



RP Series
Communication Software
User's Guide

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Seiko Instruments Inc.


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Introduction

This manual describes "Communication Software Package for RP Series Printer" (hereinafter referred to as the "communication software") provided by Seiko Instruments Inc. (hereinafter referred to as "SII").

Notation in This Manual

The notation in this manual is described.

Operation and Display

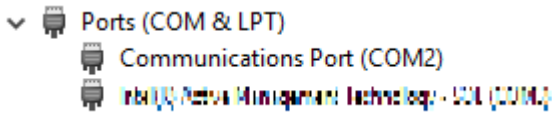
In principle, this manual is written on the basis of the following conditions:

- Screenshots and display layouts of Windows 10
- Operating instructions with a mouse and a keyboard

Terms

The terms used in this manual are defined as below.

Term	Description
Printer	SII printers described in "1.1.2 Target Products"
Printer driver	"SII Printer Driver for Windows" for SII printers described in "1.1.2 Target Products"
Driver type	Driver types shown as follows: ·Printer driver (driver that supports the print via GDI) ·Virtual serial port driver (included in communication software)
Printer response	A function to select whether or not to discard subsequent response data when the response data from the printer exceeds the output buffer size
Virtual COM port	A port that can communicate with a USB port as a virtual COM port

Term	Description
Physical COM port	<p>A COM port as a RS232C connection port</p> <p>Example of communication port (COMx) displayed on Device Manager:</p> 
iSerialNumber	Contents defined in iSerialNumber field of USB device descriptor
Technical Reference	<p>Technical References shown as follows:</p> <ul style="list-style-type: none"> • RP-D10 SERIES THERMAL PRINTER TECHNICAL REFERENCE • RP-E10 SERIES THERMAL PRINTER TECHNICAL REFERENCE • RP-F10 SERIES THERMAL PRINTER TECHNICAL REFERENCE • RP-G10 SERIES THERMAL PRINTER TECHNICAL REFERENCE
Memory switch	Memory switch of the printer, feature for [Function Settings] described in "Technical Reference"
NV image	Image data registered in the NV memory (non-volatile memory) in the printer
Codepage	Character set used as a device font organized by each language

Symbols

The symbols used in this manual are described below.

Caution

- ◆ Notes and limitations are described.

Reference

- Supplemental information and related matters are described.

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Chapter 1 Overview

This chapter describes the overview of communication software.
The communication software includes the following types of software:

- Communication Settings Utility
Utility that can change the following settings related to virtual serial port driver.
 - Switching the driver type
Selects the driver to use.
 - Switching the printer response
Selects whether to discard data when the response buffer of the printer becomes full.
 - Setting of iSerialNumber
Sets the USB iSerialNumber.
- Virtual Serial Port Driver
Driver for controlling the USB connected printer via virtual COM port.

Reference

- To use the virtual serial port driver, it is necessary to start Communication Settings Utility, and select "Virtual Serial Port Driver" in "Switch Driver Type".

1.1 Operating Environment

This section describes the operating environment for the communication software.

1.1.1 Operating Systems

Item	Specifications
Communication Settings Utility	Microsoft® Windows® 11 (64 bits) Microsoft® Windows® 10 (32 bits and 64 bits) Microsoft® Windows Server® 2019 (64 bits)
Virtual Serial Port Driver	Microsoft® Windows Server® 2016 (64 bits) Microsoft® Windows® 8.1 (32 bits and 64 bits) Microsoft® Windows Server® 2012 (64 bits)

1.1.2 Target Products

The products covered by this software are as follows.

Printer	Interface
RP-D10 Series	USB
RP-E10 Series	
RP-F10 Series	
RP-G10 Series	

1.1.3 Firmware Version

The firmware versions supported are as follows.

Printer	Interface
RP-E10 Series	Ver.1.06 or later
Other than RP-E10 Series	Ver.1.00 or later

Chapter 2 Setup

This chapter describes the setup procedure and the uninstallation procedure of the communication software.

