# Utility Software
# Data Connection
# For 45 Series
# Instruction Manual

**Please read this instruction manual carefully before installation.**

Fujikura

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# 1 Introduction

Data Connection For 35 Series (“Data Connection”) is the software included in the package of 35/45 Series; the splicer series manufactured by Fujikura. Read this installation manual before installing Data Connection

# 2 System Requirements

| | |
|---|---|
| Computer and processor | 1.6 gigahertz(GHz) processor or higher<br>(In case Core™i3, Intel Corp) |
| Operating System | Microsoft Windows10(64bit)<br>*The operating system must be updated by Windows Update |
| Memory | 4GB |
| Hard Disk | 100MB available space |
| Display | 1024x768, or higher resolution<br>24bit, or higher color |
| Other | USB 2.0 Port<br>Capable of Internet Access, 56kbps or higher<br>Broadband access is recommended |



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# 3 Install

## Login to the PC using an account with administrator privilege

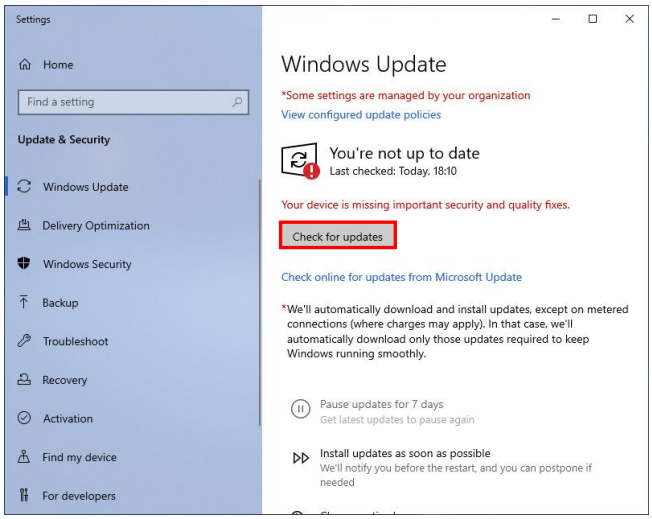
Administrator privilege is required when installing the software.
If you do not have an account which has administrator privilege, ask the supervisor of the PC for installation.

## Exit all programs running on the PC

Exit all programs running on the PC. Some programs may prevent installation. Specifically do not install Data Connection when the communication software for another series of splicer is running.

## Perform Windows Update

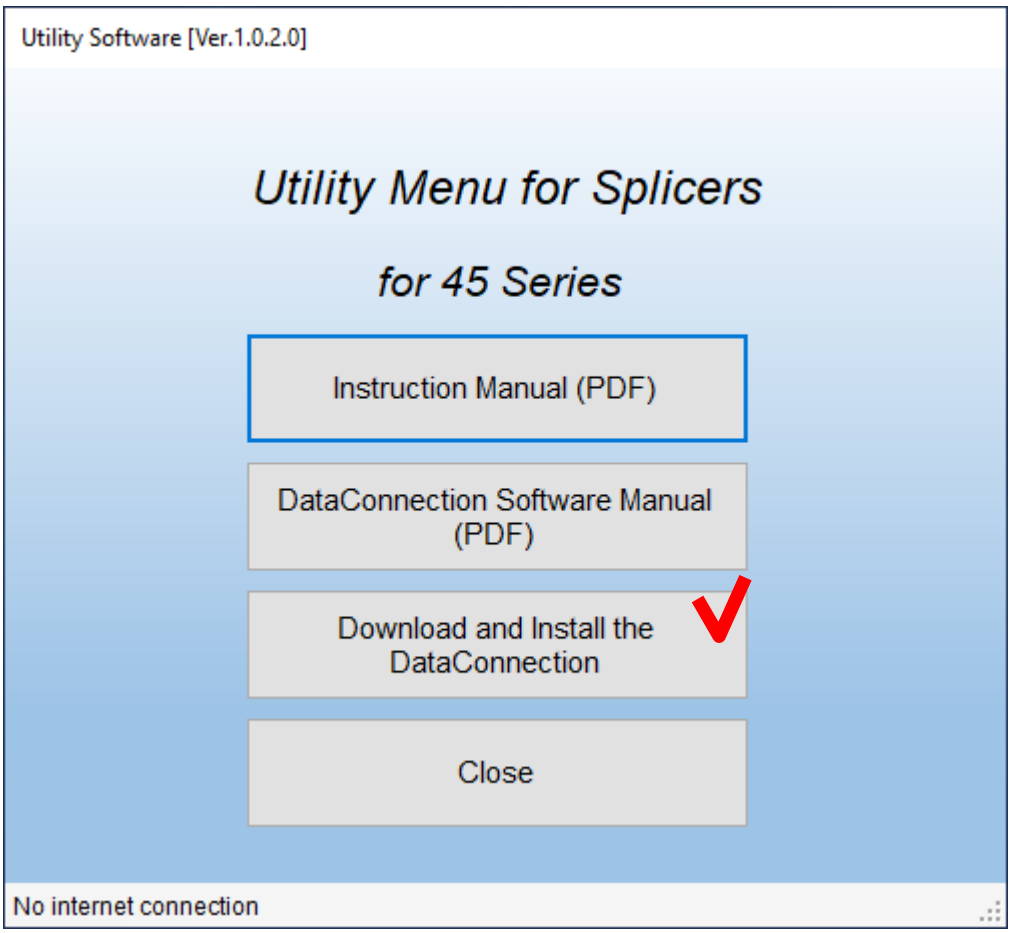
Operating System must be updated by latest update.
Perform Windows Update before starting installation.
To go to Windows Update, select [Start] > [Setting] > [Windows Update].




Internet connection is necessary in order to perform Windows Update .

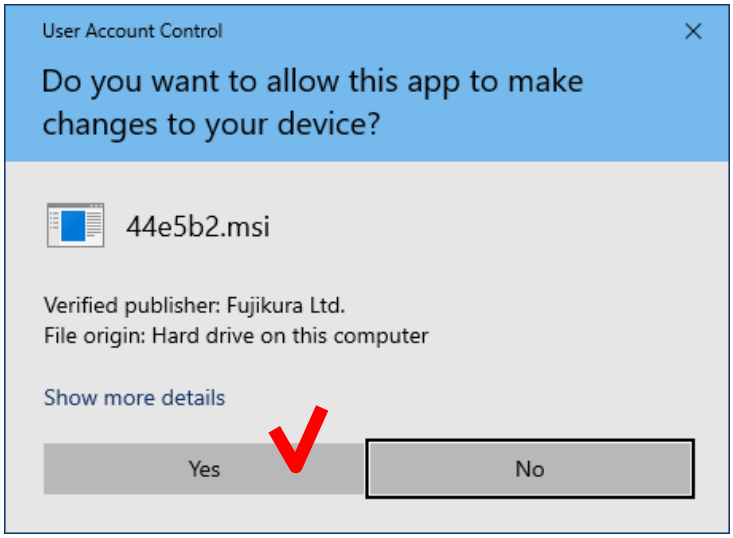
# 4 Install the Software

(1) Confirm that the PC has connected to the Internet.
(2) Confirm that the USB cable is NOT connected.
(3) Double click the shortcut to the utility software on the desktop.
(4) Click [Download and Install the Data Connection].



*"User Account Control" window may be shown during installation.*

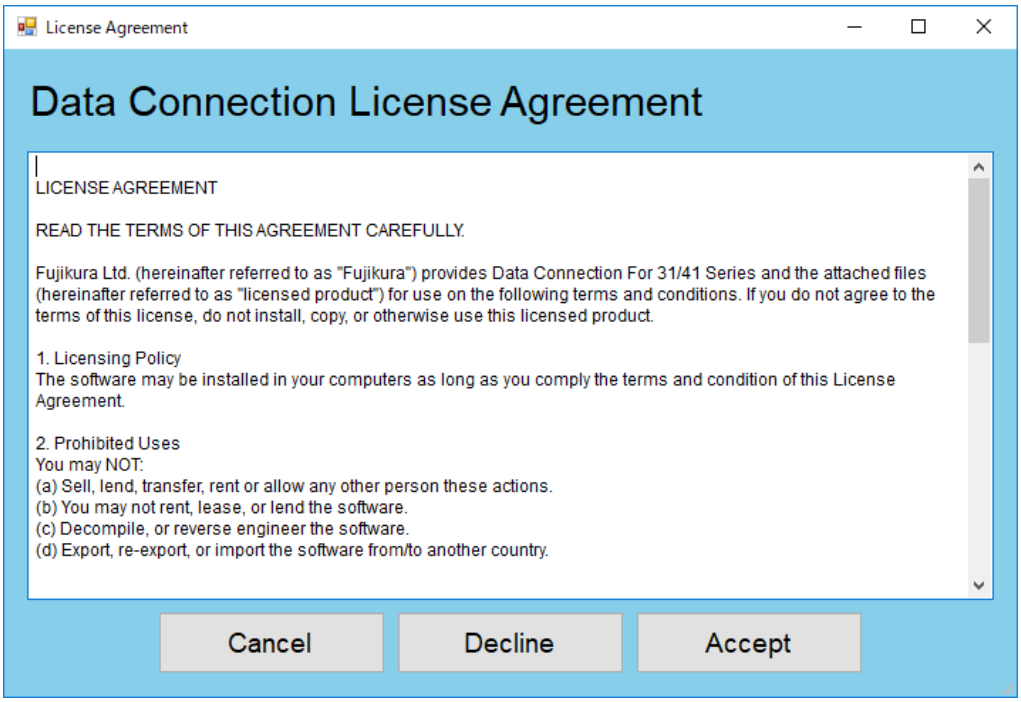
*Click [Yes] if "Do you want to allow the following program from an unknown publisher to make changes to this computer?" message is shown.*




*Click [Continue] if "Windows needs your permission to continue" message is shown.*

If you run the installer without administrator privilege, the following message may be shown. In this case, login with an administrator account, and run the installer.

(5) License Agreement confirmation window will be shown.
Click [Accept] button if you accept the License Agreement.
If you do not accept the License Agreement, click [Decline] button.
In this case, installation will be cancelled.




If the DataConnection has already been installed, the uninstall menu will be shown.

(6) Installation of necessary software and driver will start.

**Necessary software and driver for Data Connection**

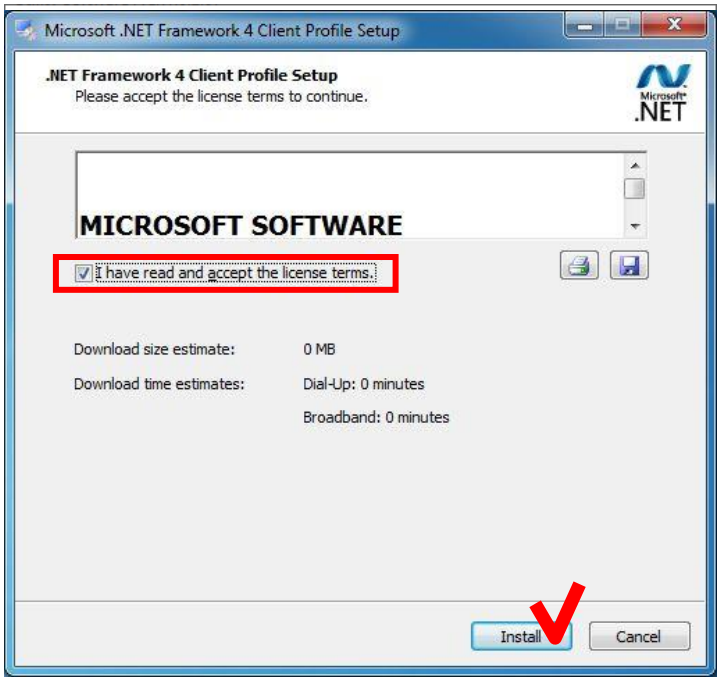
- Microsoft .NET Framework 4 Client Profile or higher
- Microsoft Visual C++ 2010 Redistributable
- USB Driver

**(a) Installation of Microsoft .NET Framework 4 Client Profile**

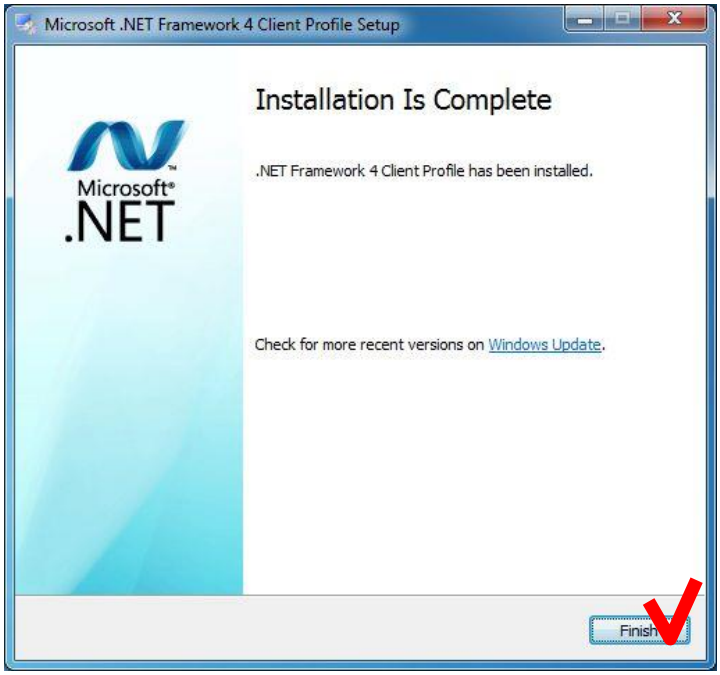
If “Microsoft .NET Framework 4 Client Profile” or higher hasn’t been installed, [Microsoft .NET Framework 4 Client Profile Setup] window will be shown.

> If the installation is not necessary, the following window will not be shown. Proceed to following page

Check [I have read and accept the license terms] and click [Install] button.




When the following window is shown, click [Finish] button to complete the installation.

