

- Leaving the carriage at the cutter change position for more than 10 minutes, will result in head clogging.

Step 6 : Softly push the knob of the cutter holder, and rotate the cutter holder lever (2) to the illustrated direction simultaneously. See image below.

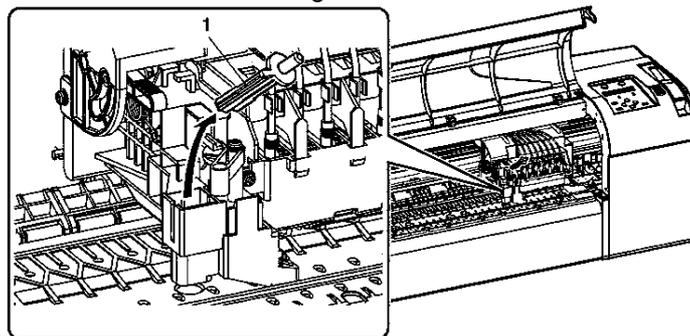


No.	Name
1	Cutter holder
2	Cutter holder lever

⚠ Notes ⚠

- Do not strongly press or suddenly release the cutter holder knob, to prevent the built-in spring from springing out.
- Do not push the cutter holder to the end. The cutter blade may damage the inside of the plotter.

Step 7 : Remove the cutter as shown on the image below.

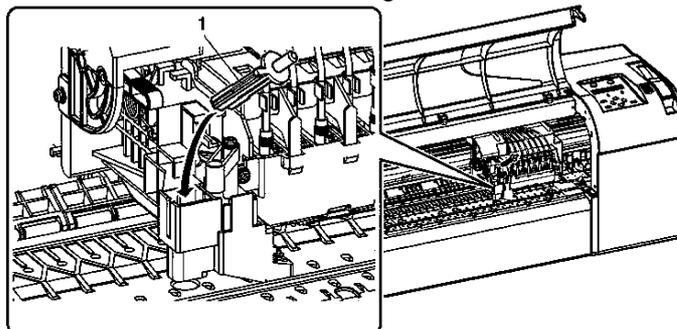


No.	Name
1	Cutter

⚠ Notes ⚠

- The used cutter should be put in a vinyl bag or bag used for this kind of waste. Disposal of a cutter blade has to be done in compliance with the regulations and instructions of the local authorities.

Step 8 : Insert the new cutter as shown in the image below.

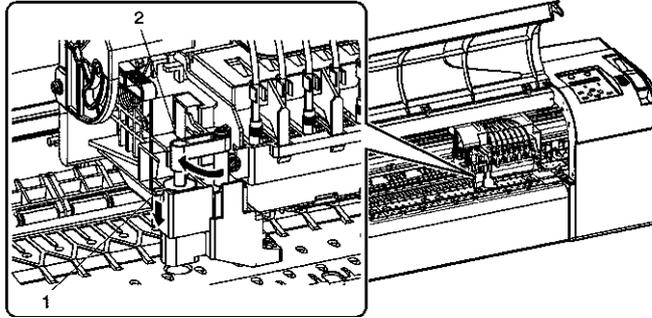


No.	Name
1	Cutter

⚠ Notes ⚠

- When installing a new cutter blade, make sure that the spring built-in in the blade holder does not come out of the holder.

Step 9 : Softly push the knob of the cutter blade and reposition the cutter holder lever (2) simultaneously as shown on the image below.

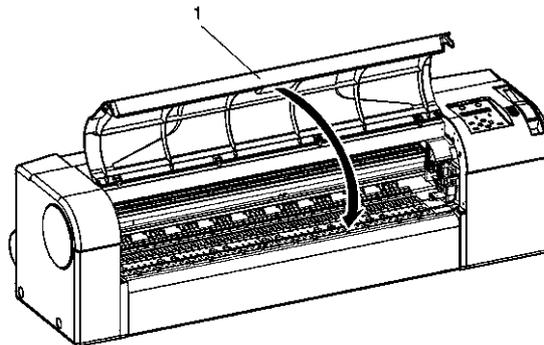


No.	Name
1	Cutter holder
2	Cutter holder lever

⚠ Notes ⚠

- Do not strongly press or suddenly release the cutter holder knob, to prevent the built-in spring from springing out.
 - Do not push the cutter holder to the end. The cutter blade may damage the inside of the plotter.
 - Correctly install the cutter holder lever referring to the image shown in this step of the procedure.
- Incorrect installation may generate errors.
If an error occurs, check that the cutter holder lever is attached correctly.

Step 10 : Close the front cover (1).



No.	Name
1	Front cover

Step 11 : Press the [Enter] key on the operation panel.

Result: The carriage returns to its original position.

3.8 REPLACING THE WASTE FLUID TANK

Be sure to read and understand the safety warnings before handling the printer.

Describes the replacement time and replacement method for the waste fluid tank.

(1) Replacement time

Replace the waste fluid tank if...

..."NearFullWasteInkTank" is displayed on the operation panel.

- The waste fluid tank shortly will become full.
- Printing continues.

Action: Prepare a waste fluid tank for replacement before the waste fluid tank is full.

..."FullWasteInkTank" is displayed on the operation panel.

- The waste fluid tank is full.
- Printing stops.

Action: Immediately replace the waste fluid tank.

(2) Type

See below for the waste fluid tank that can be used on this plotter.

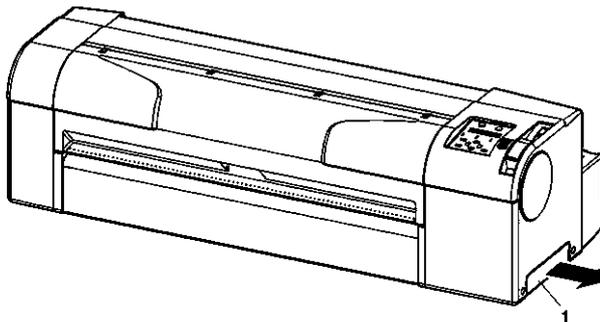
Description	Model No.
Waste fluid tank	RJ9-HEB

(3) Replacement steps

To replace the waste fluid tank, follow the 5 steps below.

Step 1 : Verify that the plotter has been switched ON.

Step 2 : Pull out the waste fluid tank (1) as shown on the image below.



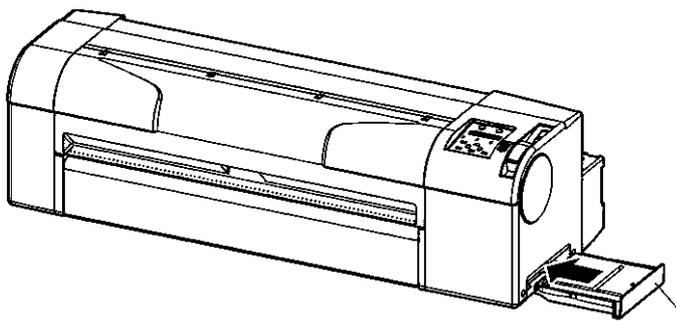
No.	Name
1	Waste fluid tank

Result: "No Waste-InkTank" will be displayed on the operation panel.

⚠ Notes ⚠

- A used waste fluid tank should be put in a vinyl bag or bag used for this kind of waste. Disposal of a waste fluid tank has to be done in compliance with the regulations and instructions of the local authorities.

Step 3 : Install a new waste fluid tank (1) in the plotter as shown on the image below.



No.	Name
1	Waste fluid tank

Step 4 : Verify that the operation panel displays "Exchange Tank? No".

Step 5 : Select "Yes", and press the [Enter] key on the operation panel.

⚠ Notes ⚠

- In case the waste fluid tank is pulled out accidentally, press the [Enter] key on the operation panel when "Exchange Tank? No" is being displayed.

3.9 TRANSFER AND TRANSPORTATION

This section describes the transfer and transportation of the plotter.

3.9.1 Transferring the plotter

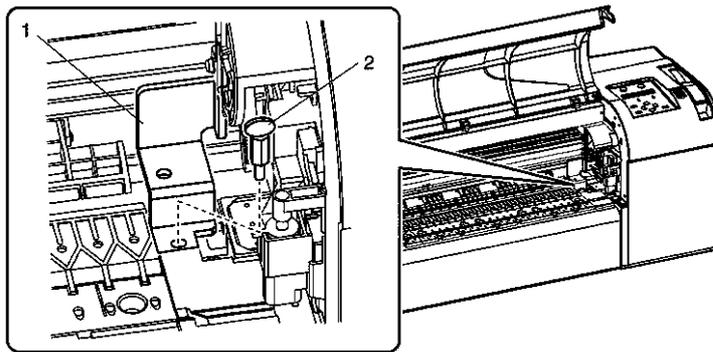
Be sure to read and understand the safety warnings before handling the printer.

Describes how to transfer the plotter.

When using the dedicated stand, transfer the plotter following the procedure below.

(1) Pre-transfer steps

- Step 1 :** Verify that the plotter has been switched OFF.
- Step 2 :** Verify that the butterfly bolts attaching the stand with the plotter, are not loosen.
- Step 3 :** Verify that the plotter head is in the rightmost position.
- Step 4 :** Attach the protective material (metal plate) for attaching the head unit (1), and fix it with thumbscrews (2).



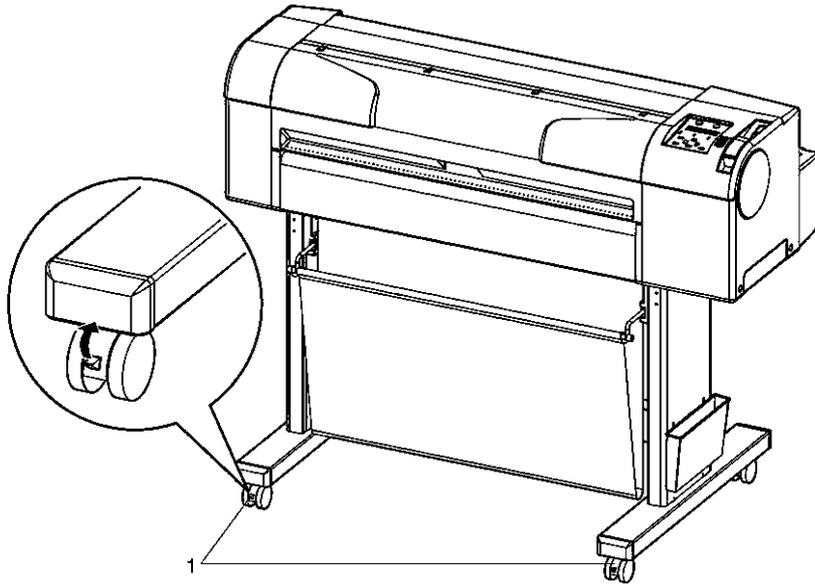
No.	Name
1	Protective material (metal plate) for attaching the head unit
2	Thumbscrew

- Step 5 :** Remove the scroller.
- Step 6 :** Unplug and remove all cables.

Step 7 : Release the lock of the caster and transfer the plotter.

⚠ Notes ⚠

- The casters supplied with the dedicated stand are manufactured for a small transfer on a plain surface. When moving the plotter outdoors, and in places with big step differences, than move the stand and plotter separately.
- Refer to the Installation guide.



No.	Name
1	Caster

(2) Steps after transfer

After transfer, follow the steps below.

Step 1 : Choose a suitable place for installation and place the plotter.
See **Installation guide**

Step 2 : Verify that the butterfly bolts fixing the stand with the plotter are not loosening.

Step 3 : Connect all cables.

Step 4 : Perform a nozzle check, and verify that there is no clogging in the plotter head.
Refer to: NozzleCheck”

Step 5 : Perform a head alignment.
Refer to: “AdjustPlot “

3.9.2 Transporting the plotter

Be sure to read and understand the safety warnings before handling the printer.

When transporting the plotter, it is necessary to pack the plotter as it was shipped, using the protective materials and packing materials to protect the plotter from vibration and shocks.

- Notes**
- When transporting the plotter, consult your MUTOH product dealer.

(1) Pre- transport procedure

Step 1 : Switch ON the plotter.

Step 2 : Verify that the plotter is in Normal mode.

Step 3 : Remove all ink cartridges.

Step 4 : Switch OFF the plotter.

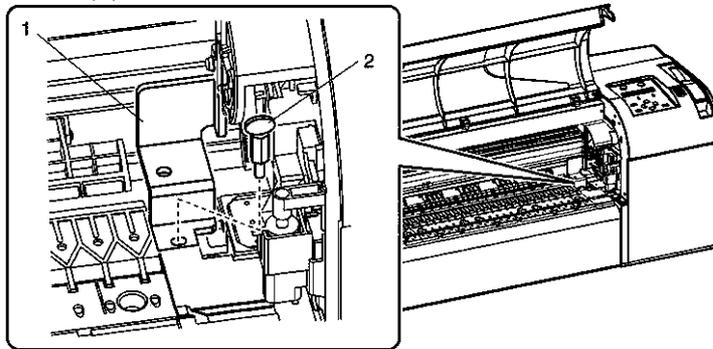
- Result: The operation panel displays "Transport Mode", and the plotter starts the ink rejecting operation.
- The ink rejecting operation takes about 2 minutes.

Step 5 : Verify that the power light faints when the ink rejection operations has been finished.

Step 6 : Remove the scroller.

Step 7 : Remove all cables.

Step 8 : Attach the protective material (metal plate) for attaching the head unit (1), and fix it with thumbscrews (2).



No.	Name
1	Protective material (metal plate) for attaching the head unit
2	Thumbscrew

Step 9 : Remove the plotter from the stand.

Refer to: **Installation guide**

Step 10 : Repack the plotter.

Post-transport procedure

Step 1 : Perform unpacking, assembling, and placing the plotter.

Refer to: **Installation guide**

Step 2 : Set the plotter in an available condition.

Refer to: "Transferring the plotter: (2) steps after transfer"

3.10 INSTALLING AND UNINSTALLING THE SOFTWARE

3.10.1 Contents of the supplied software

(1) Plotter driver

The CD-ROM with the plotter drivers includes drivers for following operating systems:

- Win 95/98
- Win NT4/2000/XP

The plotter driver installation procedure depends on how the plotter will be connected to your PC. Perform installation as shown in the following procedure:

- For network connection:
Refer to: "Installing the plotter driver for network connection"
- For USB connection:
Refer to "Installing the plotter driver for USB connection"

⚠ Notes ⚠

- Refer to the following files contained on the CD-ROM for the latest information, such as various functions, the plotter driver and its limitations :
 - Online help
 - Readme file

(2) Status monitor software tool

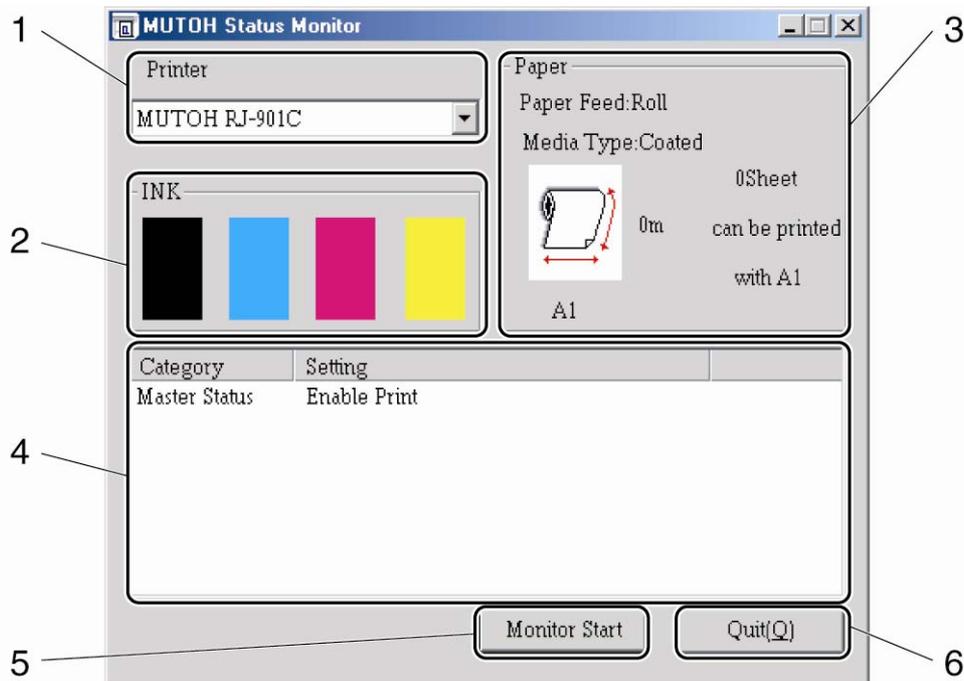
When used?

When the Operating System of the computer connected to the plotter is Windows, the Drafstation status monitor software tool can be used. This software tool can be used to check the status of the plotter from your PC.

Functions:

- Residual ink management
- Media information display
- Plotter operation information display

Overview:



No.	Name	Function
1	Plotter type	Plotter for which the operating state has to be checked is selected.
2	Residual ink quantity	Residual ink quantity of K, C, M and Y colour is displayed.
3	Media information	Media type, residual quantity etc. are displayed.
4	Plotter information	Operating status of the plotter is displayed.
5	Monitor start button	Starts monitoring the Drafstation.
6	Quit button	Closes the Status monitor software tool.

Installation procedure:

Refer to: "Installing the status monitor"

⚠ Notes ⚠

- Do not take out or insert ink cartridges while the plotter is switched ON. By doing so, the residual ink quantity in your ink cartridges will not be correctly detected and printing cannot be done.