2.1 Setup

The setup procedure is as follows.

- 1) Installation of communication software
- 2) Setting change using Communication Settings Utility

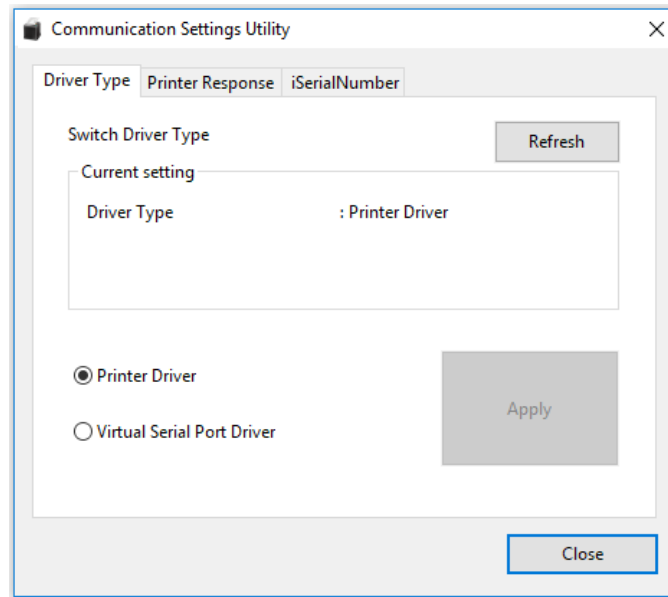
1) Installation of communication software

1. Start the setup program. The file name is as follows.
 - SetuploUtility.exe : 32-bit version
 - SetuploUtility64.exe : 64-bit version
2. Accept the license agreement, and proceed to installation by following the wizard.
3. Click the [Finish] button.
4. Connect the printer to the computer with a USB cable.

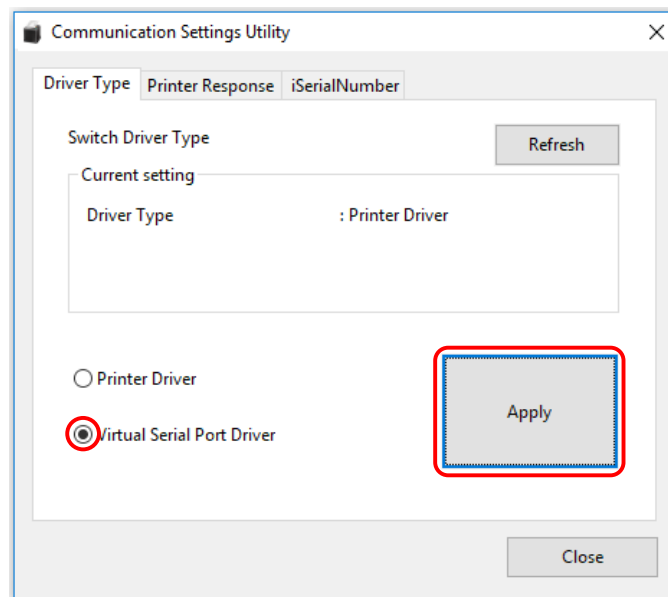
2) Setting change using Communication Settings Utility

1. Start Communication Settings Utility.
Double click the short cut "RP Communication Settings Utility" created on the desktop by steps in "1) Installation of communication software".

2. Select the [Driver Type] tab.



3. Select "Virtual Serial Port Driver", and click the [Apply] button.



4. Installation of the virtual serial port driver starts automatically.

Caution

- ◆ This installation requires login to the computer with administrator privileges.
- ◆ It is not possible to change the settings with multiple printers connected simultaneously.
- ◆ The first installation of the virtual serial port driver may take a few minutes to complete. Operation is not possible during installation.
- ◆ Restarting the computer may be necessary after installation of the virtual serial port driver is completed. (For example, when there is [⚠] mark on the "SII Virtual Serial Port" icon in "Devices" on the [Devices and Printers] window.)