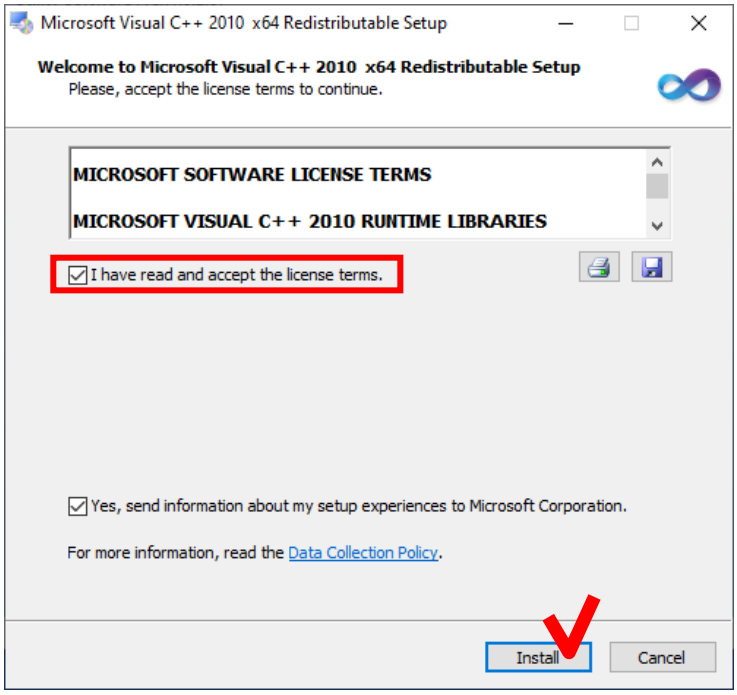


**(b) Installation of Microsoft Visual C++ 2010 Redistributable**

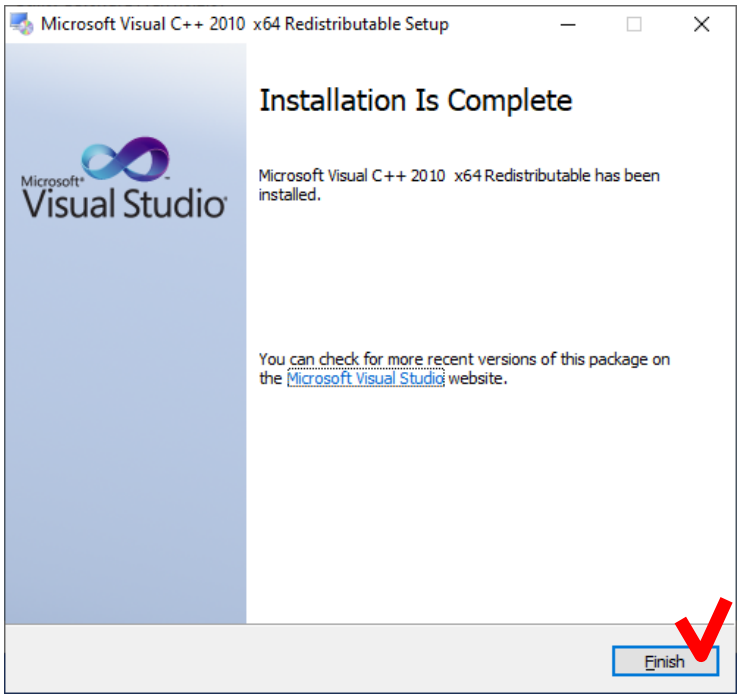
If “Microsoft Visual C++ 2010 Redistributable” has not been installed, [Microsoft Visual C++ 2010 Redistributable Setup] window will be shown.

> If the installation is not necessary, following window will not be shown. Proceed to following page

Check [I have read and accept the license terms] and click [Install] button.




When the following window is shown, click [finish] button to complete the installation.



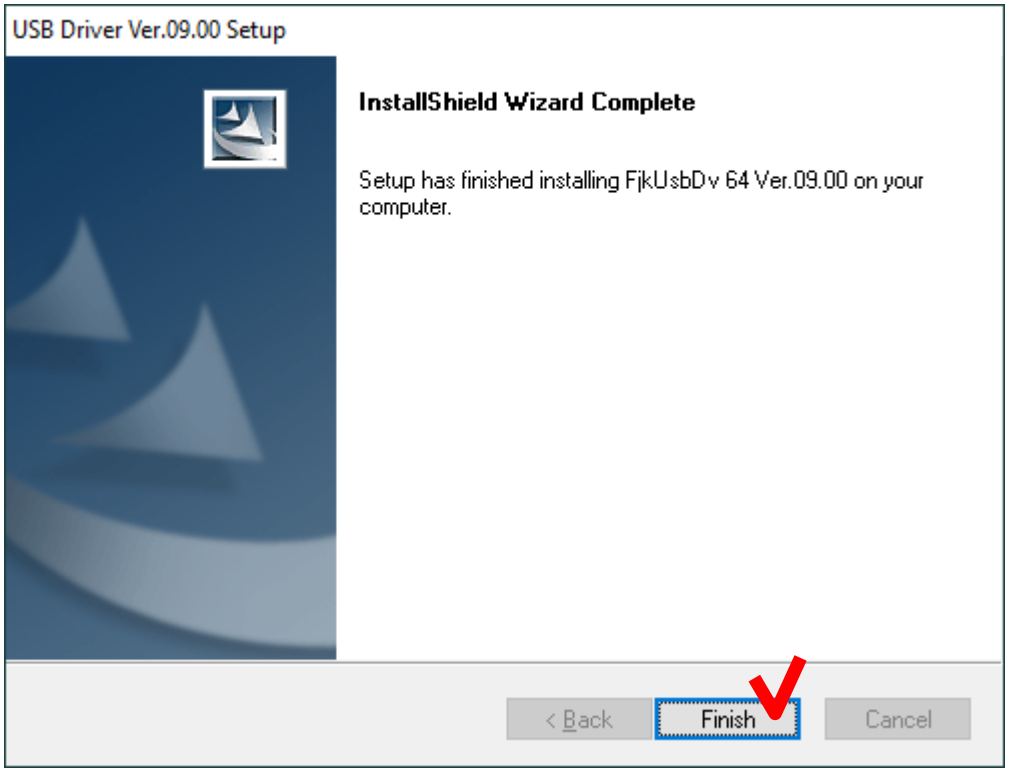
**(c) Uninstallation of existing USB driver**

If the old version of USB driver has been installed, [Confirm Uninstall] window will be shown.

> If the uninstallation is not necessary, the following window will not be shown. Proceed to following page

Click [OK].

When the following window is shown after the uninstallation, click [finish] to complete the uninstallation.



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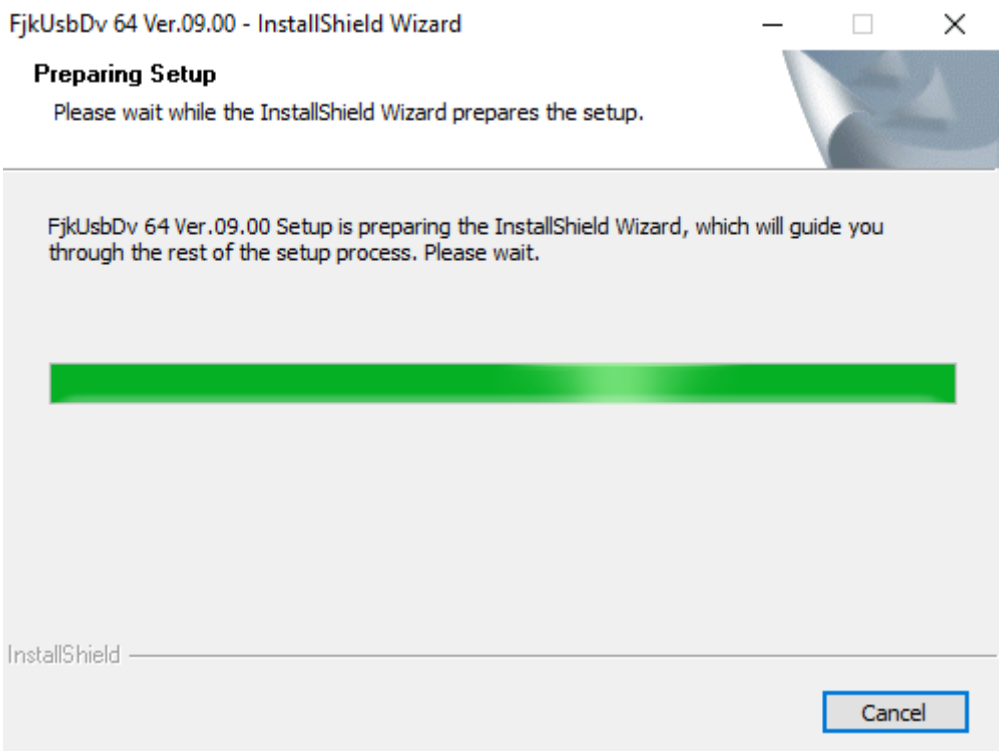
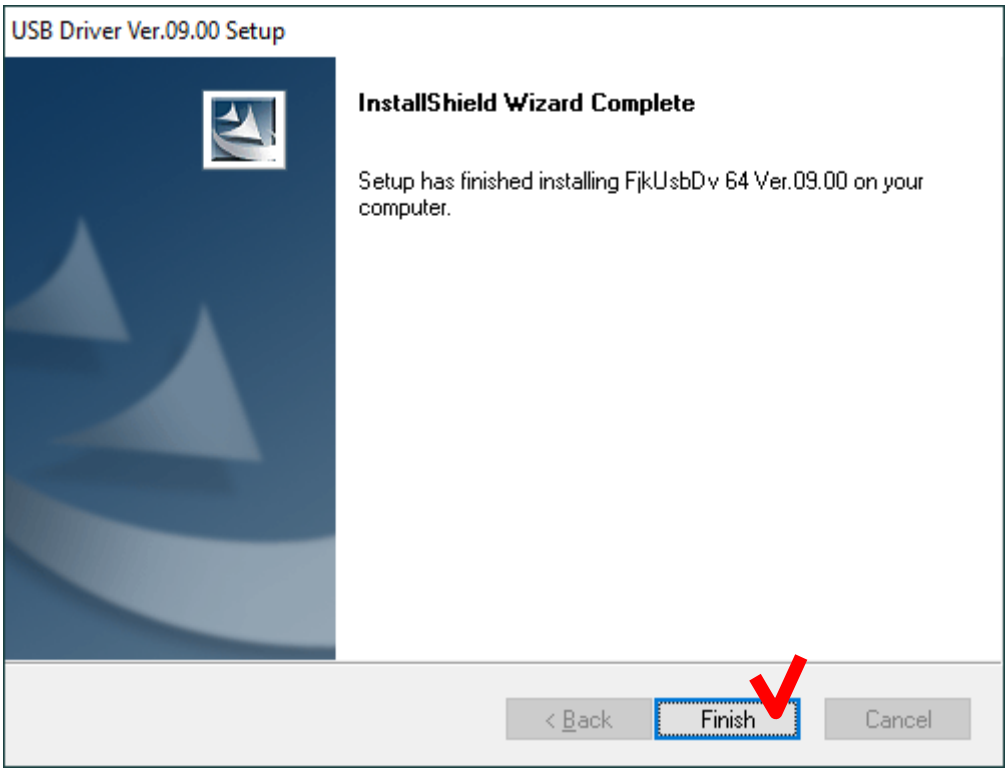
(d) Installation of USB driver
[FjkUsbDv InstallShield Wizard] window will be shown.




When the following window is shown after the installation, click [Finish] to complete the installation.



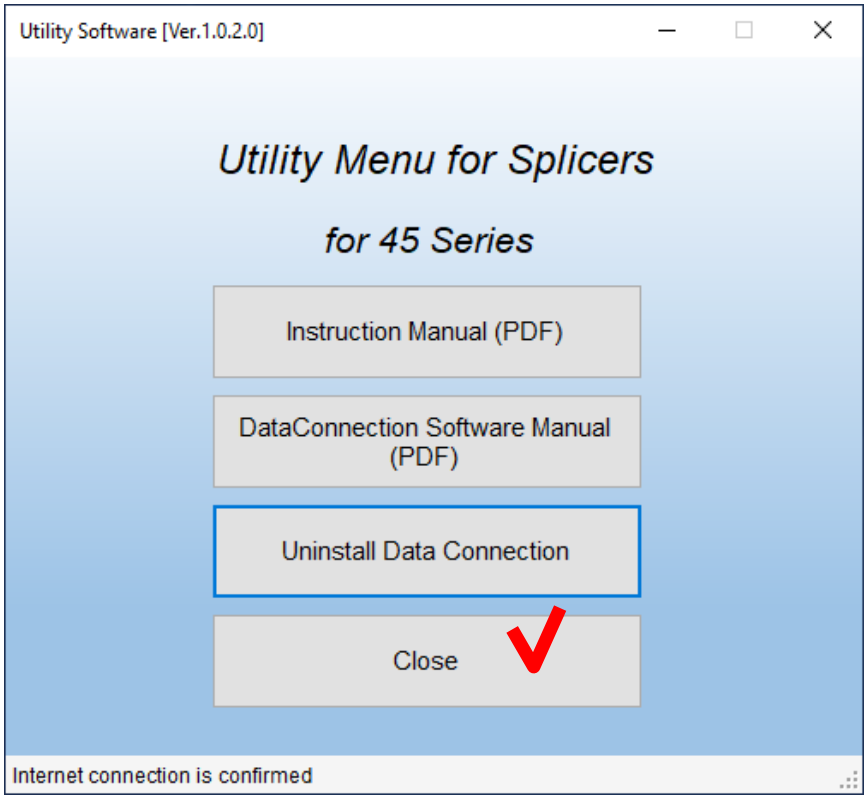
If the following message is shown, click [Install].

If the following security message was shown, click “Install this driver software anyway”.

(7) Installation of the main program of Data Connection will start.

(8) When the following message is shown, click [OK] button to complete the installation.

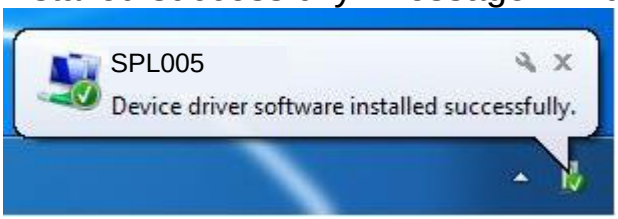
(9) Click [Close] button to close the menu.



(10) Install device driver.
Turn on the splicer and connect to the PC with USB cable.

"Installing device driver software" message will be shown at notification area in task bar.

When the driver installation is complete, "Device driver software installed successfully" message will be shown.