3.10.2 Obtaining the latest software versions

Notes

- The latest version of the Drafstation plotter drivers as well as the Drafstation Status monitor software tool, can be obtained on the Windows Drivers section of the Mutoh website: www.mutoh.eu/ / www.mutoh.be

Step 1 : Download the self-extracting exe file

Step 2 : Unpack the files :

- Start the self-extracting exe file.
- Choose a location to unpack the files.
- Unpack the files and close the installer

Step 3 : Browse to the folder where the Windows software is located.

Example of the location:

C:\Documents and Settings\MyName\Desktop\rj\Driver_Feb_2006\Driver\
RJ-900SeriesWinDriver(A0_E)_2006.02.16_MEN

Example of the Windows plotter software folder:

```

14/06/2006 16:56 <DIR>      .
14/06/2006 16:56 <DIR>      ..
15/12/2005 18:00          27 Autorun.inf
15/02/2006 01:56          8.331 DriverInfo.INI
15/12/2005 18:00         12.850 Readme.txt
14/06/2006 16:47 <DIR>      RJ-900C_2000_XP
14/06/2006 16:47 <DIR>      RJ-900C_95
14/06/2006 16:47 <DIR>      RJ-900C_NT40
14/06/2006 16:47 <DIR>      RJ-900_PROGRAM
14/06/2006 16:47 <DIR>      RJ-900_PROGRAM-95
14/06/2006 16:47 <DIR>      RJ-900_PROGRAM-NT
14/06/2006 16:47 <DIR>      RJ-901C_2000_XP
14/06/2006 16:47 <DIR>      RJ-901C_95
14/06/2006 16:46 <DIR>      RJ-901C_NT40
14/06/2006 16:46 <DIR>      RJ-901_PROGRAM
14/06/2006 16:46 <DIR>      RJ-901_PROGRAM-95
14/06/2006 16:46 <DIR>      RJ-901_PROGRAM-NT
15/02/2006 09:40         466.944 setup.exe
14/06/2006 16:46 <DIR>      USB_Driver
5 File(s)    488.152 bytes
15 Dir(s)   48.763.248.640 bytes free

```

Result: The Windows plotter software folder is now displayed on the PC, and ready to use. You can now perform the procedures to install the software.

3.10.3 Installing the Windows plotter driver for network connection

Before installing the network connection, the plotter's TCP/IP settings have to be chosen.

- IP address plotter:
 - This is the plotter's IP address.
 - Has to be filled out in the plotter AND the plotter driver.
 - The PC will send the plot files to this IP address.
- Subnet mask plotter:
Has to be filled out in the plotter.
- Gateway plotter:
 - This is the PC's IP address or the router's IP address on the plotter side.
 - Has to filled out on the plotter.

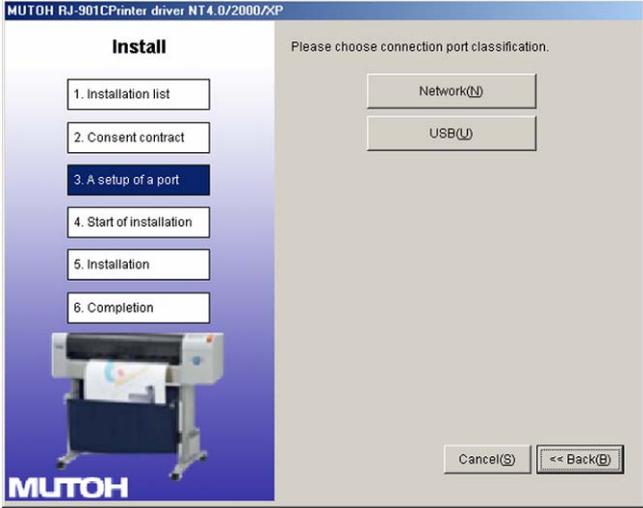
⚠ Notes ⚠

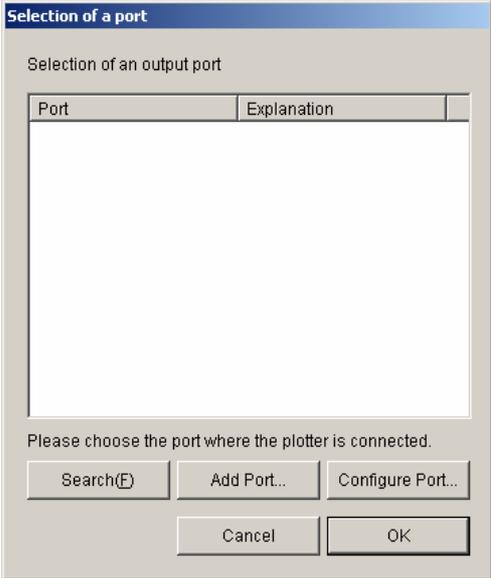
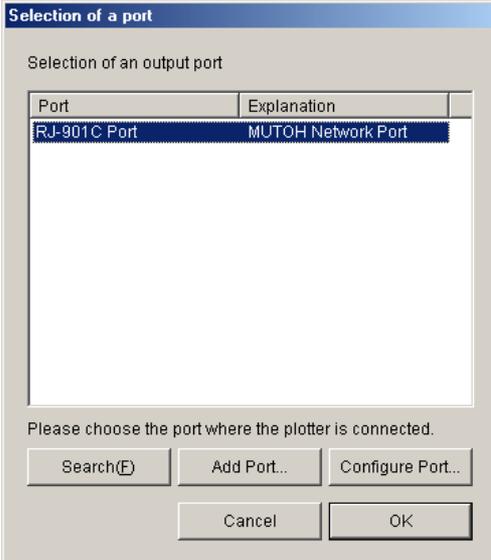
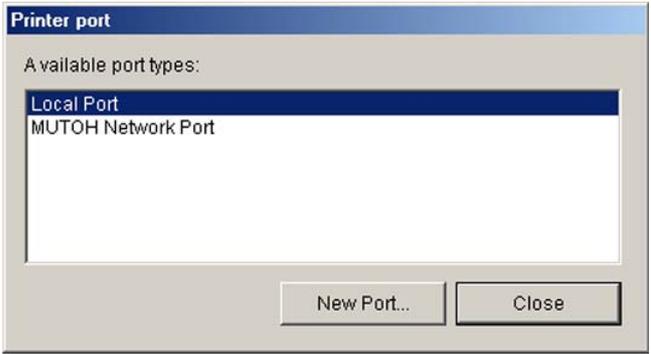
- When a router is installed between the plotter and the PC, IP forwarding of the plotter's IP address to the PC is necessary. This is needed to establish bidirectional communication between the plotter and the PC.

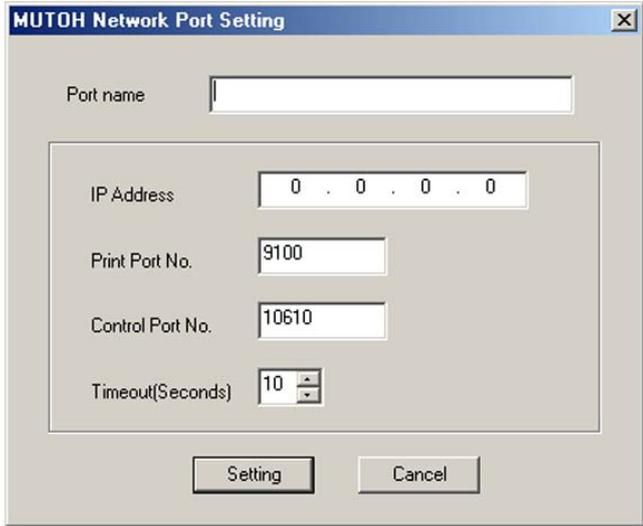
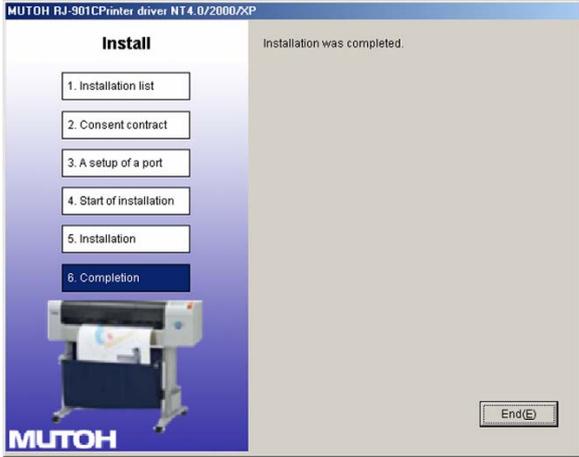
Configuration example without router :

IP address PC	Subnet mask PC	IP address plotter	Subnet mask plotter	Gateway plotter
168.192.0.50	255.255.255.0	168.192.0.51	255.255.255.0	168.192.0.50

Windows - Network installation procedure		11 steps - Step 1 to 4	
Step	Action	Screen	Result
1	<p>Verify that :</p> <ul style="list-style-type: none"> The PC and plotter are connected to the network. See "Connecting network interface cable" The PC and the plotter are switched ON. 	-	-
2	<p>Insert the driver CD in the CD drive of the PC OR run the setup.exe file in the Windows plotter software folder.</p> <p>⚠ Notes ⚠ When the Installer does not automatically start, execute "Setup.exe" on the CD-ROM.</p>	The software initializes.	The display moves to screen 1 of the Mutoh printer driver program.
3	Select the model in screen 1, and click "Install".	 <p>Screen 1</p>	The display moves to screen 2.
4	Click the check box "Installation of a driver" in screen 2, and click "Next>".	 <p>Screen 2</p>	The display moves to screen 3.

Win - Network installation procedure			11 steps - Step 5 to 6
Step	Action	Screen	Result
5	<p>Click "Agree" or "Cancel" in screen 3 : "License agreement of the plotter driver".</p> <p>a. When you agree to the license agreement: Click "Agree". The display moves to Screen 4.</p> <p>b. When you do not agree to the license agreement: Click "Cancel". Installation of plotter driver is cancelled.</p>	 <p>Screen 3</p>	<p>The display moves to screen 4 when you agree with the conditions.</p>
6	<p>Click "Network" in Screen 4.</p>	 <p>Screen 4</p>	<p>The display moves to screen 5.</p>

Win - Network installation procedure		11 steps - Step 7 to 8	
Step	Action	Screen	Result
7	<p>Click "Add Port..." and go to step 8 to add a printer port</p> <p>OR</p>	 <p>Screen 5a</p>	<p>The display moves to screen 6 in Step 8.</p>
	<p>Select a port, click "OK" and go to step 9 to select an existing port.</p> <p>Notes The RJ-90x Port is displayed if a port setup has been performed already in the past. You can use it by selecting the port and clicking the "Configure Port..." button.</p>	 <p>Screen 5b</p>	
8	<p>Select "Mutoh Network Port" and click "New Port..."</p>	 <p>Screen 6</p>	<p>The display moves to screen 7 in Step 9.</p>

Win - Network installation procedure		11 steps - Step 9 to 11	
Step	Action	Screen	Result
9	<p>Fill out the Port name and IP Address in screen 7, and click the "Setting" button. See below for settings.</p> <ul style="list-style-type: none"> Port name: Fill out the port name : Eg. : RJ901 ; any name is possible. IP Address: Fill out the plotter's IP address as chosen in step 2. 	 <p>Screen 7</p>	<p>The display moves to Screen 8.</p>
10	<p>Check the contents on the display and click "Next>".</p>	 <p>Screen 8</p>	<p>Installation of the driver is started. The display will show a progress bar and moves to screen 9.</p>
11	<p>Click "End" in screen 9.</p>	 <p>Screen 9</p>	<p>The plotter driver is now installed. END.</p>

3.10.4 Installing the Windows plotter driver for USB connection

⚠ Notes ⚠

- The USB connection can be used when your PC's Operating System is Windows 98, or Windows 2000/XP.

- READ THIS FIRST - :

Be sure to read and understand the safety warnings before handling the printer.

The procedure to install the plotter using the USB connection consists of 2 parts and a third, optional part.

Part 2 and Part 3 are separately presented for Windows XP and Windows 2000.

Follow the procedure in the following order:

Part 1: Mutoh installer



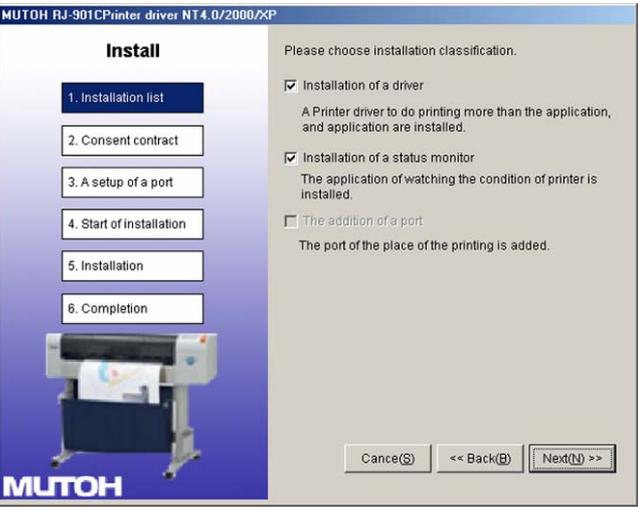
Part 2: Win XP PnP mode

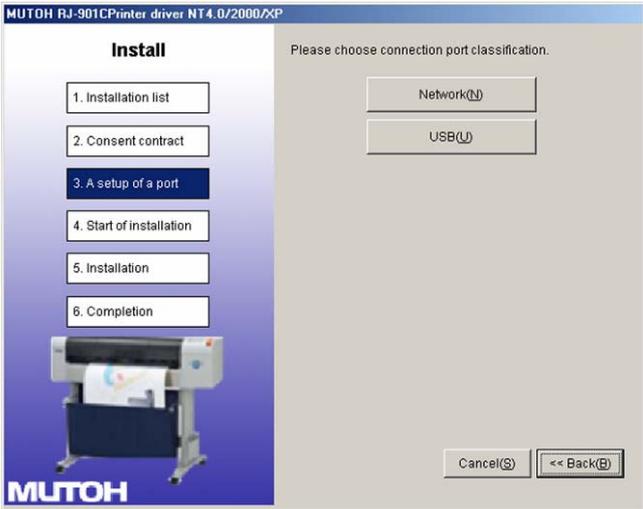
Part 2: Win 2000 PnP mode

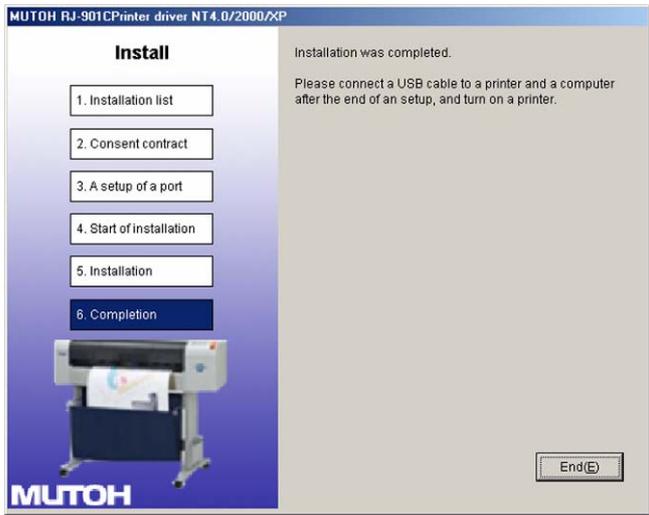


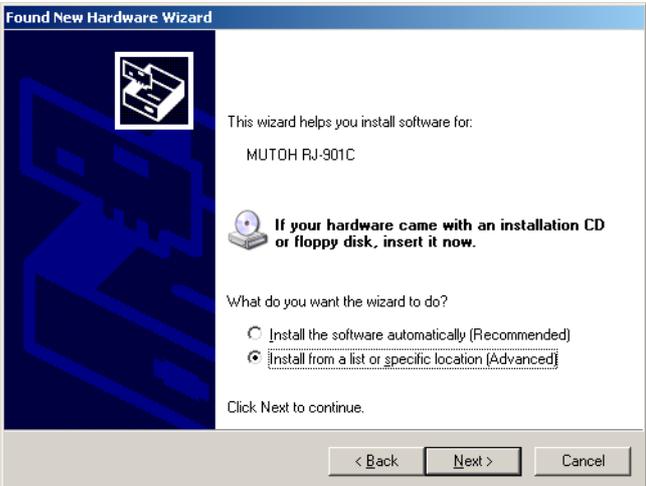
Part 3: Win XP Guide mode: OPTIONAL: Use only when PnP has failed and a print error occurs.