Reference

- About specification of COM port number
COM port number cannot be specified at the installation of the virtual serial port driver. See "4.1 COM Port Number" to change the COM port number after installation.
- About upgrading communication software to version 2.00 or later
Communication software version 2.00 or later is a version that allows the user to continue using the COM port without opening the COM port again even if the printer is turned off after opening the COM port with the WIN32 API and then turned on again.
When upgrading from communication software version 1.xx to version 2.00 or later, drivers that have already been installed are uninstalled.

2.2 Uninstallation

This section describes the uninstallation procedure of the communication software.

1. Close the application using the virtual serial port driver and Communication Settings Utility.
2. Click "Uninstall of the program" in [Programs and Features] from the control panel.
Select "SII RP Series Communication Software Package" displayed on the [Uninstall or change of the program] screen, and click the [Uninstall] button.

Chapter 3 Communication Settings Utility

This chapter describes the Communication Settings Utility.

3.1 Setting Screen

This section describes the setting screen of the Communication Settings Utility.

3.1.1 Driver Type

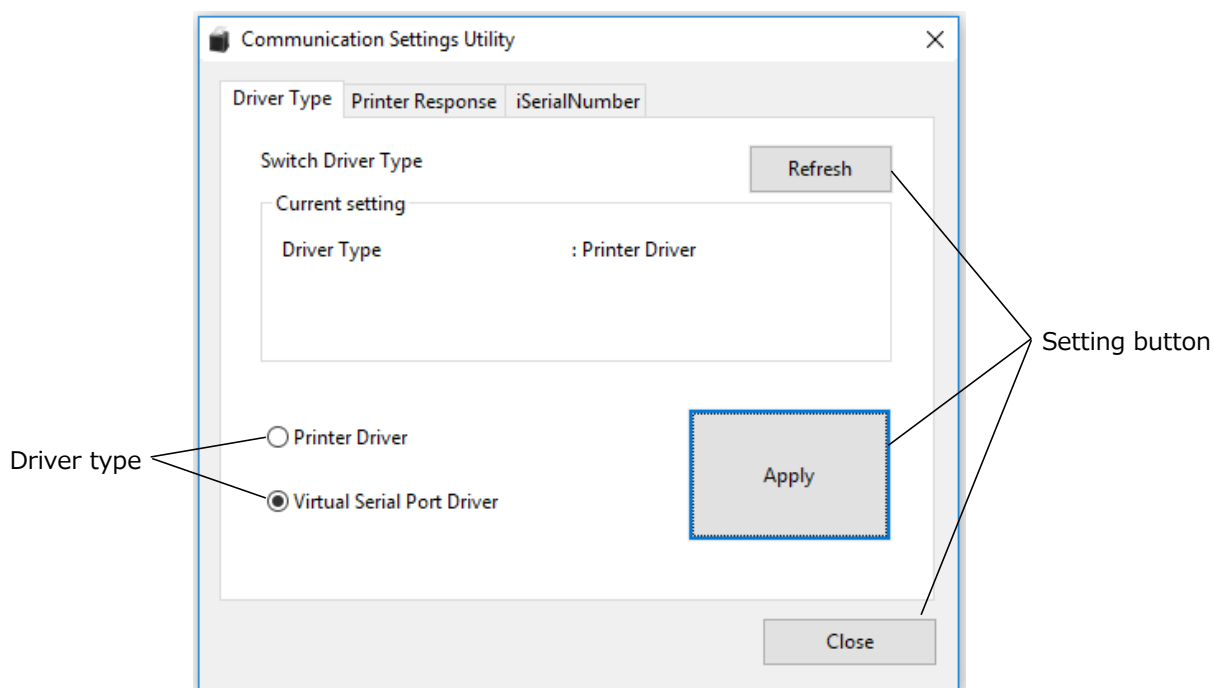
The driver type can be switched according to usage.

