FC8600 SERIES

CUTTING PLOTTER

Setup Manual

Preface

Thank you for choosing this product.
Carefully keep this manual in a handy location for quick reference as necessity prior to use to ensure safe and correct use and also to thoroughly understand the functions and operate them effectively.

Prior to use

Be sure to read the attached "TO ENSURE SAFE AND CORRECT USE" prior to use. Otherwise, it may cause an unexpected accident or fire.

Notes on this Manual

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Roles of each manual

●Setup Manual (this manual)..........Read it to understand "What is the cutting plotter?", Displaying method for FC8600 User's Manual, Method for connecting this machine with the PC, Installing method for controller driver software, and to prepare for the operation.
●User's Manual (PDF data) ....Read it to thoroughly understand the functions of FC8600.
●Cutting Plotter Controller Manual (PDF data)
....Read it to run the software "Cutting Plotter Controller" for operation of FC8600 through your PC.

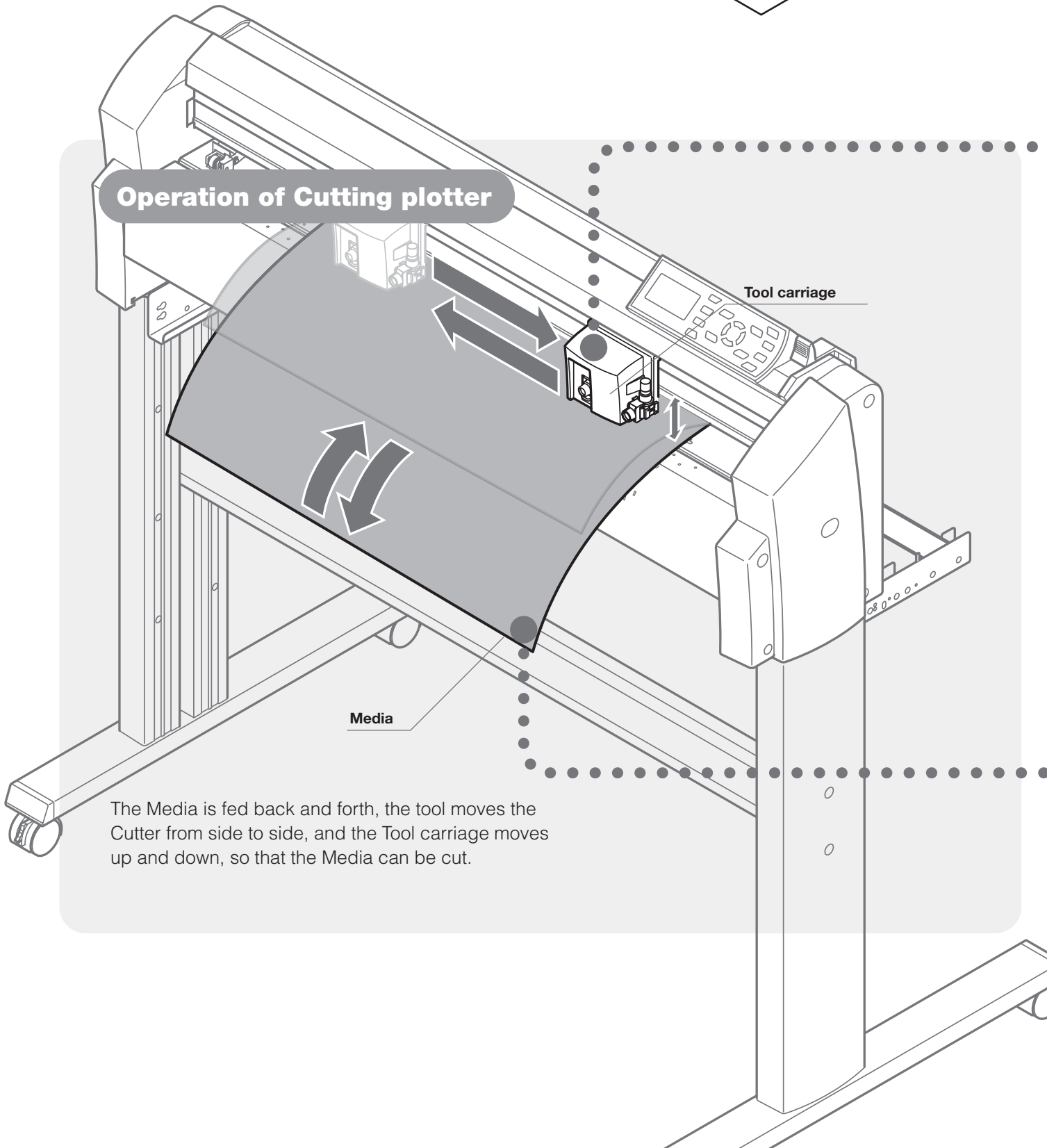*[📖 P.000] describes the reference pages of User's Manual.

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What is the Cutting plotter?

A machine that cuts the drawing, which was produced by the PC, through the Media (paper, Marking film) without using the Cutter knife or Scissors.
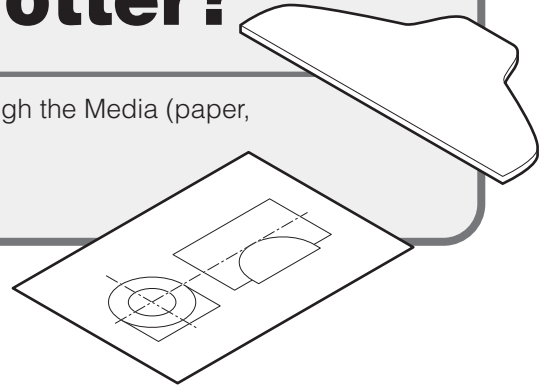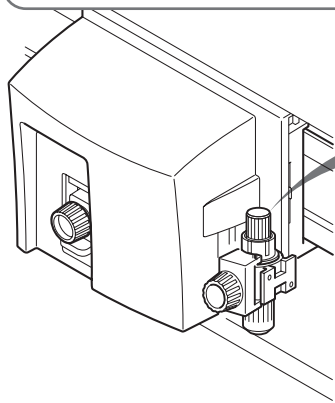
Operation of Cutting plotter
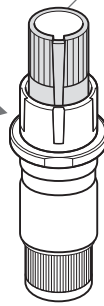
Tool carriage

Media

The Media is fed back and forth, the tool moves the Cutter from side to side, and the Tool carriage moves up and down, so that the Media can be cut.
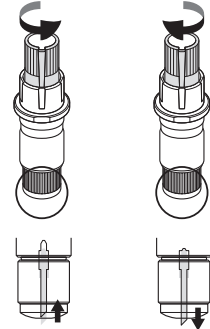
Tool carriage

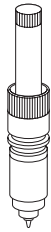*To avoid bodily injury, handle cutter blades with care.

Blade length adjustment knob

Adjust the blade length by turning the Blade length adjustment knob.

Cutter plunger

The Cutter plunger is mounted on the Tool carriage during use. The Cutter blade is mounted on the Cutter plunger.

Plotting pen (Water-based fiber pen)

Using the plotting pen instead of a cutter allows the drawing and illustration to be generated.
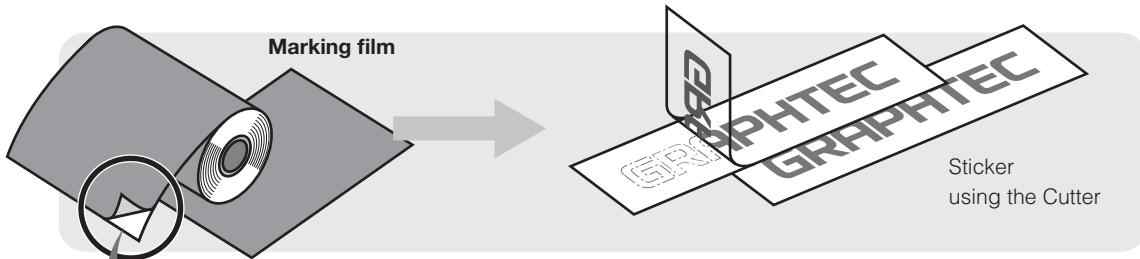Use it for testing before cutting.
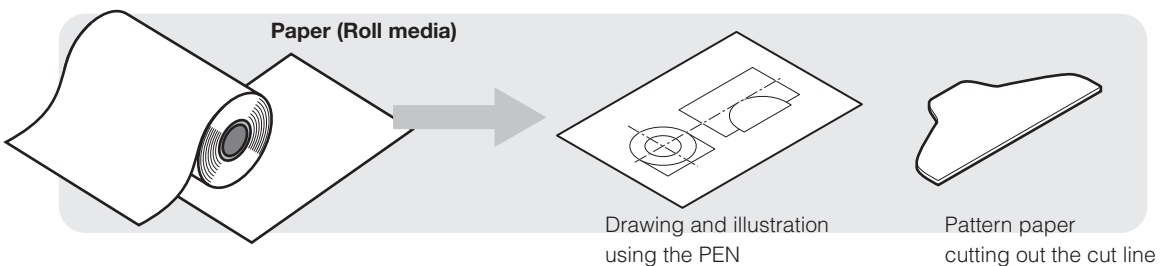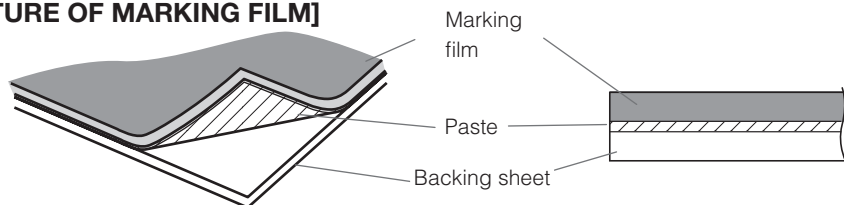
Paper

Backing sheet

Adjust the blade length to such a degree that the trace of blade can be made on the backing sheet.