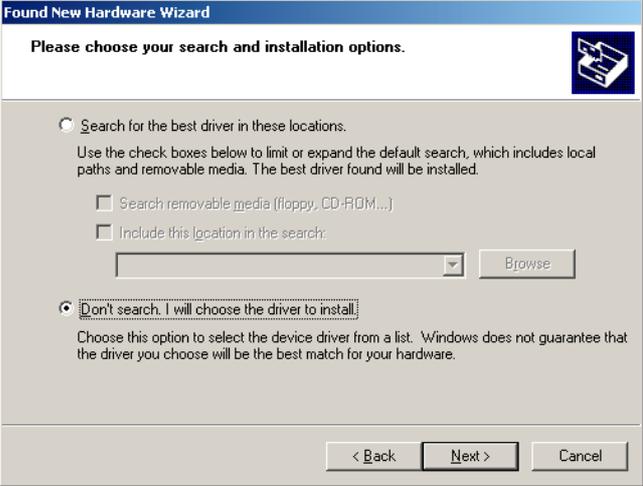
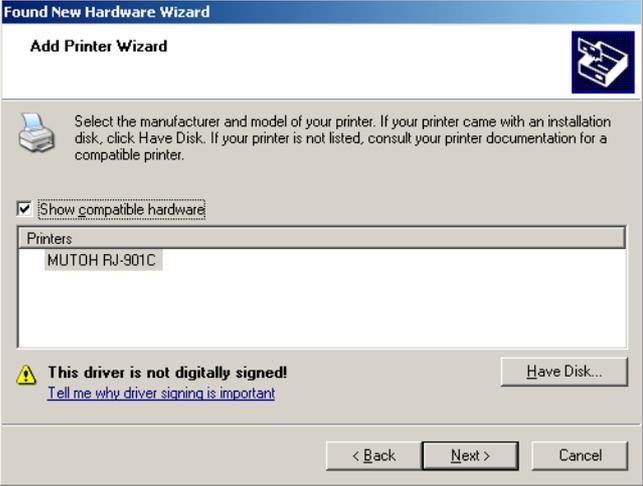
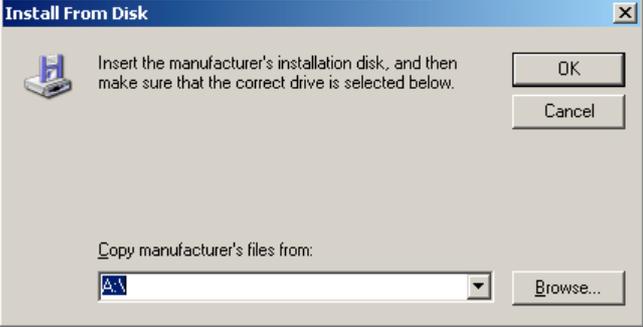
Part 3: Win 2000 Guide mode: OPTIONAL: Use only when PnP has failed and a print error occurs.

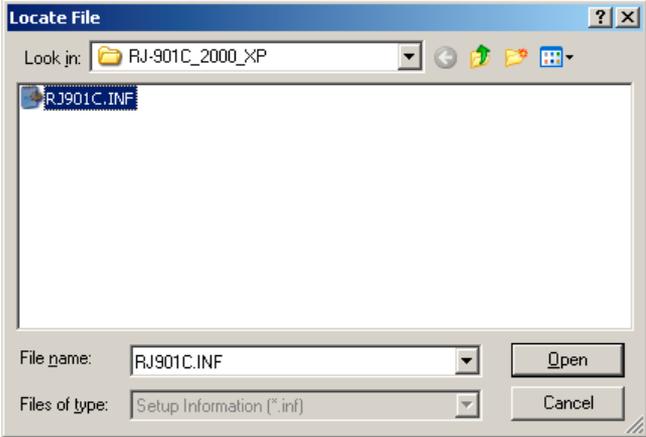
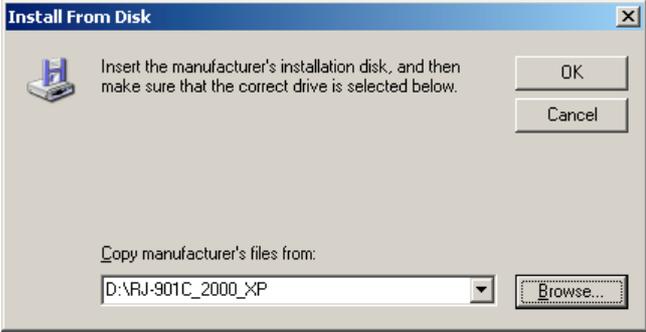
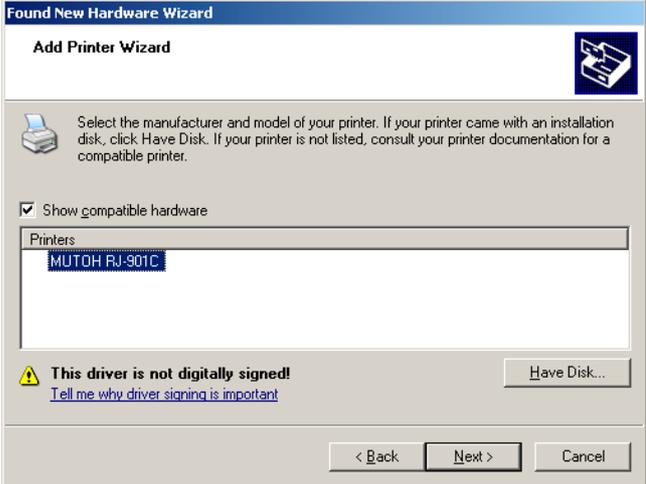
Win - USB installation procedure - Part 1 – Mutoh installer			8 steps - Step 1 to 4
Step	Action	Screen	Result
1	Verify that : the USB cable to the plotter is NOT connected, and The PC and the plotter are switched ON.	-	-
2	Insert the driver CD in the CD drive of the PC OR run the setup.exe file in the Windows plotter software folder. Notes When the Installer does not automatically start, execute "Setup.exe" on the CD-ROM.	The software initializes.	The display moves to screen 1 of the Mutoh printer driver program.
3	Select the plotter model in screen 1, and click "Install".	 <p>Screen 1</p>	The display moves to screen 2.
4	Click the check box "Installation of a driver" in screen 2, and click "Next".	 <p>Screen 2</p>	The display moves to screen 3.

Win - USB installation procedure - Part 1 - Mutoh installer			8 steps - Step 5 to 7
Step	Action	Screen	Result
5	<p>Click "Agree" or "Cancel" in screen 3 : "License agreement of the plotter driver".</p> <p>a. When you agree to the license agreement: Click "Agree". The display moves to Screen 4.</p> <p>b. When you do not agree to the license agreement: Click "Cancel". Installation of plotter driver is cancelled.</p>	 <p>Screen 3</p>	<p>The display moves to screen 4 when you agree with the conditions.</p>
6	<p>Click "USB" in Screen 4.</p>	 <p>Screen 4</p>	<p>The display moves to screen 5.</p>
7	<p>Check the contents on the display and click "Next".</p>	 <p>Screen 5</p>	<p>Installation of the driver has started. The display will show a progress bar and moves to screen 6.</p>

Win - USB installation procedure - Part 1 - Mutoh installer		8 steps - Step 8	
Step	Action	Screen	Result
8	Click "End" and Go to Part 2 of the USB installation.	 <p>Screen 6</p>	End of Part 1, the installer finishes.

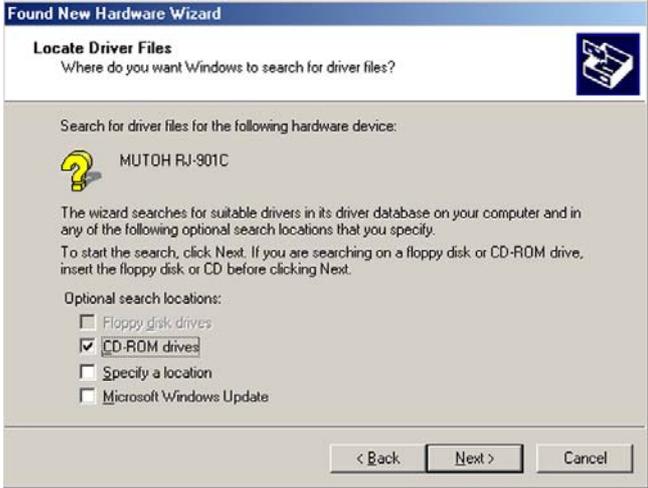
Win - USB installation procedure - Part 2 - WinXP / PnP mode			12 steps - Step 1 to 4
Step	Action	Screen	Result
1	Verify that : the plotter and printer are switched ON, the Mutoh Driver CD is inserted in the CD-ROM drive of the PC, and the Mutoh installer (Part 1) has been finalized.	-	-
2	Connect the plotter to the PC with the USB cable.	-	The display moves to screen 1 of the "Found New Hardware Wizard".
3	Mark the checkbox "No, not this time" in screen 1, and click on "Next>".	 <p>Screen 1</p>	The display moves to screen 2.
4	Mark the checkbox "Install from a list or specific location (Advanced)" in screen 2, and click on "Next>".	 <p>Screen 2</p>	The display moves to screen 3.

Win - USB installation procedure - Part 2 - WinXP / PnP mode		12 steps - Step 5 to 7	
Step	Action	Screen	Result
5	Mark the checkbox "Don't search, I will choose the driver to install" in screen 3, and click on "Next>".	 <p>Screen 3</p>	The display moves to screen 4.
6	Click "Have Disk..."	 <p>Screen 4</p>	The display moves to screen 5.
7	Click "Browse..."	 <p>Screen 5</p>	The display moves to screen 6.

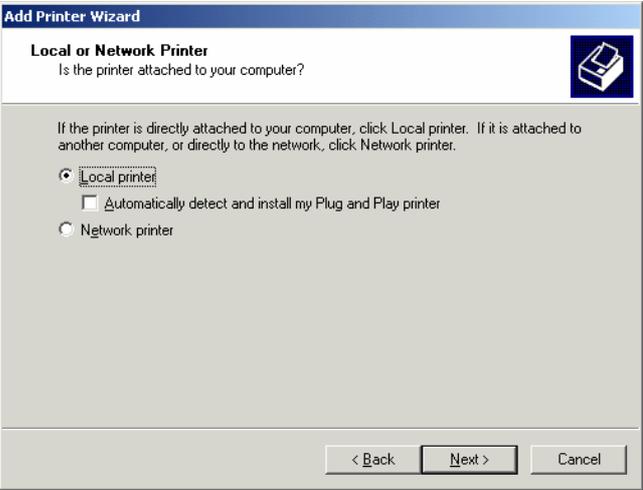
Win - USB installation procedure - Part 2 - WinXP / PnP mode		12 steps - Step 8 to 10	
Step	Action	Screen	Result
8	<p>Browse to the file 'RJ901C.inf' or 'RJ900C.inf' on the Mutoh Driver CD or the Windows plotter software folder.</p> <p>Select the file</p> <p>Click "Open"</p> <p>Notes</p> <ul style="list-style-type: none"> • RJ-901C: RJ901C.inf • RJ-900C: RJ900C.inf 	 <p>Screen 6</p>	The display moves to screen 7.
9	Click "OK" in screen 7.	 <p>Screen 7</p>	The display moves to screen 8.
10	Choose the Mutoh printer and click "Next>"	 <p>Screen 8</p>	The display moves to screen 9.

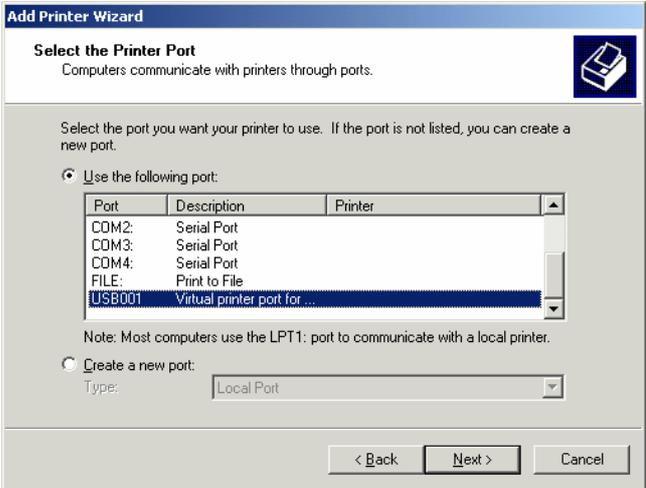
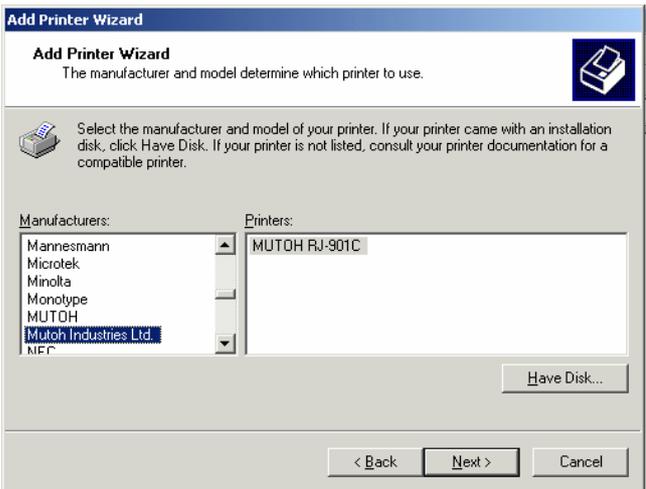
Win - USB installation procedure - Part 2 - WinXP / PnP mode		12 steps - Step 11 to 12	
Step	Action	Screen	Result
11	Click "Continue Anyway" in screen 9.	 <p>Screen 9</p>	The display moves to screen 10.
12	Click "Finish" in Screen 10.	 <p>Screen 10</p>	The plotter is now installed. END.

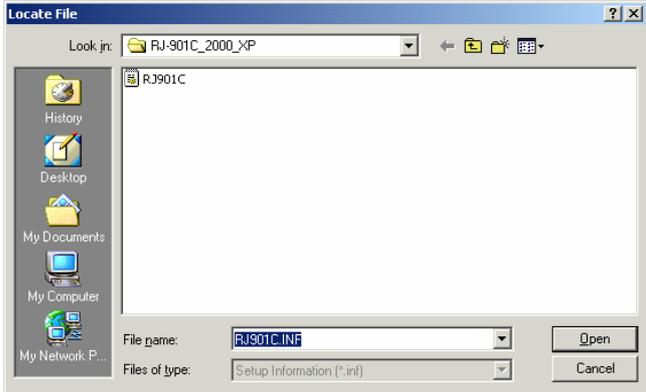
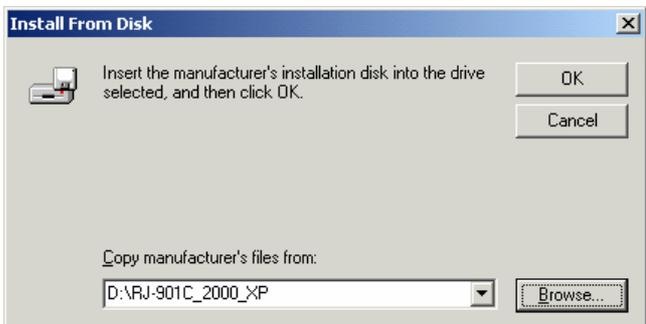
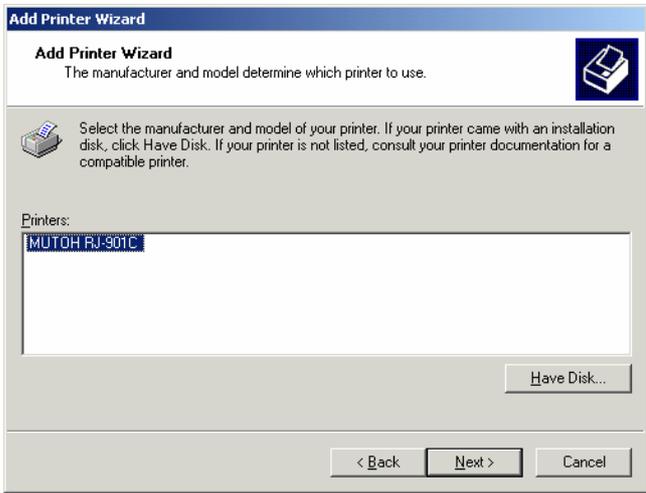
Win - USB installation procedure - Part 2 - Win2000 / PnP mode			8 steps - Step 1 to 4
Step	Action	Screen	Result
1	Verify that the plotter and printer are switched ON, the Mutoh Driver CD is inserted in the CD-ROM Drive of the PC, and The Mutoh installer has finished.	-	-
2	Connect the plotter to the PC with the USB cable. See Error! Reference source not found. Error! Reference source not found.	-	The display moves to screen 1 of the "Found New Hardware Wizard".
3	Click "Next>" in screen 1.	 <p>Screen 1</p>	The display moves to screen 2.
4	Mark the checkbox "Search for a suitable driver for my device (Recommended)" in screen 2, and click on "Next>".	 <p>Screen 2</p>	The display moves to screen 3.

Win - USB installation procedure - Part 2 - Win2000 / PnP mode		8 steps - Step 5 to 7	
Step	Action	Screen	Result
5	Mark the checkbox "CD-ROM drives" in screen 3 and click on "Next>".	 <p>Screen 3</p>	The display moves to screen 4.
6	Click "Next>" in screen 4.	 <p>Screen 4</p>	The display moves to screen 5.
7	Click "Yes" in screen 5.	 <p>Screen 5</p>	The display moves to screen 6.

