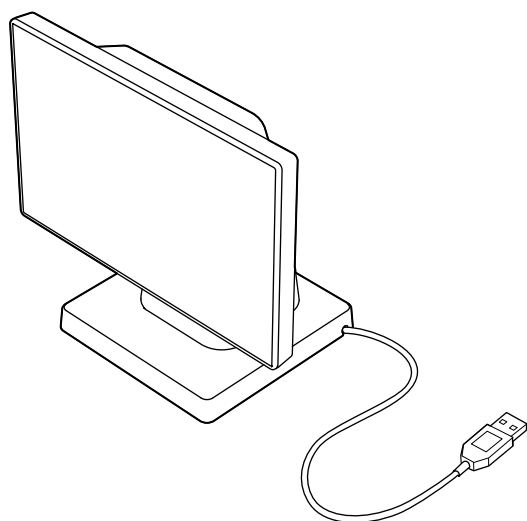


DM-D70

Technical Reference Guide



Product Overview

Describes features of the product.

Handling

Describes basic procedure for handling the product.

Installing the Product in Various Ways

Describes how to install the product in portrait orientation and how to install with an optional or commercially-available product.

Application Development Information

Provides information for controlling the product and for developing application software.

Appendix

Describes product specifications and character code tables.

Cautions

- No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of Seiko Epson Corporation.
- The contents of this manual are subject to change without notice. Please contact us for the latest information.
- While every precaution has been taken in the preparation of this manual, Seiko Epson Corporation assumes no responsibility for errors or omissions.
- Neither is any liability assumed for damages resulting from the use of the information contained herein.
- Neither Seiko Epson Corporation nor its affiliates shall be liable to the purchaser of this product or third parties for damages, losses, costs, or expenses incurred by purchaser or third parties as a result of: accident, misuse, or abuse of this product or unauthorized modifications, repairs, or alterations to this product, or failure to strictly comply with Seiko Epson Corporation's operating and maintenance instructions.
- Seiko Epson Corporation shall not be liable against any damages or problems arising from the use of any options or any consumable products other than those designated as Original Epson Products or Epson Approved Products by Seiko Epson Corporation.

Trademarks

Microsoft and Windows are registered trademarks of Microsoft Corporation in the United States and other countries.

The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Seiko Epson Corporation is under license.

IOS is a trademark or registered trademark of Cisco in the U.S. and other countries and is used under license.

iPad is a trademark of Apple Inc.

Android™ is a trademark of Google LLC.

Google Play and Google Play logo are trademarks of Google LLC.

QR Code is a registered trademark of DENSO WAVE INCORPORATED in Japan and other countries.

All other trademarks are the property of their respective owners and used for identification purpose only.

ESC/POS Command System

Epson ESC/POS is a proprietary POS printer command system that includes patented or patent-pending commands. ESC/POS is compatible with most Epson POS printers and displays. ESC/POS is designed to reduce the processing load on the host computer in POS environments. It comprises a set of highly functional and efficient commands and also offers the flexibility to easily make future upgrades.

For Safety

Key to Symbols

The symbols in this manual are identified by their level of importance, as defined below. Read the following carefully before handling the product.

 WARNING	You must follow warnings carefully to avoid serious bodily injury.
 CAUTION	You must follow cautions carefully to avoid the following risks. • Risk of physical injuries • Risk of property damage • Risk of information loss
 CAUTION	Provides information that must be observed to avoid damage to your equipment or a malfunction.
 NOTE	Provides important information and useful tips.

Warnings

 WARNING	❑ Immediately unplug the product when any one of the following problems occurs, and then contact qualified service personnel. Continued use may lead to fire or electric shock. * If the product emits smoke, a strange odor, or unusual noise. * If water or other liquid spills into the product. * If the product is too hot to touch or the case is deformed. ❑ Follow the guidelines below to avoid accidents such as fire, electric shock, or burn. * Do not use aerosol sprayers containing flammable gas inside or around the product. * Do not cover the product with cloth, or place the product in locations subject to high levels of humidity or dust. * Do not allow foreign objects or flammable objects to fall into the product. * Do not touch the inside of the product except where mentioned in the manual. * Do not use the product with any power supply or voltage other than the ones specified. * Do not connect cables in ways other than those mentioned in the manual. * Never disassemble or modify the product. * Do not use a cable covered with dust or foreign matters. * Do not use a damaged cable. * Never insert or disconnect cables with wet hands.
---	---

Cautions

 CAUTION	❑ Follow the guidelines below to avoid bodily injury and malfunction. * Set up the product on a firm, stable, horizontal surface. * Do not place heavy objects on top of the product. Never stand or lean on the product. * Never attempt to repair the product yourself. ❑ To ensure safety, unplug this product before leaving it unused for an extended period. When transporting the product, make sure to disconnect all cables in advance.
---	---

Restriction of Use

When this product is used for applications requiring high reliability/safety, such as transportation devices related to aviation, rail, marine, automotive, etc.; disaster prevention devices; various safety devices, etc.; or functional/precision devices, etc.; you should use this product only after giving consideration to including fail-safes and redundancies into your design to maintain safety and total system reliability.

Because this product was not intended for use in applications requiring extremely high reliability/safety, such as aerospace equipment, main communication equipment, nuclear power control equipment, or medical equipment related to direct medical care, etc., please make your own judgment on this product's suitability after a full evaluation.

About this Manual

Aim of the Manual

This manual provides information for development engineers, which are necessary for developing, designing, and installing POS systems.

Manual Contents

The manual is made up of the following sections:

- Chapter 1 [Product Overview](#)
- Chapter 2 [Handling](#)
- Chapter 3 [Installing the Product in Various Ways](#)
- Chapter 4 [Application Development Information](#)
- Chapter 5 [Appendix](#)

Contents

■ For Safety	3
Key to Symbols.....	3
Warnings	3
Cautions.....	3
■ Restriction of Use	4
■ About this Manual	5
Aim of the Manual	5
Manual Contents	5
■ Contents.....	6

Product Overview 8

■ Features	8
■ Product Configurations	9
Included items.....	9
Optional Kits	9
Ferrite Core	10
■ Part Names	11

Handling 12

■ Connecting to the Printer	12
When Connecting to TM-m30II (For DM-D70 that came with ferrite core).....	13
When Connecting to TM-T88VII (For DM-D70 that came with ferrite core).....	14
■ Connecting to the Computer	15
■ Routing the USB Cable	15
■ Changing the Angle of the Display Unit	16
■ Turning the Power On/Off	16
■ Adjusting the Display Brightness.....	17
■ Cleaning the Outer Case	18
■ Troubleshooting.....	19
Nothing is Displayed on the Screen	19
The Screen Looks Dark when the Display is Attached in Portrait Orientation.....	19

Installing the Product in Various Ways..... 21

■ Changing the Display Orientation to Portrait	21
■ Attaching the Display to a VESA Mount.....	24

■ Attaching the Display to the Optional Kit	26
Attaching the EXTENSION POLE UNIT FOR DM-D70 (DP-70)	26
Attaching the CRANK POLE UNIT FOR TM-T88VI-DT2 (DP-71)	31

Application Development Information..... 36

■ Controlling the Customer Display	36
ePOS-Print XML	36
ePOS-Device XML	36
ESC/POS	37
■ Software.....	38
Development Kit	38
Drivers	38
Utilities	39
Others	39
Download	39
■ Screen Display	40
Display Mode	40
Standard Mode	40
Fixed Column and Row Mode	43
Displaying Character String	44
Displaying QR Code	44
Displaying Graphics Data	45
Storing Graphics Data	45
Available Functions by Display Mode	46
List of Settings	47

Appendix..... 48

■ Configurable Number of Columns and Rows	48
When Installed in Landscape Orientation	48
When Installed in Portrait Orientation	50
■ Supported Printers	52
■ Product Specifications	54
Environmental Specification	56
External Dimensions	57
■ Character Code Tables.....	60
■ Open Source Software Licenses	61

Product Overview

This chapter describes features of the product.

Features

This product is a customer display that can display both text and images. The main features of this product are as follows.

Compact and Offers Installation in Various Ways

- A large screen, 7 inch (800 x 480 pixels), on a compact body
- Both landscape and portrait orientations are available
- The product is USB bus powered.
- Complies with VESA standard (75 x 75mm). A commercially available VESA mount such as a wall bracket or arm stand can be attached.
- To meet various requirements, EXTENSION POLE UNIT FOR DM-D70 and CRANK POLE UNIT FOR TM-T88VI-DT2 are available as an option.

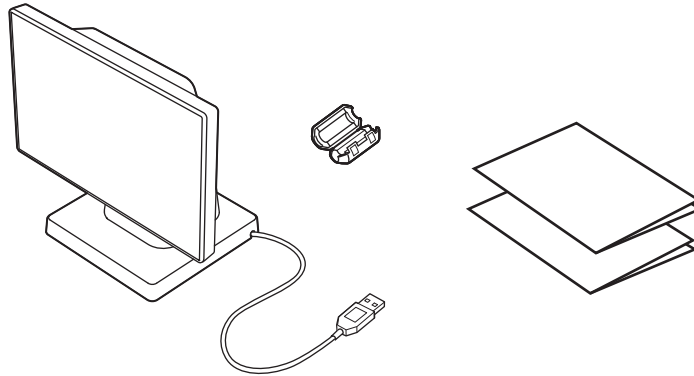
Display

- Easy-to-see large screen
- Images can be displayed in addition to text
- QR code can be displayed
- Text in multiple lines can be displayed
- Can display in 16.2 million colors

Product Configurations

Included items

The following items are included with the product. If any item is damaged or missing, contact qualified service personnel.



- Customer display
- Ferrite core
 ["Ferrite Core" on page 10](#)
- Manuals

Optional Kits

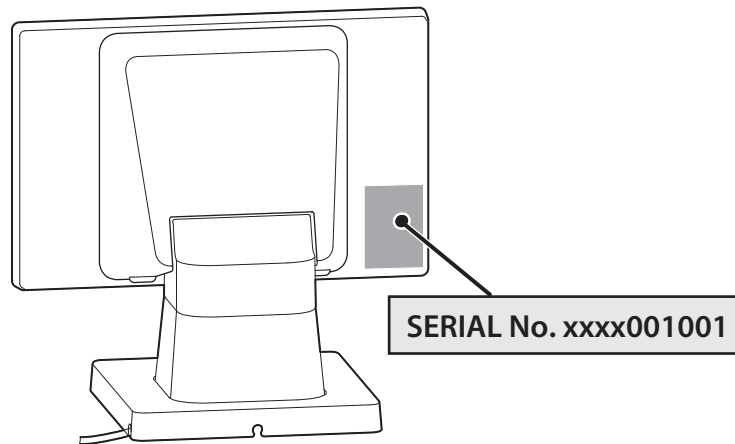
Model number	Description
DP-70	EXTENSION POLE UNIT FOR DM-D70 Extension pole (about 24 cm tall), USB extension cable (about 1.0 m length), Stickers for fixing the product (4 pieces)
DP-71	CRANK POLE UNIT FOR TM-T88VI-DT2 Crank pole, Screws (3 pieces)
OT-UL30	USB extension cable (about 1.0 m length)

Ferrite Core

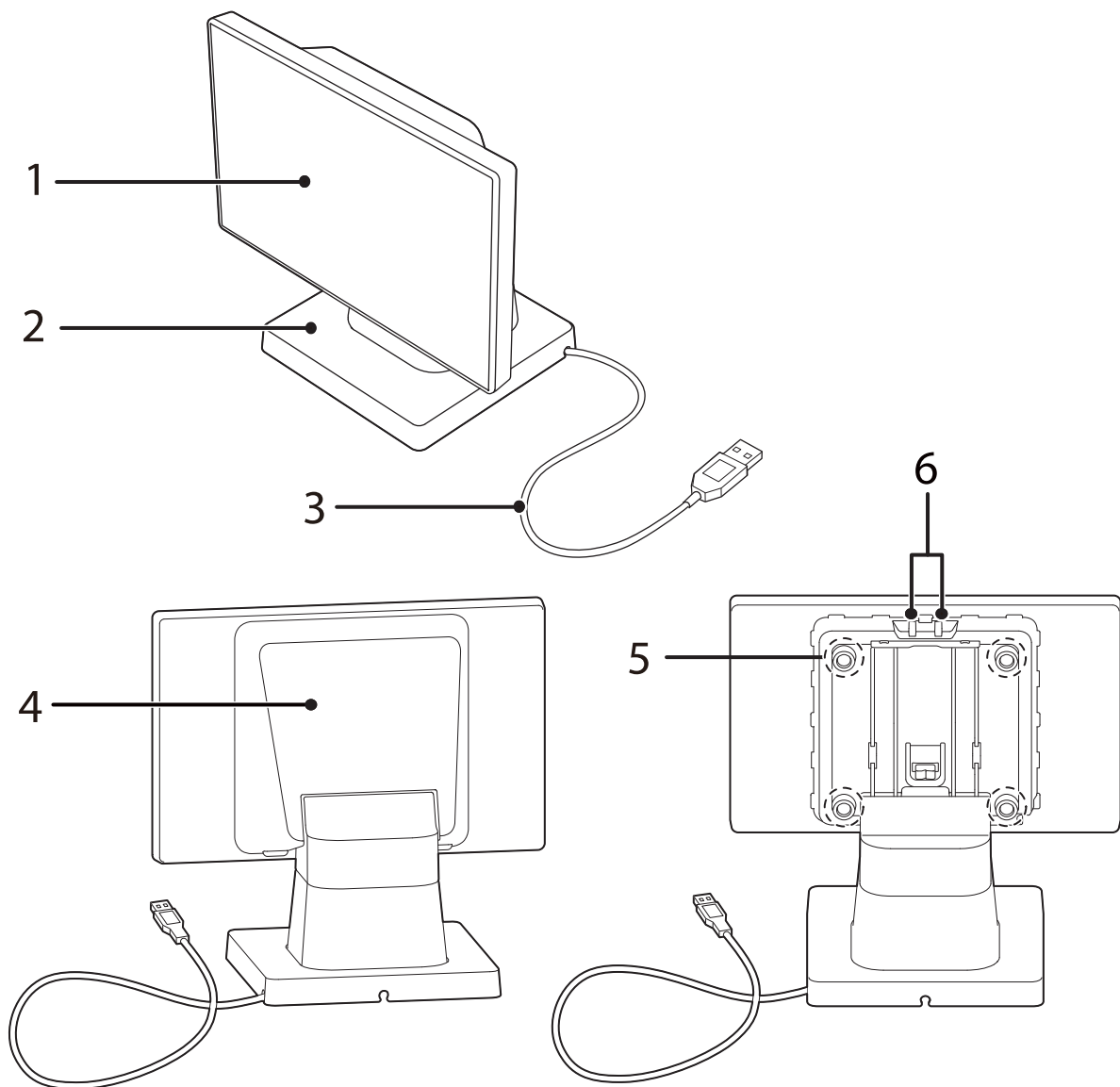
If a ferrite core is included in the product package, use the ferrite core when connecting the product with TM-m30II or TM-T88VII.