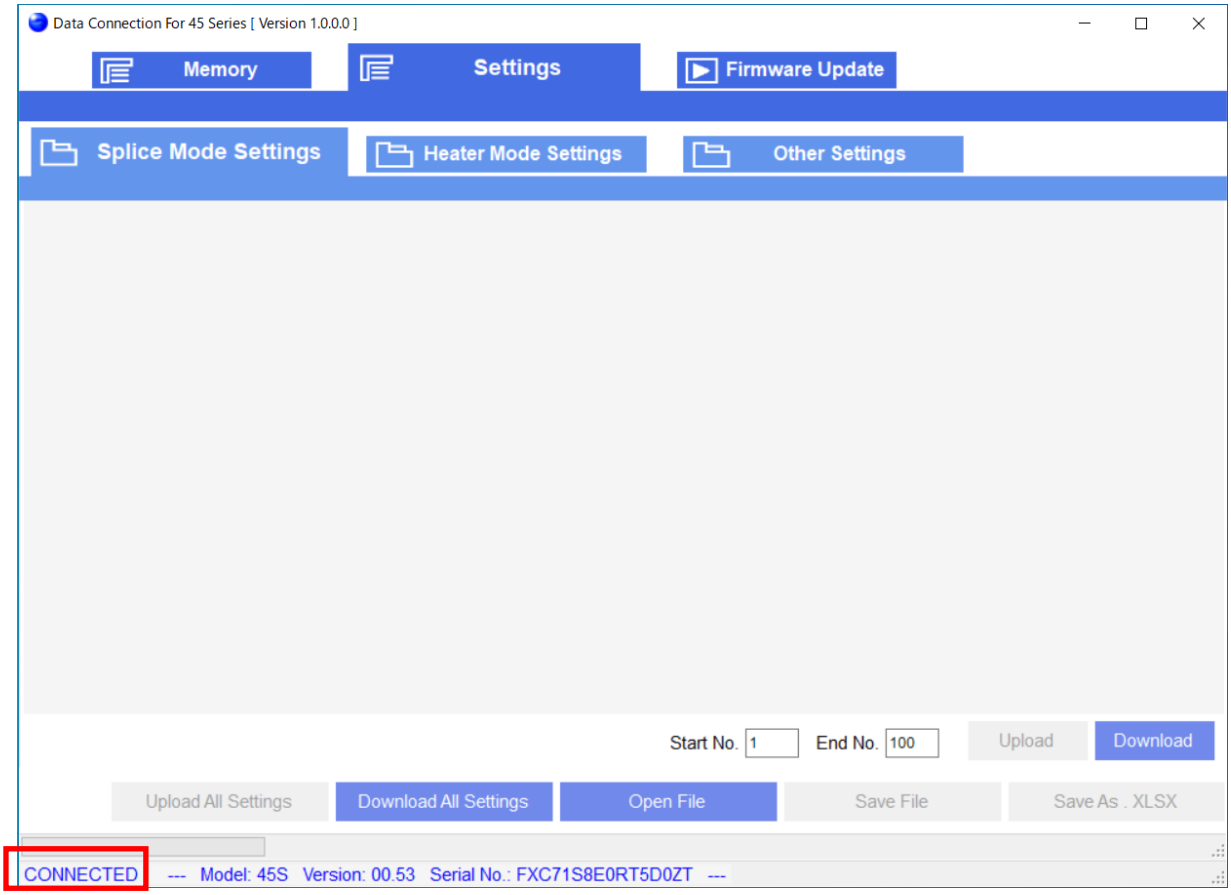

If the "Device driver software installed successfully" message was not shown in a few minutes, please read [Installation of the Device Driver Failed] in [Chapter 7: Troubleshooting]

# 5 How to use the Data Connection

Double-click the shortcut on the desktop or click “Data Connection For 45 Series” in the [Start] > [All Programs] > [Fujikura] menu.

If the Data Connection does not run, please read [Data Connection Does Not Run] in [Chapter 7: Troubleshooting]

Turn on the splicer and connect to PC with USB cable.
If the USB communication is ready, “CONNECTED” message will be shown at the bottom left of Data Connection window.




If the “CONNECTED” message was not shown, please read [USB Communication Doesn’t Work] in [Chapter 7: Troubleshooting]

## 5.1 Splice Result Memory

In [Memory] page, the splice result memory can be downloaded and saved.

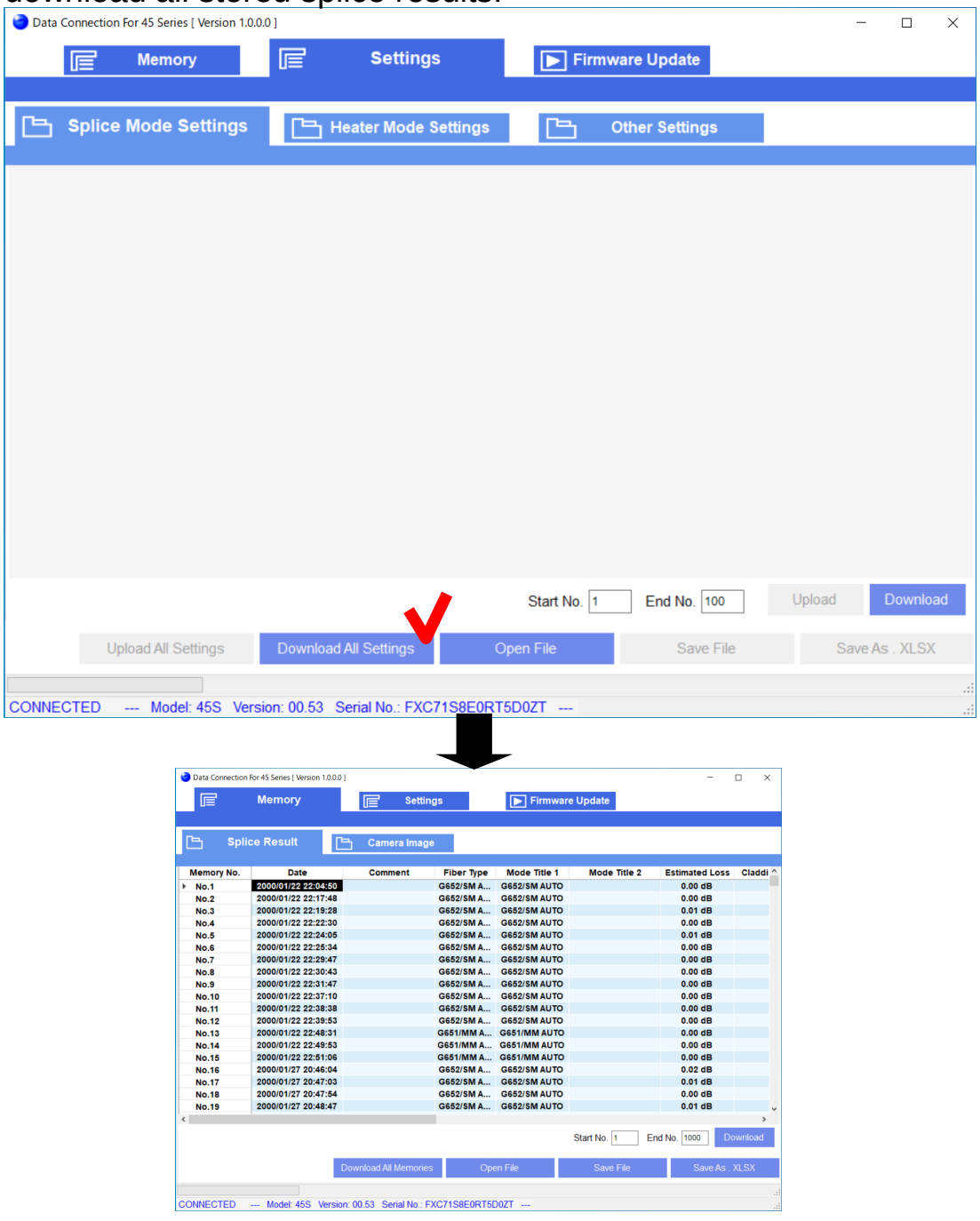
> Splice result memory can only be downloaded.
> It can not be uploaded to splicer.

### 5.1.1 Download Splice Result Memory

(1) Confirm that the splicer is in “READY” state.

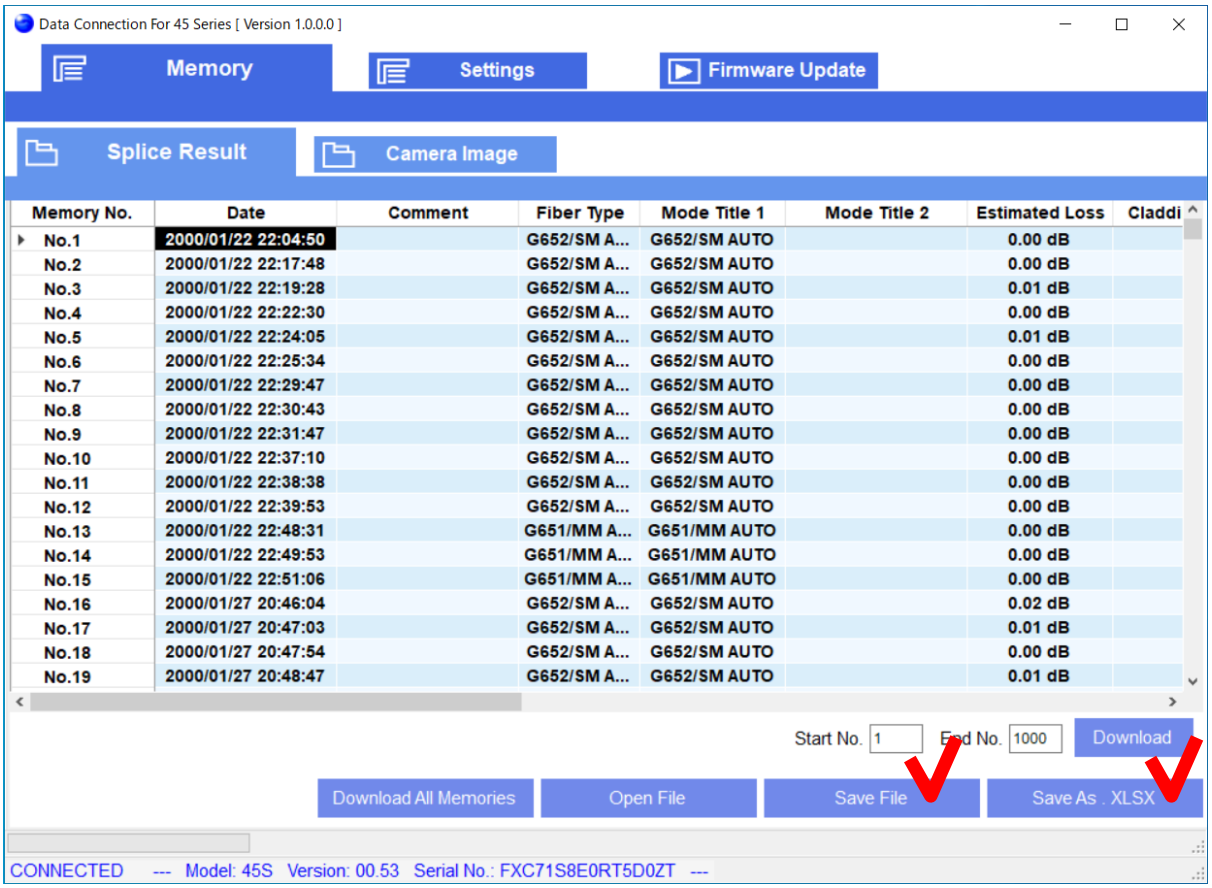
> Press “RESET” key to change the splicer to “READY” state.

(2) Select [Memory] page, and click [Download All Memories] button to download all stored splice results.



### 5.1.2 Save Splice Result Memory

(1) Click [Save File] or [Save As .XLS] button to save the splice result memories.




[Save File]
Data is saved to a file. Only Data Connection can open this data file.

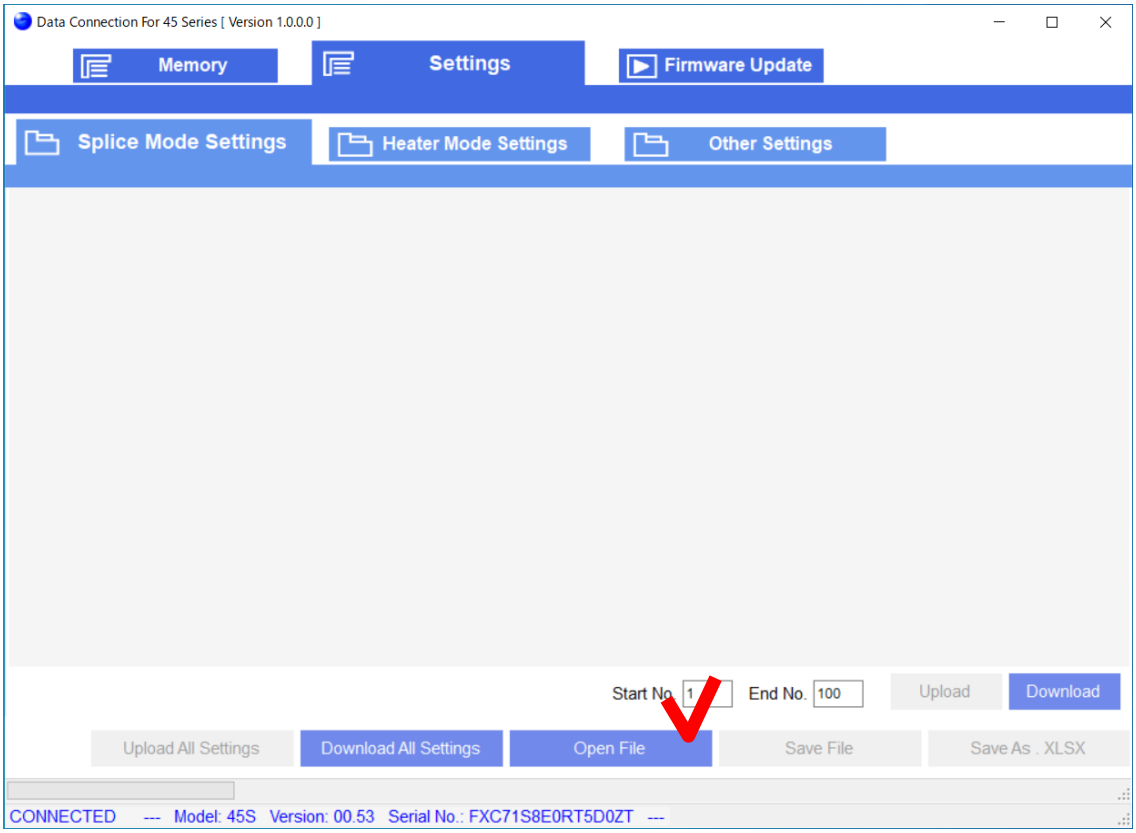
[Save As .XLS]
Data is exported as XLS file so that the data can be opened by Microsoft Excel. Note that Data Connection cannot open this exported file.

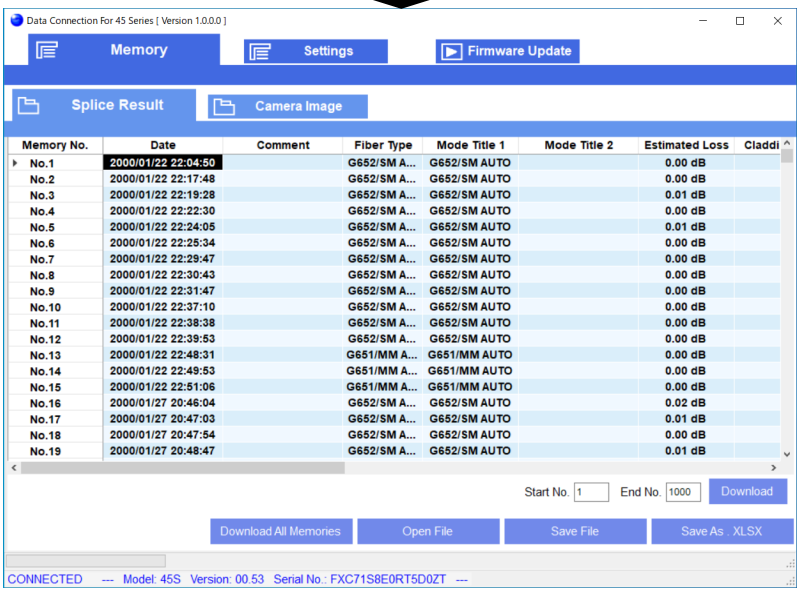
### 5.1.3 Open Splice Result Memory Data

This function is available without USB connection.