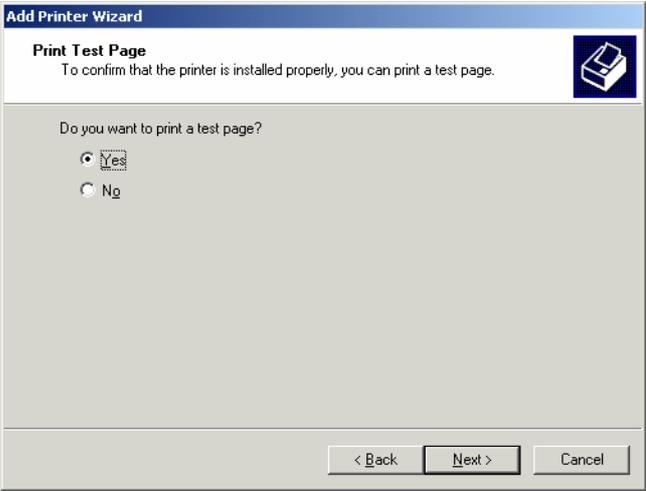
Win - USB installation procedure - Part 2 - Win2000 / PnP mode		8 steps - Step 8	
Step	Action	Screen	Result
8	Click "Finish" in screen 6.	<p>Screen 6</p>	The plotter is now installed. END.

Win - USB installation procedure - Part 3 - Win2000 / Guide mode			14 steps - Step 1 to 3
Step	Action	Screen	Result
1	Go to Control Panel > Printers and click "Add Printer".	-	The display moves to screen 1 of the "Add Printer" wizard.
2	Click "Next>" in screen 1.	 <p>Screen 1</p>	The display moves to screen 2.
3	Mark "Local printer" UN-mark "Automatically detect and install my Plug and Play printer" Click "Next>".	 <p>Screen 2</p>	The display moves to screen 3.

Win - USB installation procedure - Part 3 - Win2000 / Guide mode			14 steps - Step 4 to 6
Step	Action	Screen	Result
4	Select the USB printer port: 'Virtual printer port for Mutoh' in screen 3, and click "Next>".	 <p>Screen 3</p>	The display moves to screen 4.
5	Select 'Mutoh Industries Ltd' in screen 4, and click the "Have Disk..." button.	 <p>Screen 4</p>	The display moves to screen 5.
6	Click the "Browse" button screen 5.	 <p>Screen 5</p>	The display moves to screen 6.

Win - USB installation procedure - Part 3 - Win2000 / Guide mode		14 steps - Step 7 to 9	
Step	Action	Screen	Result
7	<p>Browse to the file 'RJ901C.inf' or 'RJ900C.inf' on the Mutoh driver CD or the Window plotter software folder.</p> <p>Select the file</p> <p>Click "Open"</p> <p>Notes</p> <ul style="list-style-type: none"> • RJ-901C: RJ901C.inf • RJ-900C: RJ900C.inf 	 <p>Screen 6</p>	The display moves to screen 7.
8	<p>Click "OK" in screen 7.</p>	 <p>Screen 7</p>	The display moves to screen 8.
9	<p>Click on MUTOH RJ-900C or MUTOH 901C in screen 8, and click "Next>".</p>	 <p>Screen 8</p>	The display moves to screen 9.

Windows - USB installation procedure - Part 3 - Win2000/Guide mode		14 steps - Step 10 to 12	
Step	Action	Screen	Result
10	Select "Replace existing driver" in screen 9, and click "Next>".	<p>Screen 9</p>	The display moves to screen 10.
11	Fill out the printer name in screen 10 and click "Next>". ⚠ Notes ⚠ • Any name is possible. • E.g. : MUTOH RJ-901C	<p>Screen 10</p>	The display moves to screen 11.
12	Choose to share the printer or not and click "Next>".	<p>Screen 11</p>	The display moves to screen 12.

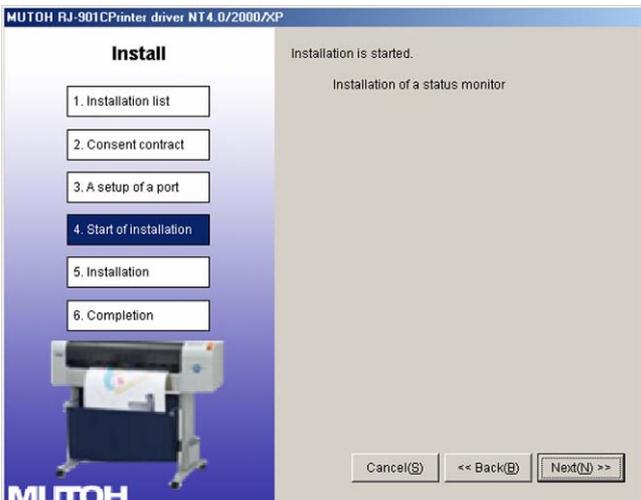
Windows - USB installation procedure - Part 3 - Win2000/Guide mode		14 steps - Step 13 to 14	
Step	Action	Screen	Result
13	Choose to print a test page or not and click "Next>".	 <p>Screen 12</p>	The display moves to screen 13.
14	Click "Finish" in screen 13.	 <p>Screen 13</p>	The plotter is now installed. END.

3.10.5 Installing the status monitor

⚠ Caution ⚠

- **DO NOT** use downloaded software **AND** the software from the driver CD together!
- **Always** use **ONE** version of the software!

Windows – Status monitor installation procedure			7 steps - Step 1 to 4
Step	Action	Screen	Result
1	Verify that the PC and the plotter are switched ON.	-	-
2	Insert the driver CD in the CD drive of the PC OR run the setup.exe file in the Windows plotter software folder. ⚠ Notes ⚠ When the Installer does not automatically start, execute "Setup.exe" on the CD-ROM.	The software initializes.	The display moves to screen 1 of the Mutoh printer driver program.
3	Select the printer model in screen 1, and click "Install".	 <p>Screen 1</p>	The display moves to screen 2.

Windows – Status monitor installation procedure		7 steps - Step 4 to 6	
Step	Action	Screen	Result
4	Click the check box "Installation of a status monitor" in screen 2, and click "Next".	 <p>Screen 2</p>	The display moves to screen 3.
5	Click "Agree" or "Cancel" in screen 3 : "License agreement of the plotter driver". a. When you agree to the license agreement: Click "Agree". The display moves to Screen 4. b. When you do not agree to the license agreement: Click "Cancel". Installation of plotter driver is cancelled.	 <p>Screen 3</p>	The display moves to screen 4 when you agree with the conditions.
6	Check the contents on the display and click "Next>".	 <p>Screen 4</p>	Installation of the status monitor starts, the display will show a progress bar and moves to screen 5.

Windows – Status monitor installation procedure		7 steps - Step 7	
Step	Action	Screen	Result
7	Click "End" in screen 5	 <p>Screen 5</p>	Installation is finalized. The status monitor is now installed. END.

3.10.6 Uninstalling the software

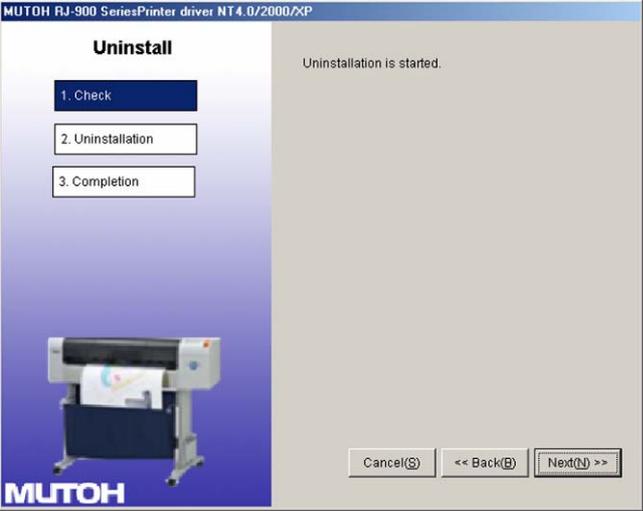
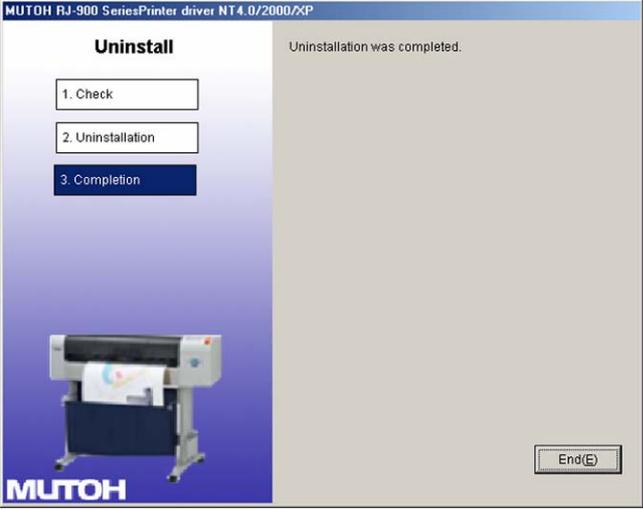
⚠ Caution ⚠

- Use the installer on the driver CD when the software was originally installed from the CD.
- Use the installer in the Windows plotter software folder when the software was originally installed from there.

⚠ Notes ⚠

- The plotter driver AND status monitor are deleted if the software is uninstalled.

Windows – Uninstall procedure			4 steps - Step 1 to 2
Step	Action	Screen	Result
1	<p>Insert the driver CD in the CD drive of the PC OR run the setup.exe file in the Windows plotter software folder.</p> <p>⚠ Notes ⚠ When the Installer does not automatically start, execute "Setup.exe" on the CD-ROM.</p>	The software initializes.	The display moves to screen 1 of the Mutoh printer driver program.
2	Select the model in screen 1, and click "Uninstall".	 <p>Screen 1</p>	The display moves to screen 2.

Windows – Uninstall procedure		4 steps - Step 3 to 4	
Step	Action	Screen	Result
3	Click "Next>" in Screen 2.	 <p>Screen 2</p>	The uninstallation of the software starts. The display will show a progress bar and moves to screen 3.
4	Click "End" in Screen 3.	 <p>Screen 3</p>	Uninstallation of the plotter drivers AND status monitor is completed. END.

4 PERIODICAL MAINTENANCE

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4.1 DONE BY THE END USER

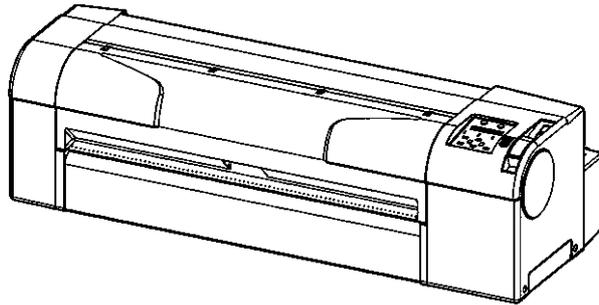
4.1.1 Cleaning the plotter

Periodic (every month) cleaning is necessary to keep the plotter in a good condition.

This section describes how to clean each part of the plotter.

4.1.2 Cleaning the outer case

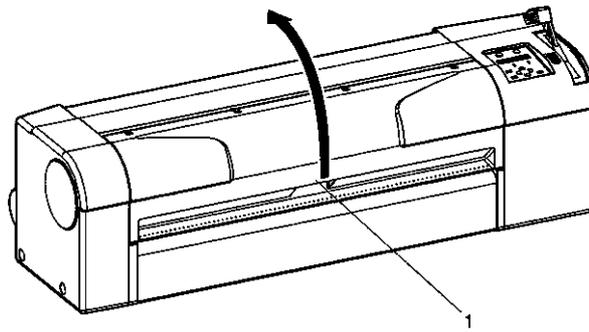
Instruction: Wipe off the dust and possible dirt from the outer case by using a soft cloth.



4.1.3 Cleaning inside the plotter

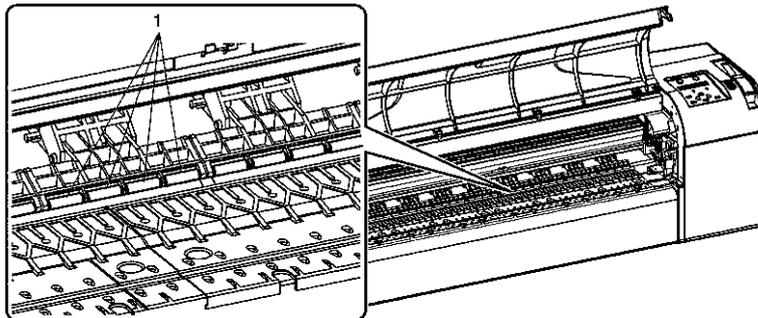
To clean inside the plotter, follow the steps below.

Step 1 : Open the front cover (1).



No.	Name
1	Front cover

Step 2 : Remove paper powder and dust from the pressure rollers (1), using a soft brush.

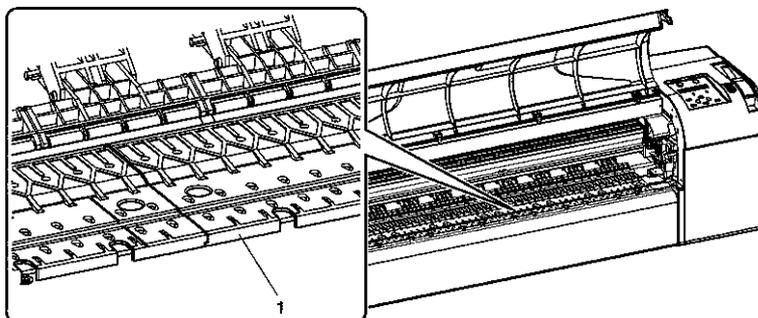


No.	Name
1	Pressure rollers

Notes

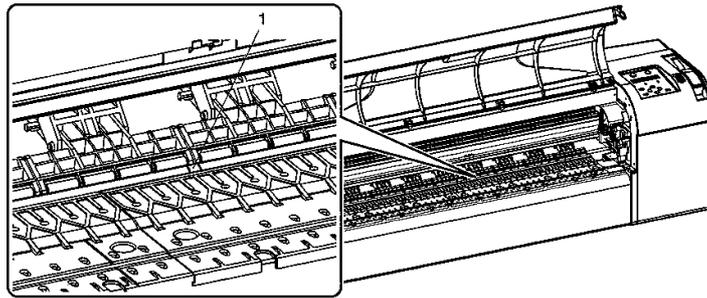
- Do not blow paper powder inside the plotter. Doing so may cause abnormal noise inside the plotter.

Step 3 : Wipe off paper powder and ink from the printing board (1) using a dust-free and soft cloth slightly damped with water.



No.	Name
1	Printing board

Step 4 : Wipe off the dirt of the grid roller's unpainted (silver colour) area with damp and a tightly squeezed soft cloth.



No.	Name
1	Grid roller

4.1.4 Head cleaning

Be sure to read and understand the safety warnings before handling the printer.

When to perform ?

If prints become blurred or are incomplete.

How to perform?

To perform a head cleaning, follow the steps below.

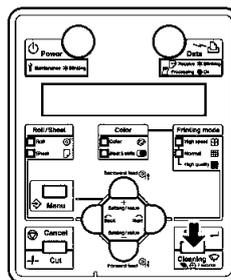
⚠ Notes ⚠

- Remove media while cleaning.

Step 1 : Verify that the operation panel is in Normal mode.

Step 2 : Verify that the media hold lever is positioned to the front side.

Step 3 : Press the [Cleaning] key on the operation panel for at least 2 seconds. See below.



Result: "Cleaning ** minutes" is displayed on the operation panel.

Step 4 : Start the head cleaning.

⚠ Notes ⚠

- Pressing the [Cleaning] key again within one printing after the 1st head cleaning performs strong cleaning. If you fail to remove blurs or incompleteness of printing in one head cleaning, perform strong cleaning.
- If you fail to remove blurs or incompleteness of printing with several head cleaning, refer to "Troubleshooting", and perform adequate process.

5 PREPARATIONS BEFORE PRINTING

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5.1 GENERAL INFO ON USABLE MEDIA

This section describes further details of available media for the plotter.

5.1.1 Media compatibility

The type and quality of the used media will greatly influence the print result. Use media that matches the application, taking the following information into account.

Various dedicated media are compatible with the Drafstation. Select the appropriate media according to the application type:

When dedicated media is used, the setting of printing quality is set according to each media type.