☞ ["Connecting to the Printer" on page 12](#)

If the last six digits of the product serial number is 001001 or later, the ferrite core is not included. If so, you do not need to use the ferrite core.



Part Names



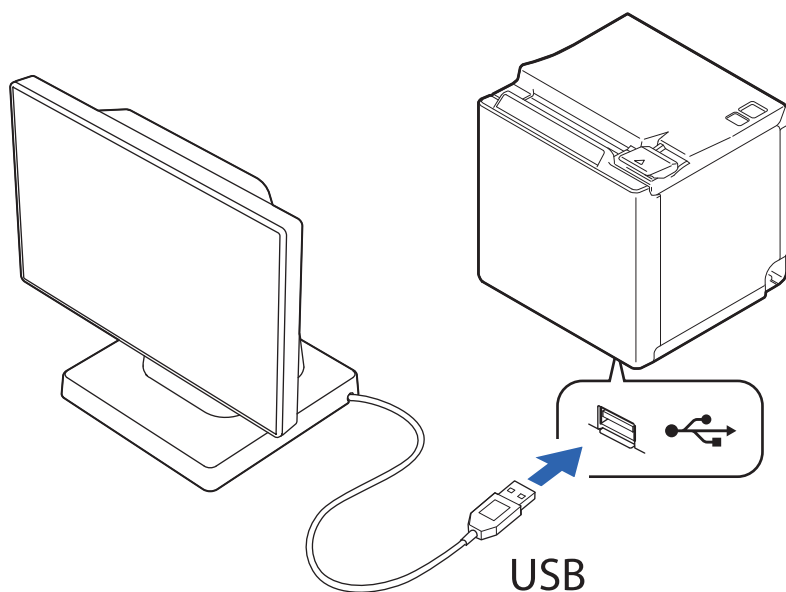
No.	Part name	Description
1	Display	A LCD screen. The display can be tilted forward or back, and to the left or right.
2	Stand	Supports the display unit.
3	USB cable	Use to connect to the printer or a computer.
4	Rear cover	Remove this cover when operating the brightness up/down buttons or when changing the display orientation from landscape to portrait.
5	Screws (4 pieces)	Remove the screws when changing the display orientation from landscape to portrait, or when connecting the display to a VESA mount. The screws can be turned by hand.
6	Brightness up/down buttons	Allows you to adjust the brightness of the display.

Handling

This chapter describes basic procedures for handling the product.

Connecting to the Printer

Connect the USB cable of the customer display to the USB connector on the printer.



Supported printers are listed below. See ["Supported Printers" on page 52](#) for more details.

TM-H6000VI

TM-L100 (Device charging model/Bluetooth model)

TM-m30

TM-m30II

TM-m30II-H

TM-m30II-NT

TM-m30II-S

TM-m30II-SL

TM-m30III

TM-m30III-H

TM-m50

TM-m50II

TM-m50II-H

TM-T70II-DT2

TM-T88VI

TM-T88VI-DT2

TM-T88VI-iHUB

TM-T88VII

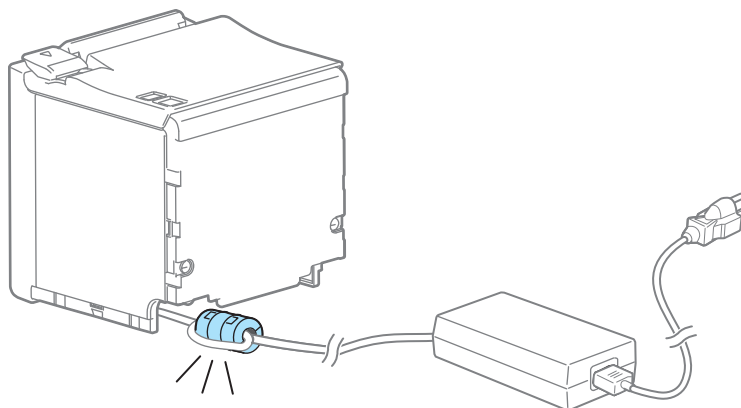
CAUTION

- Make sure to turn the printer off and then connect this product.
- The product cannot be connected to the USB-A Device Charging (iPad 2.1A) connector that is mounted on TM-m30II-H or other printers.
- If you want to extend the USB cable, use the optional USB extension cable (OT-UL30).
- The optional kit, EXTENSION POLE UNIT FOR DM-D70 (DP-70), includes a USB extension cable.
- You can mount this product to TM-m30II-S as a rear display. Refer to TM-m30II-S User's Manual for more details.
<https://support.epson.net/publist/bsredirect.php?code=M001306>
- When connecting to TM-H6000VI, set DIP switch 2-2 on the printer to OFF.

When Connecting to TM-m30II (For DM-D70 that came with ferrite core)

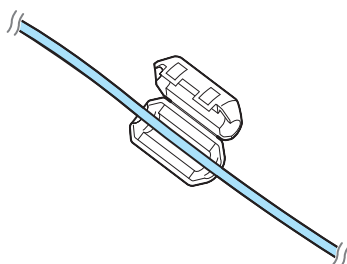
If your DM-D70 came with a ferrite core, and you want to connect the DM-D70 to TM-m30II, attach the ferrite core to the DC cable of the TM-m30II.

Bring the ferrite core as close as possible to TM-m30II.

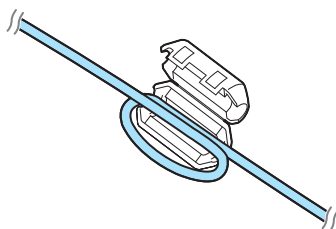


1 Turn off the TM-m30II printer, and disconnect the AC cable of the AC adapter from the power outlet.

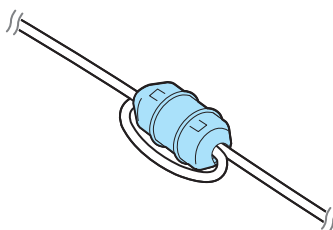
2 Put the DC cable of TM-m30II into the ferrite core.



3 Wrap the cable around the ferrite core once.



4 Close the ferrite core until it clicks.

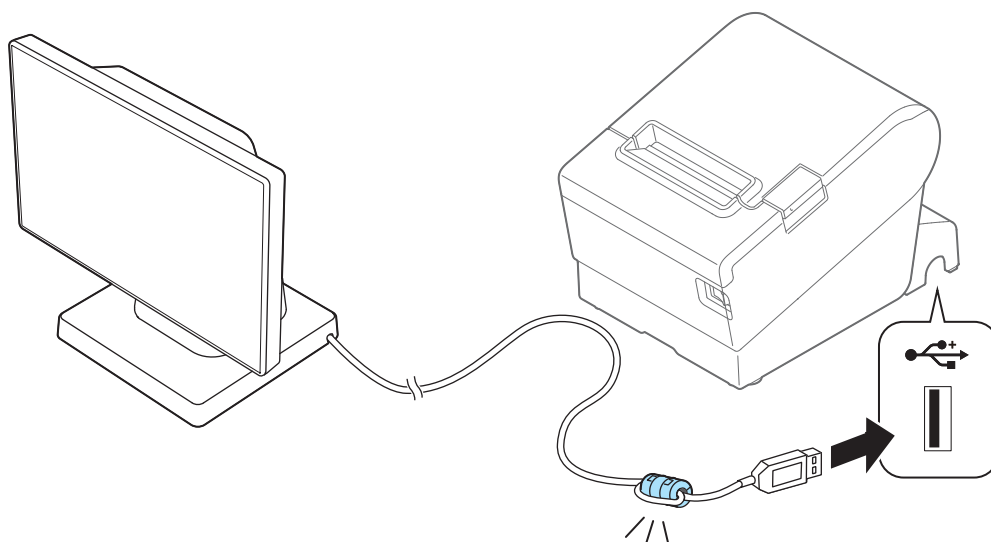


5 Connect the AC cable to a power outlet.

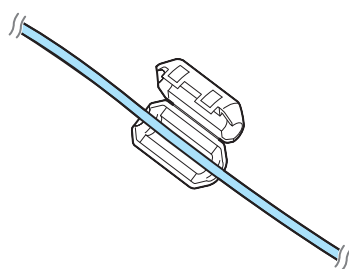
When Connecting to TM-T88VII (For DM-D70 that came with ferrite core)

If your DM-D70 came with a ferrite core, and you want to connect the DM-D70 to TM-T88VII, attach the ferrite core to the USB cable of the DM-D70.

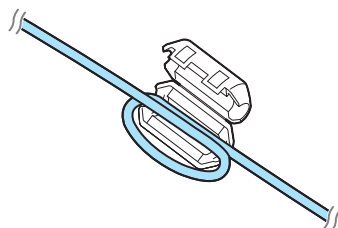
Bring the ferrite core as close as possible to TM-T88VII.



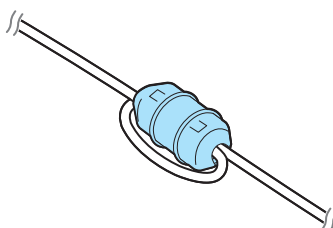
- 1 Put the USB cable of the product into the ferrite core.**



- 2 Wrap the cable around the ferrite core once.**

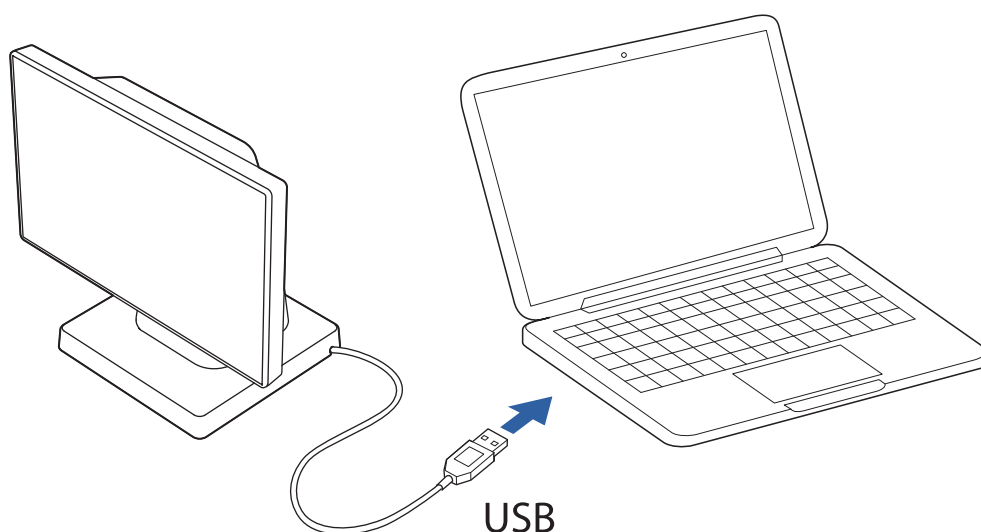


- 3 Close the ferrite core until it clicks.**



Connecting to the Computer

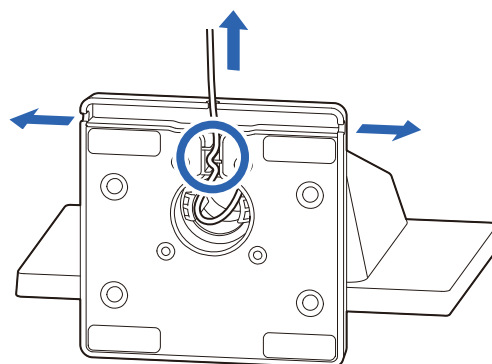
Connect the USB cable of the customer display to the USB connector on the computer.

**CAUTION**

- If you want to extend the USB cable, use the optional USB extension cable (OT-UL30).
- The optional kit, EXTENSION POLE UNIT FOR DM-D70 (DP-70), includes a USB extension cable.

Routing the USB Cable

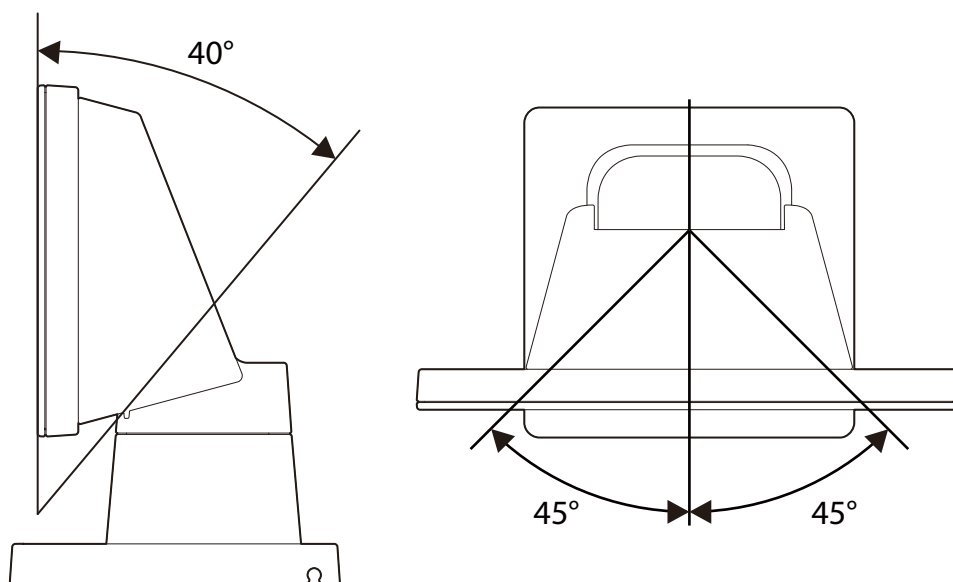
The USB cable can be routed to one of the three directions. Put the USB cable into the groove on the bottom of the stand to secure it.



Changing the Angle of the Display Unit

You can adjust the angle of the display by tilting it forward or back, and to the left or right. Hold the stand with your hand and move the display unit.

It can be tilted up to 40 degrees forward or back and up to 45 degrees to the left or right.

**CAUTION**

Do not attempt to move the display to an angle outside the allowable range. Doing so may cause the display to malfunction.

Turning the Power On/Off

Since this product is bus powered, there is no power switch. The product takes its power from the printer or the computer through the USB cable.

NOTE

- When the product is powered, an EPSON logo is displayed.
- Even when the power LED of the printer is off, the display may stay on if it is still powered through the USB connector.

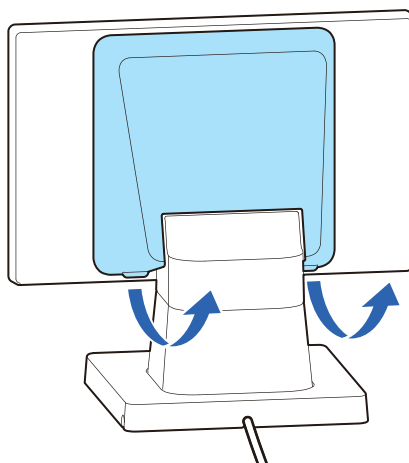
Adjusting the Display Brightness

The brightness of the display can be adjusted by pressing the brightness up/down buttons.