Splice result memory data cannot be opened when a different model of splicer is connected.

Select [Memory] page, and click [Open File] button.
When the file open dialog is shown, select the saved file.



## 5.2 Download, Save, Edit and Upload Settings

In [Settings] page, the splice settings can be downloaded, saved, edited and uploaded. [Setting] page consists of 3 additional pages.

Please note that some items are displayed on the page which is different from splicer.

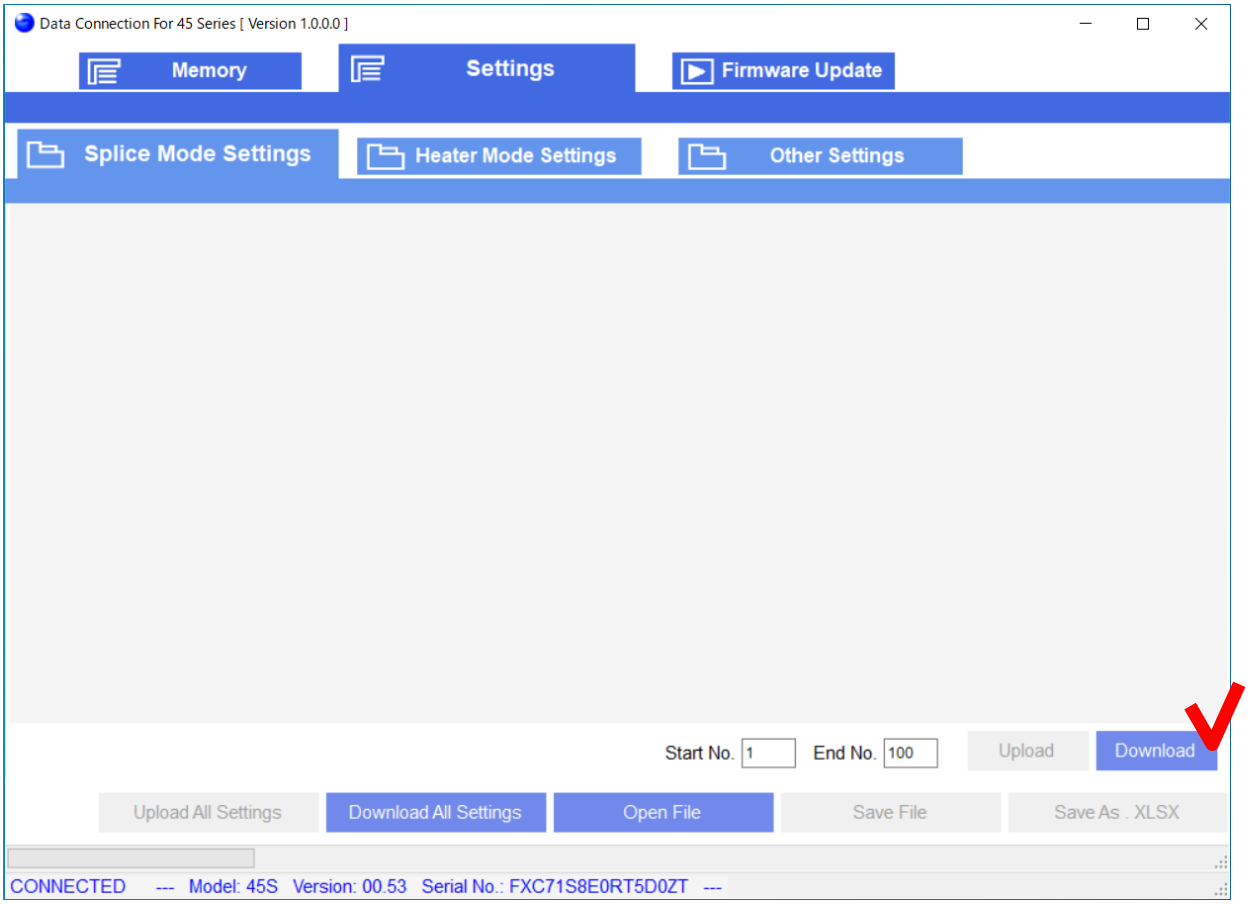
| Item | Page in Splicer | Page in Data Connection |
|---|---|---|
| Splice Mode | Splice Settings | Splice Mode Settings |
| Heater Mode | Heater Settings | Heater Mode Settings |
| Pause | Splice Settings | Other Settings |
| Auto Start | | |
| Splice Settings | Setting Menu | |
| Maintenance Settings | | |
| Machine Settings | | |
| Menu Lock Settings | | |

### 5.2.1 Download Settings

Confirm that the splicer is in “READY” state.

> Press [RESET] key to change the splicer to “READY” state.

Select [Settings] page.




Download all of [Splice Mode Settings], [Heater Mode Settings] and [Other Settings]

Click [Download All Settings] button

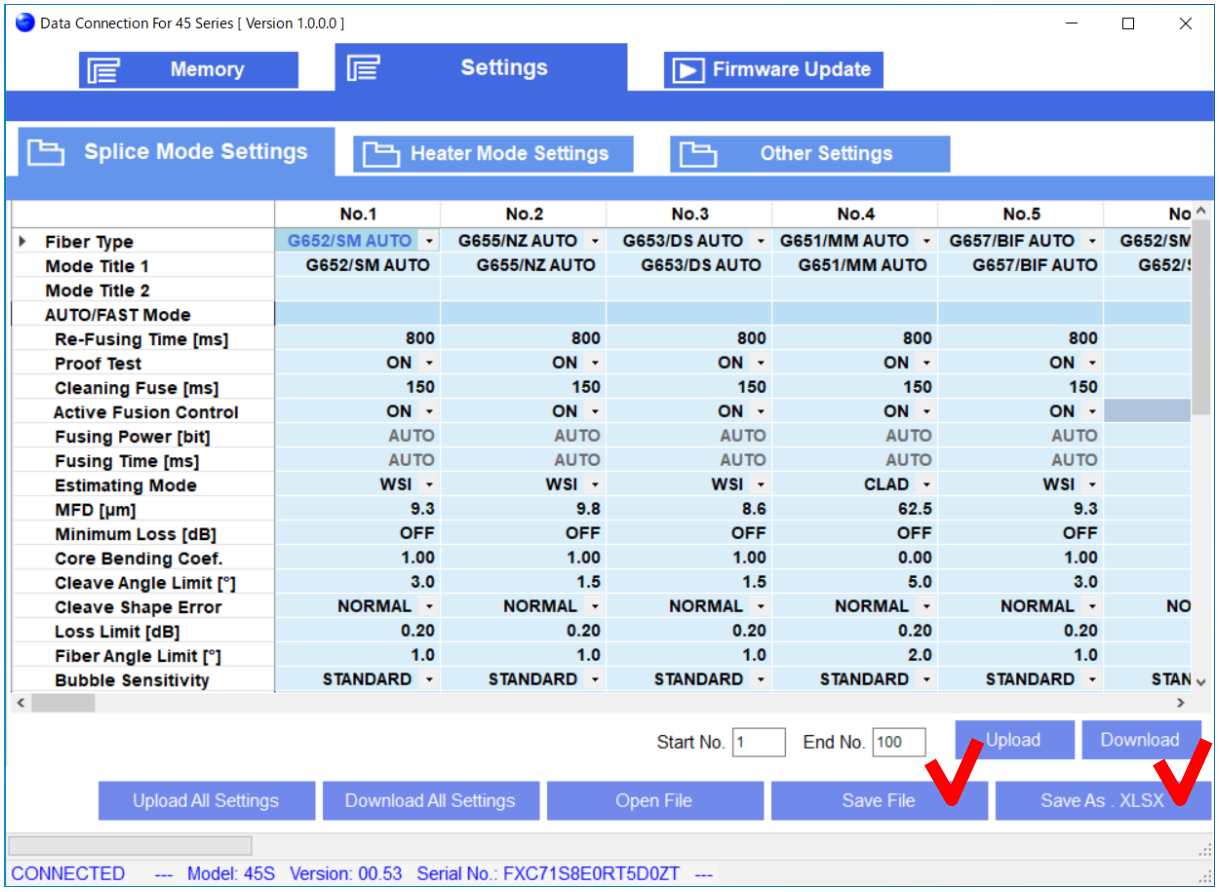
Download one of [Splice Mode Settings], [Heater Mode Settings] and [Other Settings]

Select page you want to download, and click [Download] button.
(In above picture, [Splice Mode Settings] will be downloaded.)

> In [Splice Mode Settings] and [Heater Mode Settings] page, you can select the mode number to download specifying [Start No.] and [End No.].

### 5.2.2 Save Settings

Click [Save File] or [Save As .XLS] button to save the settings. When file save dialog is shown, input file name and destination.




| | No.1 | No.2 | No.3 | No.4 | No.5 | No |
|---|---|---|---|---|---|---|
| Fiber Type | G652/SM AUTO | G655/NZ AUTO | G653/DS AUTO | G651/MM AUTO | G657/BIF AUTO | G652/SM |
| Mode Title 1 | G652/SM AUTO | G655/NZ AUTO | G653/DS AUTO | G651/MM AUTO | G657/BIF AUTO | G652/ |
| Mode Title 2 | | | | | | |
| AUTO/FAST Mode | | | | | | |
| Re-Fusing Time [ms] | 800 | 800 | 800 | 800 | 800 | |
| Proof Test | ON | ON | ON | ON | ON | |
| Cleaning Fuse [ms] | 150 | 150 | 150 | 150 | 150 | |
| Active Fusion Control | ON | ON | ON | ON | ON | |
| Fusing Power [bit] | AUTO | AUTO | AUTO | AUTO | AUTO | |
| Fusing Time [ms] | AUTO | AUTO | AUTO | AUTO | AUTO | |
| Estimating Mode | WSI | WSI | WSI | CLAD | WSI | |
| MFD [µm] | 9.3 | 9.8 | 8.6 | 62.5 | 9.3 | |
| Minimum Loss [dB] | OFF | OFF | OFF | OFF | OFF | |
| Core Bending Coef. | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | |
| Cleave Angle Limit [°] | 3.0 | 1.5 | 1.5 | 5.0 | 3.0 | |
| Cleave Shape Error | NORMAL | NORMAL | NORMAL | NORMAL | NORMAL | NO |
| Loss Limit [dB] | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | |
| Fiber Angle Limit [°] | 1.0 | 1.0 | 1.0 | 2.0 | 1.0 | |
| Bubble Sensitivity | STANDARD | STANDARD | STANDARD | STANDARD | STANDARD | STAN |

[Save File]

Data is saved to a file. Only Data Connection can open this data file.

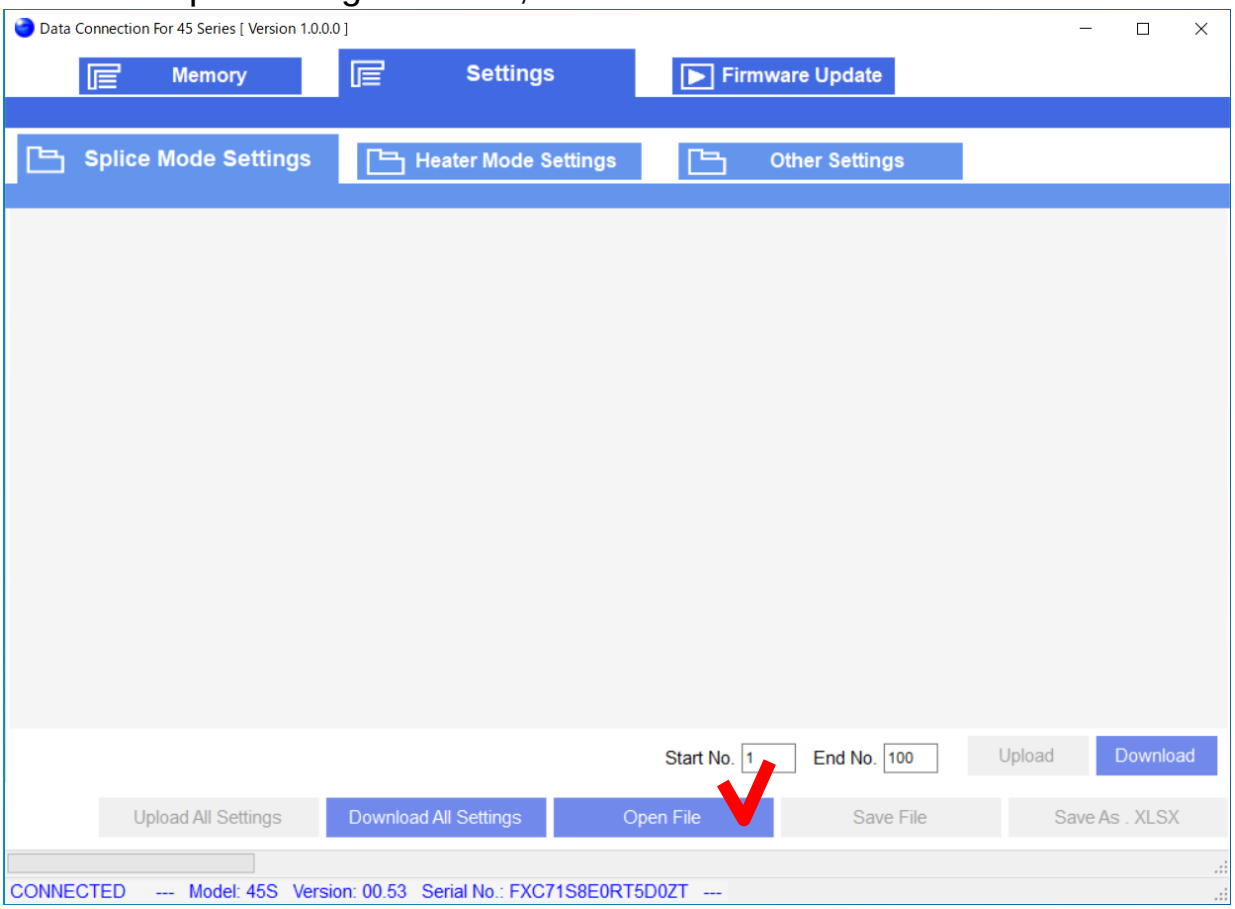
[Save As .XLS]

Data is exported as XLS file so that the data can be opened by Microsoft Excel. Note that Data Connection cannot open this exported file.