Media

The media includes the film, paper and etc. Select it depending on the application.
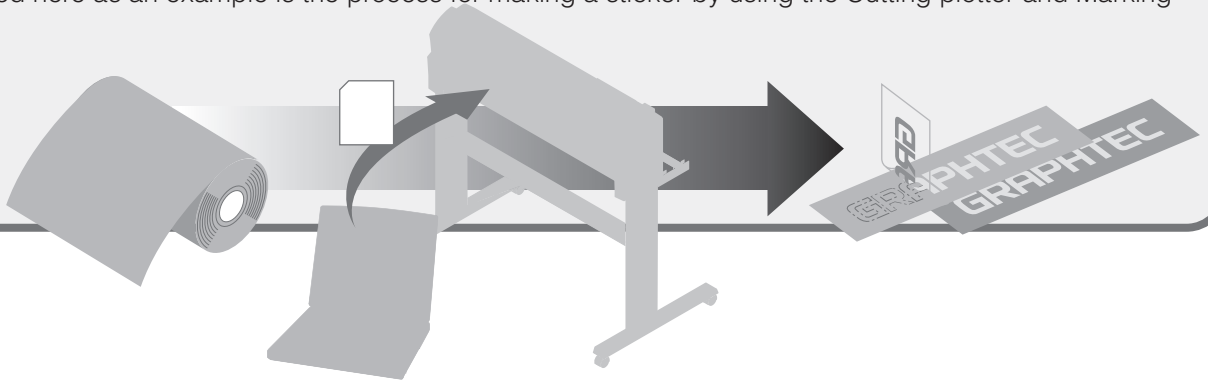
Marking film

Sticker using the Cutter

[STRUCTURE OF MARKING FILM]

Marking film

Paste

Backing sheet

Paper (Roll media)

Drawing and illustration using the PEN

Pattern paper cutting out the cut line

Flow of cutting operation

Introduced here as an example is the process for making a sticker by using the Cutting plotter and Marking film.

1 Create the data to be cut.
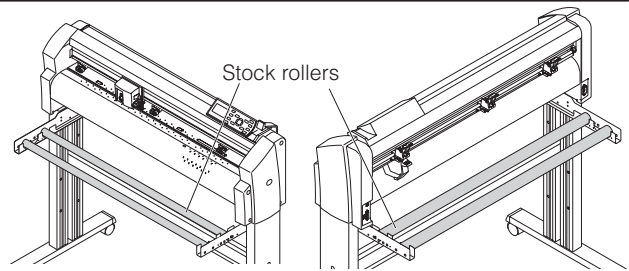
1 Prepare the data.

2 Set the Media.

3 Set the Condition.

2 Set the media on the Cutting plotter.

❶ Check which point on the Cutting plotter the paper should be set.

When Stock roller is mounted at front of main unit : Front loading
When Stock roller is mounted at rear of main unit : Rear loading

Stock rollers

<Front loading>   **<Rear loading>**

❷ Place the media on Stock tray, and set the media.
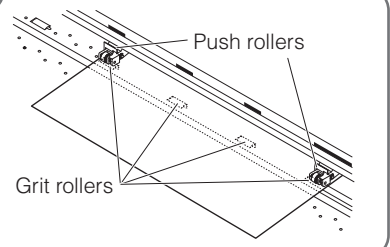
(*The illustration shows the rear loading as a case.)
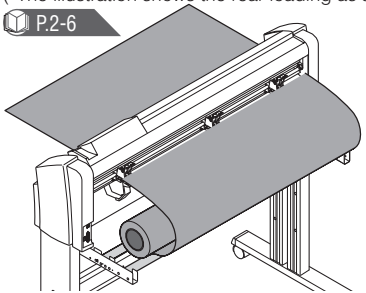
Setting the Push Roller

Fix the push rollers so that they are positioned above both ends of media and also grit rollers.

Push rollers

Grit rollers

❸ Make various settings necessary for cutting the media.

●Set the tool conditions depending on the media to be used.

*This function allows each preset condition to be memorized.
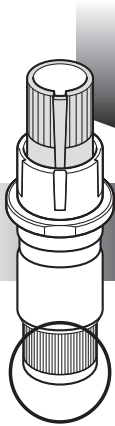
Tool setting :
Set the type of tool to be used.

Setting the Force :
Adjust the force for holding down the tool on the media.

Speed :
Adjust the tool moving speed.

Acceleration :
Adjust the tool acceleration.

Adjusting the Blade Length :
Adjust the length of cutter blade protruded out of the Cutter plunger.

Offset :
Adjust the distance between cutter blade edge and center of Plunger.

Running Cutting Tests 📖 P.2-34

Run Cutting tests after making each setting, and check actual cutting conditions.

| Offset is small | Proper | Offset is large |

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❹ Cut the Media.

Completed

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4 Output the created data into the Cutting plotter, and cut the media.

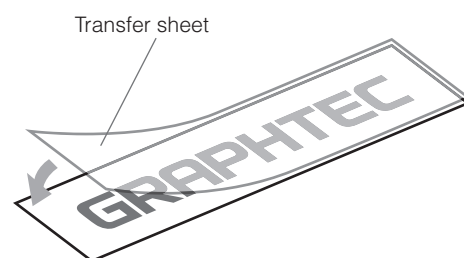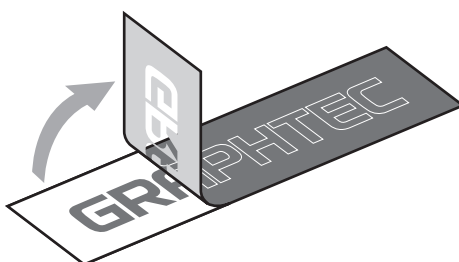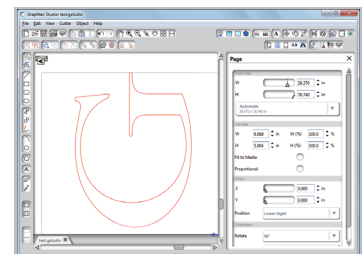## ❶ Output the data into the cutting plotter.

> **⚠ To stop on the way**
> Plotting operation will stop temporality when [STOP] key is pressed during plotting. 📖 P.3-12

❷ Cut off the cut media. (Cross cut)

❸ Remove the unnecessary portion of cut media, and affix the transfer sheet.
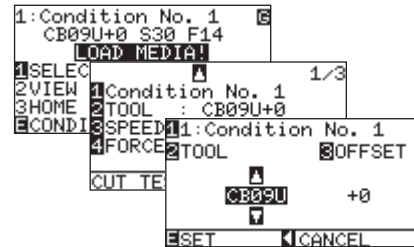
Transfer sheet

Convenient functions

Setting the tool conditions

Setting the Tool Condition ⬡ P.2-24

The tool setting allows 8 settings numbered from 1 to 8 to be memorized. First select this condition No. to set the tool conditions. Switching the condition No. allows plotting to run immediately according to the preset 8 types of tool conditions.

```
1:Condition No. 1    G
   CB09U+0 S30 F14
   LOAD MEDIA!
1 SELEC              1/3
2 VIEW   1 Condition No. 1
3 HOME   2 TOOL  : CB09U+0
  CONDI  3 SPEED 1:Condition No. 1
         4 FORCE 2 TOOL      3 OFFSET
  CUT TE
                  CB09U   +0

         SET    CANCEL
```

Setting the Force ⬡ P.2-29

This function allows cutting and plotting force to be set. Set it with reference to the tool conditions for each media and tool type.
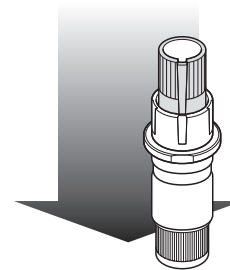
Setting the Speed ⬡ P.2-28

This function allows the tool speed (moving speed) for plotting to be set.
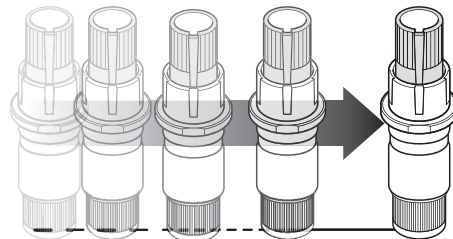
Setting the Acceleration ⬡ P.2-30

This function allows the acceleration for plotting to be set.

Setting the Offset ⬡ P.2-26

Corrects the offset of center point for betaken blade edge and plunger depending on the cutter blade types to be used. The standard values are already set when the blade name is selected. Besides, sensitive adjustment can be made within ± 5 range against the standard value.

Area option

Enlarging/Shrinking ⬡ P.4-8

Enlarging/shrinking for plotting can be set.