When select the virtual serial port driver, it is possible to control the USB connected printer via the virtual COM port.

When select the printer driver, in addition to printing via GDI, the SII Printer Setting Utility for Windows becomes available, and it is possible to change the memory switches of the printer, register NV images, register codepages, and so on.

Screen Description

The screen of the driver type is described.



Item	Description
Switch Driver Type	Selects the driver type. · Printer Driver · Virtual Serial Port Driver
Current setting	Displays the currently used driver type.

Setting Button

Item	Description
Refresh	Updates to the latest information.
Apply	Applies the selected driver type.
Close	Finishes this software, and close the Communication Settings Utility window.

Setting Method of Driver Type

1. Start the Communication Settings Utility, and select the [Driver Type] tab.
2. Select [Printer Driver] or [Virtual Serial Port Driver], and click the [Apply] button.
3. Confirm that [Driver Type] is the selected setting in [Current setting].

Caution

- ◆ When you select either driver type, the other driver will be unavailable.
Change the driver type as necessary.
- ◆ Do not specify the virtual COM port as the output destination of the printer driver. If specified, the printer driver occupies the port, and you cannot access from the software using the virtual COM port at all.

Reference

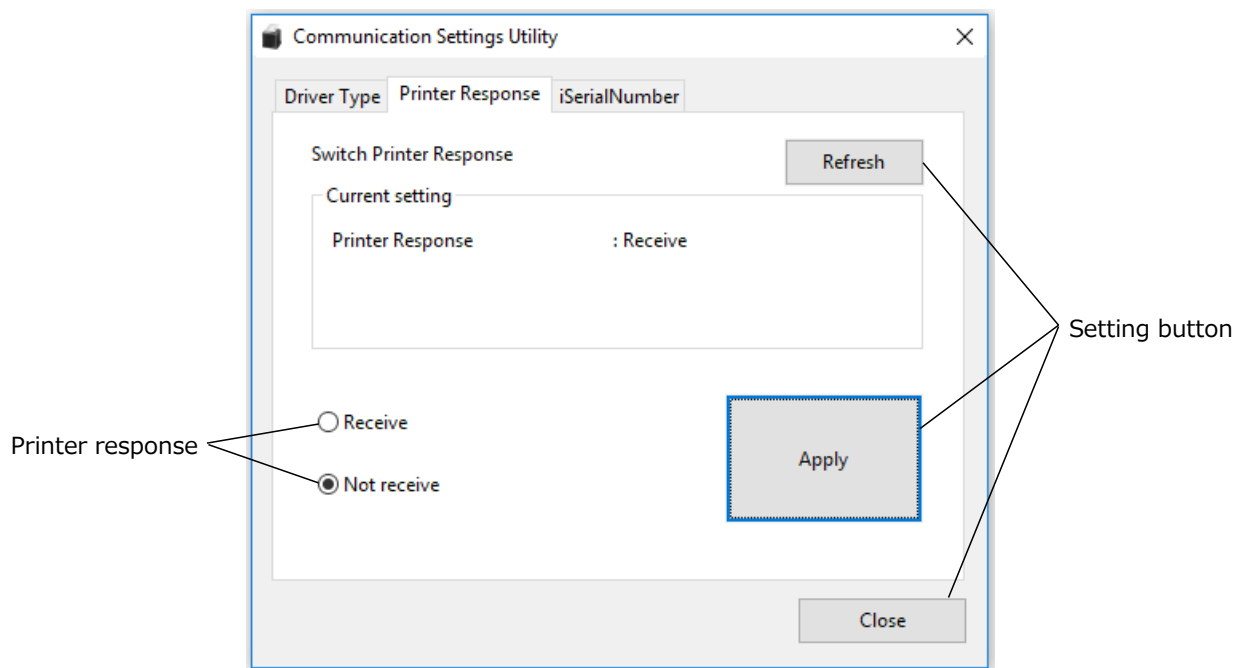
- When you select the same driver type as the current setting, the [Apply] button is not available.
- When you select "Printer Driver", install the printer driver with the USB connection as a connection method with the printer before installing the communication software.
For details of installation and functions of the printer driver, see "SII Printer Driver for Windows User's Guide" for SII printers described in "1.1.2 Target Products".