### 5.2.3 Open Settings Data

This function is available without USB connection.

Select [Settings] page and click [Open File].
When file open dialog is shown, select the saved file.



### 5.2.4 Edit Settings

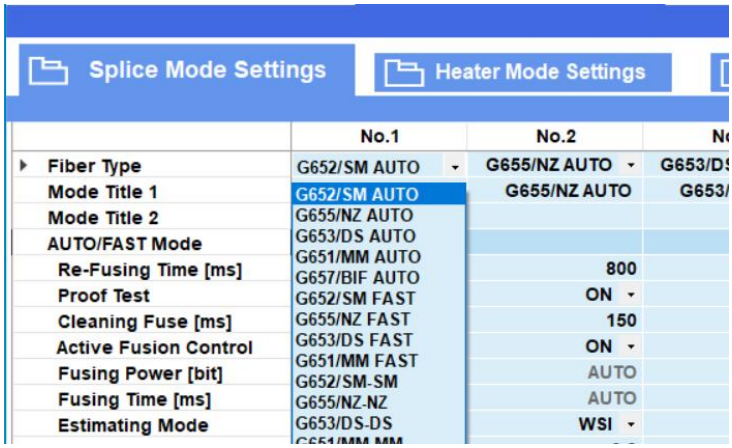
Click the cell to edit.

There are specific methods to change the setting. Follow the Data Connection display to change the setting.

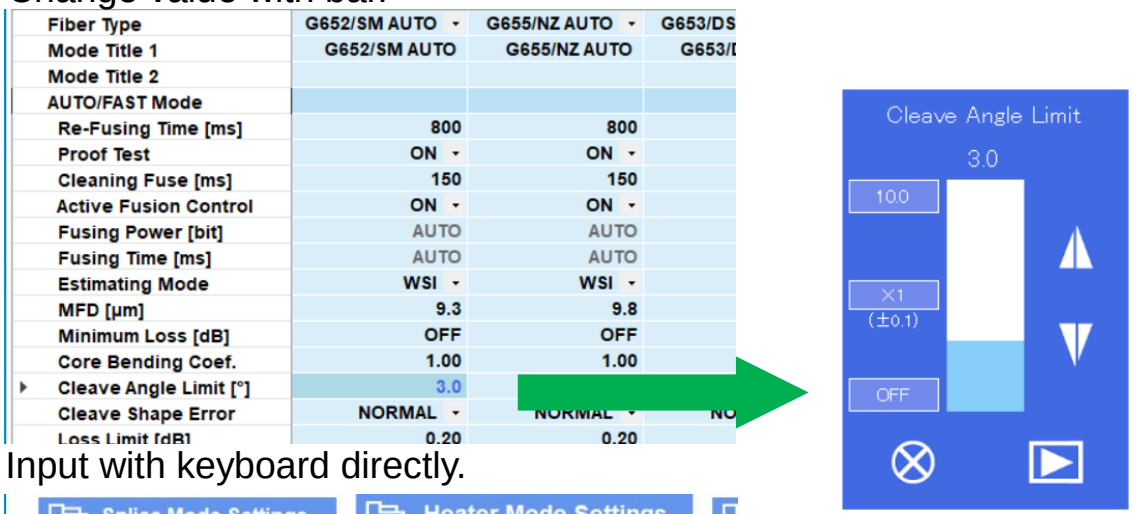
> When the value of “Fiber Type” is changed, all parameters in the selected mode will be reset to original factory values.

> When the value of “Sleeve Type” is changed, all parameters in the selected mode will be reset to original factory values.

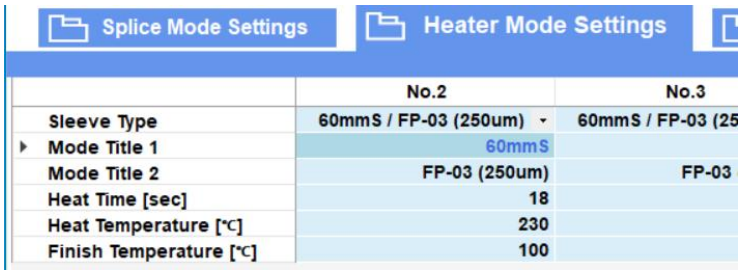
(a) Select item from list.




(b) Change value with bar.




(c) Input with keyboard directly.



### 5.2.5 Upload Settings

Confirm that the splicer is in “READY” state.

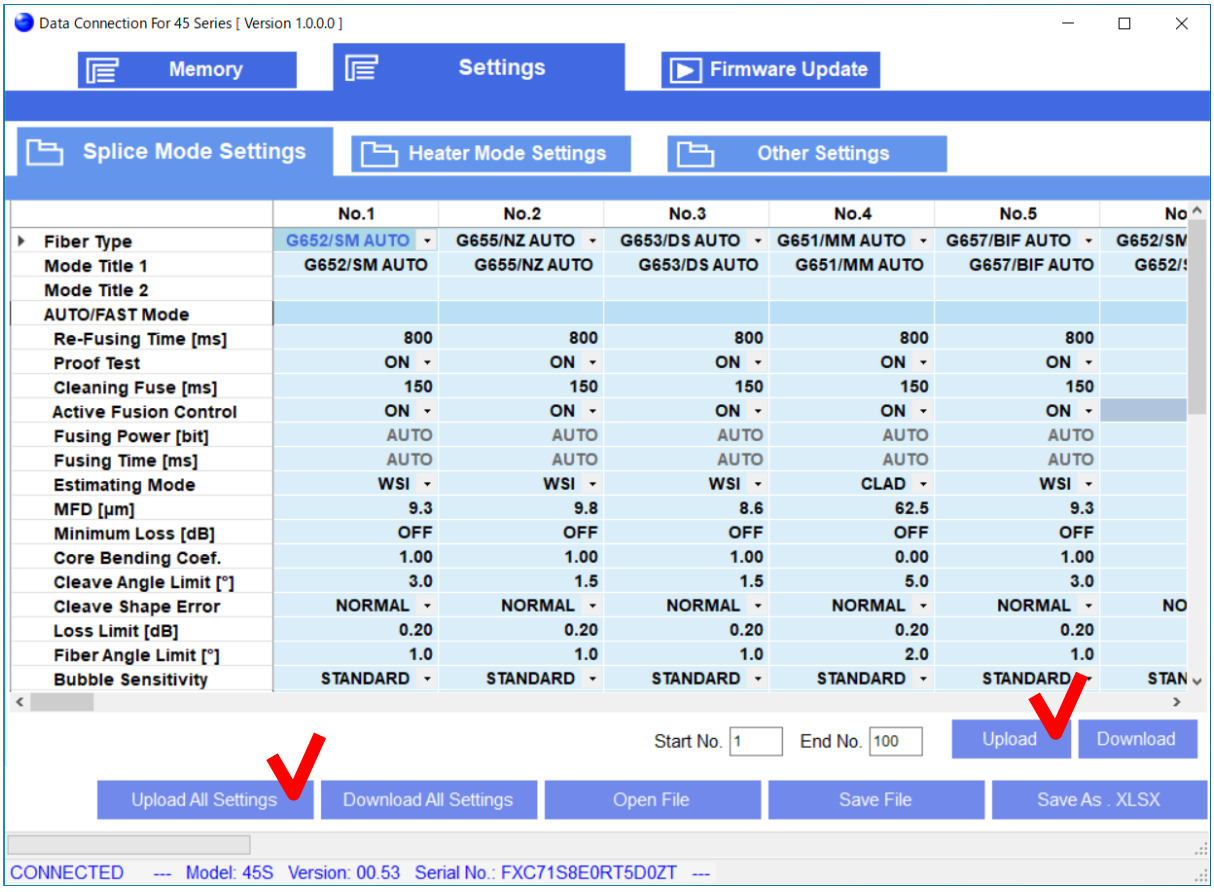
> Press [RESET] key to change the splicer to “READY” state.

Upload all of [Splice Mode Settings], [Heater Mode Settings] and [Other Settings]

Click [Upload All Settings] button

Upload one of [Splice Mode Settings], [Heater Mode Settings] and [Other Settings]

Select the page you want to upload, and click [Upload] button.
(In the following picture, only [Splice Mode Settings] will be uploaded.)



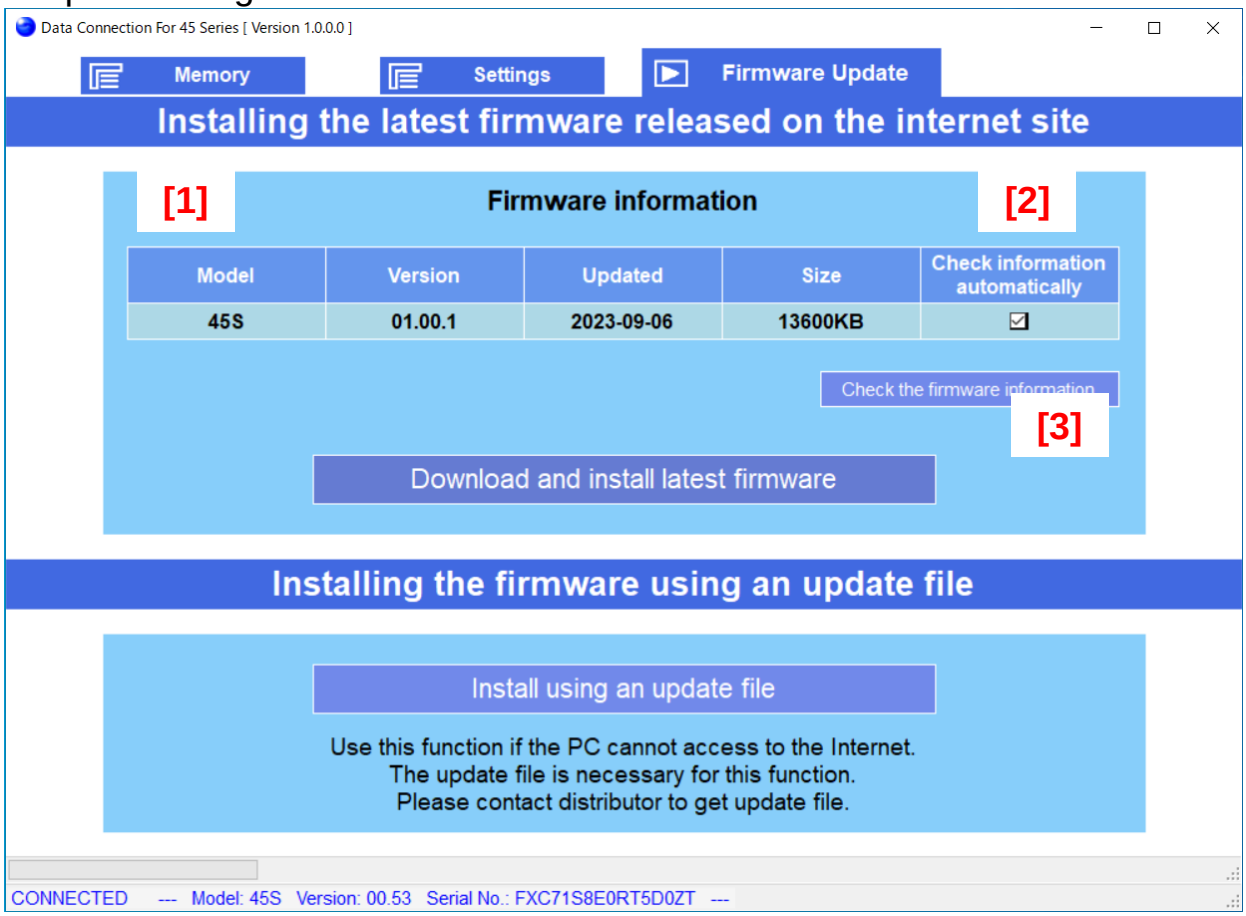

| | No.1 | No.2 | No.3 | No.4 | No.5 | No |
|---|---|---|---|---|---|---|
| Fiber Type | G652/SM AUTO | G655/NZ AUTO | G653/DS AUTO | G651/MM AUTO | G657/BIF AUTO | G652/SM |
| Mode Title 1 | G652/SM AUTO | G655/NZ AUTO | G653/DS AUTO | G651/MM AUTO | G657/BIF AUTO | G652/ |
| Mode Title 2 | | | | | | |
| AUTO/FAST Mode | | | | | | |
| Re-Fusing Time [ms] | 800 | 800 | 800 | 800 | 800 | |
| Proof Test | ON | ON | ON | ON | ON | |
| Cleaning Fuse [ms] | 150 | 150 | 150 | 150 | 150 | |
| Active Fusion Control | ON | ON | ON | ON | ON | |
| Fusing Power [bit] | AUTO | AUTO | AUTO | AUTO | AUTO | |
| Fusing Time [ms] | AUTO | AUTO | AUTO | AUTO | AUTO | |
| Estimating Mode | WSI | WSI | WSI | CLAD | WSI | |
| MFD [µm] | 9.3 | 9.8 | 8.6 | 62.5 | 9.3 | |
| Minimum Loss [dB] | OFF | OFF | OFF | OFF | OFF | |
| Core Bending Coef. | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | |
| Cleave Angle Limit [°] | 3.0 | 1.5 | 1.5 | 5.0 | 3.0 | |
| Cleave Shape Error | NORMAL | NORMAL | NORMAL | NORMAL | NORMAL | NO |
| Loss Limit [dB] | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | |
| Fiber Angle Limit [°] | 1.0 | 1.0 | 1.0 | 2.0 | 1.0 | |
| Bubble Sensitivity | STANDARD | STANDARD | STANDARD | STANDARD | STANDARD | STAN |

> In [Splice Mode Settings] or [Heater Mode Settings] page, you can select the mode number to upload specifying the [Start No.] and [End No.]

## 5.3 Firmware Update

[Firmware Update] page provides firmware update function of the splicer.

When the PC is connected to internet, DataConnection downloads firmware update file from our server and installs it to the splicer.
Otherwise, if you have the firmware update file, the firmware can be installed to splicer using Data Connection without internet connection.