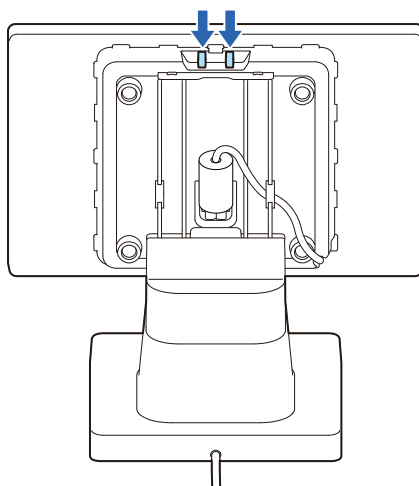
NOTE

It is set to the brightest setting by default.

- 1 Turn on the display by connecting it to the printer or a computer.**
- 2 Remove the rear cover.**



- 3 Press the brightness up/down buttons to adjust the brightness. There are four brightness levels.**



- 4 Attach the rear cover.**

Cleaning the Outer Case

Be sure to disconnect the USB cable of the customer display from the printer or a computer, and then wipe the customer display with a dry cloth or a cloth dampened with a little water.



CAUTION

- Never clean the product with alcohol, benzine, thinner, or other such solvents. Doing so may damage or break the parts made of plastic and rubber.
- Rubbing the LCD screen with too much force using a dry cloth may scratch the surface.

Troubleshooting

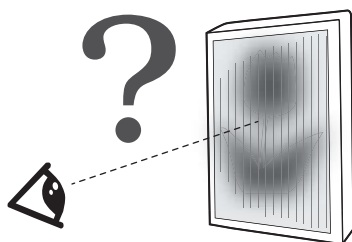
Nothing is Displayed on the Screen

- Check that the USB cable is properly connected to the printer or to the computer.
[☞ "Connecting to the Printer" on page 12](#)
[☞ "Connecting to the Computer" on page 15](#)
- Adjust the brightness of the LCD screen by pressing the brightness up/down buttons.
[☞ "Adjusting the Display Brightness" on page 17](#)

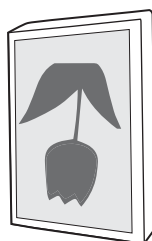
The Screen Looks Dark when the Display is Attached in Portrait Orientation

When the display is attached in portrait orientation, the screen may look dark when viewed from the right or the left, and may look differently when viewed from the opposite side. This is caused by gray scale inversion phenomenon. If that happens, adjust the angle of the display.

However, if you cannot adjust the angle, for example, when you have fixed the display to a VESA mount, follow the procedure below to make the screen appear brighter.



- 1 Remove the display and reattach it to the mount upside down.**
- 2 Check that the screen is bright enough when viewed from an angle actually used. At this step, the screen displays upside down.**



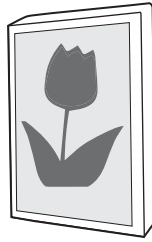
- 3 Download one of the following utilities from the website.**

For customers in North America ☞ <https://www.epson.com/support/>

For customers in other countries or regions ☞ <https://epson.sn>

- DM-D70 Utility (For Windows)
- Epson TM Utility (For Android/iOS)

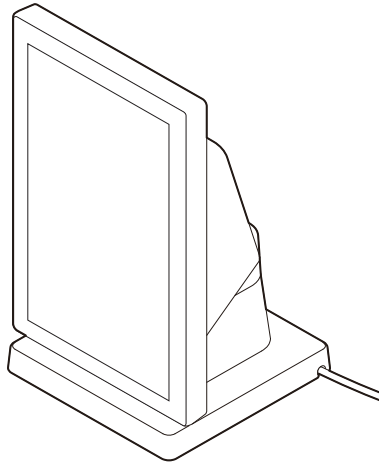
- 4 Start the utility and change [Display Settings] - [Display direction] to [Upside down] to flip the screen vertically.



Installing the Product in Various Ways

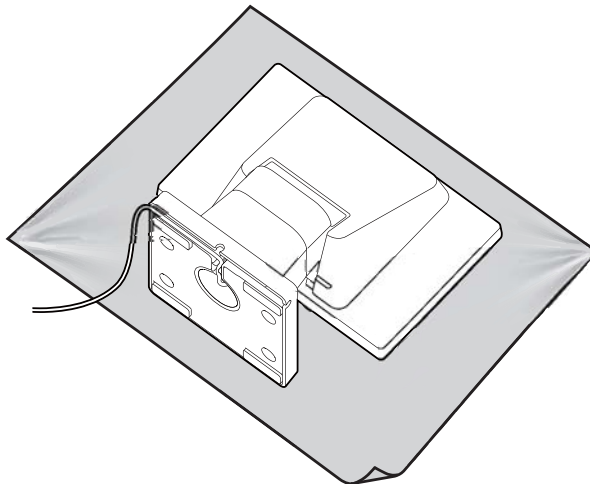
Changing the Display Orientation to Portrait

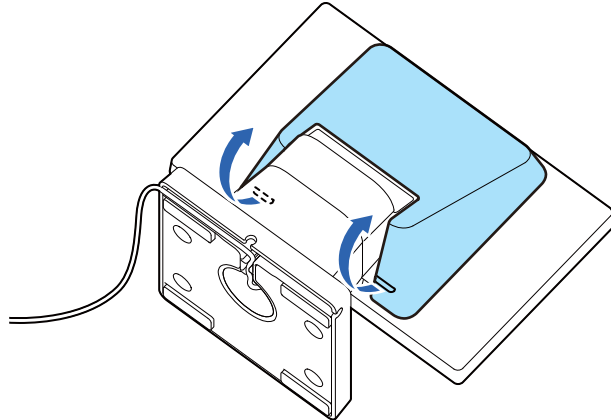
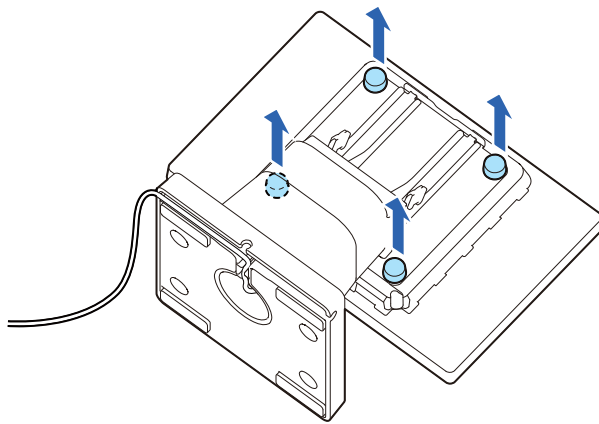
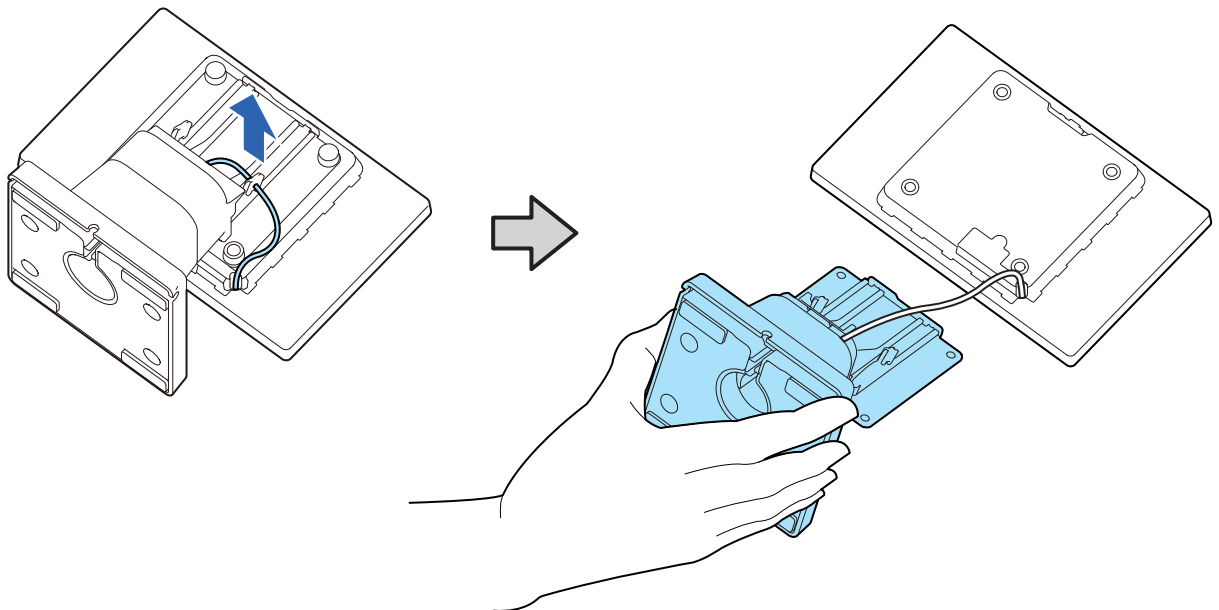
Follow the procedure below to change the display orientation to portrait.

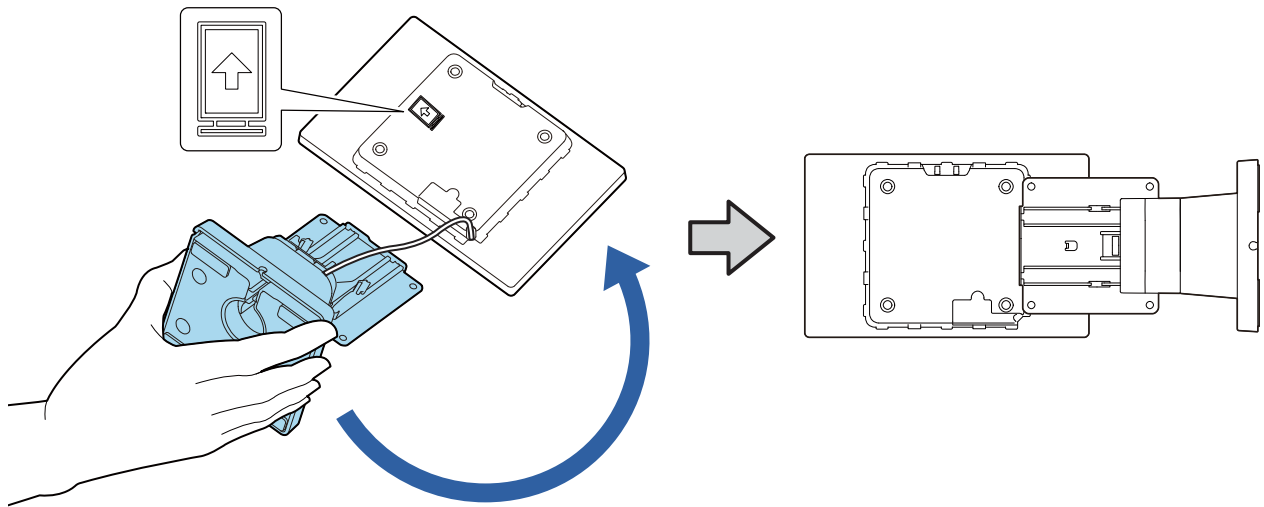
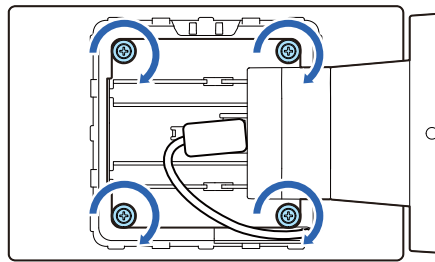
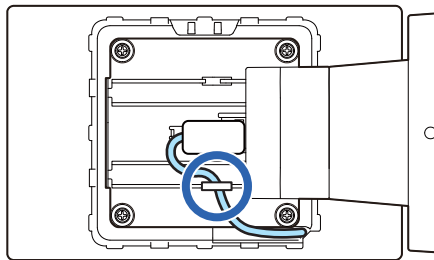
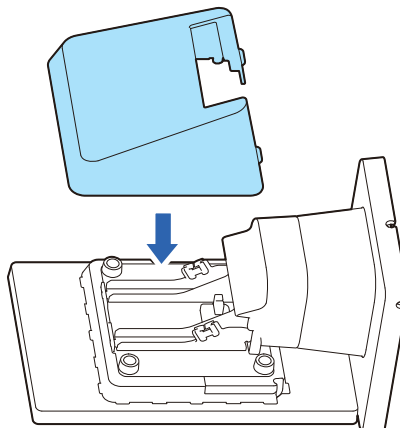
**NOTE**

Change the display orientation to portrait if your application software supports portrait display.

- 1 Place the product screen-side down on a soft cloth or the like.**

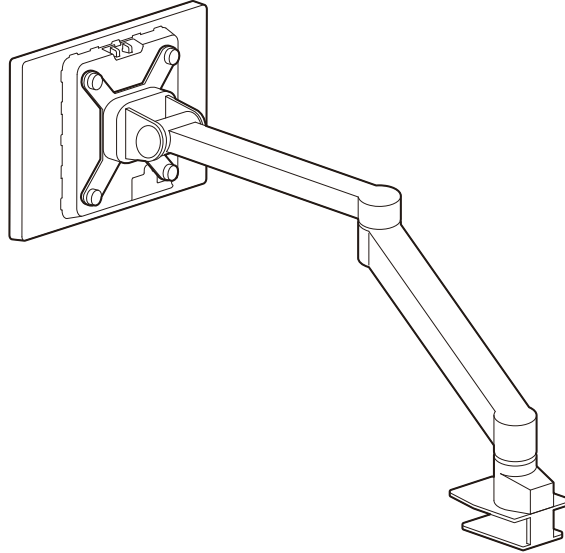


2 Remove the rear cover.**3 Remove the four screws.****4 Release the USB cable from the notch, and then remove the stand.**

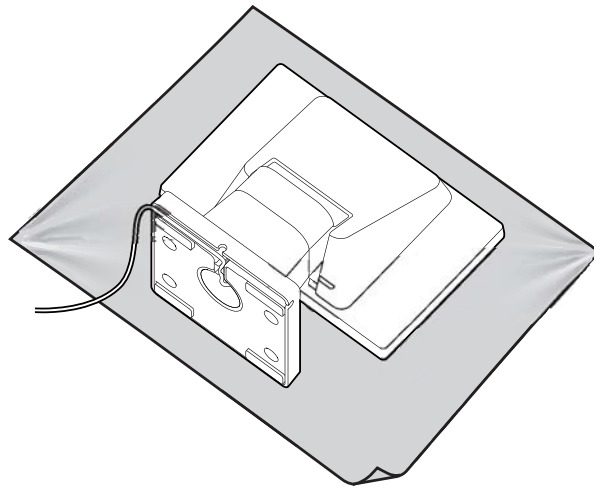
5 Change orientation of the stand referring to the mark on the rear of the display.**6 Secure the stand with the four screws.****7 Route the USB cable as shown below.****8 Attach the rear cover.**

Attaching the Display to a VESA Mount

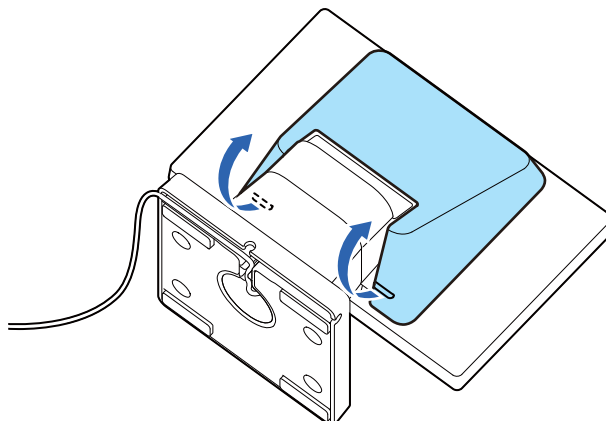
Follow the procedure below to attach the display to a mount such as a wall bracket or arm stand that complies with VESA standard (75 x 75 mm).