3.1.2 Printer Response

It is possible to select whether or not to discard subsequent response data when the response data from the printer exceeds the output buffer size in the printer without being received by the host.

Screen Description

The screen of the printer response is described.



Item	Description
Switch Printer Response	Selects whether or not to receive a response from the printer. <ul style="list-style-type: none">·Receive The printer memory switch "Select data discard when output buffer is full" is set to "Disable".·Not receive The printer memory switch "Select data discard when output buffer is full" is set to "Enable".
Current setting	Displays the currently selected printer response status.

Setting Button

Item	Description
Refresh	Updates to the latest information.
Apply	Applies the selected printer response setting.
Close	Finishes this software, and close the Communication Settings Utility window.

Reception Setting of Response Data

1. Start the Communication Settings Utility, and select the [Printer Response] tab.
2. Select [Receive] or [Not receive], and click the [Apply] button.
3. Confirm that [Printer Response] is the selected setting in [Current setting].

Caution

- ◆ Receive the response data periodically in order to certainly receive all of the response data.
If you do not receive the response data while "Receive" is selected, when the response data stored in the printer reaches the upper limit of the buffer, transmission to the printer may also become impossible.
When "Not receive" is selected, subsequent response data will be discarded when the output buffer becomes full.
- ◆ When using the printer driver
 - Select "Receive" for "Printer Response".
- ◆ When using the virtual serial port driver (using the created virtual COM port)
 - When the application receives the response from the printer, select "Receive" for "Printer Response".
 - When the application does not receive the response from the printer, select "Not receive" for "Printer Response".

Reference

- When you select the same reception setting of response data as the current setting, the [Apply] button is not available.