Mirror P.4-6

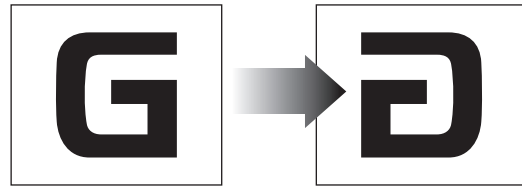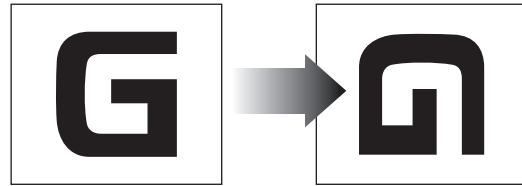This function allows the reversing for plotting origin point and coordinate axes to be set.

Rotation P.3-10

This function allows the rotation for the plotting origin point and coordinate axes to be set.

ARMS P.5-2

A function to scan the registration mark written on the media using sensors. The axis tilting, distance and 2 axes warp adjustment can be adjusted, besides this function makes possible for a precise cutting when cutting the borders of the images printed by the printer or when cutting the media again.
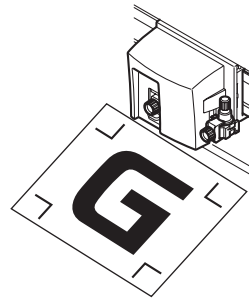
Plotting range P.4-2	Set the plotting range arbitrarily. Also the origin point moves according to the plotting range. It is impossible to plot at outside of the preset range.
Extension of plotting range width P.4-4	Set the Increase/Decrease of plotting range based on the default value (edge at inside of push roller).
Setting the cut line pattern P.7-15	Set whether cutting is made using the solid or dotted line (cut line).
Manual positioning adjustment P.6-3	Manually adjust the position of the media and tool, specify the position of the registration marks (adjustment marks), and adjust the tilting of the axes and distance. When impossible to read the registration marks through the ARMS, the precision for both cutting the borders of the images plotted by different plotter and re-cutting the media can be improved.

Environmental setting

Dual configuration P.4-18	Two types of settings can be saved independently. Two-preferred sets of setting can be stored separately if there are 2 operators, or 2 different settings for different media can be stored, making a quick change when the media is switched.
Apparel (AP) Mode P.4-20	Used when this Plotter is used in combination with CAD targeted for Apparel.

Setting the Plotting quality

Distance adjustment P.7-11	Corrects the deviation in the length of cut or plotted line segments, which occurs depending on the type or thickness of media being used.
Tangent Emulation P.7-2	Set it when cutting the thick media. Use this function when the blade tip gets sunk into the media, making the blade hard to rotate so that, the start/end points are not consistent or the corner does not get a sharp angle.

Before starting the Setup

Make the following preparations before starting Setup.

◇ Check that all of the items included in the package. (Please see 📖 P.1-2 ▨ in the FC8600 User's Manual (PDF).)
  For the Parts Names, please see 📖 P.1-3 ▨ in the FC8600 User's Manual (PDF).

◇ Assemble the FC8600, and set up it. For the assembling procedures, see either Manual attached to the Stand or FC8600 User's Manual (PDF). 📖 P.1-5 ▨

◇ When the previous version of Cutting Master 3 was installed, uninstall it.

◇ To use the Cutting Master 3, previously install the Design application (Adobe Illustrator or Corel Draw) that is used.
  For the latest supported version, please visit our website.

◇ When there are virus detection program or system resident program, terminate them beforehand.

◇ Upon installation, be sure to log into Windows using an account with administrator privileges on your computer.

CAUTION

Usage of the software

Each of the Cutting Plotter Controller/Graphtec Studio/Cutting Master 3 software is engaged in various settings on the cutting Plotter.
Do not use them at the same time.

Flow of setup

Installing the Software

1. Starting the Installer	For each software of FC8600 install them using the Installer housed in the attached DVD-ROM.	**P.09**

Setting up the FC8600	

2. Installing the Cutting Plotter Controller	Once Cutting Plotter Controller is installed, you can control main functions of FC8600 through the PC.	**P.11**

3. Installing the FC8600 Plotter Driver (Cutting Plotter Driver)	The FC8600 Driver software controls the Plotter and makes plotting according to the data created by the PC.	**P.12**

The procedures vary depending on the Interface.

Selection			
	To connect using the USB	Turn on the power source of Plotter in the middle of installing, and connect the USB cable.	**P.12**
	To connect using the Network cable	Input the IP address of FC8600.	**P.14**
	To connect using the RS-232C	Connect the RS-232C cable after installing is finished.	**P.15**

Install the software as necessity.

4. Setup the Graphtec Studio	Software enabling cutting data to be created through simple commands. Create designs and edit characters/shapes using this software.	**P.15**

5. Setup the Cutting Master 3	Plug-in driver that enables simple cutting through direct operation from within Adobe Illustrator and CorelDRAW.	**P.16**

6. Install the User's Manual	Installs the FC8600 User's Manual	**P.17**

Setting up the Plotter main unit

1.	Setting the media (paper)	Fix the media to the Plotter.	**P.17**
2.	Setting the Plotter	Set the Plotter depending on the type of media.	**P.20**
3.	Attaching the Tool	The cutter blade can replaced depending on the material or thickness of the media.	**P.20**
4.	Note on use when you mount the tool on the FC8600	This section describes how to mofdify the tilting of the equipped tool .	**P.21**
5.	Tool adjustment and test cutting	Adjust the protruded cutter edge length and the cutting Force depending on the material and thickness of the media. Make test cutting for the set media to adjust the best condition.	**P.22**

Installing the Software

Install the software housed in the attached DVD-ROM into the PC that is used.

This section explains how to install the software when using a Windows 7 (32 bit) operating environment.

Note

● Upon installation, be sure to log on Windows using an account with administrator privileges on your computer.
If you have logged on using a standard user account, an [User Account Control] screen asking you to enter the administrator account password may appear.

● **Supported OS**
This software supports the following OS environments:
Windows 8 (32 bit/64 bit), Windows 7 (32 bit/64 bit), Windows Vista (32 bit/64 bit), Windows XP SP3 (32bit/64bit), Mac OS X (10.5.8 or later) [*1] [Intel CPU (PPC is not supported)]

● ***1 : When Using Macintosh**
Macintosh operating environments are supported by the following software.
Proceed with installation in accordance with your operating environment.

• Graphtec Studio : Software application that enables cutting data to be created through simple commands.
• Cutting Master 3 : Plug-in driver that can be directly operated from within Adobe Illustrator.
Note that Adobe Illustrator must be installed on your computer prior to use.
When installing the above software to your Macintosh operating environment, refer to the respective manual for each included on the accompanying DVD-ROM.
• Open the pertinent manual on the accompanying DVD-ROM in the following sequence: [Manuals] > [English (Each Language)] > [Manual According to Software]

1. Launching the Start Menu

After starting up Windows, insert the [USER GUIDE & SOFTWARE DVD] provided with the FC8600 into your computer's DVD drive.
The below screen will appear before the Start Menu launches.
Continue with installation in accordance with the following procedures.

1 The Windows [AutoPlay] screen will appear.

Select [Run MultiSetup.exe] from the Windows [AutoPlay] screen.
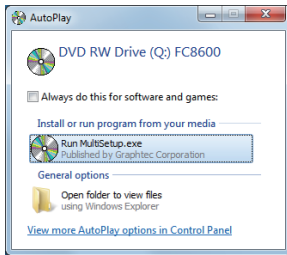
* If the [AutoPlay] screen does not appear, open [Explorer] and select the DVD drive containing the software to be installed. Open the DVD and double-click on [MultiSetup.exe].

2 Click [Yes] if you have logged on using an administrator account.
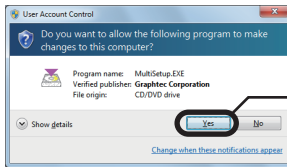
Click [Yes].

If you have logged on using a standard user account, an [User Account Control] screen asking you to enter the administrator account password may appear.
Enter the password, and then click [Yes].
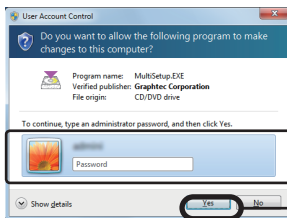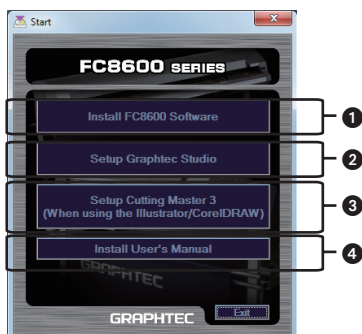
Enter the password.
Click [Yes].

3 The [Start] will appear.

"Use this menu to install the software you require to use the FC8600.
First-time users should proceed with installation by clicking on [Install FC8600 Software]."
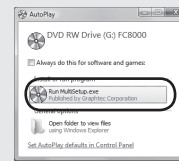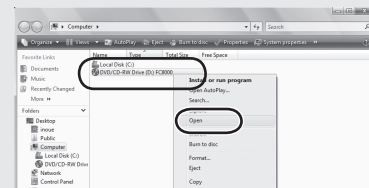Proceed with installation according to your operating environment.