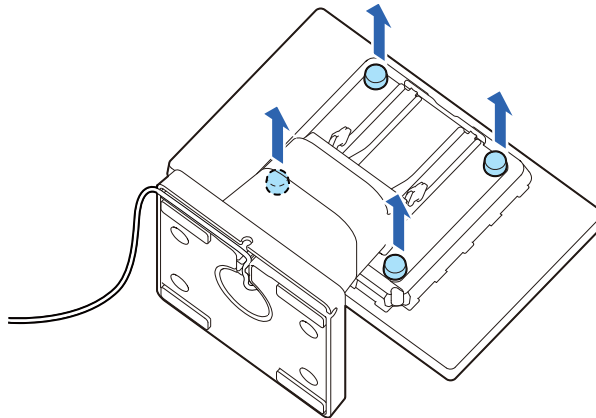
- 1 Place the product screen-side down on a soft cloth or the like.**



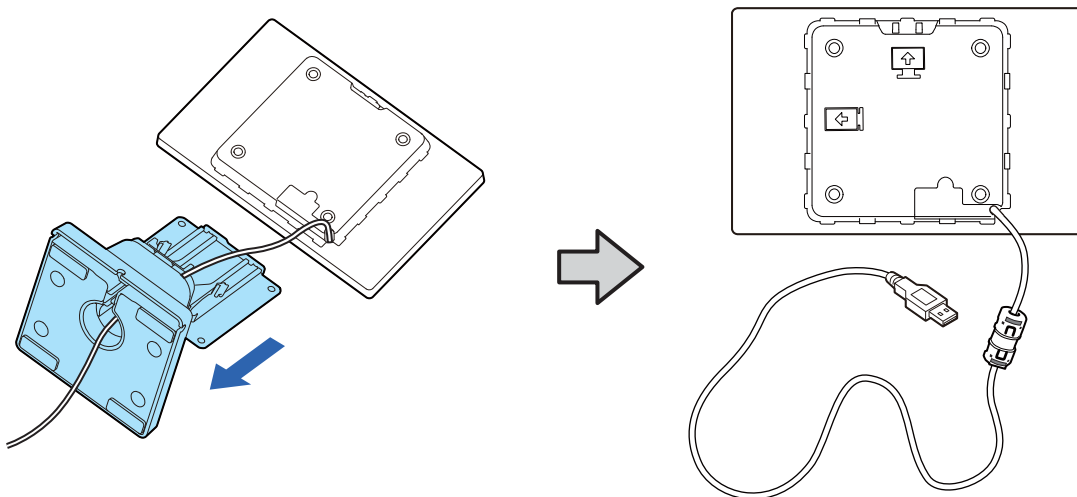
- 2 Remove the rear cover.**



3 Remove the four screws.



4 Remove the stand and then pull out the USB cable from the stand.

**NOTE**

Check the marks on the rear of the display to know which side is top or bottom.

5 Attach the display to a VESA mount such as a wall bracket or arm stand. Follow the instruction manual for the VESA mount to attach the mount.

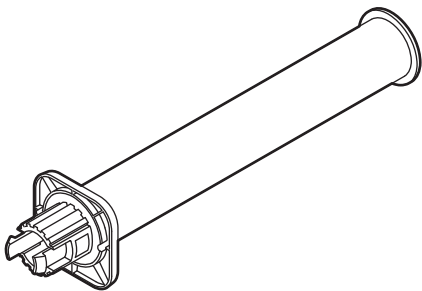
Attaching the Display to the Optional Kit

Attaching the EXTENSION POLE UNIT FOR DM-D70 (DP-70)

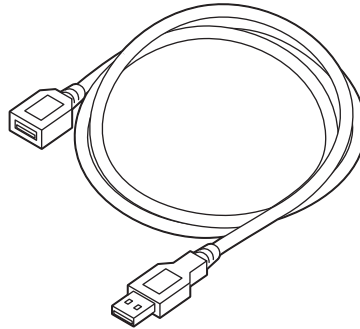
Follow the procedure below to attach the optional kit, EXTENSION POLE UNIT FOR DM-D70 (DP-70).

Contents of the DP-70 package

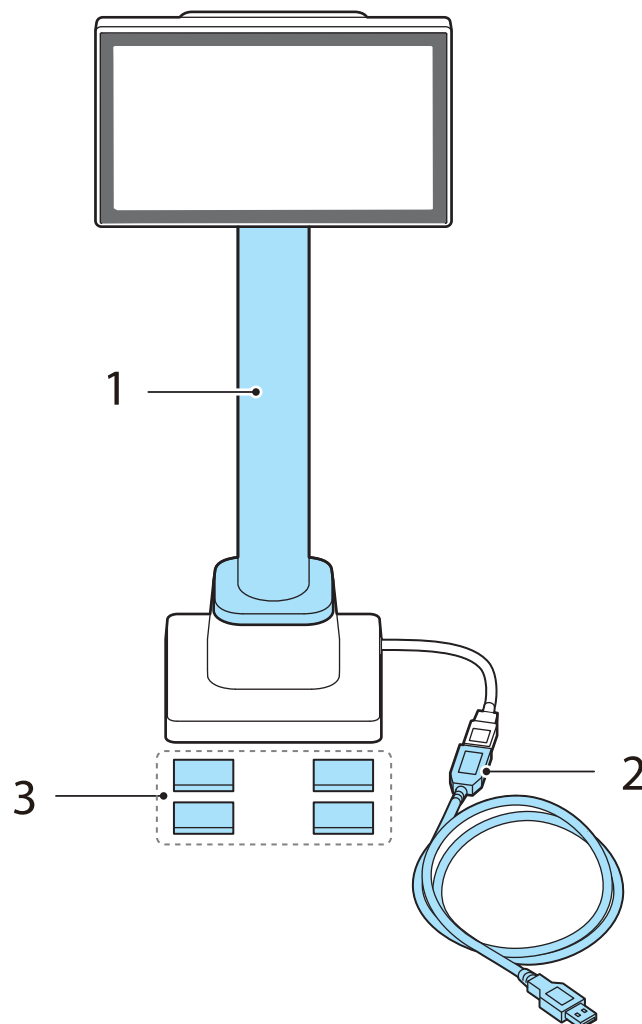
1. Extension pole



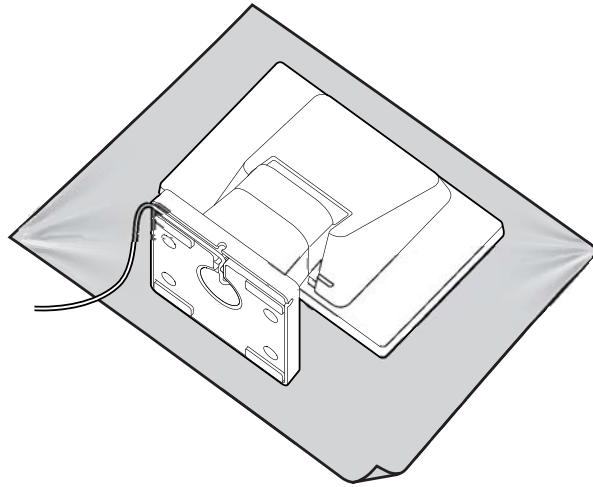
2. USB extension cable



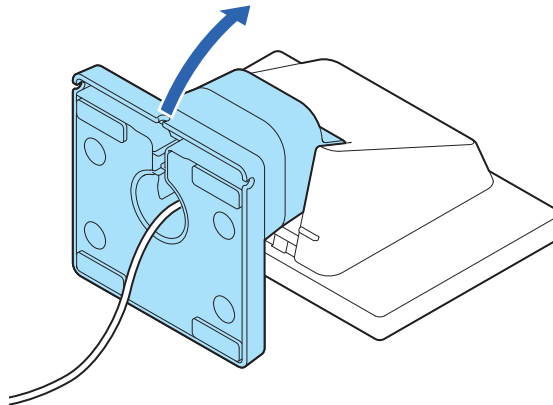
3. Stickers for fixing the product



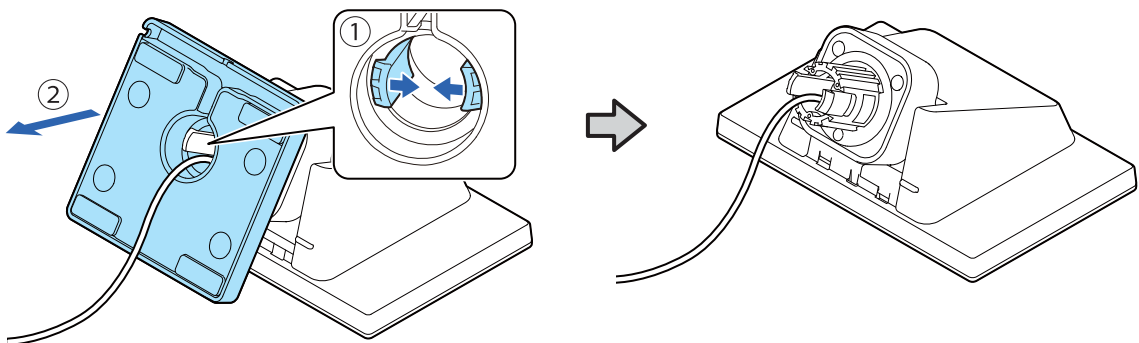
- 1 Place the product screen-side down on a soft cloth or the like.**



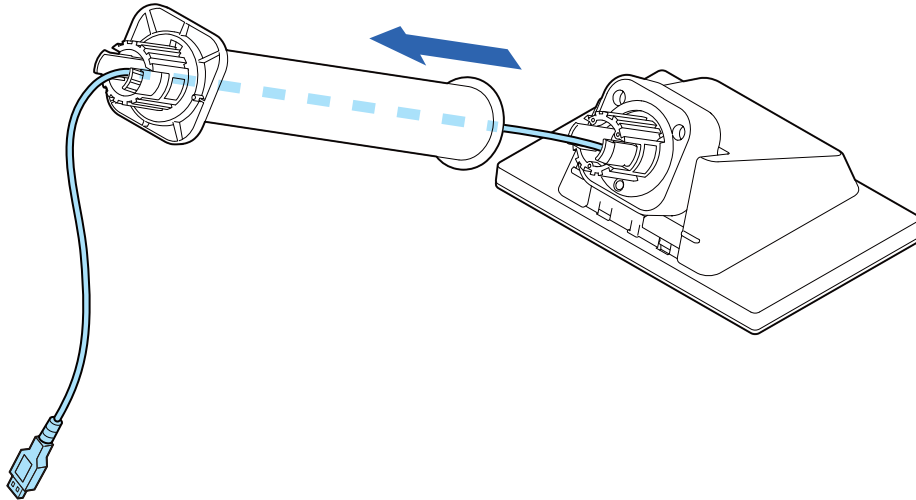
- 2 Raise the stand.**



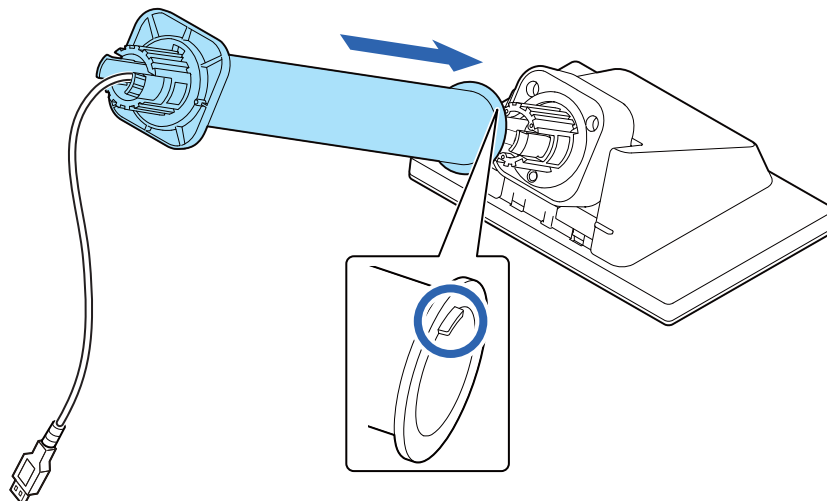
- 3 Push the tabs inward and pull out the stand.**



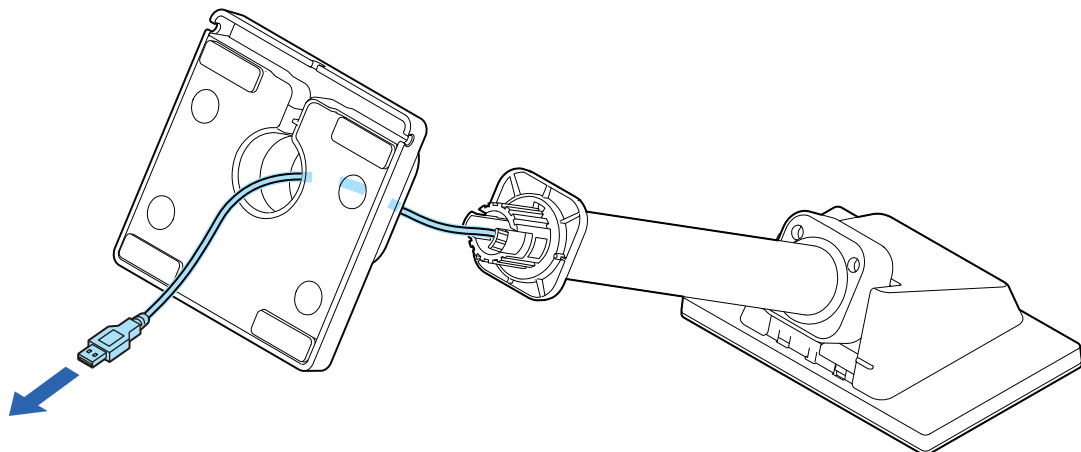
4 Pass the USB cable through the extension pole.