(1) MonoTrac

Setup item	High speed colour	High speed black & white	Normal colour	Normal black & white	High-quality Colour	High-quality black & white
Condition	--	Lines	--	Lines	--	Lines
PlotReso. (dpi)	--	HS360	--	360	--	720
Direction	--	BiDir	--	BiDir	--	UniDir
ThinOut (Black)	--	100%	--	100%	--	70%
InkDryTimer	--	30s	--	30s	--	60s
Stiffness	--	Soft	--	Soft	--	Soft

(2) Col.Trac

Setup item	High speed colour	High speed black & white	Normal colour	Normal black & white	High-quality Colour	High-quality black & white
Condition	Lines	Lines	Lines	Lines	Lines	Lines
PlotReso. (dpi)	360	360	720	720	1440	1440
Direction	BiDir	BiDir	BiDir	BiDir	BiDir	BiDir
ThinOut (Black)	100%	100%	70%	70%	60%	60%
ThinOut (Color)	70%	--	40%	--	40%	--
InkDryTimer	60s	10s	120s	90s	60s	60s
Stiffness	Normal	Normal	Normal	Normal	Normal	Normal

(3) Plain

Setup item	High speed colour	High speed black & white	Normal colour	Normal black & white	High-quality Colour	High-quality black & white
Condition	Lines	Lines	Lines	Lines	Lines	Lines
PlotReso. (dpi)	HS360	HS360	360	360	720	720
Direction	BiDir	BiDir	BiDir	BiDir	UniDir	UniDir
ThinOut (Black)	100%	100%	100%	100%	70%	70%
ThinOut (Colour)	100%	--	60%	--	40%	--
InkDryTimer	60s	60s	60s	60s	30s	30s
Stiffness	Normal	Normal	Normal	Normal	Normal	Normal

(4) Film

Setup item	High speed colour	High speed black & white	Normal colour	Normal black & white	High-quality Colour	High-quality black & white
Condition	Lines	Lines	Lines	Lines	Lines	Lines
PlotReso. (dpi)	360	720	720	1440 Position specified	1440	1440
Direction	BiDir	BiDir	BiDir	BiDir	BiDir	BiDir
ThinOut (Black)	100%	100%	100%	40%	100%	100%
ThinOut (Colour)	100%	--	50%	--	40%	--
InkDryTimer	60s	60s	60s	90s	90s	90s
Stiffness	Normal	Normal	Normal	Normal	Normal	Normal

(5) Coat

Setup item	High speed colour	High speed black & white	Normal colour	Normal black & white	High-quality Colour	High-quality black & white
Condition	Lines	Lines	Lines	Lines	Photo	Lines
PlotReso. (dpi)	360	360	720	720	1440	1440
Direction	BiDir	BiDir	BiDir	BiDir	BiDir	BiDir
ThinOut (Black)	100%	100%	70%	70%	90%	90%
ThinOut (Colour)	100%	--	60%	--	60%	--
InkDryTimer	60s	60s	60s	60s	60s	60s
Stiffness	Normal	Normal	Normal	Normal	Normal	Normal

(6) Photo

Setup item	High speed colour	High speed black & white	Normal colour	Normal black & white	High-quality Colour	High-quality black & white
Condition	Photo	Lines	Photo	Lines	Photo	Lines
PlotReso. (dpi)	720	720	1440	1440	2880 Position specified	2880 Position specified
Direction	BiDir	BiDir	BiDir	BiDir	BiDir	BiDir
ThinOut (Black)	85%	85%	75%	75%	90%	90%
ThinOut (Colour)	55%	--	60%	--	50%	--
InkDryTimer	60s	60s	60s	60s	60s	60s
Stiffness	Normal	Normal	Normal	Normal	Normal	Normal

⚠ Notes ⚠

- If plotter failures or malfunctions occur by using non dedicated media :
- The plotter will not be covered by the warranty and repair expenses will have to be paid by the customer.
 - For details, refer to: "Maintenance" and "Troubleshooting"
- If repair is necessary, contact your local MUTOH dealer.

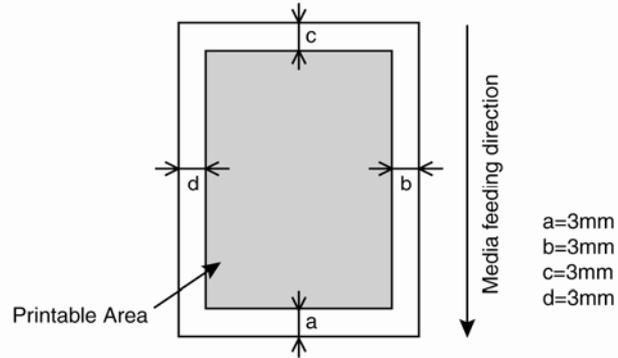
⚠ Notes ⚠

- When dedicated media is used, the print quality is set according to each media type for the settings, refer to "Printing operation specifications".
- When printing on non dedicated media :
 - Refer to the media specifications of the media supplier for information on the media type or appropriate settings for this plotter.
 - Set the printing quality according to "MediaSet Menu".

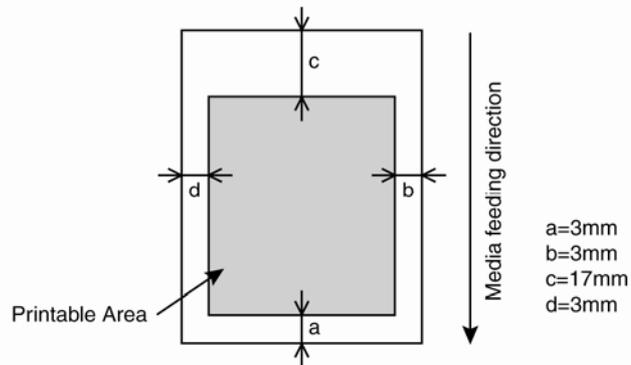
5.1.2 Printing area

The printable area of the Drafstation and Drafstation Pro is as follows:

(1) Roll media



(2) Sheet media



5.1.3 Notes on handling media

Be sure to read and understand the safety warnings before handling the printer.

Note the following recommendations when handling plotter media.

⚠ Notes ⚠

- Use dedicated media under an appropriate environment.
The appropriate temperature and humidity ranges for printing are shown below.

	Temperature	Humidity
Recommended range	15°C to 28°C	40% to 60%
Change rate	Within 2°C per hour	Within 5% per hour

- Do not use folded or torn media.
- The size of media can change according to temperature and humidity variations in the print environment. Therefore, place the media minimum 30 minutes in the print environment before use, to let it acclimatize to the print environment.
- Printing on media without having it acclimatized to the printing environment might cause media jams and bad print quality, caused by media expansion or contraction.
- Media has a printable side and a non-printable side. Printing on the non-print side can cause blurs and blots.
- Always handle media with dry and clean hands to avoid bad print quality.
- When the plotter will be unused for more than 24 hours, then remove the media to prevent media floating, media jams, and degradation of the print quality.
- Avoid using media in cold places and dry places, especially when printing formal documents.
- Always store the media in its original packing material.

5.1.4 Notes on storing media

Note the following recommendations on storing media.

⚠ Notes ⚠

- Avoid storing media in rooms with high temperature and high humidity.
- Avoid direct sunlight on stored media.
- Always repack sheet media in its original packing and store it in a horizontal position.
- After removing the unused roll media from the scroller, wind it properly, wrap it in an individual bag and store it in an individual box.
- Keep the media dry.

5.2 TESTPLOT

Overview and functions of the testplots

Testplot	Function	Action to be performed when needed
SetupPlot	To check the setup settings.	Change setup items.
NozzleCheck	To check the head nozzles.	Perform a head cleaning.
AdjustPlot	To fine tune the print quality	Adjust the print quality.
PalettePlot	To check the pen colours	Only in HPG Language
MaintenanceRecordPlot	To check the life cycle status of important parts	Replace parts.

5.2.1 Performing a testplot

Be sure to read and understand the safety warnings before handling the printer.

To print a testplot, follow the steps below.

Step 1 : Verify that the plotter has been switched ON and that media -roll or sheet- more than A3 size has been loaded. Refer to: "Loading roll media" and "Loading sheet media"

Step 2 : Verify that the plotter is in Normal mode.

Step 3 : Press the [Menu] key on the operation panel.

Result: The first submenu of the Setup menu is displayed.

- The operation panel displays "**Menu* TestPlot>".
- The plotter is in Menu mode.

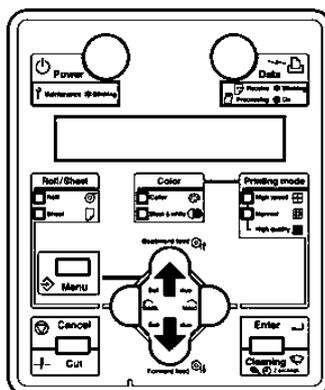
Step 4 : Press the [Enter] key on the operation panel.

Result: The operation panel displays " TestPlot: SetupPlot."

- The first submenu of the TestPlot menu is displayed.

Step 5 : Press the [Setting value +] key or [Setting value-] key on the operation panel to select the item you want to print and press the [Enter] key.

Submenus: · SetupPlot · NozzleCheck · AdjustPlot · PalettePlot · MaintenanceRecordPlot



Result: Plotting starts for the selected submenu.

⚠ Notes ⚠

- Please refer to the following topics for details on each item of the testplot list: "SetupPlot to MaintenanceRecordPlot"

5.2.3 NozzleCheck

Be sure to read and understand the safety warnings before handling the printer.

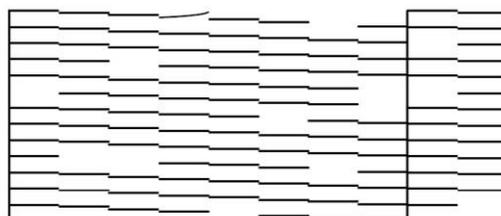
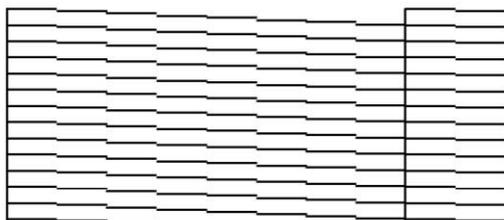
Used to check whether there is any head clogging, missing nozzles or misfiring nozzles.

⚠ Notes ⚠

- If the nozzle check result indicates that the checked points are blurred or missing, clean the head. Refer to "Head cleaning"
Perform the nozzle check once again after the head has been cleaned.

⚠ Notes ⚠

- For the printing procedure, refer to: "Performing a testplot".



5.2.4 AdjustPlot

Used to align the print head.

Notes

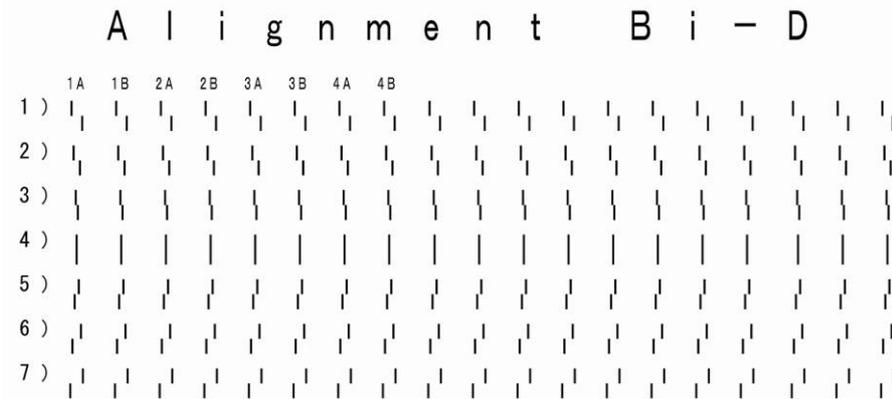
- This plotter has been adjusted for optimum print quality at the shipment from factory.
- Align the print head when the print quality decreases after the installation environment or the media has been changed.

Align the print head as described in the following procedure:

Step 1 : Switch ON the plotter.

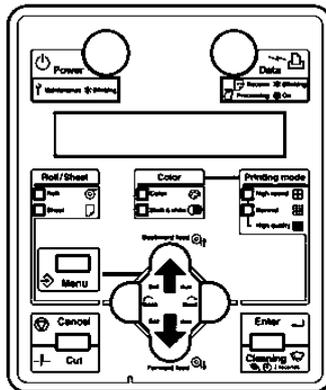
Step 2 : Load more than A3 size print media.

Step 3 : Perform a testplot for the alignment as described in: "Performing a testplot".



Step 4 : Check the print sample and select the number which matches as the best straight line. It is no. 4 in the example.

Step 5 : Press the [Setting value +] key or [Setting value-] key on the operation panel, and enter the selected number.



Step 6 : Press the [Enter] key on the operation panel to save the value.

5.2.5 PalettePlot

To compare the CAD pen colours and the print colours when using HPGL mode.

Notes

- For the printing procedure, refer to “performing a testplot“



5.2.6 MaintenanceRecordPlot

To check the life cycle status of important parts.

⚠ Notes ⚠

- The life cycle status is expressed as a number of * marks for each part (Maximum of five: denoting the residual life is 100 %).
- As the life cycle status approaches the end, the number of * marks decreases one by one (20 %).
- When all * marks have disappeared, the part life cycle has ended. Replace parts referring to :
 - Cutter blade :
 See "Replacing cutter blade"
 - Waste fluid tank :
 See "Replacing waste fluid tank"
 Other parts: Contact your local MUTOH dealer.

```

===== Maintenance Record =====
Version                : 1.00
Cutter Life            : E*** F
Page Count             : 716
Ink Pad                : E***** F
CR Motor Life          : E*****F
Pump Life              : E*** F
  
```

5.3 MEDIA FEED COMPENSATION

After every printed swat, the media is fed a certain distance. Depending on the kind of media (weight, backing) another media feed compensation has to be set. This to avoid the following phenomenon:

- Printed swats overlap.
- White lines between every swat.

Step 1 : Display the Media feed compensation menu on the operation panel.

- Press the [Menu] key on the operation panel.
 - Shift to the MediaSet menu display.
 - The operation panel displays "MediaSet".
- Press the [>] key on the operation panel and shift to "User 1".
- Press the [>] key on the operation panel until the operation panel shows the "PF" menu.
- Press the [>] key on the operation panel until the operation panel shows "Initial print"

Step 2 : Perform the initial adjust print.

- Press the [Enter] key on the operation panel.
 - The operation panel displays "Feed Length: xxx mm".

⚠ Notes ⚠

- The length that media is fed (feeding length) for initial adjustment printing is normally set at 250 mm.
- If you make the feeding length longer, the accuracy of the Media feed compensation improves. If you want to change the feeding length, press the [+] key or [-] key and change the set value.

- Press the [Enter] key on the operation panel.
 - The operation panel displays "Printing".
 - Start Initial adjustment printing.



No.	Name
1	Feed length
2	Media feeding direction

- When the initial adjustment printing is complete, the printer enters the normal status
- After the initial adjustment printing, cut the media. Refer to "Cutting media"

Step 3 : Measure the distance between two pluses in the initial adjustment print using a measurement tool, such as a ruler.

Step 4 : Set up Initial Change.

- Press the [+] key or [-] key to select "PF: Init.Change".
- Press the [Enter] key on the operation panel.
 - The operation panel displays "Init: 250.0/250mm".
- Press the [+] key or [-] key and enter the measured value in step 3.
- Press the [Enter] key on the operation panel
 - The initial adjustment value is saved.
 - The operation panel displays "PF2: Init.Adj.Change".

Step 5 : Perform the Confirm Print.

- Press the [+] key or [-] key to select "PF: Confirm Print".
- Press the [Enter] key on the operation panel.
The operation panel displays "Feed Length: 250 mm".

Notes

- The length that media is fed (feeding length) for confirmation adjustment printing is normally set at 250 mm.
- If you make the feeding length longer, the accuracy of the Media feed compensation improves. If you want to change the feeding length, press the [+] key or [-] key and change the set value.

- Press the [Enter] key on the operation panel.
 - The operation panel displays "Printing".
 - Start Confirmation adjustment printing.



No.	Name
1	Feed length
2	Media feeding direction

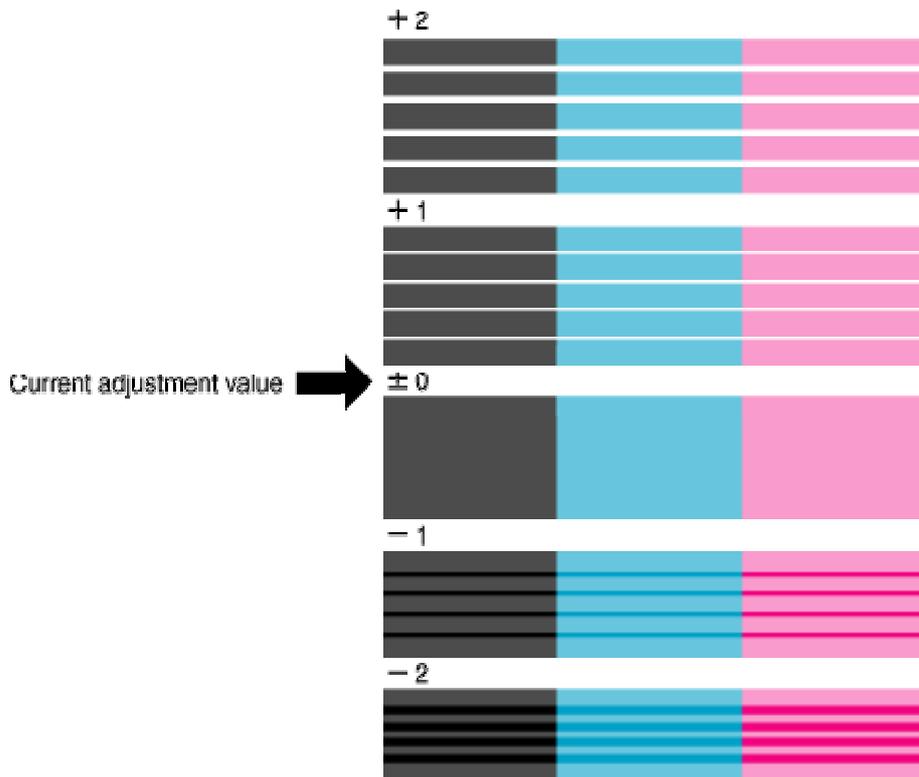
- After the confirmation adjustment printing, cut the media. See “ **Cutting media**”

Step 6 : Measure the distance between two pluses in the confirmation adjustment print using a measurement tool, such as a ruler. Then, confirm that the distance matches the feeding length when printing.

- If the distance does not match the feeding length, follow the procedure from 1 to 5 and readjust.
- If the distance matches the feeding length, proceed to step 7.

