Multifunction Analyzer
Installation manual
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1 Installation of Multifunction Analyzer

1.1 Operation environment

Multifunction Analyzer works with the Windows8/Windows7/Vista OS, supporting USB.

The necessary operation environment is as following.

- **System requirements**:  
  Windows 8/7/Vista  
  1 gigahertz (GHz) or faster 32-bit (x86) or 64-bit (x64) processor  
  1 gigabytes (GB) or more RAM (32-bit) or 2 gigabytes (GB) or more RAM (64-bit)  
  1 gigabytes (GB) or more available hard or solid state disk space  
  The USB port is installed.  
  Microsoft Excel is installed.

*1: Even if your system meets the system requirements, displaying a dialog or items on windows might be slow because it depends on number of signals or sampling data.  
*2: Windows Vista Service Pack 2 or greater.  
*4: We can’t warrant and support the Multifunction Analyzer behavior, if you connect it to other than USB 2.0/1.1.  
*5: Microsoft Excel 2003 or greater.

The application may be unstable even if your environment meets the operation environment. It depends on connections, your PC settings or your installed software. Like waveform observations stop etc., if your USB connection is unstable, it may be able to stabilize when you use a USB hub or LAN connections.

1.2 The outline of install procedure

The following setup is necessary for using Multifunction Analyzer.

1. Install Operation of Multifunction Analyzer
2. Setup USB driver  
   At the first time Multifunction Analyzer and USB cable connect PC, it means start installing USB driver.
3. Setup LAN (IP address. If you’d like to use.)  
   If you setup LAN, you need to connect the Multifunction Analyzer to your PC. If you setup LAN manually, you need to decide IP address and net mask which is set to the Multifunction Analyzer before you setup.  
   If you’d like to know details of IP address, please ask your network administrator.

The installer will install the Multifunction Analyzer application and the help.

It must execute install under Administrator.
1.3 Install Multifunction Analyzer

It must execute install under Administrator.

1. You can get the installer from our website the below. Please download "MultifunctionAnalyzer.exe" file according to the website.

   URL: http://www.ss-technologies.co.jp/en/support/mfa_dl

2. Double click "MultifunctionAnalyzer.exe" which you downloaded. The dialog for language selection will be open.

   Please select a language, then click **OK**. If you select “Japanese”, the following messages will be shown in Japanese. Then, the dialog for setup as following will open.

Open [Control user account] and [Security warning] dialog based on system security: click [Yes], [Continue] or [Allow] for continuing installing
3. InstallShield Wizard dialog as following will open.

![InstallShield Wizard dialog](image)

Click **Next**

4. Agree with the End User License Agreement.
   Read the End User License Agreement, then click **Agree** if you are able to agree.

![End User License Agreement](image)

**Agree** button will be enabled, if you scroll to the bottom.
5. Input the SSS number and SSS key.
   Please enter the SSS number and the SSS key in “SSS Registration”.

   ![Image of installation dialog]

   Click **Next**.

   The case in the SSS number and the SSS key is ignored.

6. Assign folder for install.
   In the case of change, click **Browse...** assign install folder.

   ![Image of folder selection dialog]

   Please click **Next** if it is well.
7. Please assign register folder for start menu.

![Install Shield Wizard]

Please click [Next] if it is well.

8. Execute installation as following.

![Install Shield Wizard]

Multifunction Analyzer Setup is performing the requested operations.

Installing:
C:\...\Multifunction\Analyzer\xxxxxx

13%
9. Please decide register Multifunction Analyzer icon to [Desktop]

Please click **Next**. If it is well.

Copy Multifunction Analyzer file, record necessary data to the windows registry. User does not have to care the contents recorded to registry.
10. Use IP Setting Tool.
   The dialog asks whether you set LAN settings as follows.

   If you connect the Multifunction Analyzer to your PC with LAN without DHCP server, you
   have to set IP address and net mask manually.

   If you set the IP address and the net mask from a DHCP server, you don’t have to set the
   probe IP environment. So, you make the “Set probe IP environment” checkbox cleared, then
   click [Next].

   If you set the IP address and the net mask manually, the value of the IP address and the net
   mask is needed.
   Please ask your network administrator the details.

   Now, if you set the IP address and the net mask manually, you keep the checkbox marked
   or make the checkbox marked, then click [Next].