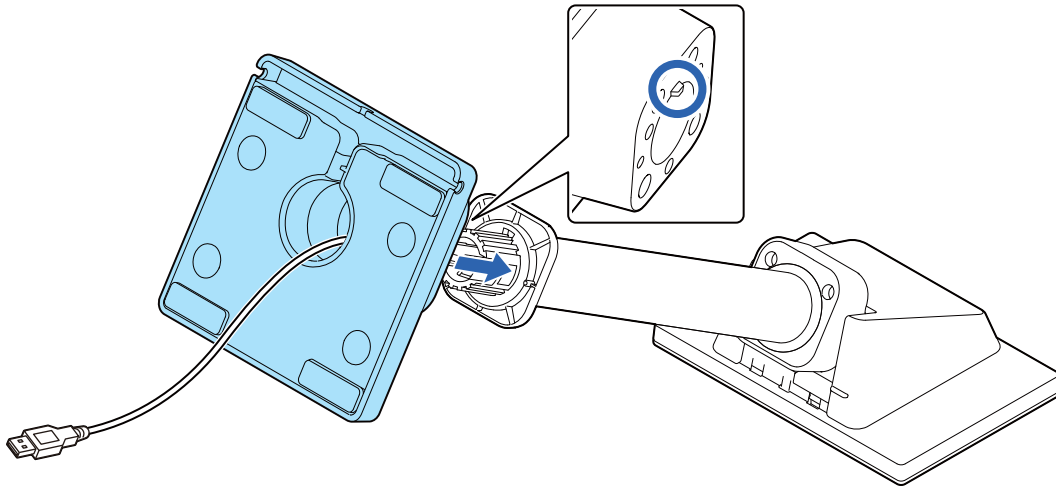
5 Attach the extension pole to the display. Insert the tab on the pole into the groove on the display.



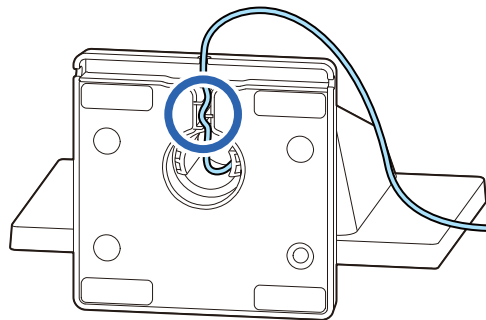
6 Pass the USB cable through the stand.



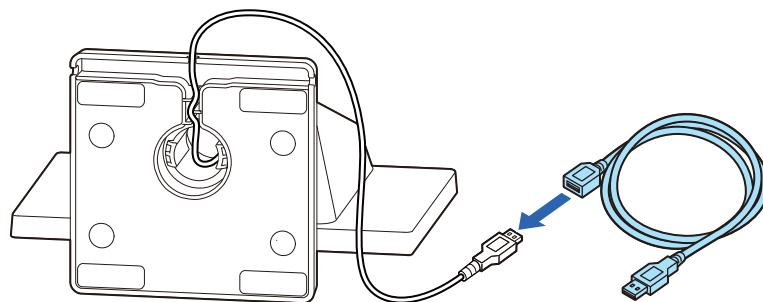
- 7** Attach the stand to the extension pole. Insert the tab on the stand into the groove on the pole.



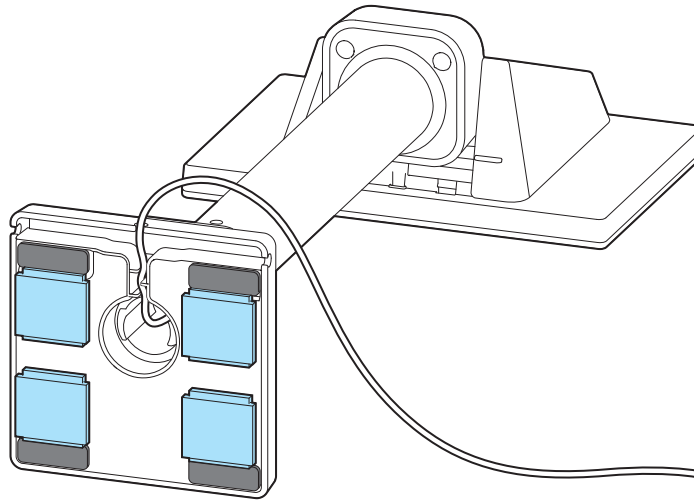
- 8** Secure the USB cable by fitting it into the groove, and then route the cable so that it passes through one of the three notches. Make sure to fit the cable into the groove to secure the cable properly.



- 9** Connect the USB extension cable if necessary.



- 10** Attach the four stickers to the bottom of the stand.
To prevent the product from falling over, use the stickers to secure the product to a table, desk, or etc.

**NOTE**

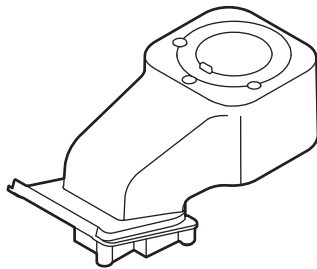
To remove the extension pole from the display, pull the pole hard.

Attaching the CRANK POLE UNIT FOR TM-T88VI-DT2 (DP-71)

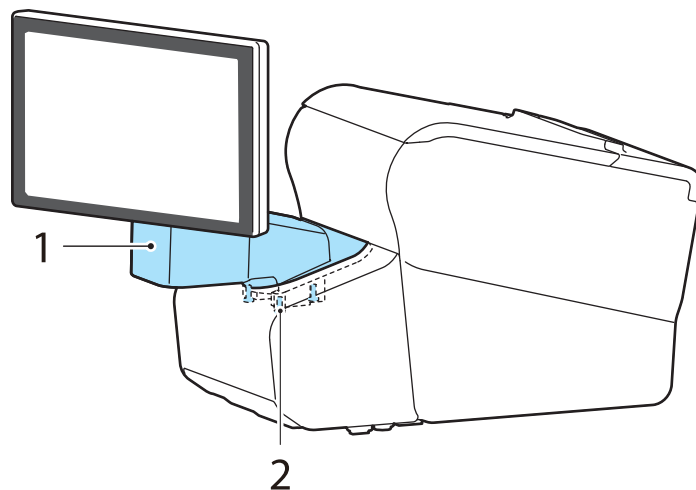
Follow the procedure below to attach the optional kit, CRANK POLE UNIT FOR TM-T88VI-DT2 (DP-71).

Contents of the DP-71 package

1. Crank pole

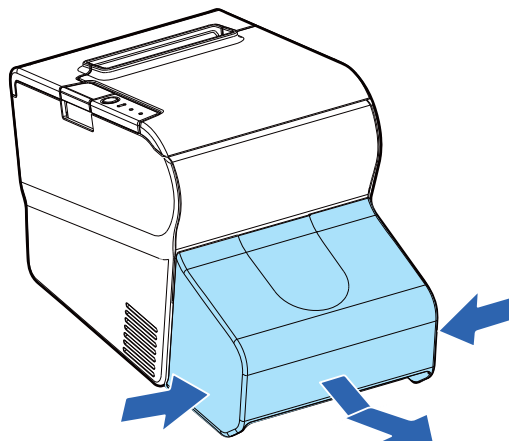


2. Three screws

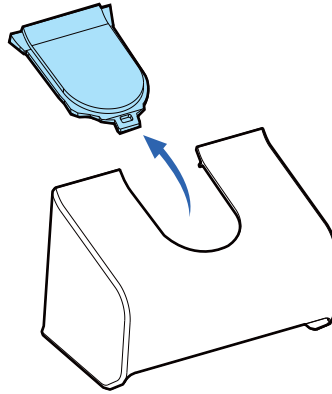


1 Remove the connector cover of the TM-T88VI-DT2.

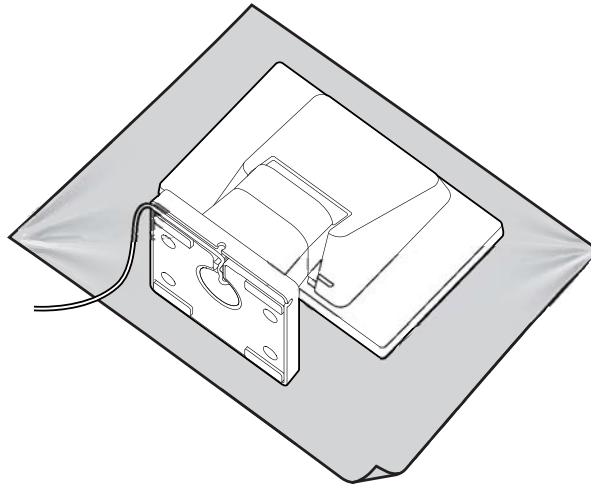
Push both lower sides of the cover inward to disengage the hooks, and remove the cover.



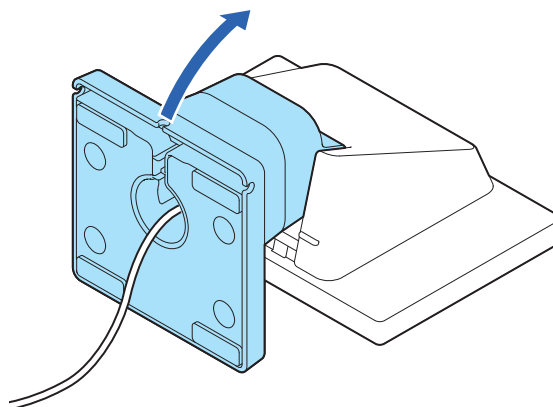
2 Remove the U-shape part from the connector cover.

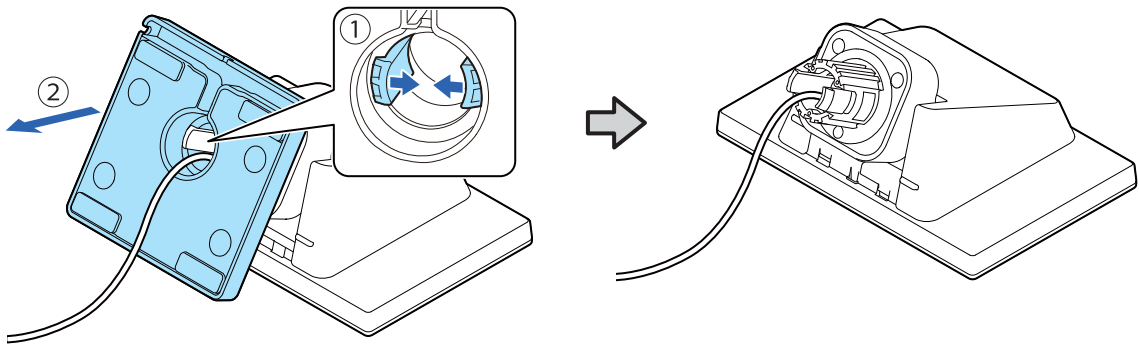
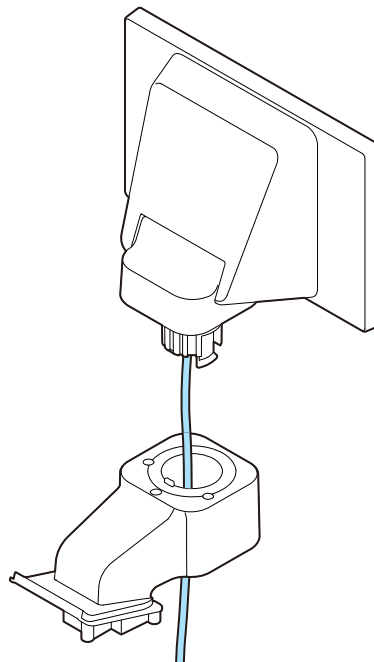


3 Place the product screen-side down on a soft cloth or the like.

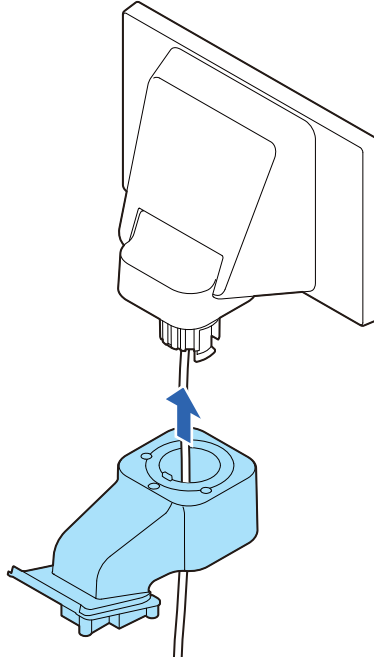


4 Raise the stand.

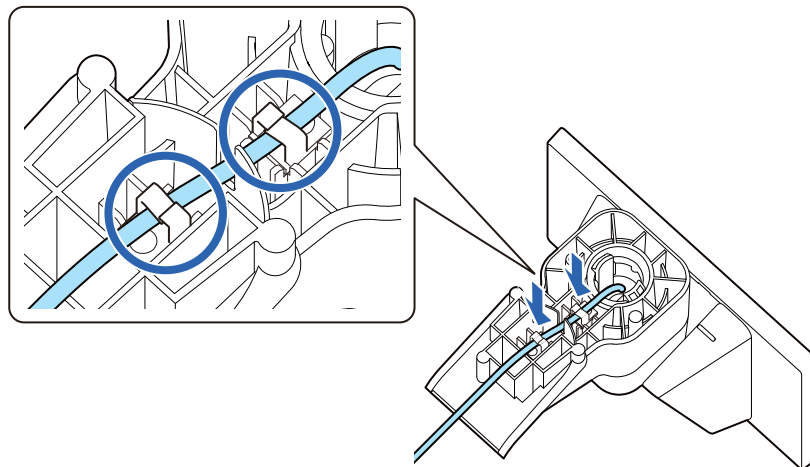


5 Push the tabs inward and pull out the stand.**6 Pass the USB cable through the crank pole.**

- 7** Attach the crank pole to the display as shown below.



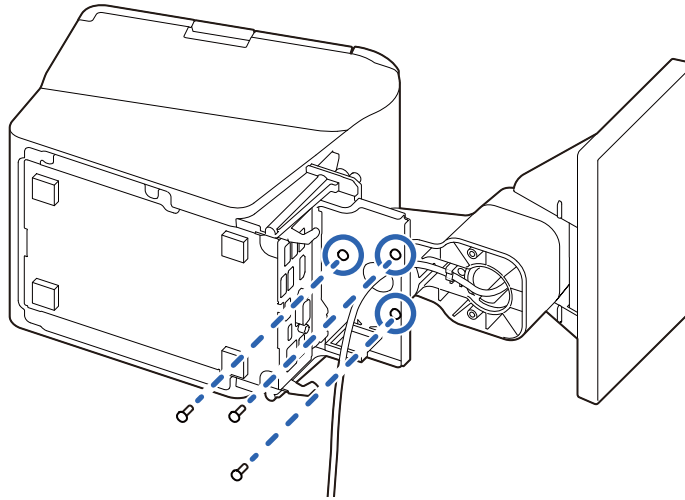
- 8** Secure the USB cable to the crank pole.



- 9** Lay TM-T88VI-DT2 on its side.