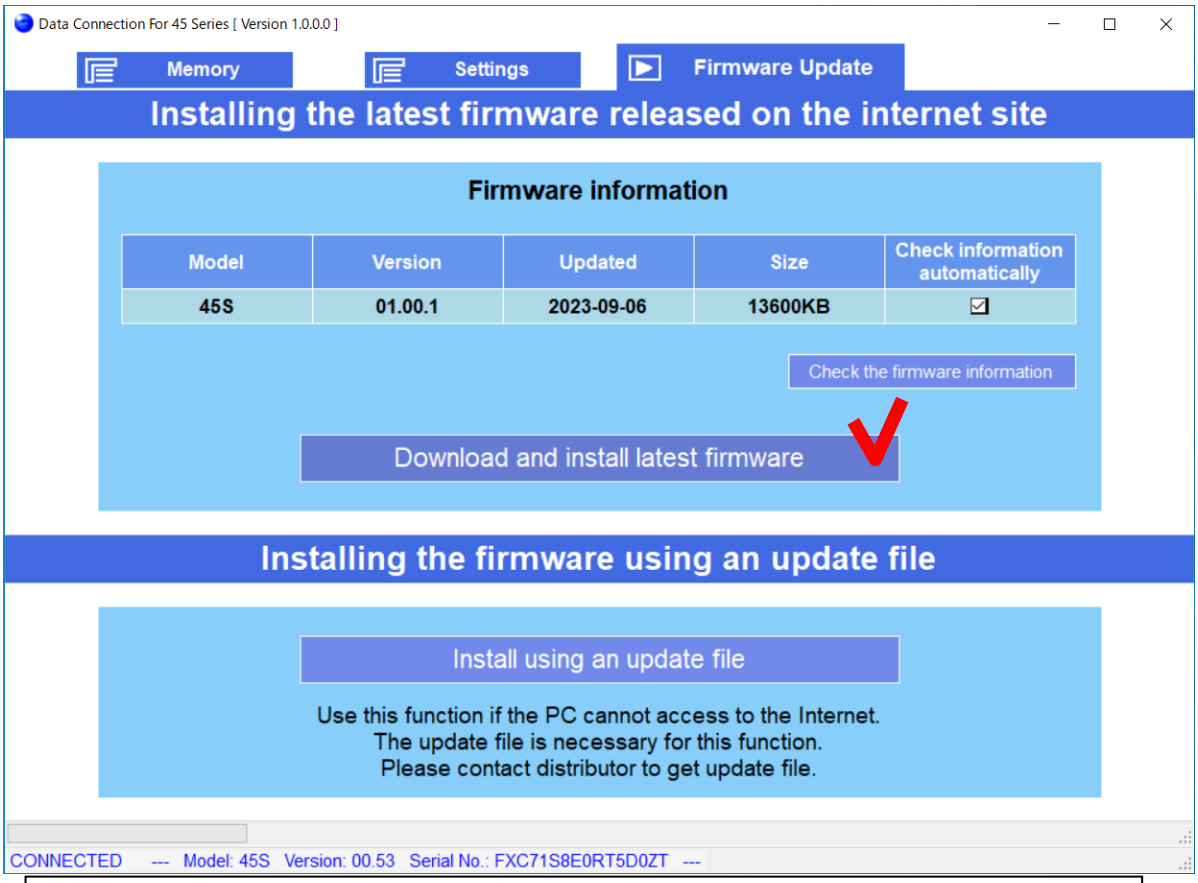

[1] Information of latest firmware
[2] Checkbox to enable check of the firmware information at logon. When the information is updated, message will be shown.
[3] Button to check the firmware information.

### 5.3.1 Install the Latest Firmware Released on the Internet

During firmware installation,
- Do not turn off the splicer.
- Do not disconnect USB cable.

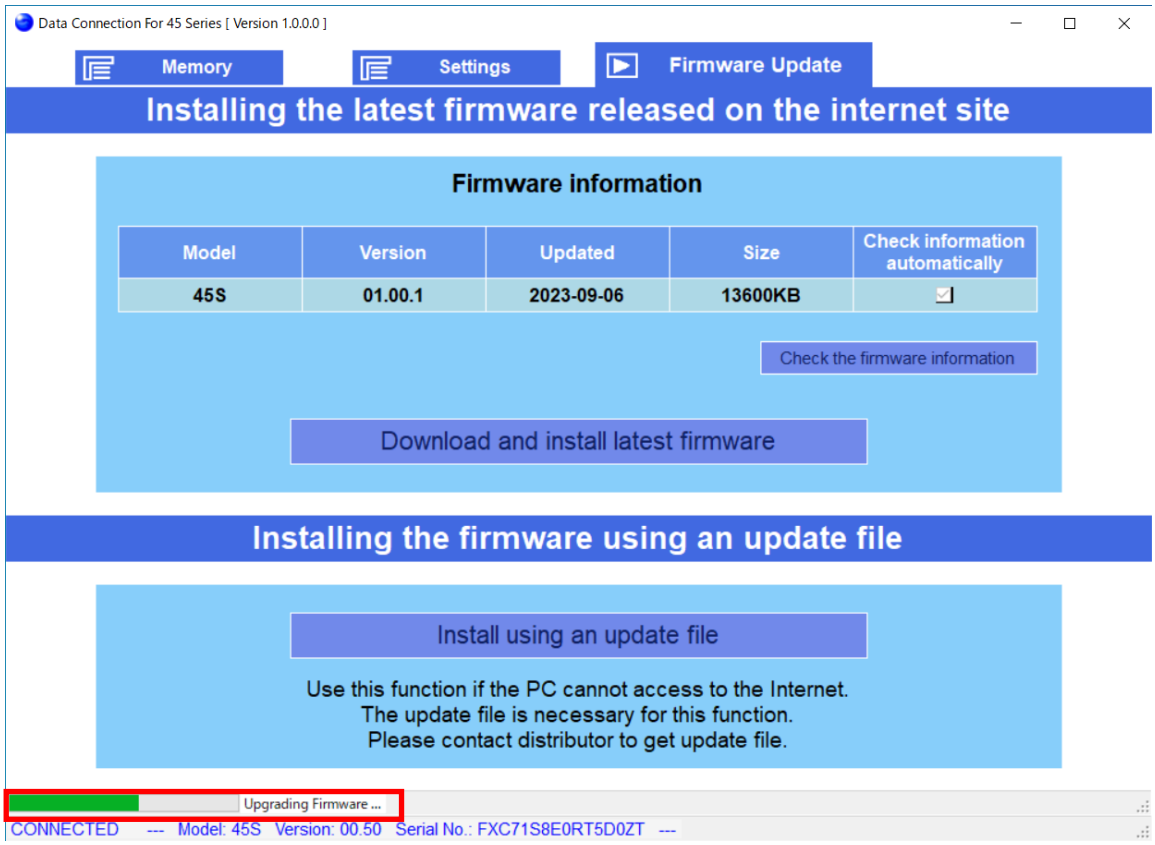
(1) Confirm the following
- The splicer is connected to PC with USB cable.
- The splicer is in “READY” state.
- The PC is connected to Internet.

(2) Select [Firmware Update] page, and click [Download and install latest firmware] button.

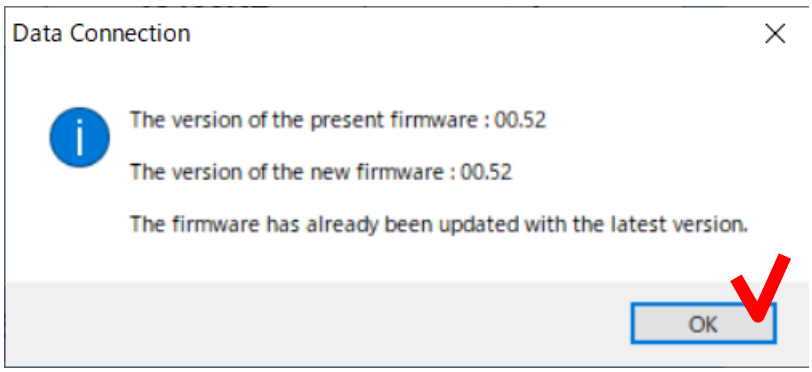



If the update file can not be downloaded, “Connect the PC to the internet” message will be shown. In this case, confirm the internet connection using web browser.
If the message is shown despite the PC can access the internet, the firewall of network system may block downloading the file. Please consult the administrator of your network system.

(3) Firmware update will start, and status bar at bottom left of Data Connection will progress.




If the latest firmware has already been installed to the splicer, the following message will be shown and firmware will not updated.



(4) When the “Firmware update is Completed. Splicer will restart.” message is shown, click [OK] button to finish the update. Confirm that the splicer restarts and “READY” state is indicated on screen.

If the firmware update failed, the following problem will occur

- The splicer can not be turned on.
  (The splicer does not restart after firmware update)
- “READY” state is not indicated on screen although the splicer is turned on.

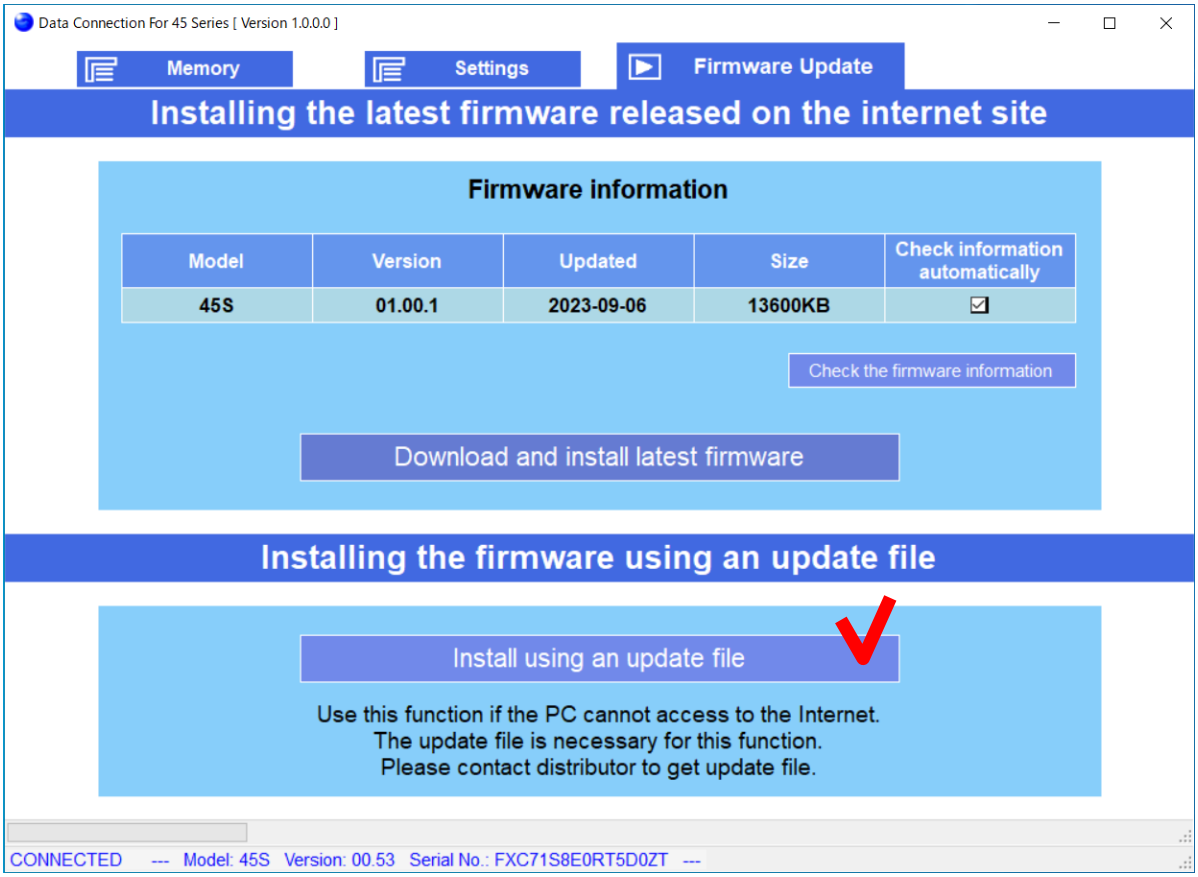
When above problem occurs, please read [Installation of Firmware Failed] in [Chapter 7: Troubleshooting]

### 5.3.2 Install the Firmware Using an Update File

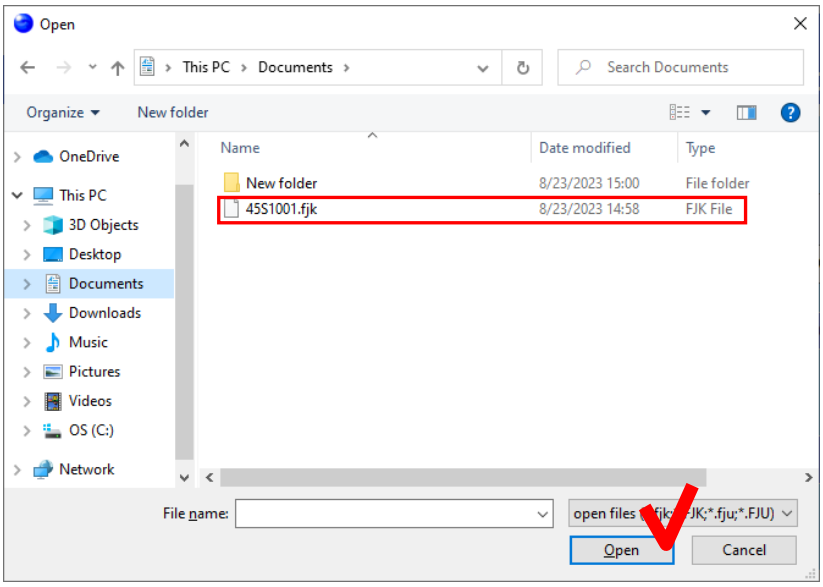
During firmware installation,
- Do not turn off the splicer.
- Do not disconnect USB cable.

(1) Confirm the following
- The splicer is connected to PC with USB cable.
- The splicer is in “READY” state.