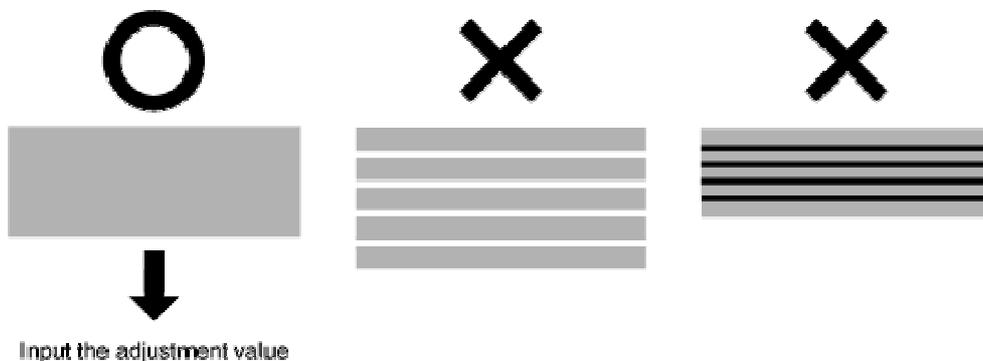
Step 7 : Perform Micro adjustment printing.

- Display the Media feed compensation menu on the operation panel as in step 1.
- Press the [+] key or [-] key to select "PF: Micro Print".
- Press the [Enter] key on the operation panel.
 - The operation panel displays "Printing".
 - Start Micro adjustment printing.



- After the micro adjustment printing is completed, the operation panel displays "PF: Micro Print".

Step 8 : Refer to the illustrations below and check the printing result.



Step 9 : Set up the Micro Adjustment Change.

- Press the [+] key or [-] key to select "PF: Micro Change".
- Press the [Enter] key on the operation panel.
 - The operation panel displays "Micro: 0pulse".
- Press the [+] key or [-] key and enter the micro adjustment value according to the printing result in step 7.
- Press the [Enter] key on the operation panel.
 - The micro adjustment value is saved.
 - The operation panel displays "PF: Micro.Change".
 - The Media feed compensation is complete.

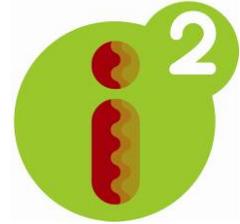
Step 10 : Set up the confirm print menu.

- Press the [+] key or [-] key to select "PF: Confirm Print".
- Press the [Enter] key on the operation panel.
- The printer will print a confirmation pattern.

Check if the step adjustment is OK for you, if so you can start with your printing operation. If the media feed compensation is still not correct, you can adjust via the micro adjust menu.

5.4 EFFECT MENU

Without weaving ON, an image is completed (formed) by printing a series of complementary rectangular shaped stripes (bands, swaths, passes). Inherent to classic inkjet printing is that ink drying effects, stepping mismatch, miss firing nozzles show up in the printed image via ink bleeding and various types of banding. By switching ON one of the weave patterns you will give the traditional rectangular print swaths a wave-shaped look that will save you time and boost your output quality. Difficult images will print smoother, banding will be suppressed (neutralized) and you will have to spend less time fine-tuning your printer to create great looking output.

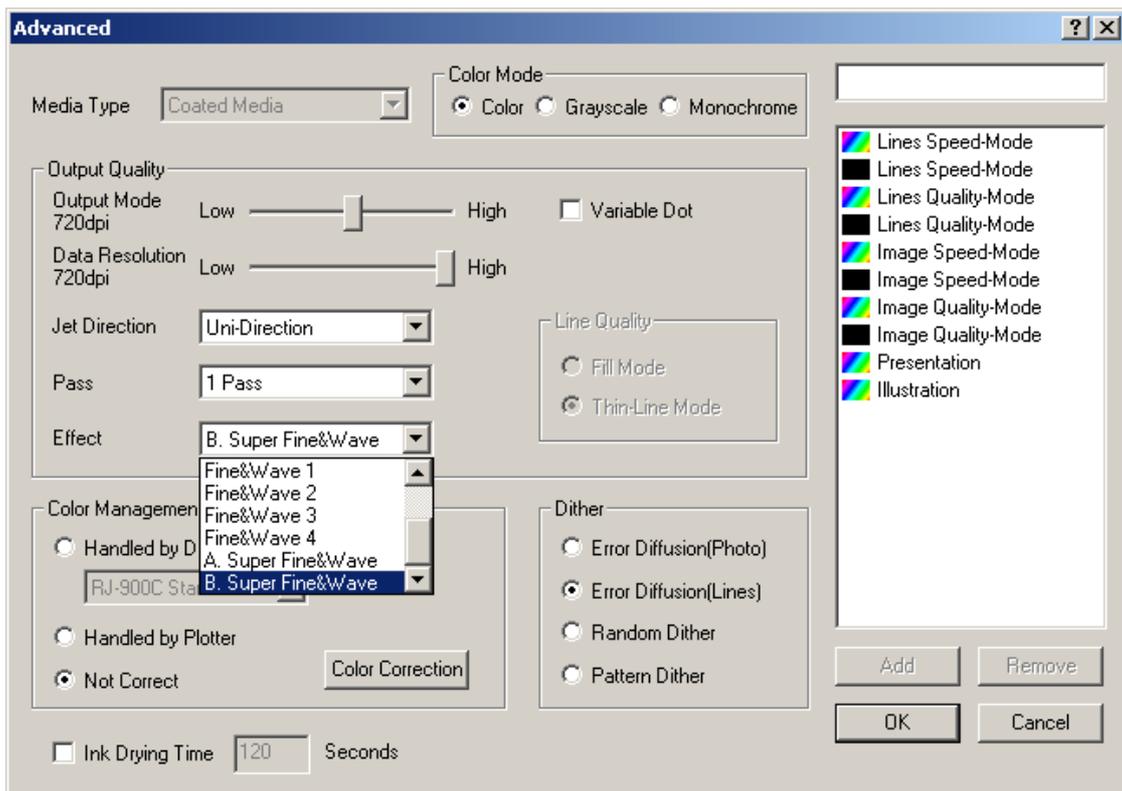


Moreover, when using wave-tuned profiles, you will be able to boost your printer's colour gamut as the i² (intelligent interweaving) technology allows depositing more ink, helping you to achieve higher colour densities.

The weaving settings can be chosen in the RIP software via a scroll down menu or via the windows driver. Use this menu to improve the print quality by means of intelligent interweaving print algorithms (i²)

Setup Item	Setting Value	Description
Effect	None	The Effect function is not used.
	Wave	The overlay will be wave form. It will improve the printing quality.
	Fine&Wave	Perform printing at a slow speed compared with "Wave". Set up this menu when you want to improve the printing quality compared with "Wave".
	S.Fine&Wave	Perform printing at a slow speed compared with "Fine&Wave". Set up this menu when improving the printing quality compared with "Fine&Wave".
	—	<ul style="list-style-type: none"> [Enter] key: Save the setting and shift to the previous menu. [Cancel] key: Cancel the setting and shift to the previous menu. <p>► Setup menu</p>

Refer to below screenshot to know how the effect menu is integrated in the windows driver. The effect menu can be similarly found in the RIP software.



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6 PRINTER MENU

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Be sure to read and understand the safety warnings before handling the printer.

6.1 HOW TO WORK IN THE MENU

This section explains the mode of the plotter and how to change it.

6.1.1 Normal mode

The plotter is ready to plot.

- The media has been loaded and the media type has been set.
- Various functions for printing can be performed on the operation panel.
- The message 'Ready to plot' is shown.

6.1.2 Menu mode

In this mode, various setup items (IP address, HPGL settings, pen setup, etc...) can be set on the operation panel.

Notes

- Essential settings for normal printing can be modified/set on the plotter driver or the graphics application software, or via the operation panel.

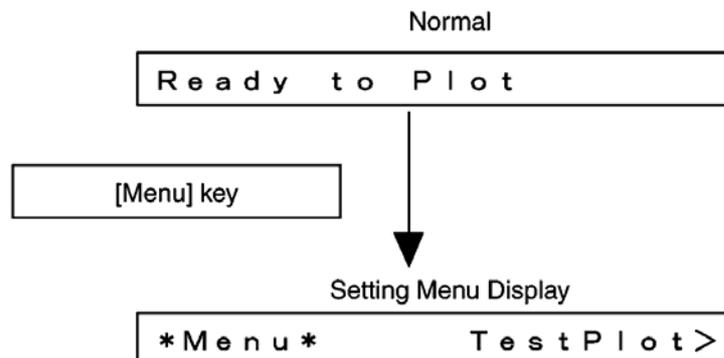
6.1.3 Changing the plotter mode

(1) Changing from Normal mode to Menu mode.

Action: Press the [Menu] key on the operation panel.

Result: The display is in 'Menu' mode', from now on called the 'Setting Menu display'.

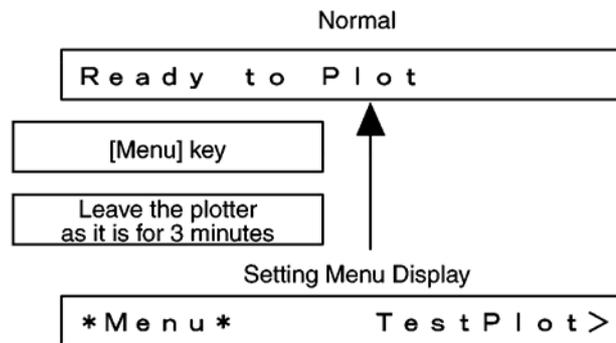
The following message is shown: "*Menu* TestPlot>".



(2) Changing from Menu mode to Normal mode

Action: Press the [Menu] key on the operation panel.

Result: The printer returns to the Normal mode.



⚠ Notes ⚠

- When the plotter is in Menu mode and the keyboard remains untouched for 3 minutes, the plotter will automatically return to Normal mode.

⚠ Notes ⚠

- For details on status messages, refer to “Status messages“
- For details on the Setup menu, refer to “Menu setup on the operation panel“

6.2 MENU SETUP ON THE OPERATION PANEL

6.2.1 Language selection

To select an other language follow the steps below

Step 1 : Switch the plotter on while holding the [cancel]-key.

Step 2 : You can release the [cancel]-key if you see the language selection menu.

Step 3 : Scroll through the languages with the [forward feed] or [backward feed]-keys.

- You can select the following languages:

Japanese	Italian
Dutch	German
Spanish	English

Step 4 : Select the language of your choice and press the [enter]-key.

The plotter will automatically switch to Normal mode.

6.2.2 Menu setup procedure

To configure various setup menus, follow the steps below.

Step 1 : Verify that the plotter is in Normal mode.

Step 2 : Press the [Menu] key on the operation panel.

Result: The plotter is in Menu mode.

- The following message is shown: "**Menu* TestPlot>".

Step 3 : Press the [Back] key or [Next] key on the operation panel to select a setup item and press the [Enter] key to confirm your choice.

Result: The settings will be confirmed, OR, when a setup item has a submenu, the submenu will be displayed.

⚠ Notes ⚠

- When a setup item has a submenu, [>] is displayed at the right end of the LCD monitor of the operation panel.
- For details of each setup item, refer to "Setup menu items".
- Settings on the LCD monitor that are blinking can be changed by pressing the [Setting value +] key or [Setting value -] key.

Step 4 : To save the changed setting, press the [Enter] key on the operation panel.

Result: The setting will be saved and the next setup item will be displayed.

⚠ Notes ⚠

- After having changed the setting, press the [Cancel] key, the [Setting value +] key or [Setting value -] key without pressing the [Enter] key, when the settings do NOT have to be saved.

Step 5 : Press the [Menu] key or [Cancel] key on the operation panel to exit the setup menu.

Result: The previous hierarchical setup menu will be displayed.

- When the main menu is displayed, the screen returns to Normal mode.

6.2.3 Setup menu items

Setup item	Description
TestPlot Menu	To perform a Test plot.
MediaSet Menu	To make various settings on printing media.
Command Menu	To set various conditions of the plotter commands.
PenSetup Menu	To make various settings on the pen used for printing.
Layout Menu	To make various settings on the layout function.
Function Menu	To make various settings on the process of print data.
Network Menu	To make various settings on the network interface.
Utility Menu	To make various settings on the advanced functions of the plotter.
Consumption Menu	To display the remaining ink quantity and life cycle status of the cutter.

We will put the settings in three categories :

1. Settings that are needed to operate the machine, marked in **BLACK**
2. Settings are used only for compatibility with the old HPGL protocol, these are marked in **RED**
3. Settings that are used to operate the machine, but that are controlled / overruled by RIP software. These will be marked in **BLUE**
These settings are in the machine only for troubleshooting, in case your RIP software is failing to control them.

⚠ Notes ⚠

- When the menu display item of the Utility menu is set to Normal, the following menus will NOT be displayed.
 - Command Menu
 - PenSetup Menu
 - Function Menu
 - BiDir Port item of Network Menu

⚠ Notes ⚠

- < > parts in each list are factory default settings (initial values).

6.2.3.1 TestPlot Menu

To perform various test prints.

Setup item	Description
SetupPlot	To print the Setup list. Refer to: "SetupPlot"
NozzleCheck	To print the Nozzle check pattern. Refer to: "NozzleCheck"
AdjustPlot	To perform a head alignment. Refer to: "AdjustPlot"
PalettePlot	To print the pen colour palette of the plotter. Refer to: "PalettePlot"
Maintenance	Plots out a small maintenance record.

6.2.3.2 *MediaSet Menu*

To make various settings on media.

Notes

- If non dedicated media (user media) is used, the following problems may occur :
 - Media detection error
 - Slanting, snagging and wrinkling of media
 - Media jams
 - Poor print quality due to blots and blurs in the prints.
 - End detection of roll media cannot be performed.
- The problems caused by the use of non dedicated media will not be covered by the warranty and repair expenses will have to be paid by the customer.

MediaSet	User 1 User 2 ... Film Photo Coat ...	Condition	Photo Lines	Sets dither condition (optimize for lines or Photo)
		PlotReso	360 720 ...	Sets plotresolution
		Direction	Bi-Dir Uni-Dir	Print unidirectional or bidirectional
		ThinOut (Black)	70% ...	Sets percentage of ink for the black head when filling a surface, using HPGL commands
		ThinOut (Colour)	70% ...	Sets percentage of ink for the colour heads when filling a surface, using HPGL commands
		Inkdrytimer	0s 10s ...	Sets the time the machine should wait before starting the next print or sheet off, in order to have sufficient curing of the ink.
		PF :	Initial Print Initial Change Confirm Print Micro Print Micro Change	Print stepadjust line Enter measured value of printed line for correction Confirm the change of the line Print pattern to judge step (other method) Set change in step
		Stiffness	Normal Soft ...	Control the fans that create the vacuum to keep the media flat.

		RollCut	On Off	Sheet off after printing IMPORTANT NOTE : SET TO ON TO BE RIP CONTROLLABLE! WHEN SET TO OFF, IT IS ALWAYS OFF, NO MATTER WHAT THE RIP DOES
		RollCutMethod	2 steps 3 steps	Sheetoff with 2 or 3 knife movements
	Cutsheetsize	Vert ...		Determine rotation of HPGL files (all vertical, all horizontal, all automatic ...)
	Topfeed	0mm ...		Set top offset before image is printed
	Mangeroll	Invalid 50m		Set roll length so that the machine can keep track of the remaining length
	CutRollTop	0mm ...		Set cutting margin (margin between image and cutter line)

6.2.3.3 Command Menu

To set various conditions of the plotter command.

Command	Command	MHGL/GL2 MH/GL2		Set printer to autosense difference between GL1 and GL2 language Set printer to force to receive GL2 language
	Origin	Center LL		Set HPGL origin to centre Set HPGL origin to Lower Left
	Step	0.025mm 0.010mm		Set HPGL step to 0.025 mm Set HPGL step to 0.010 mm
	Position	P1 Full LL		Set HPGL page position to manual selected point Set HPGL page to Full page Set HPGL to start at Lower Left
	Terminator	Normal Special		Set HPGL terminator to normal Set HPGL terminator to special
	ImageReso.	1440 dpi 720 dpi		Set the imageresolution
	Onlinetimer	30s		Set the time for which the printer should wait before giving a data connection time out
	Merge	Last Mix		Merge vector lines. With last, the last vector is on top, with mergen the colours of multiple vectors are mixed
	Quality	ThinLine Filling		Optimize printing quality for lines or surface fills

6.2.3.4 PenSetup Menu

To define various settings of the pens. MH-GL/2 only !

PenSetup	Penprior	Command Panel		Set HPGL2 penset to react to the software commands Set HPGL2 penset hardwarematically on the panel
	PenTone	Invalid Valid		Do not react on pencolour React on pencolour

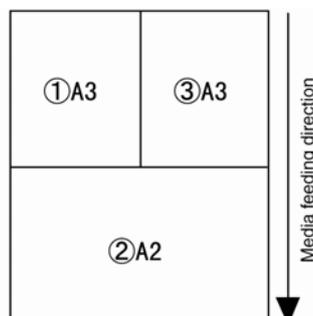
6.2.3.5 Layout Menu

The layout function is used to reduce unused space on roll media.

Layout	Layout	On Off		Set hardware nesting to ON or OFF Hardware nesting only works for A4 pages in a vector protocol, such as HPGL
	Layout method	Command MAX-MIN		Determine the page size. Command will sheet off on the page size set, no matter how much white space is in, and MAX MIN will sheet-off after the last vector, ignoring any whitespace
	Margin	Normal FULL		Set printer's margin to Mutoh standard or expanded (FULL)
	CutLine	On Off		Prints a small line between the nested images
	LayoutTimer	120s ...		Set timer to determine the time in which jobs should be send together before nesting takes place. The timer starts from the moment the printer receives the first job.