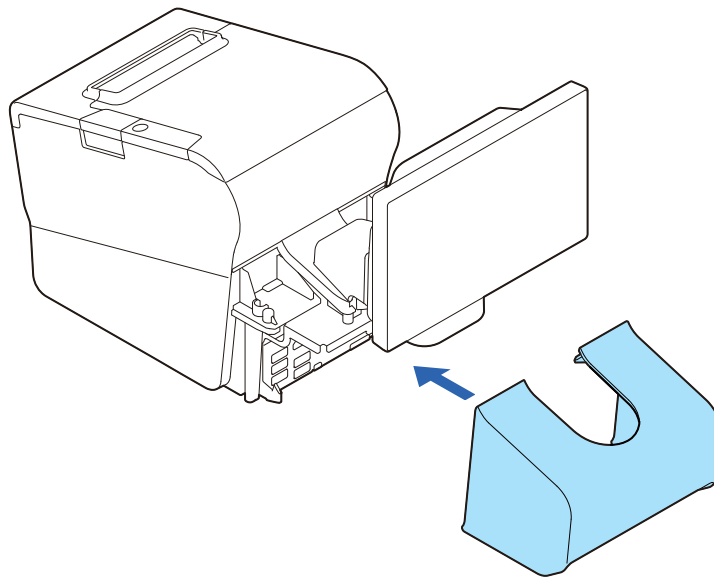
- 10** Pass the USB cable through the TM-T88VI-DT2.

- 11** Secure the display and crank pole with the three screws.



- 12** Connect the USB cable to the connector on the TM-T88VI-DT2.

- 13** Attach the connector cover.



Application Development Information

This chapter explains how to control the product as well as necessary information for developing system applications using the product.

Controlling the Customer Display

This product supports the following control commands.

- ePOS-Print XML
- ePOS-Device XML
- ESC/POS

NOTE

ePOS-Print XML and ePOS-Device XML can be used only when the product is directly connected to a supported TM printer. See the link below for information on the supported printers.

 ["Supported Printers" on page 52](#)

To control the product from an application, use the above commands or the following development kits and drivers.

- Epson ePOS SDK
- EPSON OPOS ADK
- EPSON OPOS ADK for .NET
- EPSON Advanced Printer Driver

ePOS-Print XML

ePOS-Print XML is the Epson original control command system for POS printers and customer displays. This allows an application on a computer or tablet to send an XML-format request to a TM printer that supports the XML over an HTTP connection. ePOS-Print Service that is pre-installed on the XML-compatible printer receives the request and printing or displaying data is performed according to the request. For more details about ePOS-Print XML, see the ePOS-Print XML User's Manual.

ePOS-Device XML

ePOS-Device XML is the Epson original control command system defined using xml for POS printers and peripheral devices. This allows an application on a computer or tablet to send an XML-format request to a TM Intelligent printer over a socket connection. ePOS-Device Service that is pre-installed on the TM Intelligent printer receives the request and printing or displaying data is performed according to the request. For more details about ePOS-Device XML, see the ePOS-Device XML User's Manual.

ESC/POS

ESC/POS is the Epson original printer command system for POS printers and customer display. With ESC/POS commands, you can directly control all functions of this product, but comparing to using drivers and the development kit, more detailed information about the product specifications and combination of commands are required.

For details on the ESC/POS commands, see "ESC/POS Command Reference for Customer Displays" by accessing the URL below.

🔗 https://support.epson.net/publist/reference_en/

Software

The following pieces of software are provided for application development.

Development Kit

Software	Description
Epson ePOS SDK for Android for iOS for JavaScript	Allows you to develop application software with low quantity of codes using extensive APIs. You can easily develop an iOS/Android native application or Web application.
EPSON OPOS ADK	
EPSON OPOS ADK for .NET	
	OCX driver that controls the POS peripheral devices using the OLE technologies*. Because controlling POS peripherals with original commands is not required on the application side, efficient system development is possible.
	The OPOS ADK for .NET is a POS industry standard printer driver compatible with Microsoft POS for .NET. It allows you to develop applications that are compatible with the UPOS (Unified POS) specifications. When developing applications, use a separate development environment such as Microsoft Visual Studio .NET.

*: OLE technology developed by Microsoft divides software into part blocks. The OPOS driver is completely different from a printer driver for Windows. You need to program it in a development environment such as Visual Basic. It is not a driver that enables printing from a commercially available application.

You can acquire documents regarding the UnifiedPOS from the following link.

🔗 <https://www.omg.org/spec/UPOS>

Drivers

Software	Description	Operating environment
EPSON Advanced Printer Driver (APD)	Windows printer driver that can send data to be displayed on the customer display. It is not possible to get status of the customer display.	Windows
TM Virtual Port Driver	Use this when controlling the display using ESC/POS commands. The customer display connected to a USB port is recognized as a virtual serial port.	Windows

Utilities

Software	Description	Operating environment
DM-D70 Utility	A utility for checking and changing various settings of the product. Use this utility to: • Configure the screen layout settings • Store data for slide show • Store frame data • Run an operation check • Store image data • Change display settings • Save or restore the settings	Windows
Epson TM Utility	A utility that is available on the App Store or Google Play. You can change settings of the product from an iOS or Android device. Use this utility to: • Configure the screen layout settings • Store data for slide show • Store frame data • Run an operation check • Store image data • Change display settings	Android, iOS
Deployment Tool	This allows you to make the settings of the product, the printer and the network simultaneously. Settings of multiple products can be done efficiently.	Windows
DM-D70 Firmware Updater	Use this to update the firmware of the product. An executable file and the firmware are packaged together.	Windows

Others

Manual	Description
ePOS-Print XML User's Manual	Describes ePOS-Print XML statements. This manual comes with sample programs.
ePOS-Device XML User's Manual	Describes ePOS-Device XML statements. This manual comes with sample programs.

Download

You can obtain software and manuals from one of the following URLs.

For customers in North America, go to the following web site:

 <https://www.epson.com/support/>

For customers in other countries or regions, go to the following web site:

 <https://epson.sn>

Screen Display

This product is capable of displaying characters and backgrounds in color, and graphics data. This section describes the functions and capability of the display.

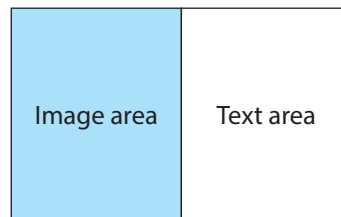
For information necessary for developing application software, see the manual for the development kit and driver, and the ESC/POS Command Reference.

Display Mode

The product has the two display modes.

Display Mode	Description
Standard mode	All functions of the product can be used in this mode.
Fixed column and row mode	This mode allows you to fix the number of columns and rows to the same as those of DM-D30, DM-D110, DM-D210, or DM-D500.

Both modes have two areas; text area and image area. The text area mainly displays character string, and the image area displays graphics data.



Standard Mode

Contents that can be displayed in the text and image areas in the standard mode are as follows.

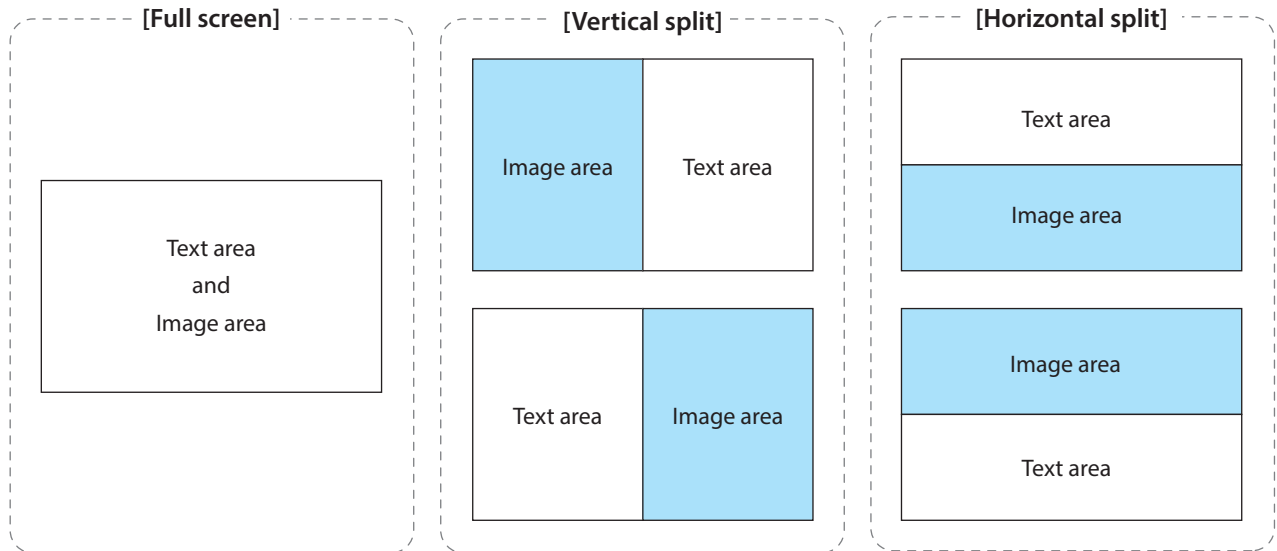
Display Area	Description
Text area	Character string, QR code, Frame image (PNG)
Image area	Image data (JPEG, PNG), Slide show images (JPEG, PNG)

NOTE

It is not possible to get information about the display orientation (landscape or portrait) from application software or any other tool.

The following screen layouts are available in the standard mode.

When Installed in Landscape Orientation



Screen Layout	Text area		Image area
	Columns x Rows*	Width x Height (pixels)	Width x Height (pixels)
Full screen	33 x 10 (44 x 13)	800 x 480	800 x 480
Vertical split (divided into right and left)	16 x 9 (22 x 13)	400 x 480	400 x 480
Horizontal split (divided into up and down)	33 x 5 (44 x 6)	800 x 240	800 x 240

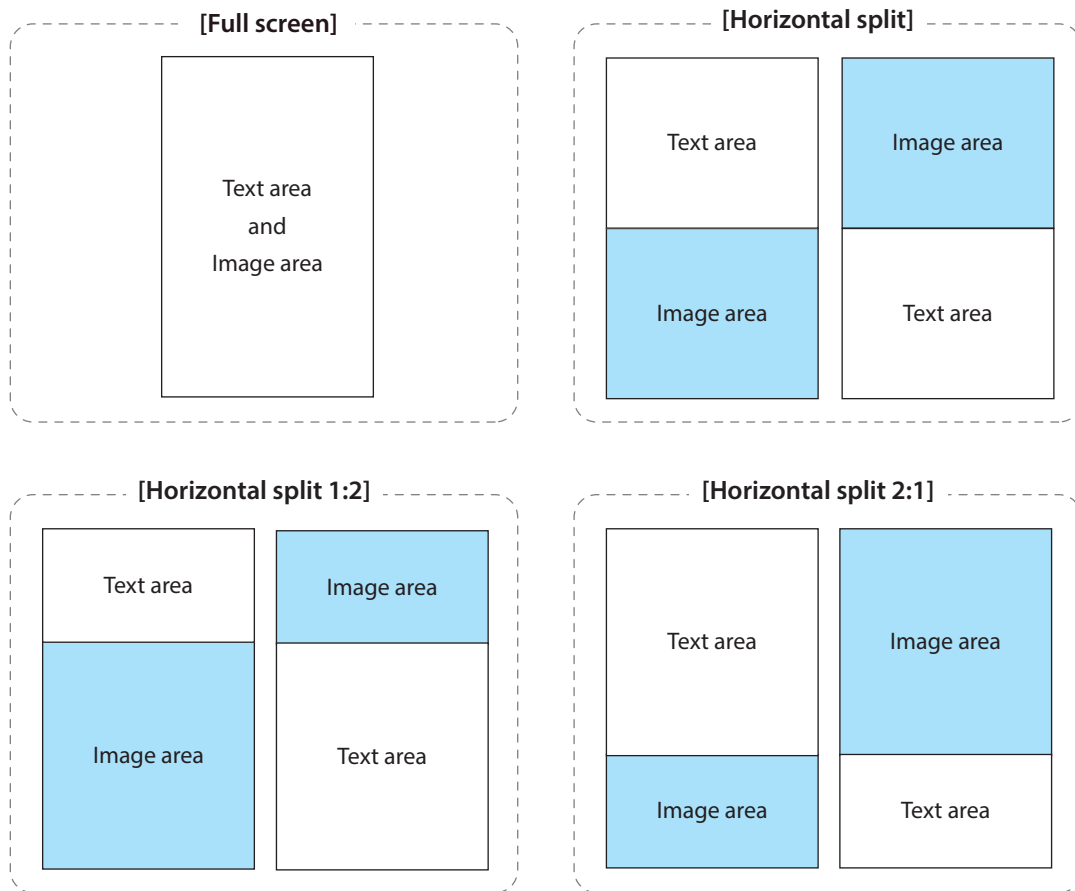
*: The number of columns and rows of the text area are default values. The values in parentheses are maximum values. You can change the values from your application software. See the link below for information about the number of columns and rows that can be set.

 ["Configurable Number of Columns and Rows" on page 48](#)

NOTE

- In the full screen, the text area and the image area are laying on top of each other. Display each area with attention to the overlapping area.
- You can change the screen layout setting from your application software.

When Installed in Portrait Orientation



Screen Layout		Text area		Image area
		Columns x Rows*	Width x Height (pixels)	Width x Height (pixels)
Full screen		20 x 16 (22 x 19)	480 x 800	480 x 800
Horizontal split (divided into up and down)		20 x 8 (22 x 9)	480 x 400	480 x 400
Horizontal split 2:1	Text area: 1 Image area: 2	20 x 5 (22 x 6)	480 x 267	480 x 533
Horizontal split 1:2	Text area: 2 Image area: 1	20 x 11 (22 x 12)	480 x 533	480 x 267

*: The number of columns and rows of the text area are default values. The values in parentheses are maximum values. You can change the values from your application software. See the link below for information about the number of columns and rows that can be set.

[🔗 "Configurable Number of Columns and Rows" on page 48](#)

NOTE

- In the full screen, the text area and the image area are laying on top of each other. Display each area with attention to the overlapping area.
- You can change the screen layout setting from your application software.

Fixed Column and Row Mode

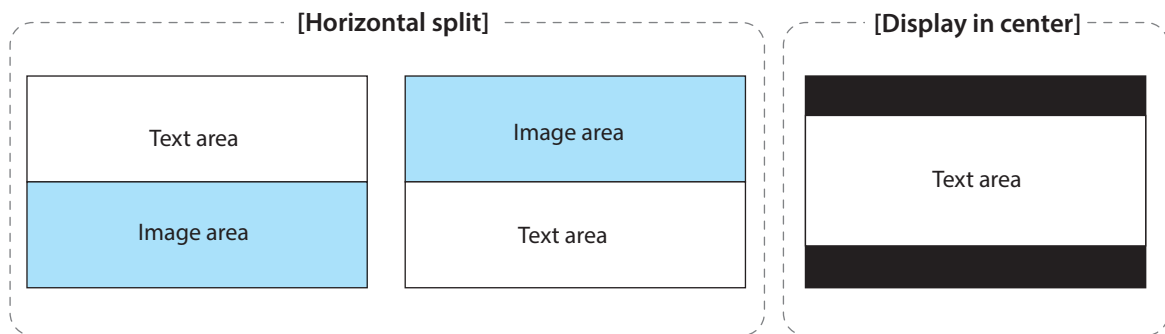
This mode is for users who use existing application software developed for an earlier customer display. Modifying the software to use with this product can be done with less work. The number of columns and rows of the text area are the same as those of DM-D30, DM-D110, DM-D210, or DM-D500. To use this mode, the display needs to be installed in landscape orientation.