① ② ③ ④
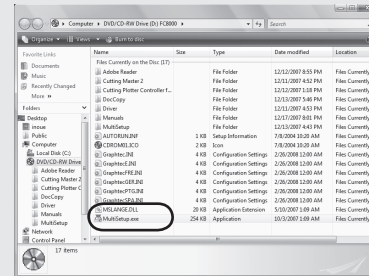
❶ **Install FC8600 Software:**

Install the [Cutting Plotter Controller] and [Plotter Driver].

The [Cutting Plotter Controller] enables various cutting conditions, plotter settings, etc. to be controlled directly from your computer.

❷ **Setup Graphtec Studio:**

Software enabling cutting data to be created through simple commands.

Create designs and edit characters/shapes using this software."

❸ **Setup Cutting Master 3:**

Plug-in driver that enables simple cutting through direct operation from within Adobe Illustrator and CorelDRAW.

❹ **Install User's Manual:**

Installs the FC8600 User's Manual.

2. Installing the Cutting Plotter Controller

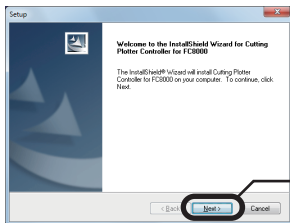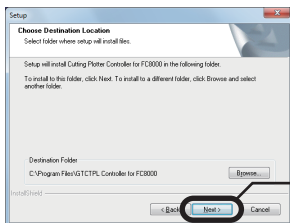**1** Click the [Install FC8600 Software] in the [Start] screen of Installer.

❶ Select "Install FC8600 Software".

For the [Install FC8600 Software], both "Cutting Plotter Controller" and "FC8600 Plotter Driver" will be installed.
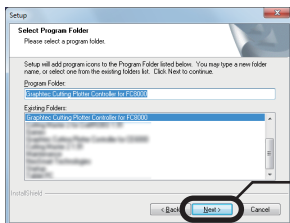
2 Operate according to the instruction in the displayed screen.

Click [Next].
*To install only FC8600 Driver Software, press [Cancel].

Click [Next].

Click [Next].
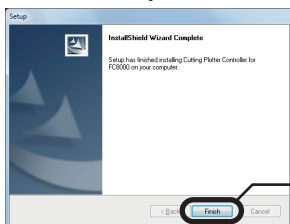
Click [Finish].

⚠CAUTION

Do not connect the Interface cable between Plotter (FC8600) and PC before installing the FC8600 Plotter Driver.

Corresponding PC

To use the Cutting Plotter Controller, use PC of Windows 8/7/Vista/XP and connect using the USB/LAN (Network)/RS-232C Interface.

The Cutting Plotter Controller is the software, which provides the similar operation as that of control panel of Plotter through the PC. If your Windows and Interface being used are different from the above mentioned, use the Control panel to operate.

3. Installing the FC8600 Plotter Driver

Once installing of Cutting Plotter Controller is terminated, the install screen of FC8600 Plotter Driver appears.

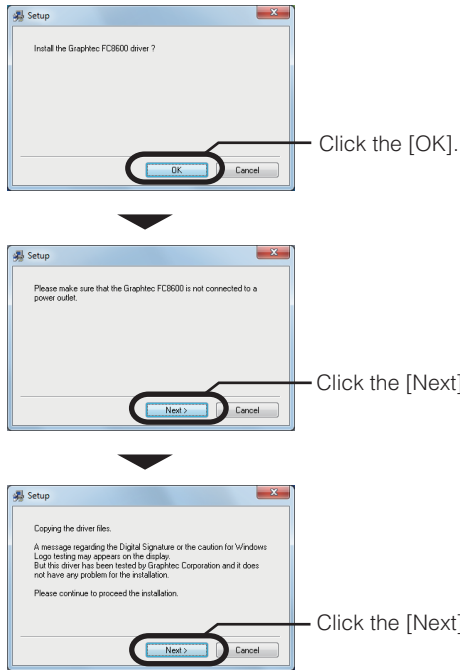**1** Operate according to the instruction in the screen.

Click the [OK].

Click the [Next].

Click the [Next].

> ⚠CAUTION
>
> **Do not connect** the Interface cable between Plotter (FC8600) and PC before installing the FC8600 Plotter Driver.

To connect using the USB cable

2 Select the Interface.

❶ Select "USB" from Pull down list.

❷ Click the [Next].
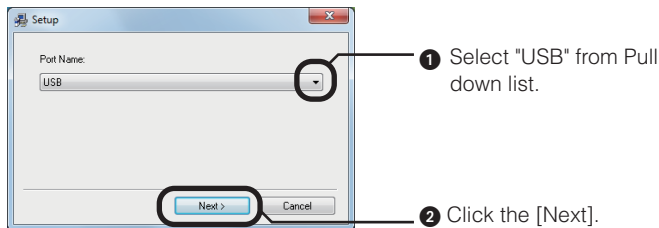
The procedures vary depending on the selected Interfaces.

3 Install the Driver software.

❷ Click the [Install].

❶ Click the [CHECK BOX].
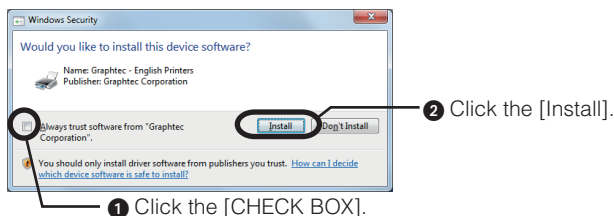
> **Port name**
>
> Select the "Port name" depending on the Interface that is used.
>
> | Interface | Port name | Next procedure |
> |---|---|---|
> | To connect using the USB cable | USB | P.12 |
> | To connect using the Network cable | TCP/IP | P.14 |
> | To connect using the RS-232C cable | COM1 | P.15 |
> | To output the data for plotting into the file without connecting to the plotter | FILE | - |

4 Connect the Power cable of Plotter.
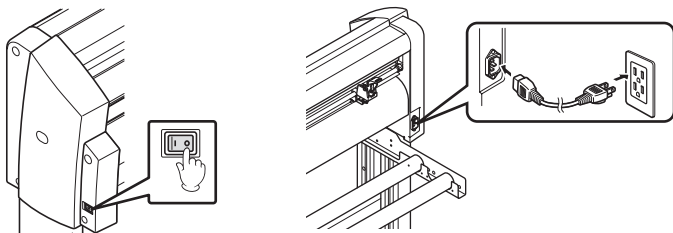
① Check that the Plotter power source is turned off (the "○" side is pressed down).

② Connect the power source cable.

⚠CAUTION

Be sure to ground the earth terminal.
If the plotter is not grounded, the operator could suffer an electric shock in the event of current leakage.
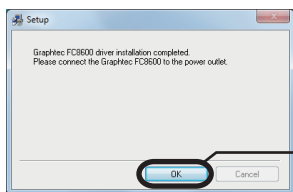
Click the [OK].

5 Connect the Plotter to the PC using the USB cable, and turn on the Plotter power source.

② Connect it to the PC

① Connect it to the Plotter.

USB cable

③ Press Power switch "|".

6 The Device Driver will be installed.

Click the message.

When normally installed

"Start" → "Control panel" → "Hardware and Sound" → "Graphtec FC8600" appears on "Devices and Printer". (For Windows 7)
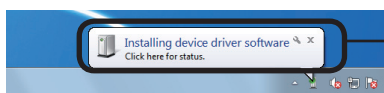
Click the "Skip obtaining driver software from Windows Update".
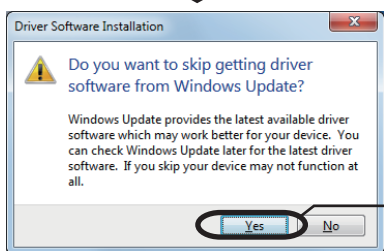
Click the [Yes].
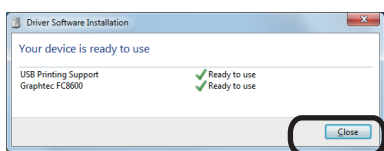
Click the [Close].

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To connect using the Network cable

2 Select the Interface.

1. Select the "Standard TCP/IP Port: (Network)" from Pull down list.

2. Click the [Next].

3 Connect the Plotter to the PC using the USB cable, and turn on the Plotter power source.

1. Connect it to the Plotter.
2. Connect it to the PC
3. Press Power switch "|".

Network hub
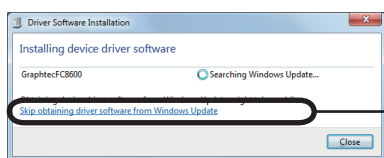Network cable

4 Check the IP address of Plotter.

5 Input the IP address of Plotter.

1. Input the IP address.

2. Click the [Next].
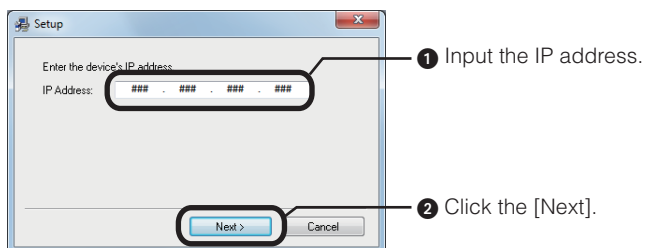
The IP address on the screen is only for reference.

Click [OK].
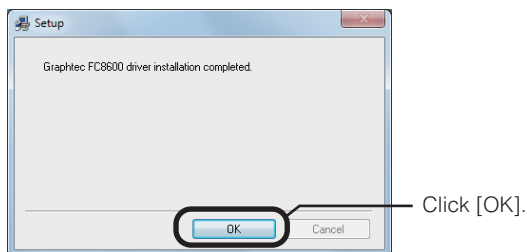
When IP address is not identified

The IP address may vary depending on the network environment. Consult with Network administrator. For how to check the IP address of this machine, see "Setting Interface" in FC8600 User's Manual.
P.9-2

When normally installed

"Start" → "Control panel" → "Hardware and Sound" → "Graphtec FC8600" appears on "Devices and Printer". (For Windows 7)

2 Connect the Plotter to the PC using the RS-232C cable, and turn on the Plotter power source.

❷ Connect it to the PC

❶ Connect it to the Plotter.