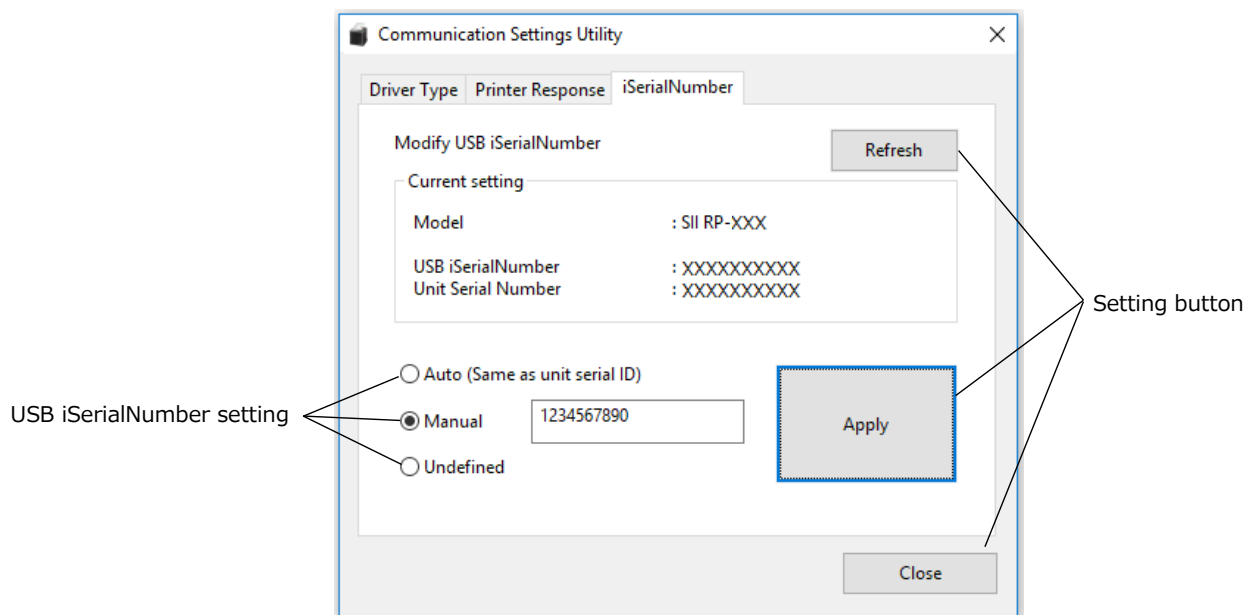
3.1.3 iSerialNumber

It is possible to set the iSerialNumber of USB port.

When the printer is connected to a different USB port, the USB iSerialNumber needs to be set in order to recognize it as the same printer.

Screen Description

The screen of the iSerialNumber is described.



Item	Description
Modify USB iSerialNumber	<p>Selects the setting of USB iSerialNumber.</p> <ul style="list-style-type: none"> • Auto (Same as unit serial ID) Sets the serial number (Unit Serial Number) registered in the printer unit as USB iSerialNumber. • Manual Sets the entered character string as USB iSerialNumber. <ul style="list-style-type: none"> • Set within 1 to 10 characters. • 1-byte alphanumeric characters are available. • Undefined Disables the value of USB iSerialNumber.
Current setting	<p>Displays the following information.</p> <ul style="list-style-type: none"> • Model Displays the driver name of the connected printer. • USB iSerialNumber Displays the USB iSerialNumber of the connected printer. • Unit iSerialNumber Displays the iSerialNumber of the connected printer.

Setting Button

Item	Description
Refresh	Updates to the latest information.
Apply	Applies the selected USB iSerialNumber setting.
Close	Finishes this software, and close the Communication Settings Utility window.

Setting of USB iSerialNumber

1. Start the Communication Settings Utility, and select the [iSerialNumber] tab.
2. Select the USB iSerialNumber setting, and click the [Apply] button. When selecting "Manual", enter a character string in the text box.
3. Confirm that [USB iSerialNumber] matches the set value in [Current setting].

Caution

- ◆ If the setting of USB iSerialNumber is changed, installation of a new printer driver or virtual serial port driver may be started.
- ◆ When entering USB iSerialNumber with "Manual", be sure to set a character string that is not duplicated with the USB iSerialNumber of other printers. If it is duplicated, the printer or system may not operate properly.

Reference

- When you select the same USB iSerialNumber setting as the current setting, the [Apply] button is not available.

Chapter 4 Virtual Serial Port Driver

This chapter describes the virtual COM port assigned by installing the virtual serial port driver.

Note that the operation partly differs from the control with physical COM port.
See "4.2.1 Virtual COM Port and Physical COM Port" for details.

4.1 COM Port Number

This section describes the method of confirming and changing the COM port number.

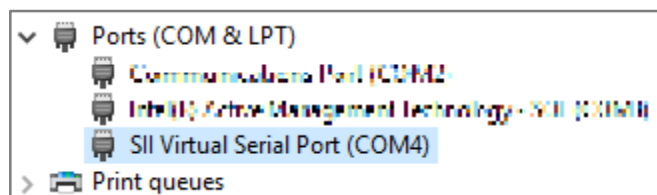
4.1.1 COM Port Number Assignment

For the COM port number, the smallest COM port number counted from COM3 and not being used is assigned automatically.

4.1.2 Confirmation of COM Port Number

The procedure for confirming the assigned COM port number is described.