When using this mode, use DM-D70 Utility to configure color of characters at power-on, background color, slide show, and frame. The settings cannot be changed while running your application software.

Contents that can be displayed in the text and image areas in the fixed column and row mode are as follows.

Display Area	Description
Text area	Character string, Frame image (PNG)
Image area	Slide show images (JPEG, PNG)

The following screen layouts are available in the fixed column and row mode.



Screen Layout	Text area		Image area
	Columns x Rows	Width x Height (pixels)	Width x Height (pixels)
Horizontal split (divided into up and down)	20 x 2	800 x 240	800 x 240
	32 x 2		
Display in center	32 x 3		
	32 x 4		
	42 x 8		

NOTE

- Even when using the fixed column and row mode, software for this product is required. Software for DM-D30, DM-D110, DM-D210, or DM-D500 cannot be used.
- To center a frame, create a graphic image of 800 x 480 pixels, and make the text area (coordinate (0,120) to (800,360)) transmissive.
- The "Display in center" layout does not have an image area. Therefore, slide show cannot be displayed.

Displaying Character String

Character string can be displayed in the text area. You can change the color of the characters and background. In the standard mode, the number of columns and rows in the text area can be changed from application software.

The character size is automatically determined by the specified number of columns and rows. The character size is uniform in the text area and it is not possible to change the character size partially.

Displaying QR Code

A QR code can be displayed in the text area in the standard mode. Note the following points for displaying a QR code.

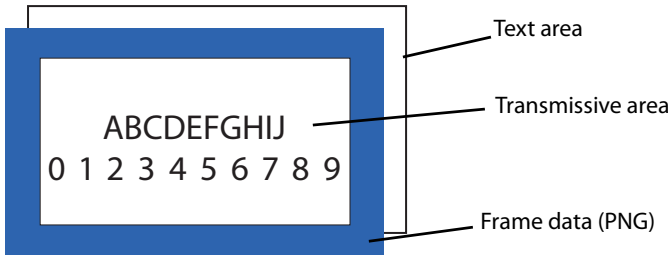
- Display a QR code so that it fits inside the text area.
- A displayed QR code is not square. This is caused by difference in aspect ratio of the pixels on the LCD.
- Since the recognition rate of a QR code varies depending on widths of the modules, brightness of the display, and characteristics of the reader, make sure to check the recognition rate beforehand to determine the settings and use conditions so that the requirements of the reader are satisfied.
- Display a QR code so that it is not overlaid on the text area.

Displaying Graphics Data

Graphics data that can be displayed in the text and image areas are as follows.

For specifications of available JPEG and PNG data, see the link below.

 ["Product Specifications" on page 54](#)

Type of Graphics	Description
Image data	- Displayed in the image area in the standard mode. - By specifying the display size, the image can be reduced or enlarged and displayed in the image area.
Frame	- Graphics data that can be always displayed in the text area to decorate the text area. To display character string over the frame, the portion of the frame PNG data that overlap with characters needs to be transmissive. - Match the size of the frame data (horizontal and vertical pixel size) with the size of the text area. 
Slide show	- Multiple graphics data can be displayed in turn at regular intervals in the image area. - Match the size of each graphics data (horizontal and vertical pixel size) with the size of the image area. If the size of the graphics data is larger than the image area, the graphics is reduced so that it fits inside the image area. - All graphics data used for the slide show need to be uniform in size. If they are different in size, an immediately preceding image remains.

Storing Graphics Data

To display graphics data in the text or image area, store the data in the memory dedicated for graphics data.

There are two types of memory.

Memory	Description
NV Graphics	NV (non-volatile) memory of the product. The data in the memory is not erased even when the power is turned off. Graphics data for slide show or frame can be stored only in the NV Graphics memory. NV Graphics can store data up to 10 MB.
Download Graphics	RAM (random access memory) of the product. The data in the memory is erased when the power is turned off. Download Graphics can store data up to 1.5 MB.

NOTE

It is recommended to use DM-D70 Utility or Epson TM Utility to store data in the NV memory. Graphics data can be converted in appropriate format and then stored.

CAUTION

It may take about 110 seconds to store graphics data in the NV memory. This is because an optimization of the NV memory is performed. During the optimization, a message "Optimizing" is displayed on the screen.

Available Functions by Display Mode

The table below shows differences in available functions between the standard mode and the fixed column and row mode.

	Standard mode		Fixed column and row mode	
	Text area	Image area	Text area	Image area
Changing the number of columns and rows	✓	-	Fixed *	-
Displaying character string	✓	-	✓	-
Changing characters color	✓	-	✓ *	-
Changing background color (rows)	✓	-	-	-
Changing background color (full screen)	✓	-	✓ *	-
Displaying a QR code	✓	-	-	-
Displaying an image	-	✓	-	-
Displaying slide show	-	✓	-	✓ *
Displaying frame	✓	-	✓ *	-

*: Use DM-D70 Utility or Epson TM Utility to change the settings. You cannot change them from your application software.

List of Settings

There are settings you can change in addition to the screen layout setting. Use DM-D70 Utility or Epson TM Utility to change the settings. Or you can change them from your application software by using the development kit and the driver. For more details, see the manual for the development kit and driver, and the ESC/POS Command Reference.

Item	Description
Screen Layout settings	Allows you to change the display mode. Default: standard mode (landscape, full screen)
Text color	Allows you to change the color of characters. Default: white
Background color	Allows you to change the color of background. Default: black
Screen timeout	Allows you to change the time from when the product receives no data until the back light turns off. Default: Normally On
Code-page	Allows you to change the code page for the product. Default: PC437 (USA: Standard Europe)
International character set	Allows you to change the international character set for the product. Default: USA
Adjust Brightness	Allows you to change the brightness of the back light. Default: 100%
ePOS-Device XML mode	Select [DM-D30] when using the product in the fixed column and row mode with application software that uses ePOS-Device XML functions. Default: DM-D70  "Supported Printers" on page 52
Display direction	Allows you to change the display direction setting. Default: Forward direction  "The Screen Looks Dark when the Display is Attached in Portrait Orientation" on page 19
Autoplay slideshow	Allows you to set the slide show to run when the product starts up.
Image change time	Allows you to change time duration to switch images in slide show.

Appendix

Configurable Number of Columns and Rows

When Installed in Landscape Orientation

Full screen

Column Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Column Row	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
9	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓

Vertical split (screen divided into right and left)

Column Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓

Horizontal split (screen divided into up and down)

Column Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Column Row	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓

When Installed in Portrait Orientation

Full screen

Column Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
9	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
11	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓

Horizontal split (screen divided into up and down)

Column Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓

Horizontal split 1:2 (screen divided into up and down at a ratio of 1:2)

Column Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓

Horizontal split 2:1 (screen divided into up and down at a ratio of 2:1)

Column Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓

Supported Printers

The printers that can be directly connected to the display are listed below. Available functions vary depending on the connected printer. When the display is connected to a computer, all of the functions can be used.

Supported Printers	Available Display Mode	Restrictions
TM-m30	Fixed column and row mode	A
TM-m30II	Fixed column and row mode	A
TM-m30II-H	Fixed column and row mode, Standard mode	B
TM-m30II-NT	Fixed column and row mode, Standard mode	B
TM-m30II-S	Fixed column and row mode, Standard mode	B
TM-m30II-SL	Fixed column and row mode, Standard mode	-
TM-m30III	Fixed column and row mode, Standard mode	-
TM-m30III-H	Fixed column and row mode, Standard mode	-
TM-m50	Fixed column and row mode	A
TM-m50II	Fixed column and row mode, Standard mode	C
TM-m50II-H	Fixed column and row mode, Standard mode	-
TM-H6000VI	Fixed column and row mode, Standard mode	C
TM-L100	Fixed column and row mode, Standard mode	-
TM-T88VI	Fixed column and row mode	A
TM-T88VII	Fixed column and row mode, Standard mode	C
TM-T88VI-iHUB	Fixed column and row mode	A
TM-T88VI-DT2	Fixed column and row mode, Standard mode	D
TM-T70II-DT2	Fixed column and row mode, Standard mode	D

Restrictions A

- Cannot be used in the standard mode.
- To use application software that uses ePOS-Device XML functions, change the ePOS-Device XML mode from [DM-D70] to [DM-D30] using DM-D70 Utility. In addition, set the screen layout setting to [Fixed column and row mode], and then select [20 x 2] as the number of columns and rows.
- When using DM-D70 Utility/ DM-D70 Firmware Updater, connect the product to a computer directly. They cannot be used when the product is connected to the printer.
- Epson TM Utility cannot be used. Use DM-D70 Utility instead.

Restrictions B

- To use the product in the standard mode, the product firmware needs to be updated to Ver. 03.06A/03.06B ESC/POS or later.
- Restrictions A apply if the firmware is not updated.

Restrictions C

- When a printer and a computer are connected via a serial or parallel port, DM-D70 cannot be used in the Standard mode.

Restrictions D

- When developing a PC-POS application software, you cannot use EPSON Advanced Printer Driver for DM-D which is pre-installed in TM-T88VI-DT2 or TM-T70II-DT2 because the software does not support DM-D70. Download and use EPSON Advanced Printer Driver 6 for DM-D70.
- When developing application software that uses TM-DT software, you need to update the TM-DT software to Ver.5.10 or later.

NOTE

Available functions vary depending on which development kit and which type of driver are used. For more details, see the manual for the development kit and driver, and the ESC/POS Command Reference.

Product Specifications

Display size		7 inch (800 x 480 pixels), Viewing area 154.1 x 85.9 mm	
Display type		TFT LCD (16.2 million colors)	
Pixel pitch		0.1926 (horizontal) x 0.179 (vertical) mm	
The number of defective dots* ¹		5 dots or less	
Brightness		Approx. 300 cd/m ² (standard) (Peak brightness soon after purchasing, measured at 25 degrees C)	
Viewing angle (landscape orientation)* ²		Vertical 120°, Horizontal 150° (standard)	
Character classes	Alphanumeric	95 character	
	International characters	18 sets	
	Graphic characters	128 characters x 39 pages	
	Japanese	JIS X 0213-2004	11,208 characters
	Special characters	845 characters	
	Simplified Chinese	GB18030-2000	28,553 characters
	Traditional Chinese	Big5	13,502 characters
	Korean	KS C5601	8,224 characters
Character code	Unicode* ³	UTF-8	
Numbers of characters displayed	Landscape (Standard mode)	Alphanumeric	44 columns x 13 rows (Max.)
		Kanji	22 columns x 13 rows (Max.)
	Landscape (Fixed column and row mode)	Alphanumeric	20 columns x 2 rows, 32 columns x 2 rows, 32 columns x 3 rows, 32 columns x 4 rows, 42 columns x 8 rows
		Kanji	10 columns x 2 rows, 16 columns x 2 rows, 16 columns x 3 rows, 16 columns x 4 rows, 21 columns x 8 rows
	Portrait	Alphanumeric	22 columns x 19 rows (Max.)
		Kanji	11 columns x 19 rows (Max.)
Image file format	JPEG	Standard	Baseline JPEG
		Pixel format	4:2:2 (horizontal), or 4:2:0
		Size (width)	Even-numbered pixels
	PNG	Bit depth	8 bit
		Color type	True color, or true color + alpha channel
		Interlace	Not supported
Barcode		2D code (QR code)	
Interface		USB 2.0 High/Full speed	
Power supply		USB bus power (4.75 to 5.5 V DC)	
Consumption current		Operating: 0.5 A (max.)	
VESA standard		75 x 75 mm (VESA75)	
Dimensions	Landscape	180 x 109 x 165.2 mm {7.1 x 4.3 x 6.5"} (W x D x H)	
	Portrait	116 x 109 x 197.2 mm {4.6 x 4.3 x 7.8"} (W x D x H)	
Mass		Approx. 0.93 kg {2.05 lb}	
Length of the USB cable		Approx. 60 cm {23.6"}	

*1 The number of defective dots was calculated in units of sub pixel according to ISO9241-307 Class II standard.

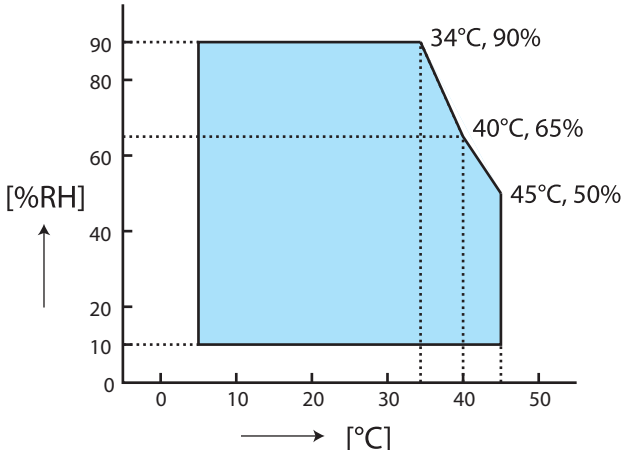
*2 The viewing angle is the angle where the contrast ratio exceeds 10:1. It is not the angle where gray scale inversion phenomenon does not occur.

*3 Only character types that are installed on the product can be displayed.