RS-232C cable

❸ Press Power switch "|".
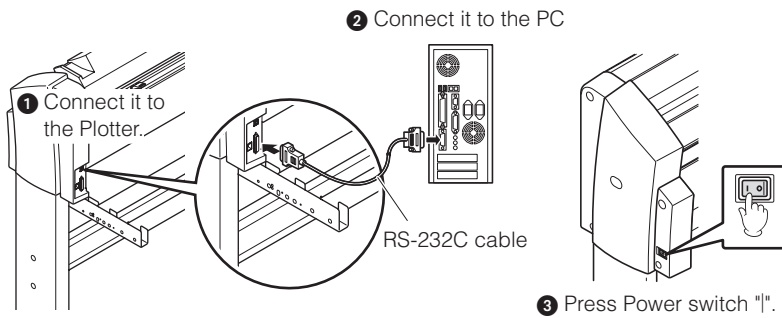
3 Check the machine for RS-232C setting.

4 Select the Interface.
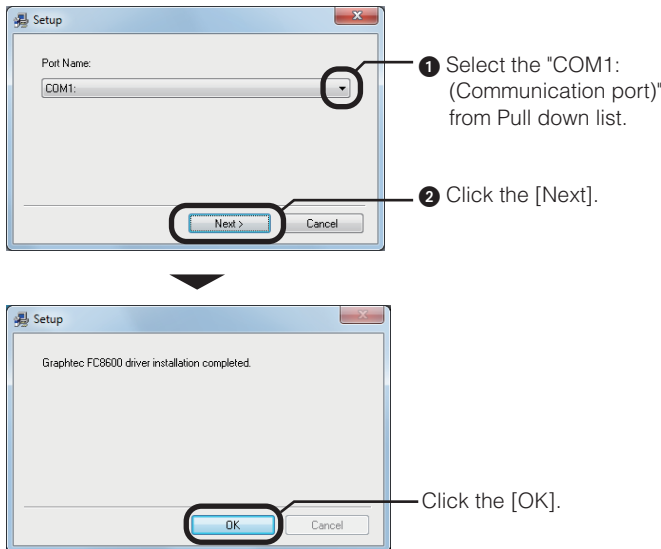
Setting the port of PC

When RS-232C is used to connect, the port setting for between PC and this machine should be matched. For the port setting with PC, see Help in Windows.

Setup

Port Name:
COM1:

❶ Select the "COM1: (Communication port)" from Pull down list.

Next >   Cancel

❷ Click the [Next].

Setup

Graphtec FC8600 driver installation completed.

OK   Cancel
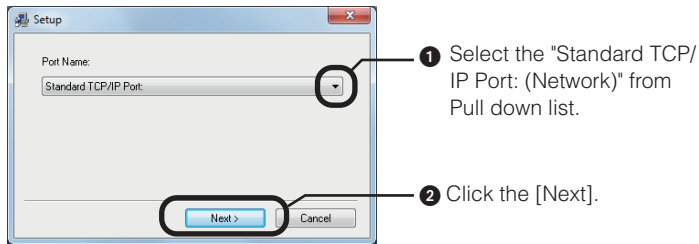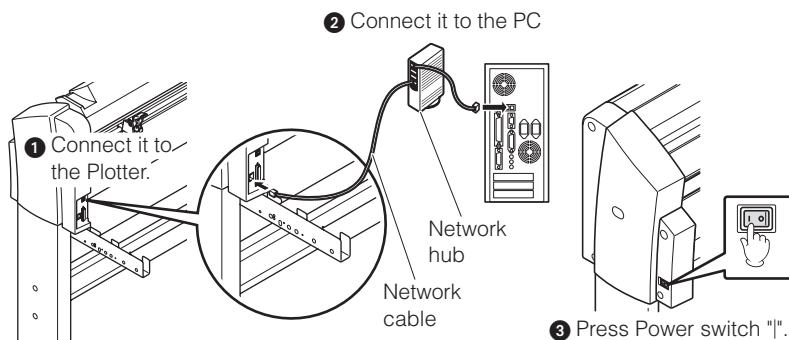
Click the [OK].

When normally installed

"Start" → "Control panel" → "Hardware and Sound" → "Graphtec FC8600" appears on "Devices and Printer". (For Windows 7)

4. Installing the Graphtec Studio

1 Click the [Setup Graphtec Studio] on the "Start" screen of Installer.

For the Macintosh

See User's Manual contained in each language folder inside attached DVD-ROM.

2 Operate according to the instruction in the displayed screen.

Click the [Next].

Click the [Next].

Click the [Install].

Click the [Finish].
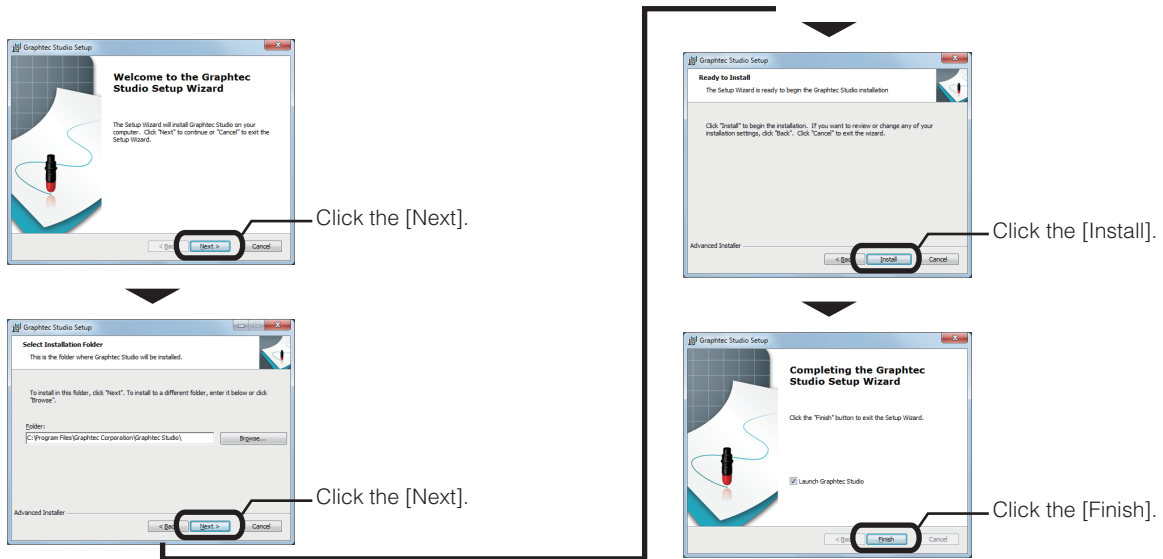
5. Installing the Cutting Master 3

1 If you use Illustrator or CorelDRAW, click the [Setup Cutting Master 3] on the "Start" screen of Installer.

2 Operate according to the instruction in the displayed screen.

Select the "Setup Cutting Master 3".

Click the [Next].

Click the [Next].

When Illustrator or CorelDRAW is not used

No need to install

For the Macintosh

See User's Manual contained in each language folder inside attached DVD-ROM.

Click the [Install].