   You can set IP environment later, if you set IP environment here, make the “Set probe IP
   environment” checkbox cleared, then please click [Next].

   | Set later | Please refer 3 Setup LAN (IP Setting Tool). |
   | Not set   | Jump to 11.                                   |

   You can set IP environment later. Please refer 3 Setup LAN (IP Setting Tool).
11. Complete install. Reboot PC when finish install

```
[Completed dialog] maybe not be displayed by OS.

Install Multifunction Analyzer is finished by above procedure.
```
12. Multifunction Analyzer will be added to start menu as following shows.

Windows7:

The order in the start menu might be changed.
2 Install USB driver

Sophia Systems use USB as interface for Multifunction Analyzer.

Drive is structure by following file.

- SsUsb.sys
- SSIEUSB.INF

This file is saved in “driver” folder under folder installed Multifunction Analyzer.

About connect USB with PC and Multifunction Analyzer
Please use attached USB cable to connect with PC and Multifunction Analyzer directly.
We can not guarantee operation when course USB hub.

Contact Sophia Systems for additional support of USB driver for OS.

On Multifunction Analyzer Ver. 1.8 or newer, Multifunction Analyzer firmware is updated. After updating, Multifunction Analyzer is recognized as Human Interface Devices.

The OS Standard drivers is used. And, In Device Manager, Multifunction Analyzer displays “HID-compliant device” and “USB Input Device” in “Human Interface Devices” tree.
2.1 Install steps of Windows 8

1. Connect USB to PC and Multifunction Analyzer powered by AC adapter.

2. Open [Control Panel] > [Hardware and Sound], then start [Device Manager] in [Devices and Printers].

3. **Right click** [Unknown device] of [other device]
4. Select [Update Driver Software...]

![Device Manager window showing Other devices and the Update Driver Software option highlighted.](image)
5. Click **Browse my computer for driver software**
6. Assign folder name has drive. There is USB driver in the folder “driver” in which Multifunction Analyzer was installed. Specify the folder by [Browse] button.

Click [Next] button.
7. Start installing the driver.
8. Click **Install**

9. After install driver, the following diagram will be displayed.

   Click **Close**
10. Confirm USB driver
Open Device Manager window.
Confirm message as **Sophia System SSIE USB Device** is added or not.
2.2 Install steps of Windows 7

1. Connect USB to PC and Multifunction Analyzer powered by AC adapter without driver, new driver will be found. However, it is **unable to successful installed** as below dialog.

   Start install device driver.

   ![Installing device driver software](image1)

   Click the above tub, the below dialog will be opened.

   ![Driver Software Installation](image2)

   2. [Device driver software was not successfully installed] will be indicated.

   ![Device driver software was not successfully installed](image3)

   Click **Close.**
3. Start device manager (devmgmt.msc)

   Click [Start] 
   Input devmgmt.msc to [Search programs and files], <return>

4. Open [Device manager].
   Right click In Circuit Emulator of [other device] select [Update driver software].
5. Click **Browse my computer for driver software**

6. Assign folder name has drive.
   There is USB driver in the folder “driver” in which Multifunction Analyzer was installed.
   Specify the folder by **Browse** button.

   ![Image of Browse for driver software on your computer]

   Click **Next** button assign research point as following.
7. 

Click **Install this driver software anyway**

8. After install driver, The following diagram will be displayed.

Click **Close**
9. Confirm USB driver
Open Device Manager window.
Confirm message as **Sophia System SSIE USB Device** is added or not.
2.3 Install procedure of Windows Vista

1. If USB cable connect PC without drive and Multifunction Analyzer powered by AC adapter, new hardware will be detected.

   ![Found New Hardware dialog]

   Windows needs to install driver software for your In Circuit Emulator

   **Locate and install driver software (recommended)**
   Windows will guide you through the process of installing driver software for your device.

   **Ask me again later**
   Windows will ask again the next time you plug in your device or log on.

   **Don’t show this message again for this device**
   Your device will not function until you install driver software.

   ![Located device driver software dialog]

   Click **Locate and install driver software**

   Start install device driver.

   ![Installing device driver software dialog]

   When click the above tub, the below dialog will be opened.

   ![Driver Software Installation dialog]

   The **indicated** indicator will move circle under searching.
1. Click **I don’t have the disk, Show me other options.**

2. Click **Browse my computer for driver software (advanced)**
3. Assign folder name has drive. There is USB driver in the folder “driver” in which Multifunction Analyzer was installed. Specify the folder by [Browse] button.