NOTE

If you change the character encoding to UTF-8, all character types installed on the product can be displayed. For instructions and more detailed information for displaying Unicode characters, see ESC/POS Command Reference Guide (see the explanation of commands that start from "US (N)", or software manuals. (["Application Development Information" on page 36](#))

Environmental Specification

Temperature / Humidity	Operating	5 to 45°C {41 to 113°F}, 10 to 90% RH, non condensing, 34.0°C {93.2°F} of wet-bulb temperature (The blue area on the graph below shows operating environment)	
	Storage	-10 to 50°C {14 to 122°F}, 10 to 90% RH, non condensing, 39.0°C {102.2°F} of wet-bulb temperature	
			
Vibration resistance* ¹	Operating	Frequency	10 to 150 Hz
		Acceleration rat	Approx. 4.9 m/s ² {0.5G}
		Sweep	10 minutes (one way)
		Time	1 hour
		Directions	XYZ
	Before unpacking	Frequency	10 to 55 Hz
		Acceleration rate	Approx. 19.6 m/s ² {2G}
		Sweep	10 minutes (one way)
		Time	1 hour
		Directions	XYZ
Impact resistance	Before unpacking* ²	Packaging specification	Epson standard packaging for factory shipment
		Height	90 cm
		Directions	1 corner, 3 ribs, 6 surfaces
	After unpacking* ³	Height	5 cm
		Directions	4 sides, Supporting only one side
Life	Product life	5 years	
	LCD back light	43,800 hours or longer (the time until the brightness drops to half in a room temperature, 25 degrees C)	
Altitude	3,000 m or less		

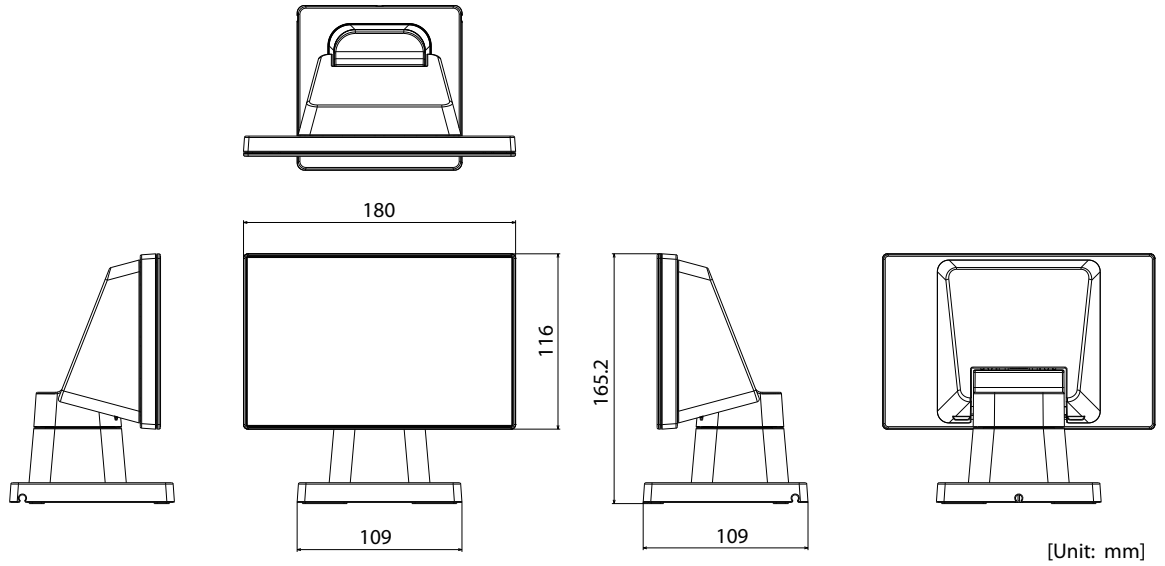
*1: After the vibration is applied, there should be no visible defect on both the surface and inside, and have no problem for operation.

*2: After the impact is applied, there should be no visible defect on both the surface and inside, and have no problem for operation.

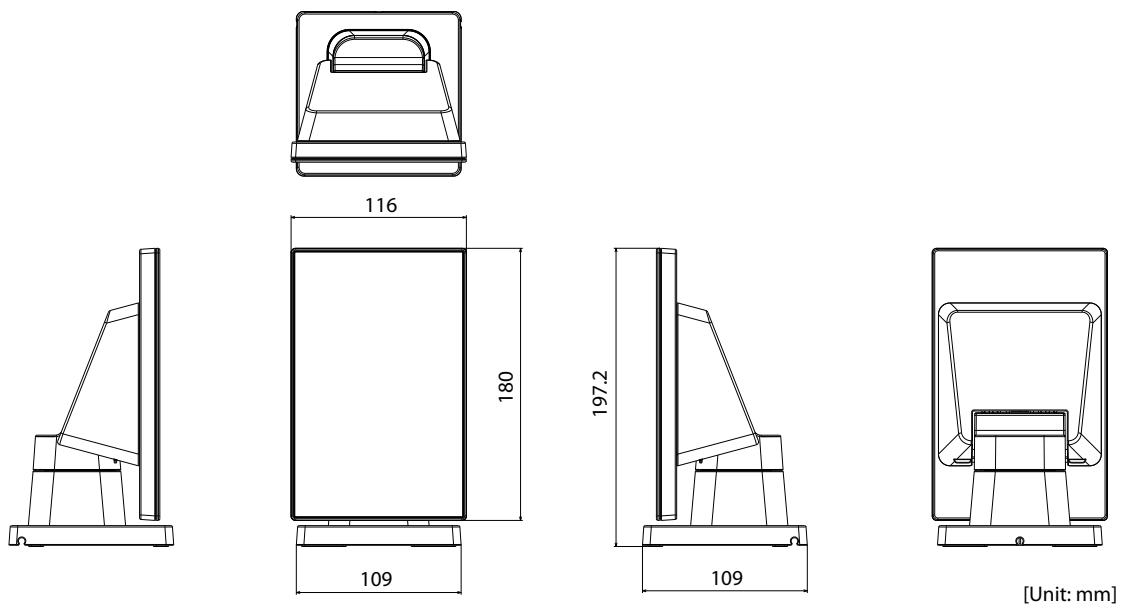
*3: After the impact is applied while the product is not operating, there should be no visible defect on both the surface and inside, and have no problem for operation.

External Dimensions

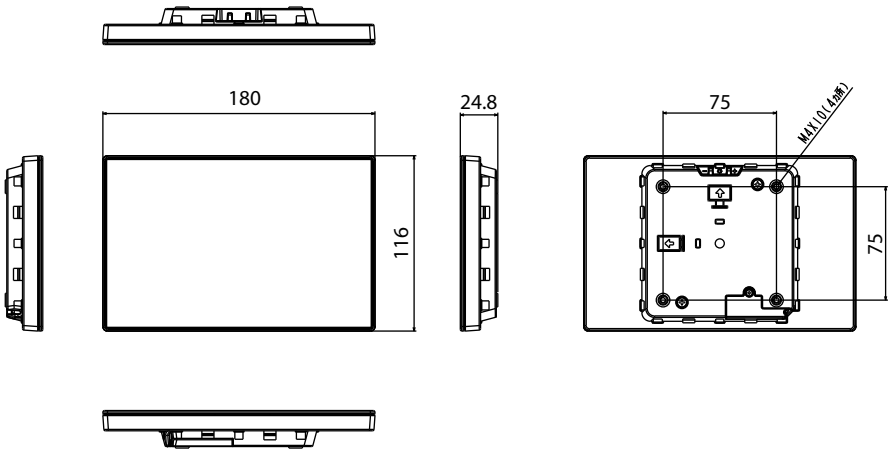
When Installed in Landscape Orientation



When Installed in Portrait Orientation

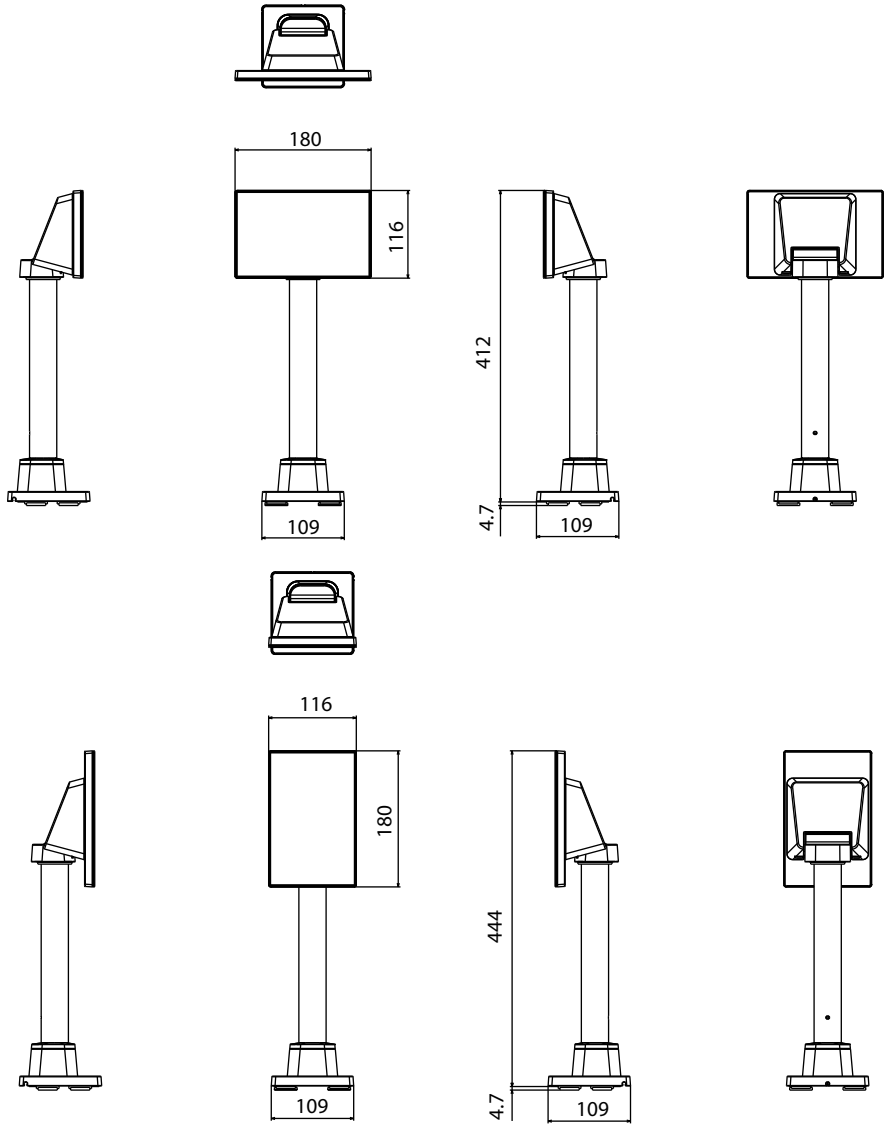


Display Only



[Unit: mm]

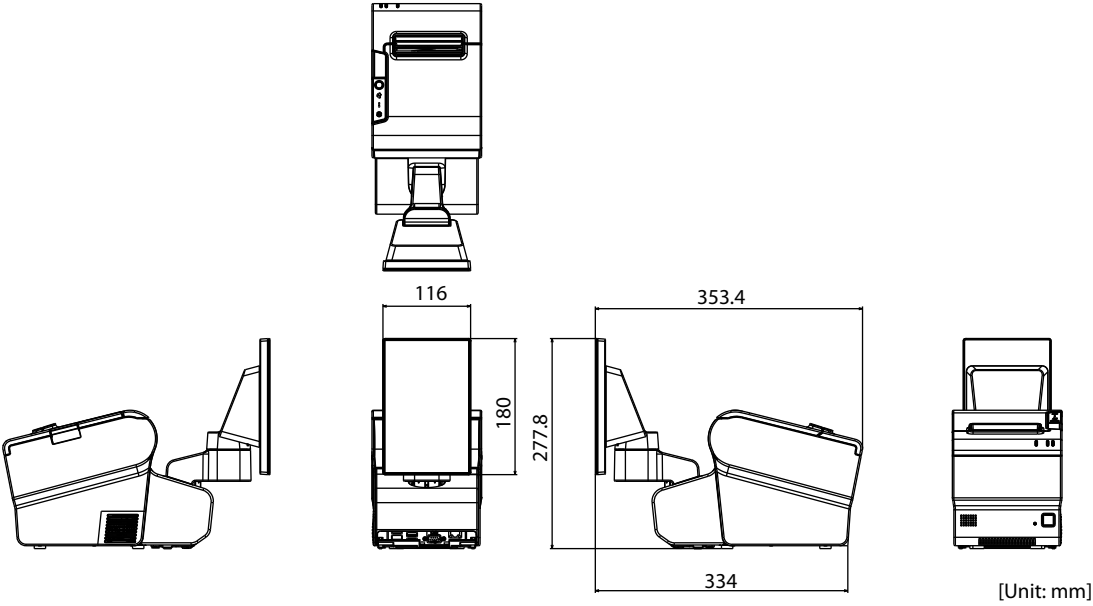
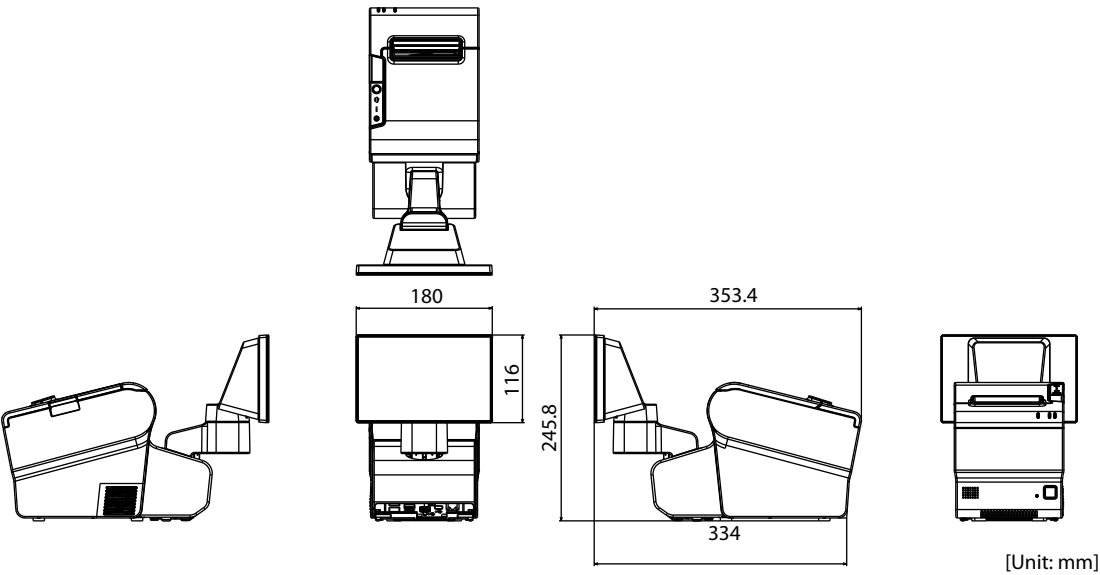
When Attached to DP-70



[Unit: mm]

[Unit: mm]

When Attached to DP-71



Character Code Tables

See the Character Code Tables for Customer Displays that can be accessed from the following URL:

 https://support.epson.net/publist/reference_en/

Open Source Software Licenses

The product uses open source software in addition to software that Epson possesses. The following pieces of open source software are used for this product.

Name of Software	Version of Software	Usage	3rd Party Code Licensor	Source Download URL	License URL
zlib	1.2.8	Redistributed (binary)	zlib/libpng License (Compatible with GPL)	http://www.zlib.net/fossils/	http://www.zlib.net/zlib_license.html
libpng	1.6.14	Redistributed (binary)	PNG Reference Library License	https://sourceforge.net/projects/libpng/files/libpng16/older-releases/	http://www.libpng.org/pub/png/src/libpng-LICENSE.txt
IJG JPEG	9a	Redistributed (binary)	Libjpeg License(BSD-like)	http://www.ijg.org/files/	https://jpegclub.org/reference/libjpeg-license/
newlib	2.2.0	Redistributed (binary)	BSD 3-Clause License	https://www.sourceware.org/newlib/	https://www.sourceware.org/newlib/COPYING.NEWLIB
CMSIS-RTOS	4.80	Redistributed (binary)	BSD 3-Clause License	https://github.com/ARM-software/CMSIS_4/releases/tag/v4.5.0	an-r01an3638ej0212-rza1-fwp\Software\CMSIS_RTOS\RTOS\RTOS\RTX\License.txt (Included in the downloaded files)
lwIP	1.4.1	Redistributed (binary)	BSD 3-Clause License	https://lwip.fandom.com/wiki/LwIP_Wiki	https://lwip.fandom.com/wiki/License
FreeType 2	2.4.9	Redistributed (binary)	Free Type Project LICENSE	https://www.freetype.org/download.html	http://www.freetype.org/license.html