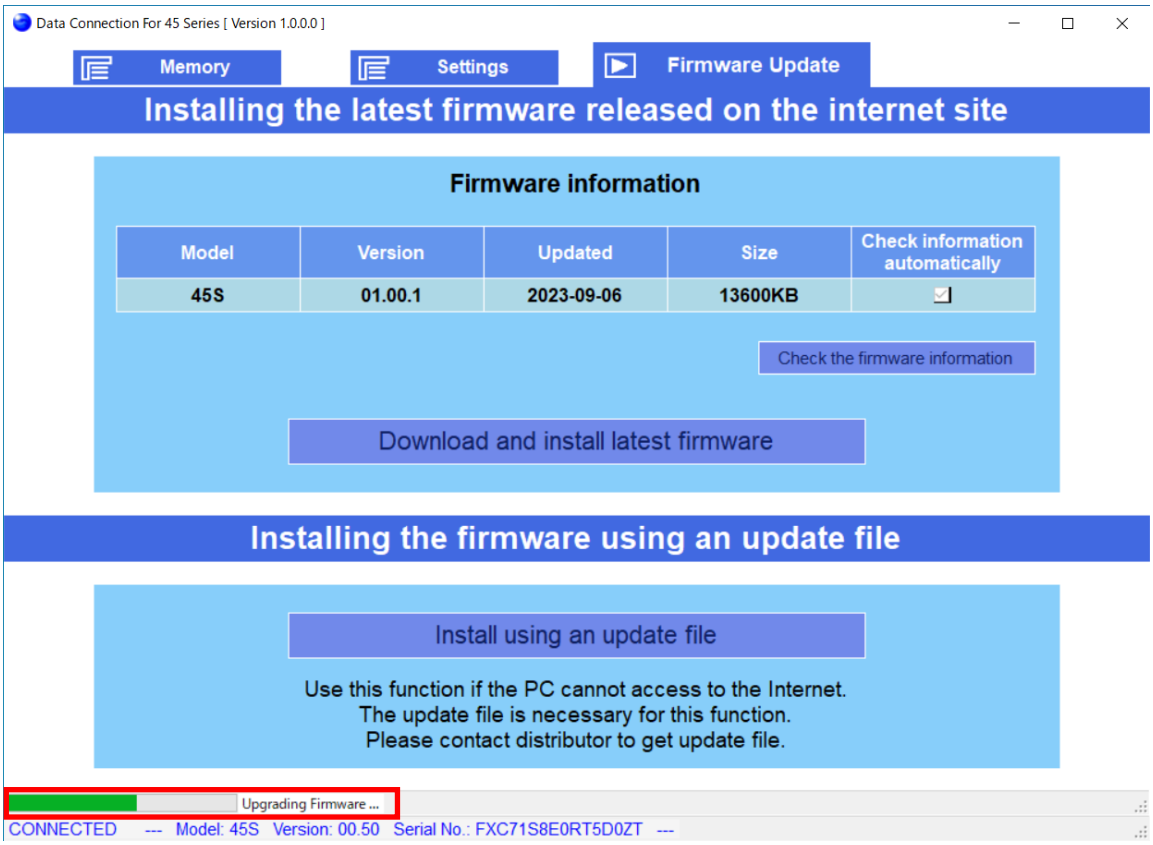
(2) Select [Firmware Update] page, and click [Install using an update file] button.



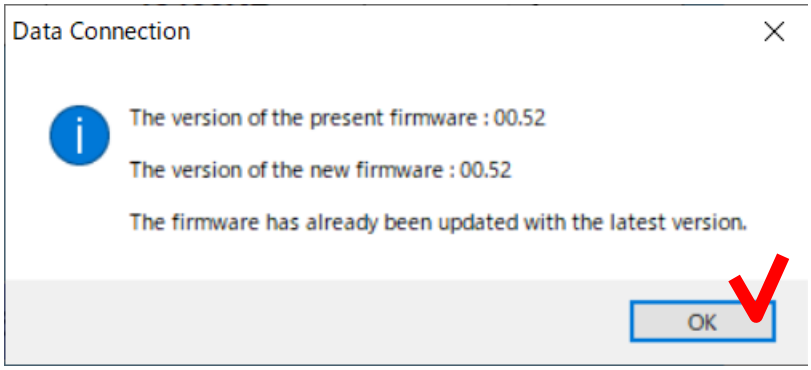
(3) When file open dialog is shown, select the update file.



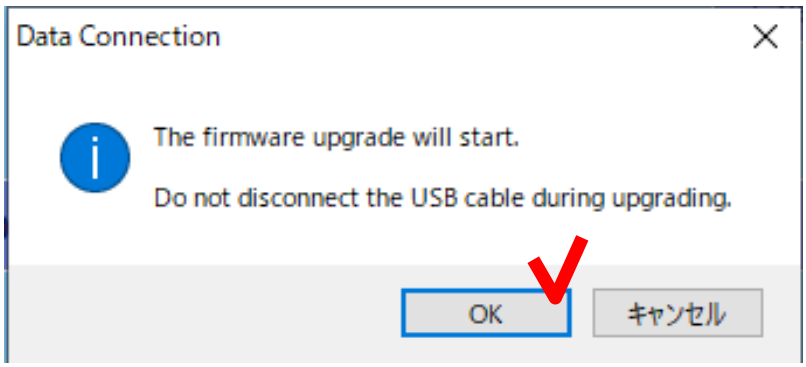

(4) Firmware update will start, and status bar will progress.



If the latest firmware has already been installed to the splicer, the following message will be shown and firmware will not updated.




(5) When the “Firmware update is Completed. Splicer will restart.” message is shown, click [OK] button to finish the update. Confirm that the splicer restarts and “READY” state is indicated on screen.




If the firmware update failed, the following problem will occur

- The splicer can not be turned on.
  (The splicer does not restart after firmware update)
- “READY” state is not indicated on screen although the splicer is turned on.

When above problem occurs, please read [Installation of Firmware Failed] in [Chapter 7: Troubleshooting]



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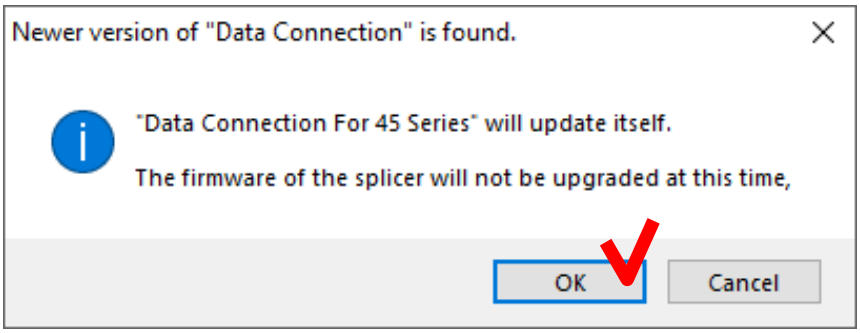
## 5.4 Update Data Connection

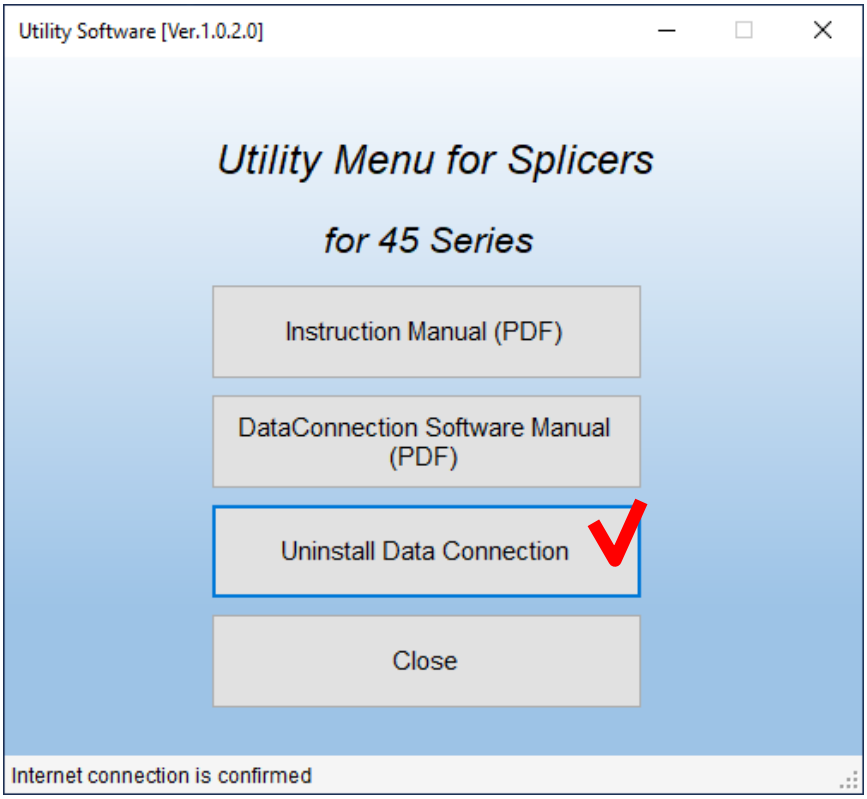
Data Connection has self-update feature. If the following message is shown when Data Connection is starting, click [OK] to start updating Data Connection.



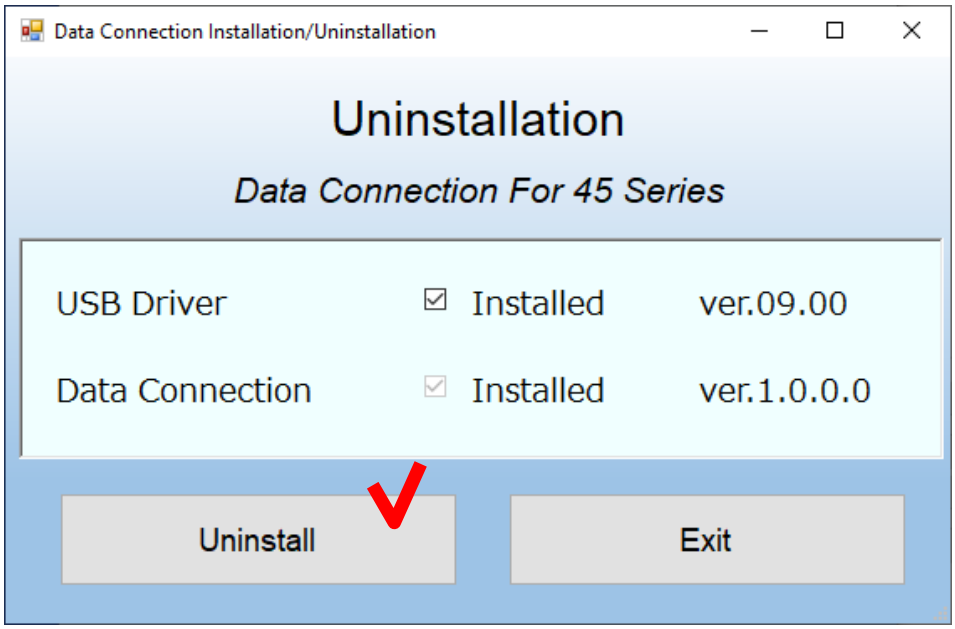

Internet connection is necessary for self-update.

# 6 Uninstall the Data Connection

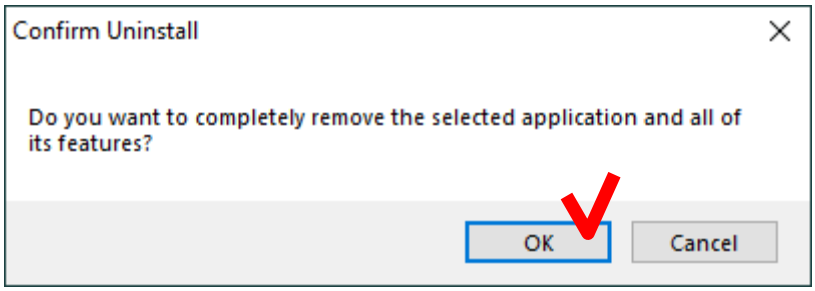
(1) Confirm that the USB cable is NOT connected.
(2) Double click the shortcut to the utility software on the desktop.
(3) Click [Uninstall the Data Connection] button.



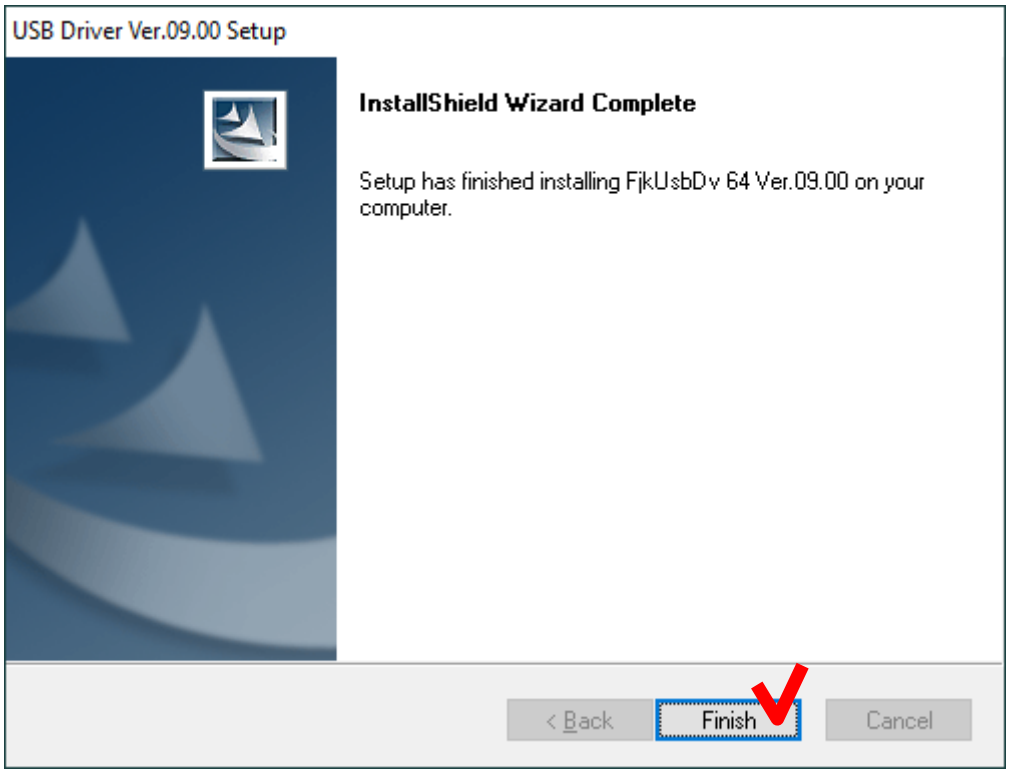
(4) When the following window is shown, click [Uninstall] button.



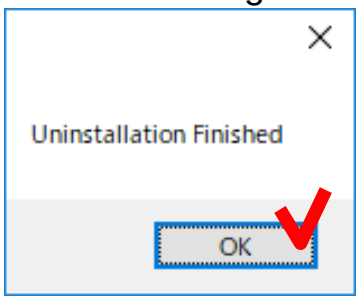

(5) When the [Confirm Uninstall] message is shown, click [OK] button to continue.



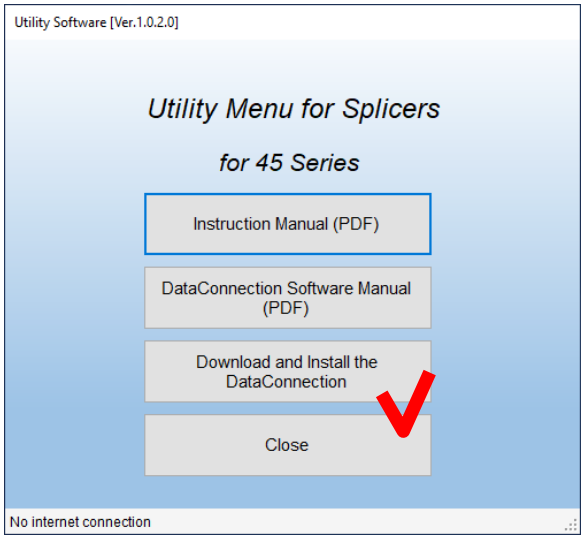
(6) When [Maintenance Complete] window is shown, click [Finish] button.




(7) When the following message is shown, click [OK] to complete installation.