Click the [Finish].
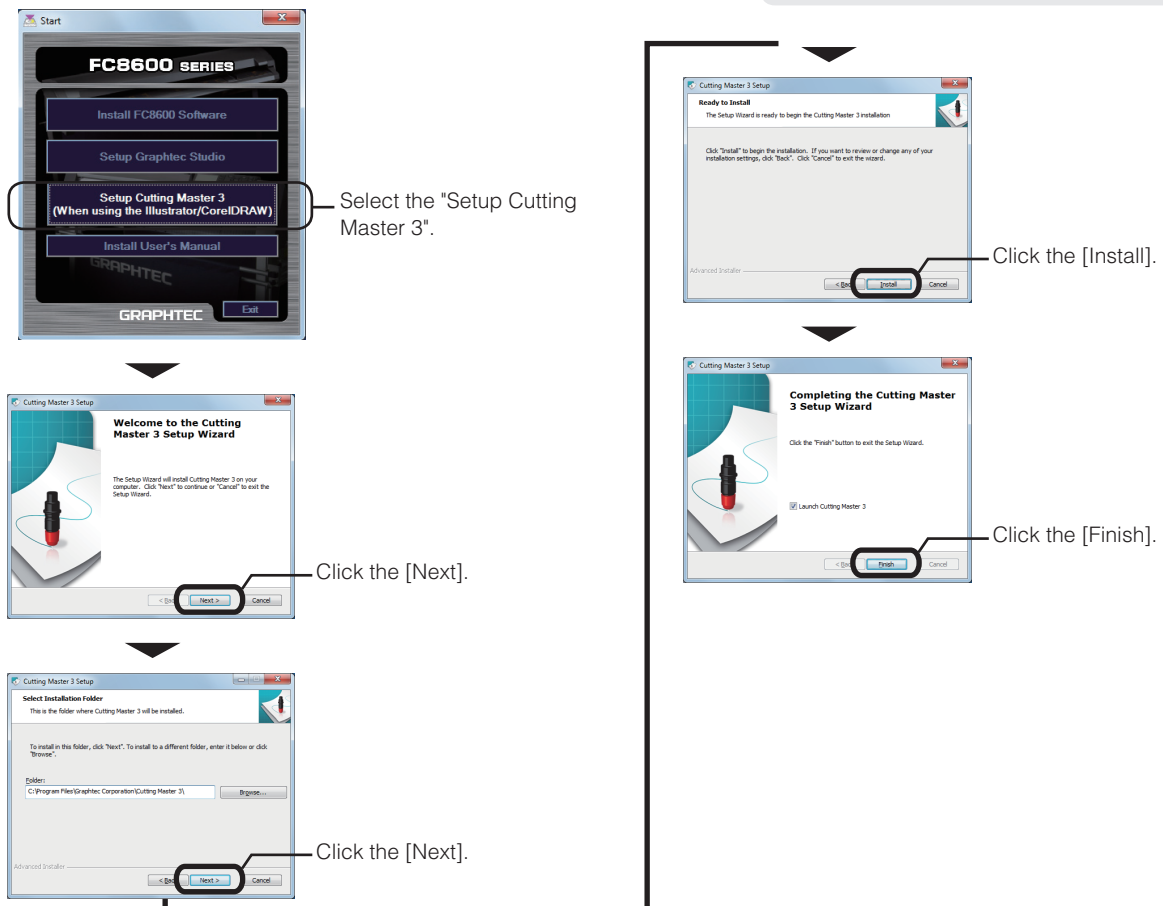
6. Installing the User's Manual

1 Click the [Install User's Manual] on the "Start" screen of Installer.

2 Operate according to the instruction in the displayed screen.

Select the "Install User's Manual".

Click [Next].

Click [Finish].

The installed User`s manual is registered in Start menu of Windows.
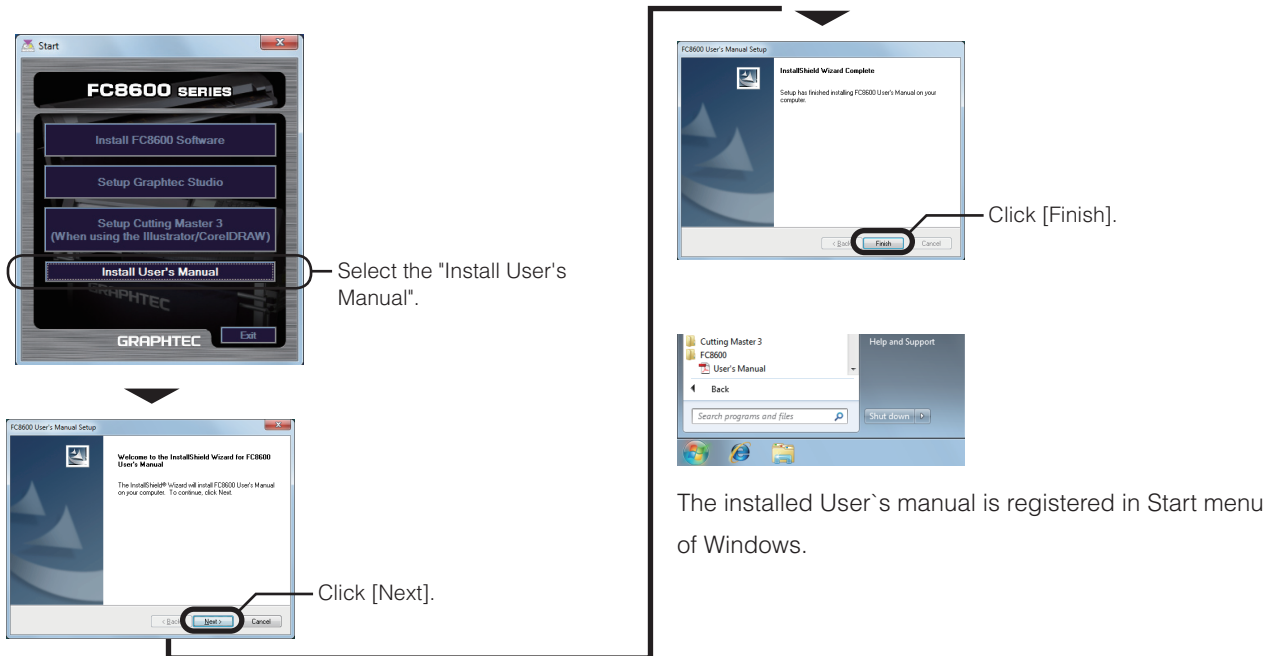
Setting up the Plotter main unit

1. Setting the media (paper)

For the FC8600, the roll media and sheet media can be used. The feeding method includes rear loading (feeding from rear side) and front loading (feeding from front side). Select it depending on the assembled way of Plotter.

If the roll media is used

Explained here is the operation method that is used for rear loading. For use in front loading, see the column shown at right.

Media

The setup methods vary depending on the media type, width and loading method. See the page stated in the "Next procedure" of the following conditions table.

Media type	Media width	Loading method	Next procedure
Roll media	160 to 540mm	F/R	P.18
	540mm or over	F/R	P.19
Sheet media	100 to 160mm	F/R	P.19
	160mm or over	F/R	P.19

1 Lower the Media set lever to raise the push rollers.

Media sensor

Push roller

Media set lever

For front loading

Media set lever

The Stock tray is mounted at front side.

```
1:Condition No. 1    G
  CB09U+0 S30 F14
    LOAD MEDIA!
1SELECT USER        P
2VIEW               1
3HOME
ECONDITION No.
```

Once the Media set lever is lowered, "LOAD MEDIA!" appears on LCD.

2 Insert the media through the bottom of push roller.

Raise the Media lock, (①), put the roll media so that the extracted portion faces up (②), and extract the media to such a degree that it covers the top of media sensor. (③)

* Cutting media should be placed above media censor at any time.

Media lock

Media sensor
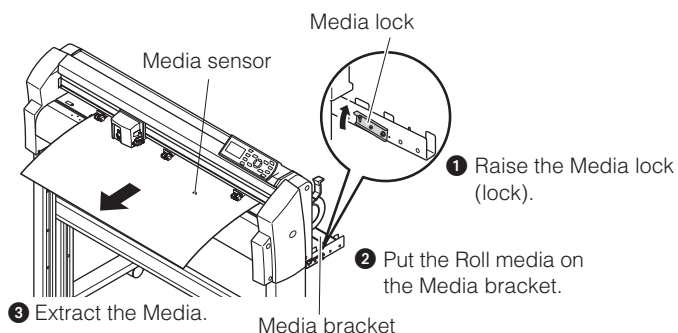
① Raise the Media lock (lock).

② Put the Roll media on the Media bracket.

③ Extract the Media.

Media bracket

For front loading
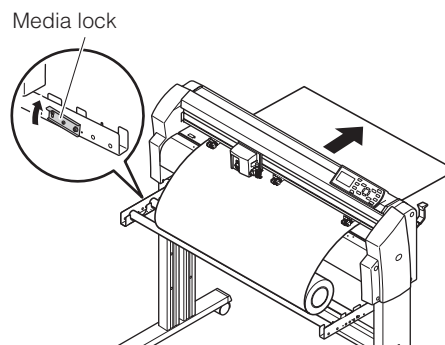
Media lock

Media lock

A stopper, which is used to prevent the stock rollers from rotating when setting the roll media. The media lock ensures that the media is pulled straight out from the roll.

When the media width is 160 to 540 mm

3 Set the positions of two push rollers.

Push both ends of media so that it comes over the media sensor, and set the push rollers so that they comes over the grit rollers. (①) Move the push rollers, that are not used, to the Standby position. (②)

Push roller

Push roller

Media

Grit roller   Media sensor
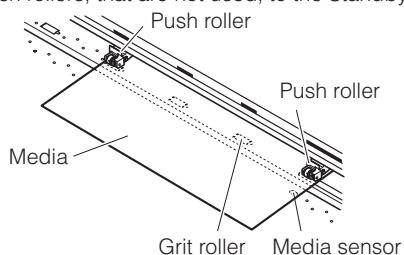
After setting, go to the procedure 4.

① Position of Push roller

For the adjustment of Push roller position, see "Aligning the Push Roller" in FC8600 User's Manual.

② Standby position

For the standby position, see "Standby of Push Roller" in FC8600 User's Manual.

Standby position

3 Set the positions of three push rollers.

Push both ends and center of the media so that it comes over the media sensor, and set the push rollers so that they comes over the grit rollers. (❶) Move the push rollers, that are not used, to the Standby position. (❷)

Push roller

Media

Grit roller   Media sensor

4 Take up the slack of roll media, and fix it with the Push rollers.

Media set lever
❷ Raise the Media set lever.