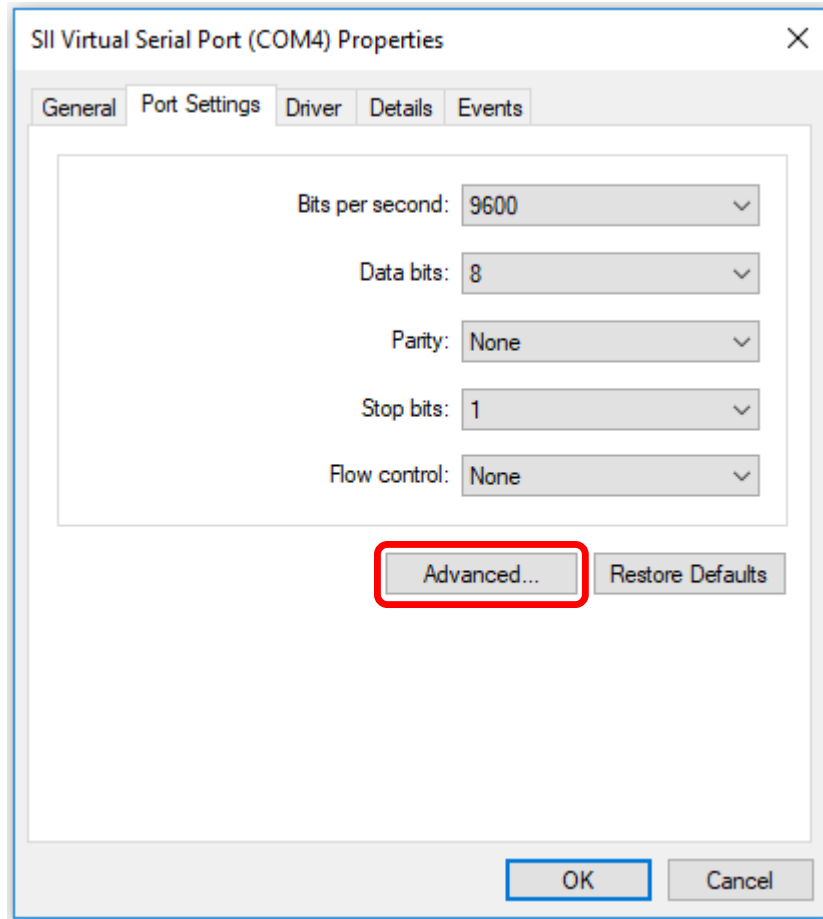
1. Display [Ports (COM & LPT)] category of the Device Manager while connecting the printer to the computer.
2. Check the port which shows "SII Virtual Serial Port". The COM number is enclosed with brackets.



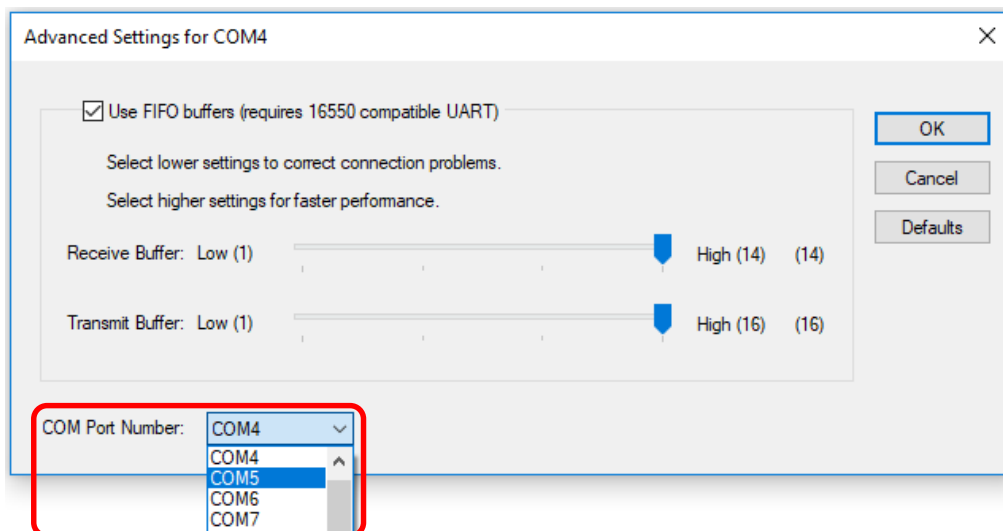
4.1.3 Changing COM Port Number

The procedure for changing the COM port number is described.