(8) Click [Close] button to close the menu.



# 7 Troubleshooting

When trouble occurs during installation or when using Data Connection, please read this chapter.

If the trouble is not fixed despite performing the following procedure, please contact us.

## 7.1 Installation of the Device Driver Failed

When first connecting to PC, the device driver should be installed automatically. If the installation failed, install device driver according to procedure listed in the following pages.



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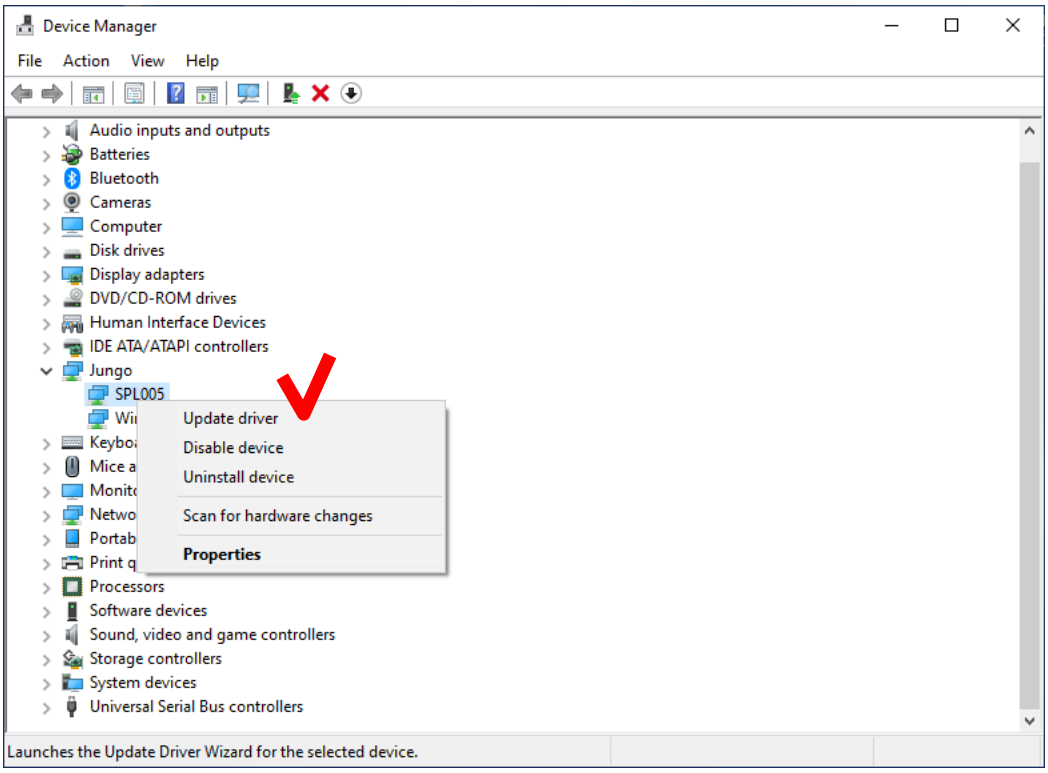
(1) Open the “Device Manager” menu with procedure as follows.

**In case of Windows 10**

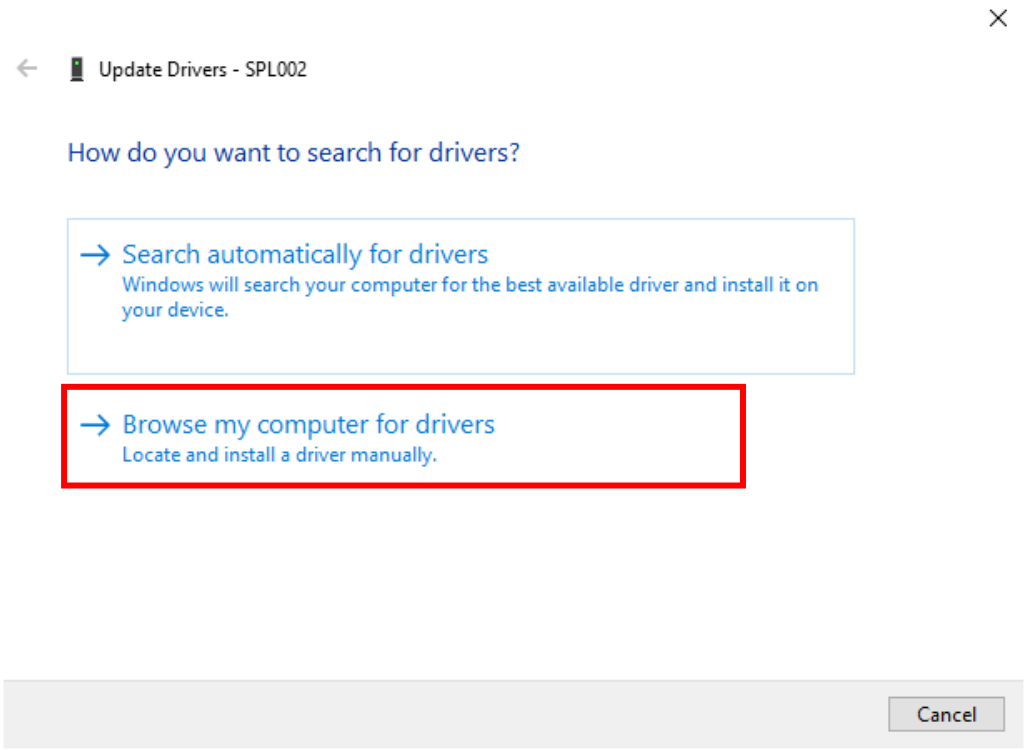
Right-click on the Windows icon on the bottom left and select [Device Manager].

(2) Right-click on “SPL005” of “SPL002” in the [Jungo] or [Other devices] and select “Update Driver Software…”.
If “SPL005” is not listed, confirm the following.

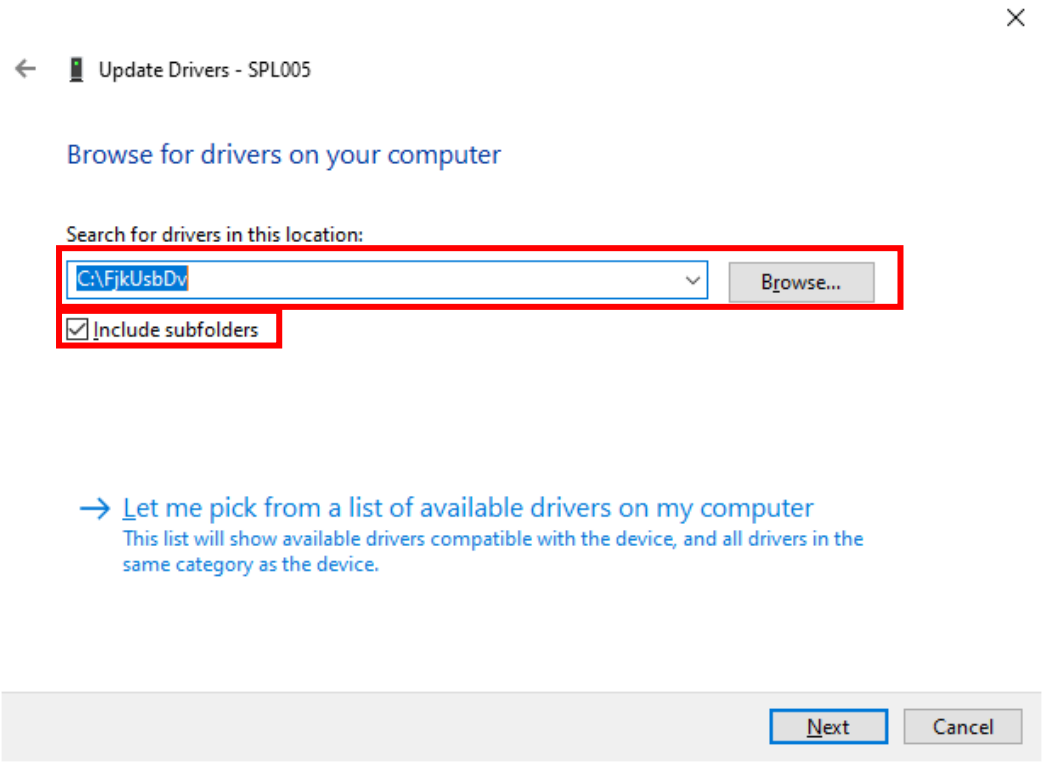
- The splicer is connected to PC with USB cable.
- The splicer is turned on.



(3) Click “Browse my computer for driver software”.

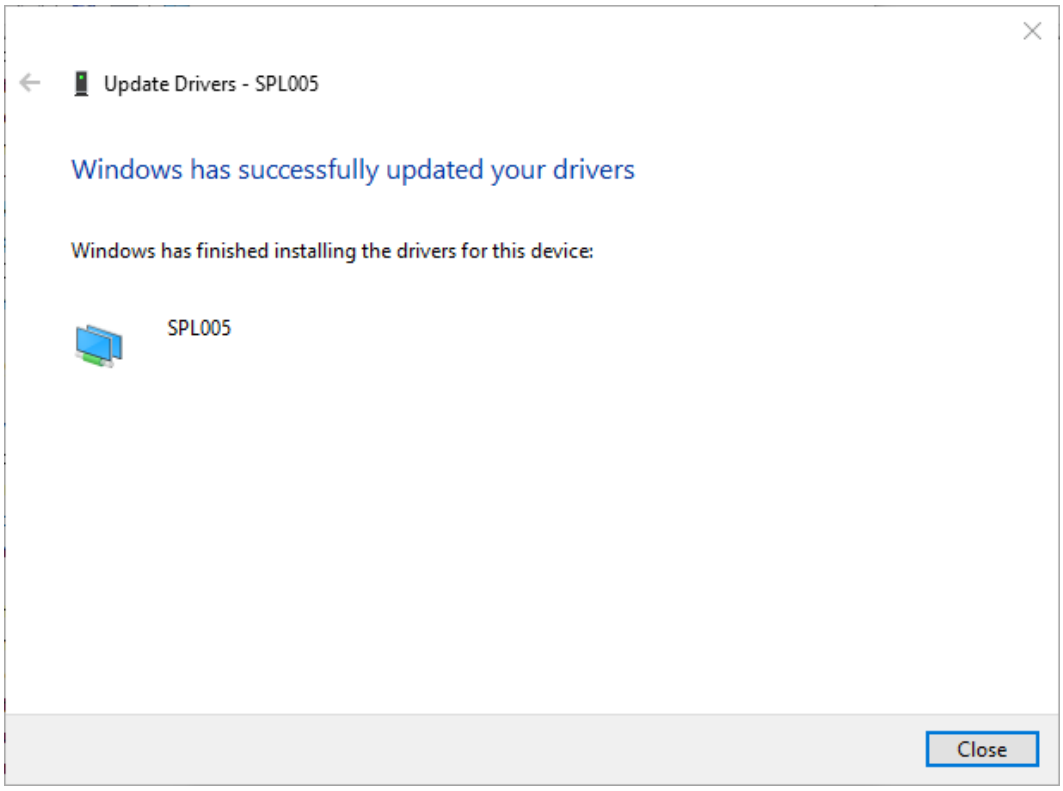



(4) Click [Browse…] and select “C:\FjkUsbDv”. After selecting, check [Include subfolders] and click [Next] button.



(5) When “Windows Security” message is shown, click “Install this driver software anyway”.

(6) When the following window is shown, click [Close] button




(7) Close “System Properties” and “Device Manager”.

## 7.2 Data Connection Does Not Run

**Data Connection is not shown although the icon was clicked**

(a) Windows may not be updated to latest version. Perform Windows Update to update Windows.

(b) Memory capacity or CPU speed may be insufficient to meet the system requirement.

- Close other running applications.
- Confirm that memory capacity and CPU speed meet the system requirement.

**".NET Framework Initialization Error" is shown when Data Connection is launched**

(a) Windows may not be updated to the latest version. Perform Windows Update to update Windows.

**.NET Framework error is shown when Data Connection is launched**

(a) Windows may not be updated to the latest version. Perform Windows Update to update Windows.



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## 7.3 Installation of Firmware Failed

If the installation of firmware failed, the following problem will occur.
When the problem occurs, perform the following procedure to install the firmware again.

- The splicer cannot be turned on (Splicer does not restart after installation).
- The splicer turns on, but “READY” state is not indicated.

(1) Turn off the splicer.
(2) Then keep holding down the [RESET] key and turn on the splicer again. (Keep holding down keys until “SOFTWARE UPDATE MODE” is indicated on the screen.)
(3) In the [Firmware Update] page of Data Connection, click [Download and install latest firmware] button to install the firmware again.

If the update failure persists or you have some questions about this procedure, please contact us.

## 7.4 USB Communication Doesn’t Work

Confirm that the “CONNECTED” is indicated at bottom left of Data Connection window.

**“DISCONNECTED” is indicated**

(a) Confirm that the splicer is connected to PC with USB cable.
(b) Confirm that the splicer is turned on.
(c) Confirm that the splicer is in “READY” state.
Press [RESET] key to change splicer to “READY” state.
(d) If the external USB hub is used, connect the USB cable to PC directly.
(e) USB driver may not be installed correctly.
Install the Data Connection again.

**“Communication Error” message was shown during downloading or uploading (“CONNECTED” is indicated)**

(a) Confirm that the splicer is in “READY” state.
Press [RESET] key to change splicer to “READY” state.
(b) If the external USB hub is used, connect the cable to PC directly.
(c) The firmware version of splicer may not be the latest.
If the firmware is not the latest, update the firmware of splicer.



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# 8 Contact Address

Inquiries concerning products should be made to the nearest distributor or one of the following:

Fujikura Europe Ltd.
C51 Barwell Business Park
Leatherhead Road, Chessington, Surrey KT9 2NY, UK
General inquiries: +44-20-8240-2000
Service & support: +44-20-8240-2020
URL https://www.fujikura.co.uk

AFL
110 Hidden Lake Circle, Duncan, SC29334, USA
General inquiries: +1-800-235-3423, Option 2
Service & support: +1-800-866-3602
URL https://www.aflglobal.com

Fujikura Asia Ltd.
438A Alexandra Road, Block A Alexandra Techno Park #08-03,
SINGAPORE, 119967
General inquiries, service & support: +65-6-278-8955
URL https://www.fujikura.com.sg

Fujikura Ltd.
1-5-1 Kiba, Koto-ku, Tokyo 135-8512, Japan
General inquiries: +81-3-5606-1164
Service & support: +81-43-484-3962
URL https://www.fujikura.com

Fujikura (CHINA) Co., Ltd
7thFloor, Shanghai Hang Seng Bank Tower, 1000 Lujiazui Ring
Road, Pudong New Area, Shanghai 200120, CHINA
General inquiries, service & support: +86-21-6841-3636
URL https://www.fujikura.com.cn

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