❶ Pull the edge to take up the slack.
❸ Lower the Media lock (Cancel).

```
SELECT
1 ROLL-1 REAR SET
2 ROLL-2 REAR SET
3 SHEET
```

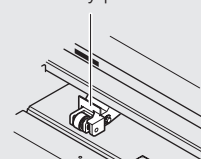The MEDIA FEEDING METHOD SELECTION screen appears.

1 Lower the media set lever to raise the Push rollers. (See "If the roll media is used".)

2 Insert the media through the bottom of Push roller. (See "If the roll media is used".)

3 Set the positions of two Push rollers.

Push both ends of media so that it comes over the top of Media sensor, and position the Push rollers while the left edge of grit roller is being set as the starting point so that the Push roller come over the lengthy grit rollers at right edge. (❶) Move the Push rollers, that are not used, to the Standby position. (❷)

Origin point
Push roller

Media sensor
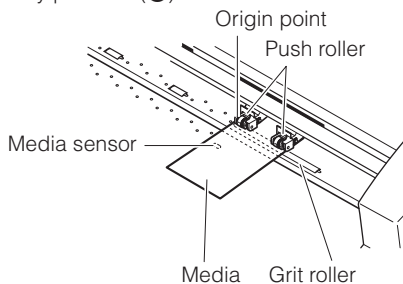
Media   Grit roller

❶ Set the Media and Push rollers on the lengthy Grit roller.

❷ Move away the Push roller that is not used.

---

❶ Position of Push roller

For the adjustment of Push roller position, see "Aligning the Push Roller" in FC8600 User's Manual. P.2-13

❷ Standby position

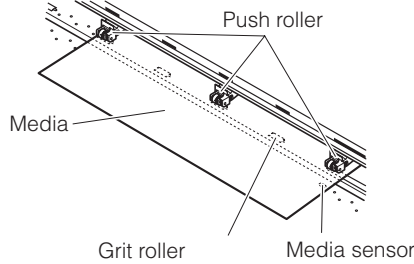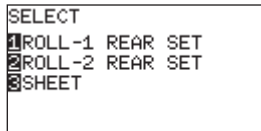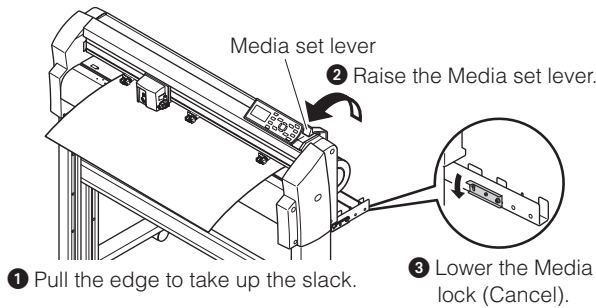For the standby position, see "Standby of Push Roller" in FC8600 User's Manual. P.2-13

Switching the pressure of push rollers

When you cut with 3 or more push rollers, switch the center push roller .Refer to FC8600 user`s manual. P.2-13

For front loading

Media lock

Media set lever

❶ Position of Push roller

For the adjustment of Push roller position, see "Aligning the Push Roller" in FC8600 User's Manual. P.2-13

❷ Standby position

For the standby position, see "Standby of Push Roller" in FC8600 User's Manual. P.2-13

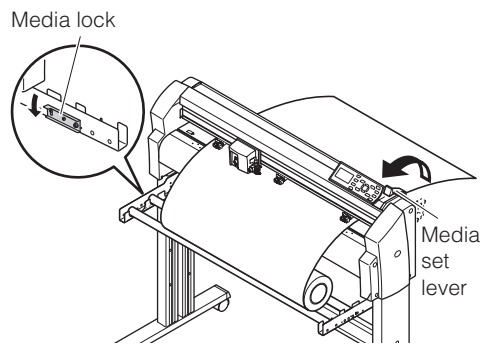**When the media width exceeds 161mm**

See "If the roll media is used".

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4 Take up the slack of roll media, and fix it with the Push rollers. (See "If the roll media is used".)

2. Set the media type into the Plotter.

Set the media type into the Plotter depending on the preset media.

1 Select the type of the loaded media.

Use the keys numbered [1] to [4] of Control panel to select.

Roll media	Plot starting with the edge of media.	[1]
	Plot starting with the preset position.	[2]
Sheet media		[3]
When similar media is reset		[4]

Once the media is set, the next screen appears.

```
SELECT
1 ROLL-1 REAR SET
2 ROLL-2 REAR SET
3 SHEET
```

The MEDIA FEEDING METHOD SELECTION screen appears.

To change the loading method

It is set to rear loading in the initial setting. If setup was made according to Front loading, change the loading method. For the change of loading method, see "Setting Feeding Method" in FC8600 User's Manual. P.2-19

Display of "CONTINUE"

Depending on the status of Plotter, the fourth option "CONTINUE" may appear.

```
SELECT
1 ROLL-1 REAR SET
2 ROLL-2 REAR SET
3 SHEET
4 CONTINUE
```

To reset the similar media and to continue the same setting as is during plotting, select the "CONTINUE". It appears when Media set lever is raised/lowered after setting the media.

2 Wait until the Plotter detects the media size and setting completes.

Once completed, the next screen appears.

```
1:Condition No. 1        G
  CB09U+0 S30 F14
        READY
1 SELECT USER           P
2 VIEW                  1
3 HOME
E CONDITION No.
```

"READY" appears.
This screen is called as "Ready status".

Ready status

The "READY" appears on LCD when PC data receiving enabling status is achieved in Plotter.
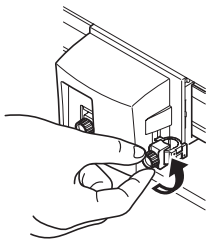
Default screen

When power source of main unit is turned on, the screen after version displayed is called "DEFAULT SCREEN".

3. Attaching the Tool

Attach a tool (cutter plunger, plotter pen) to the Plotter. It is explained here using cutter plunger as an example.
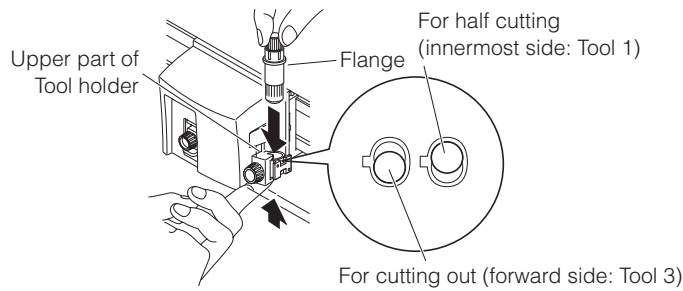
1 Loosen the Tool holder screw.

⚠CAUTION

Do not touch the Tool edge when power is turned on or during operation.

② Attach the tool on the Tool holder.

While pushing the Tool holder in the upward direction, push the tool all the way into the holder until its flange contacts the upper part of the Tool holder.

Upper part of Tool holder

Flange

For half cutting (innermost side: Tool 1)

For cutting out (forward side: Tool 3)

③ Fix the Tool.

Make sure that the Tool bracket is engaged on the tool's flange, and then tighten the screw.

Flange

Bracket to hold tool
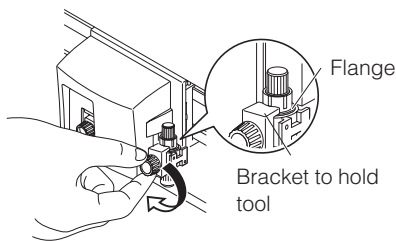
⚠CAUTION

When pushing the Tool holder with your fingers, the blade tip may be protruding. Take care not to cut your fingers.

Half cutting and Cutting out

The cutting operation is different depending on the position of Tool holder where the Tool is inserted. Mainly, the forward side is used for Cutting out, and innermost side is for Half cutting.

For Cutting out and Half cutting, see "Attaching a Tool" in FC8600 User's Manual. 📖 P.2-4

⚠CAUTION

Do not over tighten the screw during fixing. When the screw is loosened and disconnected, connect it again.

The pouncing pen (option) should be connected on the Tool 1 by all means.

4. Note on use when you mount the tool on the FC8600

The tool may be tilted when mounted.
In this case, please follow right procedure to mount the tool correctly.
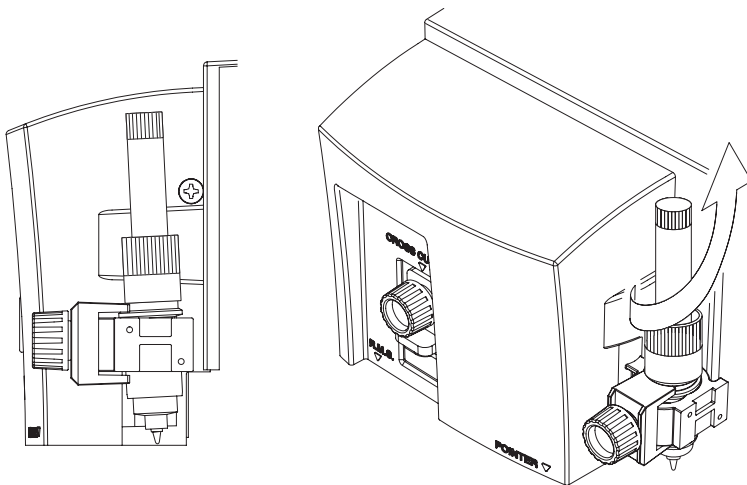
① Screw the tool holder screwloosely.