Notes

- The layout function automatically determines the size of the drawings sent from the PC, and prints them after locating the drawings on the roll media, in order to have as less as possible unused space on the media.
- Example: When data is received in the following order: 1) A3 → 2) A2 → 3) A3, the layout function will nest the drawings as shown on the image below. Actual printing will be performed in the following order : 1) A2 → 2) A3 → 3) A3 data.



- When the Layout item is set to "Off", the prints are performed sequentially after receiving the print data of each drawing.
- When sheet media has been loaded, the layout function will be disabled.
- The layout function is enabled or disabled depending on the print data.

6.2.3.6 Function Menu

To define various settings of the print process.

Function	Scale	100%		Scale the print
	Rotation	90°		Rotate the print
	Mirror	Off	X on	Mirror around X or Y axis

6.2.3.7 Network Menu

To define various settings of the network interface.

Network	Ip address	xxx.xxx.xxx.xxx		Set your Ip address (ask your admin for details)
	Subnetmask	xxx.xxx.xxx.xxx		Set your subnetmask (ask your admin for details)
	Gateway	xxx.xxx.xxx.xxx		Set your Gateway (ask your admin for details)
	MAC address			Check your MAC address (evolution function only, nothing can be set)

6.2.3.8 Utility Menu

To define various settings on the advanced functions of the plotter.

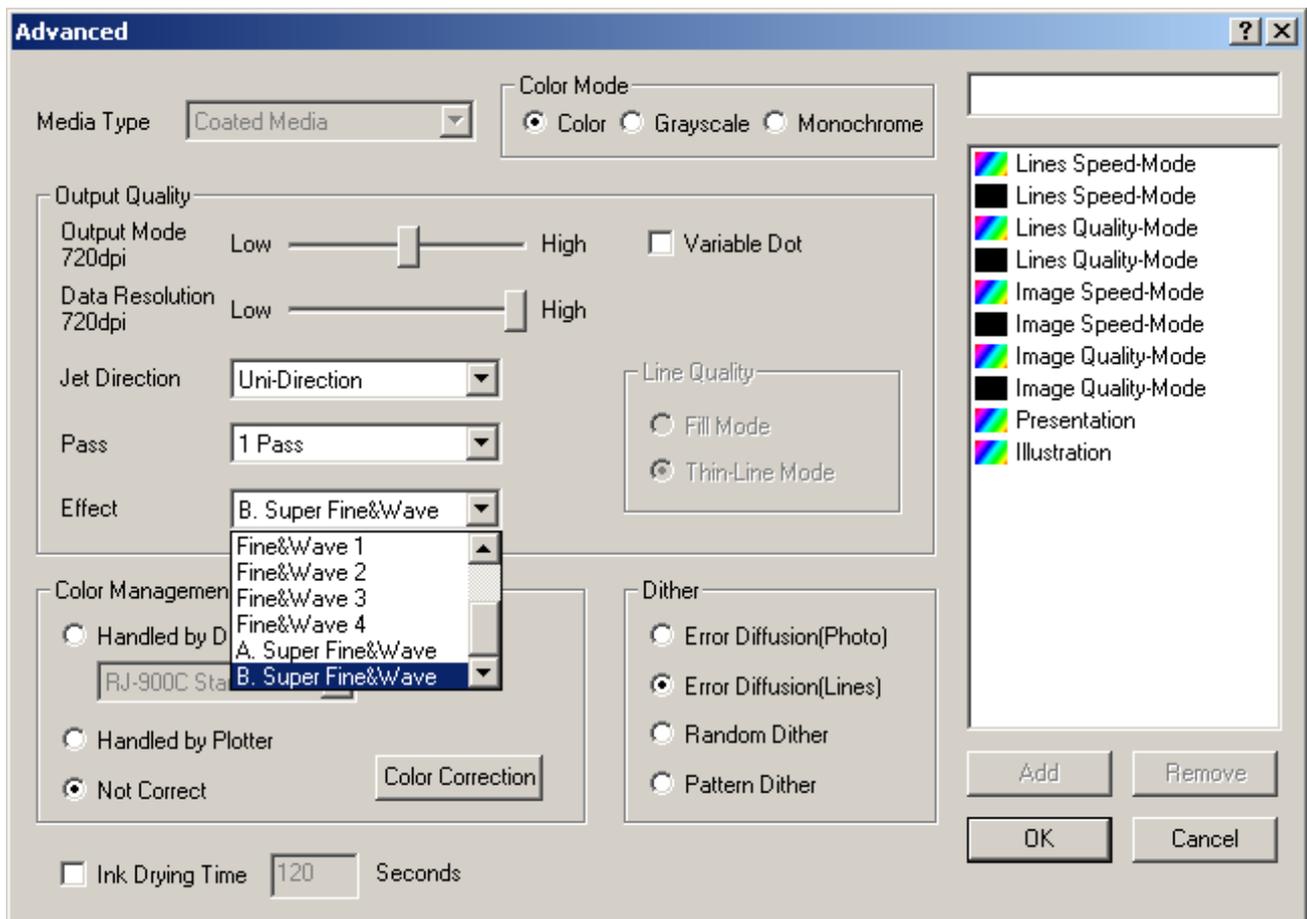
Utility	Menu mask	Normal		Set menu mask to normal (dummy-menu)
		OFF		Set menu mask OFF. Menu mask will be back to normal on next machine restart
		Always OFF		Set menu mask to Always OFF, even if machine is restarted.
	Error display	On		Show error commands on the display when errors are received
		Off		
	Dump	Start/End		Print out the ASCII symbols received (typing), instead of printing the image. For diagnostic purpose only
		All		
Cutter change	No		Unlock the machine's head so that you can easily change the cutter	
	Yes			
On Cleaning	On		Clean the heads every time you power on the machine	
	Off			
Prefeed	Data		Paper will shuffle for the exact size of the image that will be printed, to avoid tension on the paper.	
	Take-Up		Paper will not shuffle, and the machine will never look for a front margin. Use this when you have a take-up	
	Manual		Set a fixed shuffle amount for all prints	
Prefeed amount	1000mm		Determine how long the fixed shuffle amount should be (see above)	
	...			

6.2.3.9 *Effect*

The weaving settings can be chosen in the RIP software via a scroll down menu or via the windows driver. Use this menu to improve the print quality by means of intelligent interweaving print algorithms (i²)

Setup Item	Setting Value	Description
Effect	None	The Effect function is not used.
	Wave	The overlay will be wave form. It will improve the printing quality.
	Fine&Wave	Perform printing at a slow speed compared with "Wave". Set up this menu when you want to improve the printing quality compared with "Wave".
	S.Fine&Wave	Perform printing at a slow speed compared with "Fine&Wave". Set up this menu when improving the printing quality compared with "Fine&Wave".
	—	<ul style="list-style-type: none"> [Enter] key: Save the setting and shift to the previous menu. [Cancel] key: Cancel the setting and shift to the previous menu. <p>► Setup menu</p>

Refer to below screenshot to know how the effect menu is integrated in the windows driver. The effect menu can be similarly found in the RIP software.



Be sure to read and understand the safety warnings before handling the printer.

6.2.3.10 Consumption Menu

To display the life cycle status of important plotter parts, the ink level in the ink cartridges and the remaining quantity of roll media.

Take this menu into consideration for part replacement and replacing ink cartridges/roll media.

Consumption	Remain Ink K	50%		Show Remaining Ink
	Remain Ink C	50%		Show Remaining Ink
	Remain Ink M	50%		Show Remaining Ink
	Remain Ink Y	50%		Show Remaining Ink
	Remain Roll	20m		Show remaining roll length
	RemainWaste	30%		Show remaining waste tank capacity
	Remaincutter	20%		Show remaining cutter life

⚠ Notes ⚠

- Do not take out nor insert an ink cartridge while switching ON the plotter. If doing so, the ink residual quantity will not be correctly detected and printing cannot be done.
- Do not keep using the parts whose life cycles have come to an end. The problems caused by doing so will not be covered by the warranty.

6.3 OPERATING FROM THE OPERATION PANEL

Be sure to read and understand the safety warnings before handling the printer.

This section describes various functions which can be operated from the operation panel.

⚠ Notes ⚠

- For names and functions of each key, refer to "Operation panel."

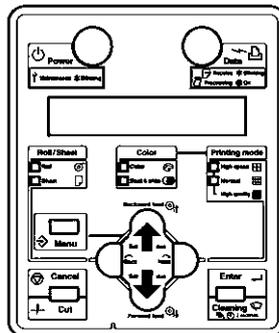
6.3.1 Feeding media

To feed media, follow the steps below.

Step 1 : Verify that the plotter is in Normal mode.

Step 2 : Check that the media hold lever is positioned to the front side (lever down).

Step 3 : Press the [Forward feed↓] key or [Backward feed↑] key on the operation panel.



Result: Media is fed forward or backward.

⚠ Notes ⚠

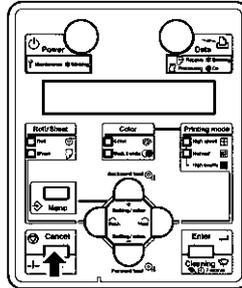
- When sheet media has been loaded, media feed cannot be performed.

Step 4 : Release the [Backward feed ↑] key or [Forward feed ↓] key on the operation panel after feeding the media to the desired position.

6.3.2 Stop printing

To stop printing :

→ Press the [Cancel] key on the operation panel. See image below.



Result: The plotter will operate as follows:

Plotter Status	Operation with the [Cancel] key pressed
Printing	Terminates printing and deletes the non printed data.
Receiving, analyzing	Deletes the received and analyzed data and the rest of the incoming data of the print file.
Before data receiving	When roll media is set, the roll media will be cut at that position. See “Cutting media”
Ink dry timer wait	Ignores the setting of the ink dry timer wait function and ejects the media.

6.3.3 Cutting media

Be sure to read and understand the safety warnings before handling the printer.

When the plotter prints on roll media, it will cut off media automatically after finishing a print.
Roll media can be cut off at any position according to the following procedure:

- Step 1 :** Verify that the plotter is in the Normal mode.
- Step 2 :** Verify that the media hold lever is positioned to the front side (lever down).
- Step 3 :** Press the [Cut] key on the operation panel.

Result: Roll media is fed forward about 90 mm and cut off at the media cut position.

⚠ Notes ⚠

- If the front edge of new roll media is not straight, then cut off the front edge of the roll media.
- The cutter blade is replaceable. To periodically replace the cutter blade, follow the instructions described in “Replacing cutter blade.”

6.3.4 Selecting print mode

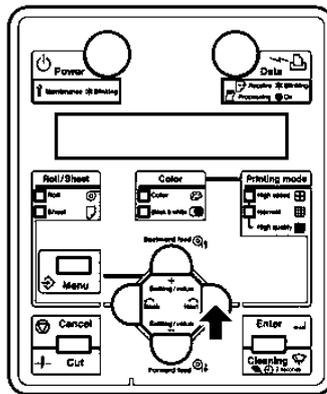
Depending on the desired print quality and print speed, the following print modes can be set on your DrafStation plotter:

Print mode	Feature
High speed colour	Set to give priority to the print speed.
High speed black & white	Use these modes for draft plots.
Normal colour	Set to give priority to the print quality.
Normal black & white	Use these modes when high accuracy is required for final plots.
High-quality colour	Use these modes for top quality plots.
High-quality monochrome	

According to the following procedure, select the print mode:

Step 1 : Verify that the plotter is in Normal mode.

Step 2 : Press the [Next] key on the operation panel.



· The selected print mode light is switched on (red).

Notes

- When the plotter driver is used, the plotter driver settings will have priority over the ones set at the operation panel in Normal mode. For plotter driver setup, refer to “Setting the plotter driver”

Notes

- For details of print mode, refer to “Printing operation specifications. “

7 TROUBLESHOOTING

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If the error is not included in any items of this section, contact your local MUTOH dealer.

⚠ Notes ⚠

- When you have to receive product service within the warranty period, verify you have a warranty certificate. If the warranty certificate is not presented, the parts and service will not be included in the warranty and will be charged for.
If you have signed a maintenance service contract, than present the contract to the service technician.

7.1 MALFUNCTION AND FAILURE OF THE PRODUCT

This section describes the malfunction and failure of the product without displaying errors, and possible causes and countermeasures.

Be sure to read and understand the safety warnings before handling the printer.

7.1.1 Problem at installation and introduction

(1) Cannot perform ink initial filling

No.	Possible cause	Remedy	Reference
1	The front cover is open, or media hold lever is up.	Close the front cover, or lower the media hold lever.	"Handling and installing media"
2	Are all four ink cartridges fully inserted?	Fully insert all four ink cartridges.	"Installing ink cartridges"
3	Is the waste fluid tank fully inserted?	Fully insert the waste fluid tank.	"Replacing waste fluid tank"

(2) Ink does not come out after initial filling

No.	Possible cause	Remedy	Reference
1	- The ink cartridge is cool and frozen. - Head clogging.	Leave the cartridge at room temperature for at least 3 hours, and perform a head cleaning several times.	"Head cleaning"
2	The power has been switched OFF during initial ink fill.	Switch the power on again and continue initial filling.	"Installing ink cartridges"
3	Normal printing cannot be performed after initial filling.	Perform cleaning several times, and check it each time.	"Head cleaning"

(3) Cannot install plotter driver

No.	Possible cause	Remedy	Reference
1	Are plotters added?	Install the plotter driver again.	"Installing, Uninstalling the software."
2	Does the CD-ROM file name contain "*.INF"?	Correctly specify the CD-ROM or the drive which contains the driver program, or folder, and install the plotter driver again.	"Installing, Uninstalling the software."

7.1.2 Cannot generate graphics.

(1) Do not actuate at all after power activation

No.	Possible cause	Remedy	Reference
1	Is the power cable connected to the plug?	Connect the power cable.	"Power cable connection"
2	Is the AC power supply set for the specified voltage?	Connect the cable to another outlet.	"Power cable connection"
3	The front cover is open, or media hold lever is up.	Close the front cover. Lower the media hold lever.	"Handling and installing media"
4	Is the waste fluid tank fully inserted?	Fully insert the waste fluid tank.	"Replacing waste fluid tank"

(2) Does not work after setting the media

No.	Possible cause	Remedy	Reference
1	The front cover is open, or media hold lever is up.	Close the front cover. Lower the media hold lever.	"Handling and installing media"
2	The media is not loaded straight into the plotter.	Load the media straight.	"Handling and installing media"
3	Are the ink cartridges inserted?	Insert the ink cartridges.	"Installing ink cartridges"
4	Are you using dedicated media?	Use dedicated media.	"Media"
5	Is the plotter being used in an environment other than the one specified, such as in direct sunlight?	Only use the plotter in an environment that is specified for use.	"Installation guide"

(3) An error is displayed and details not printed after sending data from the computer

No.	Possible cause	Remedy	Reference
1	Is the type of computer selected correctly?	Check that the settings on the computer side and plotter side are the same.	"Connecting the plotter to PC"
2	Are the interface requirements and command mode the same on the computer side and plotter side?		"Setting the plotter driver"

(4) Cannot use the computer in online mode via LAN

No.	Possible cause	Remedy	Reference
1	Is the network interface cable connected correctly?	Connect the network interface cable correctly.	"Connecting network interface cable"
2	Is network setting configured correctly?	Configure network settings correctly.	"Network Menu"
3	Are the plotter's network settings correctly configured?	Match this product's network settings with the computer side environment.	"System requirements"
4	Does the Data light on the operation panel switch on after sending graphics data from the computer?	If the Data light does not switch on, contact the computer manufacturer.	--

(5) Cannot use the computer in online mode via USB

No.	Possible cause	Remedy	Reference
1	Is the USB cable correctly connected?	Connect the USB cable correctly.	"Connecting the USB cable"
2	Does the Data light on the operation panel switch on after sending graphics data from the CAD?	If the Data light does not switch on, contact the CAD or computer manufacturer.	--
3	Is the type of command currently set up, the same as the one on the CAD and driver side?	Match the command setting of the plotter to the environment of the CAD and driver.	"Command Menu"

7.1.3 Media-related troubleshooting

(1) The media deviates or is torn during initialization.

Notes

- If the media is jammed or torn, remove it according to "The media is jammed."

No.	Possible cause	Remedy	Reference
1	Are you using the dedicated media?	Use the dedicated media.	"Media"
2	Is the loading position of the media correct?	Set the media correctly.	"Loading roll media" "Loading sheet media"
3	Is the scroller set correctly?	Set the scroller correctly.	"Loading roll media"
4	Are there any foreign materials such paper attached to the pressure rollers?	Clean the pressure rollers.	"Cleaning inside the plotter"
5	Is the plotter being used in an environment other than the one specified, such as in direct sunlight?	Only use the plotter in an environment that is specified for use.	"Installation Guide"
6	Did you load sheet media?	Set the media size detection method to "Vert." or "Hori."	"MediaSet menu"
7	Are you using folded, torn or rolled media?	Replace the media.	"Cautions on handling media"
8	Does the media curl or float?	Use dedicated media. If media that is not dedicated is used, set the following items in the MediaSet Menu. <ul style="list-style-type: none"> • Media • Stiffness 	"Media" "MediaSet Menu"

(2) The media is crumpled during initialization.

⚠ Notes ⚠

- If the media is jammed or torn, remove it according to "The media is jammed."