1. Display [Ports (COM & LPT)] category of the Device Manager while connecting the printer to the computer.
2. Open the property window of the port which shows "SII Virtual Serial Port", and click the [Advanced...] button in the [Port Settings] tab.



3. Change the COM port number with [COM Port Number], and click the [OK] button.



4. Restart the computer.

Caution

- ◆ The COM port number may change by changing the position of the USB port on the host computer.

Setting of USB iSerialNumber	COM Port Number
Set	The COM port number before change is still available.
Not set	The COM port number before change becomes unavailable, and a new COM port number is assigned.

Reference

- The input buffer is fixed to 64 bytes.
- The output buffer is 1024 bytes at default setting.
The output buffer can be changed from 1 to 65536 bytes by the Win32 API.

4.2 Operating Specifications

This section describes operating specifications of the virtual COM port operating with the virtual serial port driver.

4.2.1 Virtual COM Port and Physical COM Port

The difference with the physical COM port is as follows.

Item	Physical COM Port	Virtual COM Port
Response result of the Win32 API call during disconnection	Succeed	Fail*1
Parameters retrievable by the Win32 API and unrelated to USB communication	Enable	Fixed value
Parameters configurable by the Win32 API and unrelated to USB communication	Enable	Disable
Settings on the property opened from Device Manager	Enable	Settings other than "COM Port Number" are disabled

*1: Excluding **CloseHandle** etc.

4.2.2 Win32 API Function

The following Win32 API functions are supported.

- ◎: All parameters are enabled.
- : Some parameters are enabled.
- △: All parameters are not enabled.

File Management Functions Synchronization Functions	Support	Remarks
CancelIo	◎	
CloseHandle	◎	
CreateFile	◎	
GetOverlappedResult	◎	
ReadFile	◎	
ReadFileEx	◎	
WaitForSingleObject	◎	
WriteFile	◎	
WriteFileEx	◎	

Communication Functions	Support	Remarks
BuildCommDCB	△	
BuildCommDCBAndTimeouts	△	
ClearCommBreak	△	
ClearCommError	○	Only the following parameter is enabled: · CE_IOE
CommConfigDialog	△	

Communication Functions	Support	Remarks
EscapeCommFunction	△	
GetCommConfig	△	
GetCommMask	○	Only the following parameters are enabled: <ul style="list-style-type: none"> ▪ EV_TXEMPTY ▪ EV_ERR
GetCommModemStatus	○/△	Only the following parameters are enabled: <ul style="list-style-type: none"> ▪ MS_CTS_ON ▪ MS_DSR_ON Condition for the parameters to be ON: In printable state
GetCommProperties	○	Only the following members of COMMPROP structure are enabled: <ul style="list-style-type: none"> ▪ wPacketLength ▪ wPacketVersion ▪ dwMaxTxQueue ▪ dwMaxRxQueue ▪ dwCurrentTxQueue ▪ dwCurrentRxQueue
GetCommState	△	
GetCommTimeouts	◎	
GetDefaultCommConfig	△	
PurgeComm	◎	
SetCommBreak	◎	
SetCommConfig	△	
SetCommMask	○	Only the following parameters are enabled: <ul style="list-style-type: none"> ▪ EV_TXEMPTY ▪ EV_ERR
SetCommState	△	
SetCommTimeouts	◎	
SetDefaultCommConfig	△	
SetupComm	○	Only the following parameter is enabled: <ul style="list-style-type: none"> ▪ dwOutQueue
TransmitCommChar	◎	
WaitCommEvent	○	Only the following parameters are enabled: <ul style="list-style-type: none"> ▪ EV_TXEMPTY ▪ EV_ERR



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(Specifications are subject to change without notice.)