② Pull up the tool while turnit one-quarter to mount it vertically.

③ Tighten the tool holder screw after the tool is mounted vertically

5. Tool adjustment and test cutting

After setting the Tool/Speed/Force/Acceleration, make test cutting, and repeat until optimal condition is achieved.

1 Press the [CONDITION] key in the Default screen.

```
          ▲        1/3
1Condition No. 1
2TOOL  : CB09U+0
3SPEED : 30 cm/s
4FORCE : 14
          ▼
CUT TEST    ◀△ ▶△△△
```

CONDITION screen (1/3) appears.

> **⚠ CAUTION**
>
> Do not touch the Tool edge when power is turned on or during operation.

2 Set the Tool conditions (Tool, Speed, Force, Acceleration).
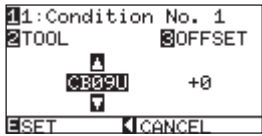
```
1 1:Condition No. 1
2TOOL       3OFFSET
          ▲
        CB09U    +0
          ▼
ESET      ◀CANCEL
```
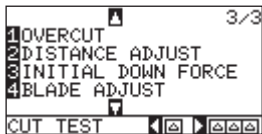
eg.) Screen for Tool setting

Press the [ENTER].

> **Setting the Tool conditions**
>
> For detailed setting methods of each plotting condition, see "Selecting Tool conditions" in FC8600 User's Manual. 📖 P.2-24

To make 1 cut with set value

3 Make test cutting for one piece while Tool conditions are being set.

```
          ▲        3/3
1OVERCUT
2DISTANCE ADJUST
3INITIAL DOWN FORCE
4BLADE ADJUST
          ▼
CUT TEST    ◀△ ▶△△△
```

CONDITION screen (1/3) appears.

▼

❶ Press the POSITION [◀] key.

```
    ▲▼◀▶FE
USE THE POSITION KEY
TO MOVE THE TOOL AND
THEN PRESS ENTER.
4CANCEL
```

▼

❷ Press the POSITION (▲ ▼ ◀ ▶) key so that the Tool carriage moves to the location you wish to perform the test cutting.

Tool carriage

▼
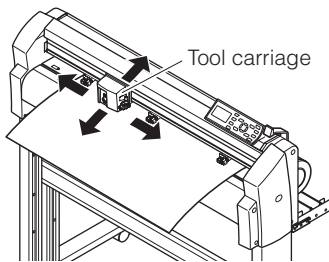
Press the [ENTER] key.

To make 3 cuts with set value and ±1 of set value

3 Make test cutting for three pieces while Tool conditions are being set.

```
          ▲        1/3
1Condition No. 1
2TOOL  : CB09U+0
3SPEED : 30 cm/s
4FORCE : 14
          ▼
CUT TEST    ◀△ ▶△△△
```

CONDITION screen (1/3) appears.

❶ Press the POSITION [▶] key.

```
 CUT TEST
1FORCE
2CUTTER OFFSET

4CANCEL
◄▶▲▼F POSITION KEY
```
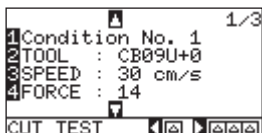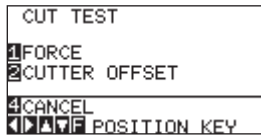CUT TEST screen appears.

❷ Press the POSITION (▲ ▼ ◄ ▶) key so that the Tool carriage moves to the location you wish to perform the test cutting. (See the case when test cutting is made for the preset value or one piece)

❸ Press the [1] key (FORCE).
Three cut test patterns, where the FORCE increased/decreased by 1 each time is added, will be cut with a focus on the current Force.

-1　　Set value　　+1

❹ Press the [ENTER] key after completion.
Go back to the TEST CUT MENU screen.

❺ Press the [2] key (CUTTER OFFSET).
Three cut test patterns, where the Offset value increased/decreased by 1 each time is added, will be cut with a focus on the current Offset value.

❻ Press the [ENTER] key.

4 Check if the cut test is appropriate.

Rough standard of half cutting
Peel off the corners of the triangle(s). Ideally, only slight traces of the cutter blade should remain on the backing sheet. If the backing sheet has been cut through, either the FORCE setting is too high or the cutter-blade tip is extended too far. If the backing sheet shows only a few traces of the cutter blade, either the FORCE setting is too low or the cutter blade tip is not sufficiently extended.

Rough standard of cutting out
Ideally, the backing sheet should be cut out completely. If the backing sheet is not completely cut, either the FORCE setting is too low or the cutter blade tip is not sufficiently extended.

Rough standard of Plotting Pen
Adjust the speed so there will be no faint lines. To prolong the pen life, set the FORCE to the lowest setting.

5 Repeat the setting and test cutting until optimal cut is achieved.

Checking methods for offset
Check if the offset value is set correctly with reference to the following.

Not enough adjustment. Increase the offset value.

Optimal offset value.
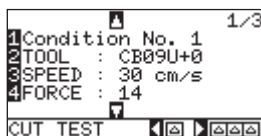

Too much adjustment. Decrease the offset value.

Blade adjusting function

To set the optimal blade length, test cutting should be done several times. This function enables the blade length to be easily adjusted.

1 Control the panel according to the following procedures.

Press the [CONDITION] key in the Default screen.

```
             ▲      1/3
1Condition No. 1
2TOOL : CB09U+0
3SPEED : 30 cm/s
4FORCE : 14
             ▼
CUT TEST  ◄▣ ▶▣▣▣
```
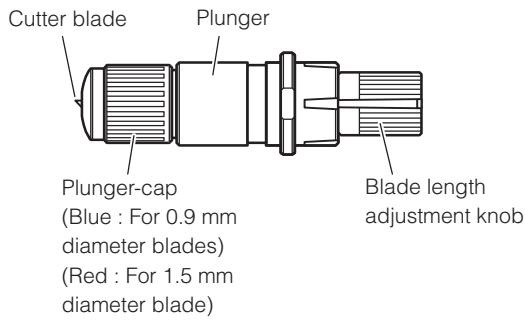CONDITION screen (1/3) appears.

Press the POSITION [▲] key.

Press the [4] key (BLADE ADJUST).

⚠CAUTION

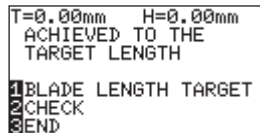Do not touch the Tool edge when power is turned on or during operation.

Set the cutter plunger in a tool 1.

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2 Turn the Blade length adjustment knob of Cutter plunger to the left to fully retract the blade.

Cutter blade   Plunger

Plunger-cap
(Blue : For 0.9 mm diameter blades)
(Red : For 1.5 mm diameter blade)

Blade length adjustment knob

> ⚠**CAUTION**
>
> To avoid bodily injury, handle cutter blades with care.
>
> **Blade length adjustment knob**
>
> Adjust the blade length by turning the Blade length adjustment knob. To protrude the blade, turn in the direction of "A". To retract the blade, turn in the direction of "B". When the knob is turned by one scale unit, the blade moves approximately 0.1 mm. One full turn of the knob moves the blade approximately 0.5 mm.
>
> Cutter blade moves approximately 0.1 mm turning one scale unit
>
>
>
> B   A   Scale   Scale

3 Control the panel according to the following procedures.

Press the [ENTER] key.

```
T=0.00mm   H=0.00mm
 ACHIEVED TO THE
 TARGET LENGTH

1BLADE LENGTH TARGET
2CHECK
3END
```

BLADE LENGTH setting screen appears.

▼

Press the [1] key (BLADE LENGTH TARGET).

```
T=0.0mm    H=0.0mm
TARGET
        ▲
      0.00mm
        ▼
◄PREVIOUS
```

BLADE LENGTH TARGET screen appears.

> ⚠**CAUTION**
>
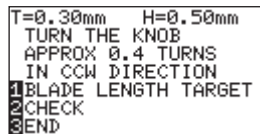> When the [1] key (BLADE LENGTH TARGET) is pressed, the Tool carriage will start moving, so take care not to cut your fingers.

▼

Press the POSITION [▲ ▼] key to increase or decrease the setting value.

▼

It will get set and return to BLADE LENGTH setting screen by pressing the POSITION [◄] key (PREVIOUS).

▼

Press the [2] key (CHECK).

```
T=0.30mm   H=0.50mm
 TURN THE KNOB
 APPROX 0.4 TURNS
 IN CCW DIRECTION
1BLADE LENGTH TARGET
2CHECK
3END
```

The amount and direction for turning the adjustment knob are displayed.

> ⚠**CAUTION**
>
> When the [2] key (CHECK) is pressed, the Tool carriage will start moving, so take care not to cut your fingers.

4 Turn the Blade length adjustment knob to adjust the cutter blade length.
Current blade length is displayed by pressing the [2] key (CHECK), so adjust the blade length until it matches the thickness of the media.
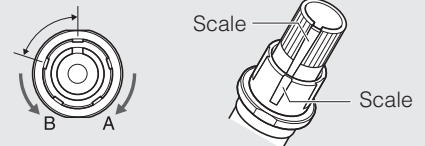
Press the [3] key (END).

▼

Press the [CONDITION] key.

GRAPHTEC