No.	Possible cause	Remedy	Reference
1	Are you using dedicated media?	Use dedicated media.	"Media"
2	Is the loading position of the media correct?	Set the media correctly.	"Loading roll media" "Loading sheet media"
3	Is the media loaded at an angle?	Set the media straight.	"Loading roll media" "Loading sheet media"
4	Are there any foreign materials such paper attached to the pressure rollers?	Clean the pressure rollers.	"Cleaning inside the plotter"
5	Is the plotter used in an environment other than the one specified, e.g. near an air conditioner?	Only use the plotter in an environment that is specified for use.	"Installation guide"
6	Did you load sheet media?	Set the media size detection method to "Vert." or "Hori.".	"MediaSet Menu"
7	Are you using folded, torn or rolled media?	Replace the media.	"Cautions on handling media"

(3) The wrong media size is set during initialization.

No.	Possible cause	Remedy	Reference
1	Are you using dedicated media?	Use dedicated media.	"Media"
2	Is the media loaded at an angle?	Set the media straight.	"Loading sheet media"
3	When the media is set, does it curl upward?	Straighten the media or set a new media.	"Loading roll media"
4	Is the being plotter used in an environment other than the one specified, e.g. near an air conditioner?	Only use the plotter in an environment that is specified for use.	"Roll media loading"
5	Are you using media that has been printed already?	Use new media.	"Media"

(4) Tracing paper or thin media is not detected.

No.	Possible cause	Remedy	Reference
1	Are you using dedicated media?	Use dedicated media.	"Media"
2	Is the plotter being used in an environment other than the one specified, e.g. in direct sunlight?	Only use the plotter in an environment that is specified for use.	"Installation guide"

(5) Media jams frequently occur.

⚠ Notes ⚠

- If media other than dedicated one is used, correct media feeding cannot be assured.

No.	Possible cause	Remedy	Reference
1	Are you using dedicated media?	Use the dedicated media.	"Media"
2	Is the media used in a place other than the specified environment?	Use the media in a dedicated environment.	"Cautions on handling media"
3	Using old media?	Replace it with new media.	"Replacing roll media"
4	Using media with fold, wrinkle, etc?		"Loading sheet media"
5	Does the media curl or float?	Use dedicated media. If media that is not dedicated is used, set the following items in the MediaSet Menu. · Media · Stiffness	"Media" "MediaSet Menu"

(6) The media veers during printing.

No.	Possible cause	Remedy	Reference
1	Are you using dedicated media?	Use dedicated media.	"Media"
2	Is the loading position of the media correct?	Set the media correctly.	"Loading roll media" "Loading sheet media"
3	Is the scroller set correctly?	Set the scroller correctly.	"Roll media installing"

(7) Roll media is not cut well.

No.	Possible cause	Remedy	Reference
1	Does the cutter blade cut well?	Replace the cutter blade.	"Replacing cutter blade"
2	Is the roll media charged with static electricity?	Remove the charged static electricity.	--

7.1.4 Printing-related troubleshooting

(1) Printing is partially stained or incomplete.

△ Notes △

- Proper print quality may not be obtained with the media other than the dedicated one.

No.	Possible cause	Remedy	Reference
1	Does the media include moisture?	Replace it with new media.	"Replacing roll media"
2	Using the media with folds and wrinkles?		"Loading sheet media"
3	Does the media curl or float?	Use the dedicated media. If media that is not dedicated is used, set the following items in the MediaSet Menu. · Media · Stiffness	"Media" "MediaSet Menu"

(2) The order of printing is incorrect (There are some places that cannot be printed).

No.	Possible cause	Remedy	Reference
1	Is the loading position of the media correct?	Set the media correctly.	"Loading roll media" "Loading sheet media"
2	Set the Scale and Mirror?	Cancel or reset the Scale and Mirror settings.	"Layout Menu" "Function Menu"
3	Set the origin and print position?	Cancel or reset the settings of the origin and print position.	"Command Menu"

(3) Printing is blurred.

No.	Possible cause	Remedy	Reference
1	Are you using the dedicated media?	Use the dedicated media.	"Media"
2	Using thick and thin media?	Use the dedicated media.	"Media"
3	Using standard media?	Use the dedicated media.	"Media"
4	Is the media setup correct?	Set up the media correctly.	"MediaSet Menu"
5	Printing on the printing surface?	Confirm the printing surface of the media and set it correctly.	"Media handling"

(4) White or black lines appear on the printing.

No.	Possible cause	Remedy	Reference
1	Are you using dedicated media?	Use dedicated media.	"Media"
2	Is the scroller set correctly?	Set the scroller correctly.	"Roll media loading"
3	Are the nozzles in good condition?	Perform head cleaning.	"Head cleaning"

(5) Printing lines are not straight.

No.	Possible cause	Remedy	Reference
1	Is the ink cartridge within the validity period?	Use a new ink cartridge.	"Replacing ink cartridges"
2	Are you using dedicated media?	Use dedicated media.	"Media"
3	Is the printer correctly aligned?	Perform alignment.	"AdjustPlot"

(6) Printing lines are duplicated or are patchy.

No.	Possible cause	Remedy	Reference
1	Are the head nozzles in good condition?	Perform head cleaning.	"Head cleaning"

7.2 ERROR MESSAGES

7.2.1 Status messages

This section describes the display during the plotter operation.
When the product is operating correctly, the operation panel displays each operation status as below.

No.	Possible cause	Description	Reference
1	Ready to Plot	Idling (Media is set).	--
2	Paper End	Idling (Media is not set).	"Media handling"
3	Receiving [port*]	Receiving data. (* displays a port no.)	--
4	Converting [port*]	Analyzing data. (* displays a port no.)	--
5	Plotting	Printing.	--
6	Cleaning ** minutes	Cleaning the head. Please wait a while.	"Head cleaning"
7	Ink Refill **min	Filling the ink. Please wait a while.	"Installing ink cartridges"
8	Transport Mode	Preparing for transportation. Please wait a while.	"Transporting the plotter"
9	***** OK?	Initializing the media.	"Setting media type"
10	Paper Initial	Please wait a while. (*** represents the setup media type.)	
11	Cover Open	The front cover is open.	"Media handling"
12	Lever Up	The media hold lever is positioned backward. Set the media.	"Media handling"
13	Layout Receiving	After receiving print data, the plotter is waiting for receiving the next data. Displayed when the layout function is enabled.	"Setup menu items"

Be sure to read and understand the safety warnings before handling the printer.

7.2.2 Error message display and remedies

This section describes the details of the display when an error message appears and its remedy. Error messages are displayed when certain failures occur during plotter operation.

If an error message appears, the plotter may display the following error message on the operation panel and stop operation.

When operation stops and the error is solved, the error message is cancelled and the plotter restarts operation.

No.	Display	Description	Remedy	Reference
1	Undefined Paper	Failed in identifying the media. (Stops operation)	Reload the media.	"Media handling"
2	Paper Slant	The media was not fed straight. (Stops operation)	Reload the media.	"Media handling"
3	Paper Cut Error	The media could not be cut. (Stops operation)	Reload the media.	"Media handling"
4	End Of Roll	The roll media has run out. (Stops operation)	Reload a new roll media.	"Replacing roll media"
5	[KCMY] InkNearEnd	Ink is running out. (Continues operation)	Prepare a new ink cartridge.	"Replacing ink cartridges"
6	[KCMY] Ink End	Ink has run out. (Stops operation)	Replace with a new ink cartridge.	"Replacing ink cartridges"
7	[KCMY] Cartridge	Cartridge is not inserted. (Stops operation)	Insert a genuine ink cartridge.	"Installing ink cartridges"
8	Not Original Ink	A genuine ink cartridge is not inserted. (Stops operation)	Insert a genuine ink cartridge.	"Replacing ink cartridges"
9	NearFullWasteInkTank	Waste fluid tank shortly becomes full. (Continues operation)	Replace the waste fluid tank.	"Replacing waste fluid tank"
10	FullWasteInkTank	The waste fluid tank is full. (Stops operation)	Replace the waste fluid tank.	"Replacing waste fluid tank"
11	Warning CR Mot. Life	The life CR motor is almost expired. (Continues operation)	Contact your local MUTOH dealer.	--
12	NoMemory DIMM256MB	Memory ran out during data analysis or printing.	Contact your local MUTOH dealer.	--

⚠ Notes ⚠

- The colour inside [] in the error display represents the problem ink colour.
- If the "No Ink" and "No Cartridge" errors occur simultaneously, "No Cartridge" is displayed.

7.2.3 Data error display and remedies

This section describes the details of the display when an error message appears and its remedy.

A data error appears if data communication between your PC and the plotter has failed.

If a data error occurs, the following error message appears on the operation panel of the plotter and operation stops.

When the cause of the error is solved, the plotter starts operating again.

No.	Display	Description	Remedy	Reference
1	M** Error []	An error occurred when receiving data.	Check the communication requirements between the plotter and your PC.	"Menu setup on the operation panel"

⚠ Notes ⚠

- "****" in the error message is the code no. that indicates what type of error occurred.

7.2.4 Command error display and remedies

This section describes the details of the display when a command error occurs and its remedy.

A command error is displayed if a certain failure occurs during analysis of the command data sent from your PC to the plotter.

If a command error occurs, the following error message appears on the operation panel of the plotter and operation stops.

When the cause of the error is solved, the plotter starts operating.

No.	Display	Description	Remedy	Reference
1	MH** Error []	An invalid command has been sent from the computer.	Check that the settings on your PC and the plotter are the same.	"Menu setup on the operation panel"

⚠ Notes ⚠

- "****" in the error message is the code no. that indicates what type of error has occurred.
- The command code representing the error occurred is indicated in [].
- For the settings on your PC side, refer to the Operating Guide attached with your PC.

7.2.5 Error requiring a restart

This section describes the details of the display when an error requiring a restart occurs and its remedy. An error requiring a restart is displayed if a fatal operational failure such as the following occurs.

- When an obstacle which prevents printing occurs.
- When a problem occurs with the electrical circuit (PCB, motor, sensor, etc.) of the plotter.
- When a failure on the plotter control program occurs.

If an error requiring a restart occurs, the plotter stops operating after performing the following operations.

Step 1 : The power automatically shuts down.

Step 2 : All lights on the operation panel blink, and the buzzer rings continuously.

Step 3 : The error message is displayed on the operation panel.

Pressing any key on the operation panel stops the beeping.

For an error requiring a restart, operation will return to normal after removing the cause of the error and restarting the plotter.

If the same error continues to be displayed, contact your local MUTOH dealer. Be sure to tell us the code no. of the error message when you contact us.

No.	Display	Description	Remedy	Reference
1	E** Error []	A problem that does not have a remedy.	1. Remove obstacles such as paper scraps in the drive system.	"The media is jammed"
			2. Confirm that the replaced items are correctly attached.	"Replacing consumable components"
			3. Switch off the plotter power, and switch it on again after more than 10 seconds.	

⚠ Notes ⚠

- "****" in the error message is the code no. that indicates what type of error occurred.
- The command code representing the error occurred is indicated in [].
- For the settings on your PC side, refer to the Operating Guide of your PC.

7.3 THE MEDIA IS JAMMED

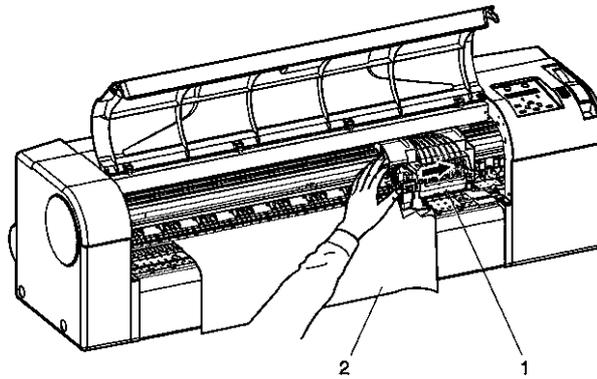
When the set media is jammed, remove it according to the following procedures.

7.3.1 Roll media

Be sure to read and understand the safety warnings before handling the printer.

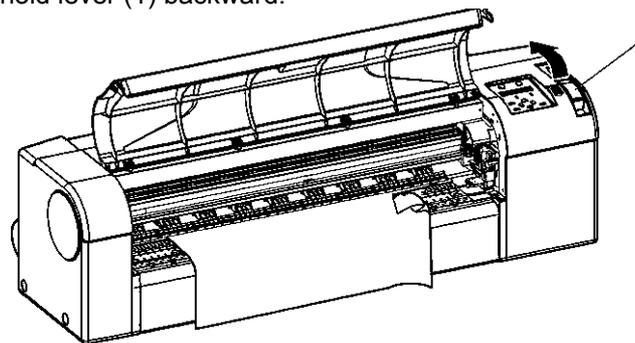
Step 1 : Open the front cover.

Step 2 : Move the carriage (1) to the right.



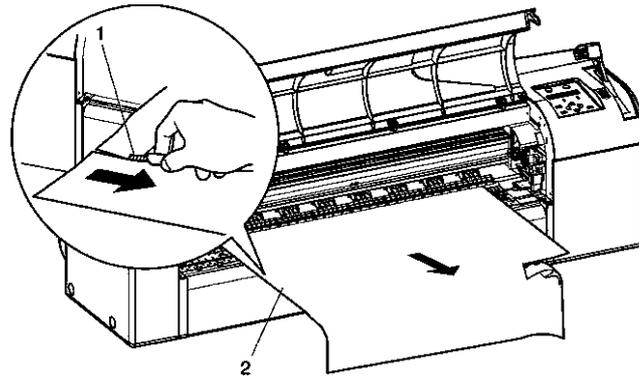
No.	Name
1	Carriage
2	Roll media

Step 3 : Push the media hold lever (1) backward.



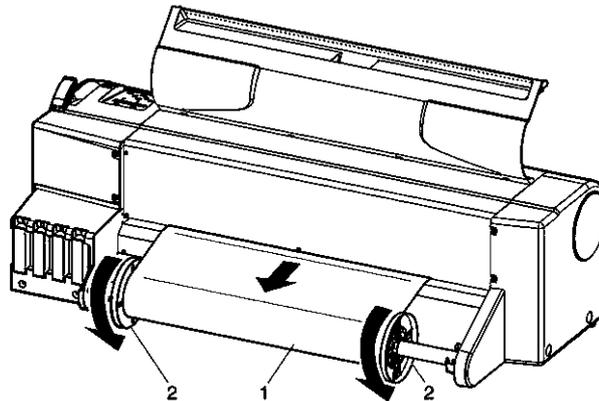
No.	Name
1	Media hold lever

Step 4 : Pull the media to your side, and cut the torn part with a cutter blade (1).



No.	Name
1	Cutter blade
2	Roll media

Step 5 : Lift both end of the scroller (2), and guidely rewind the roll media (1).



No.	Name
1	Roll media
2	Scroller

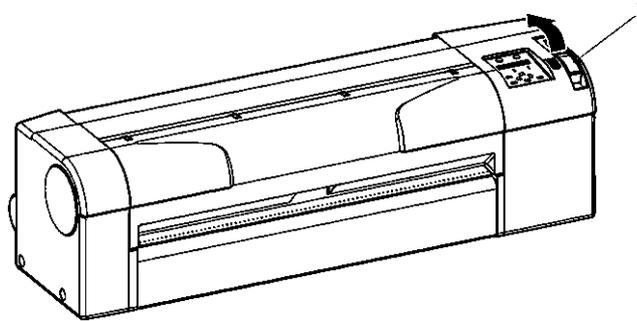
Step 6 : Remove all other remaining paper pieces in the plotter.

Step 7 : If errors requiring a restart occur, switch off the plotter, and switch it on again.

7.3.2 Sheet media

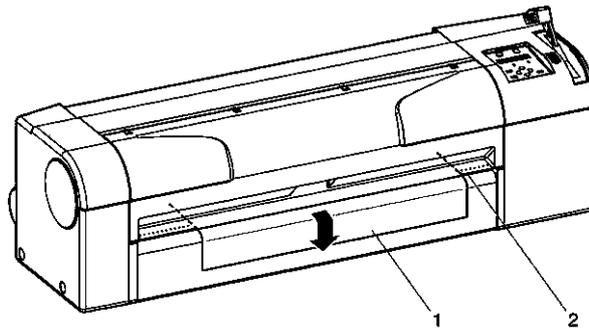
Be sure to read and understand the safety warnings before handling the printer.

Step 1 : Push the media hold lever (1) backward.



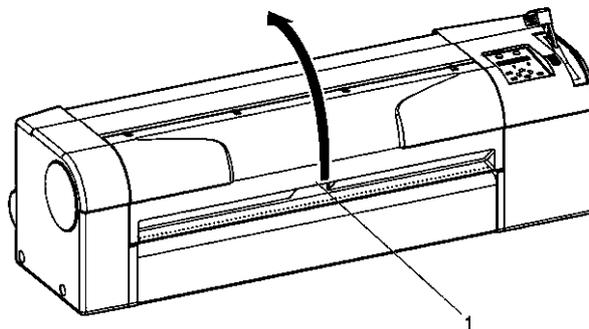
No.	Name
1	Media hold lever

Step 2 : Remove the sheet media (1) from the media feed slot (2).



No.	Name
1	Sheet media
2	Media feed slot

Step 3 : Open the front cover (1) and remove all paper pieces remained inside the plotter.



No.	Name
1	Front cover

If errors requiring a restart occur, switch off the plotter, and switch it on again.