![Image of Found New Hardware - In Circuit Emulator]

Click [Next] button assign research point as following.

4. Click [Install this driver software anyway]

![Image of Windows Security]

Click [Install this driver software anyway]
5. Installing driver

![Installing driver software](image)

6. After install driver, The following diagram will be displayed.

![The software for this device has been successfully installed](image)

Click **Close**
7. Confirm USB driver. (devmgmt.msc)
   Write "devmgmt.msc" into Start Search area.

8. Open Device Manager Dialog.
   Confirm message as "Sophia System SSIE USB Device" is added or not.

[END]
If you use the Multifunction Analyzer with LAN, you need to set IP address and net mask to the Multifunction Analyzer.

### 3.1 Preparation

1. Turn on the Multifunction Analyzer, after you connect it to PC with USB.

   If you connect the Multifunction Analyzer to PC with USB for first time, you need to install USB driver for the Multifunction Analyzer.
   Please refer “2 Install USB driver” in this document.

2. If you set the Multifunction Analyzer IP address manually, please decide the value below.
   - IP address
   - sub net mask

   **Please ask your network administrator for details.**

   **You will set IP address and sub net mask to Multifunction Analyzer via USB.**
3.2 Start IP Setting Tool and Steps

Start IP Setting Tool.

[All Programs] >> [MultifunctionAnalyzer] >> [MFAIPSettingTool]

or

[Start] >> [Programs] >> [MultifunctionAnalyzer] >> [MFAIPSettingTool]

When you start IP Setting Tool, the dialog as following might be shown.
If the dialog will be shown, please update firmware in the following steps first.

Please select **Yes**.

Follow the dialog instructions to click **OK**.

Updating firmware will be started.

When updating firmware is finished, IP Setting Tool will be started automatically.
The “MFAIPSettingTool” dialog as following will be opened. IP address can be set to Multifunction Analyzer via USB.

If “USB Devices” is empty, select **Reload**.

### 3.2.1 Specify “Way to set IP Address”
Specify how to set IP address.

<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Manual</strong></td>
<td>Set IP address and sub net mask you want to use.</td>
</tr>
<tr>
<td><strong>Automatic</strong></td>
<td>Get IP address and subnet mask from DHCP server automatically.</td>
</tr>
</tbody>
</table>
3.2.2 In the case of specifying “Manual” in “Way to set IP Address”
Please enter IP address and sub net mask you decided.

When you enter IP address, sub net mask and host name,
jump to “3.2.4 Write IP address settings to the Multifunction Analyzer”
3.2.3 In the case of specifying “Automatic” in “Way to set IP Address”

Get IP address and sub net mask for the Multifunction Analyzer from DHCP server.

When you click “Get IP Address”, the IP address and sub net mask is displayed.

You can’t enter IP address and sub net mask.

You specify the host name for the Multifunction Analyzer in network. The host name is up to 15 characters, and you can use 1 byte alphabet, numbers, ‘-’ (hyphen) and ‘_’ (underscore). The default host name is a serial number.

If you used 2 bytes characters or 1 byte kana character for the hostname, then behavior is not ensured.

If you don’t change the settings, you can’t click [Apply]. Please click [Close].
3.2.4 Write IP address to the Multifunction Analyzer

If you will write IP address, click **Apply**.

When you click this button, the settings will be written to the Multifunction Analyzer. But, the settings will be enabled actually after reboot.

If you want enable new settings soon, select **Yes** in a message box shown as soon as you select **Apply**.

When the Multifunction Analyzer will be rebooted, please select **Close** in “MFAIPSettingTool” dialog to finish “MFAIPSettingTool” dialog.

*If you want to know how to connect the Multifunction Analyzer with LAN, please refer "Basic Operation" – "Connecting to Devices" in online help.*
4 Uninstall Multifunction Analyzer

Here is 2 way of uninstall Multifunction Analyzer

1. Re-install Multifunction Analyzer
2. Use control panel>> add or delete application

4.1 Uninstall by re-install

If the Multifunction Analyzer already in PC,
Installer (MultifunctionAnalyzer.exe) of Multifunction Analyzer will execute uninstall.
Please follow the following procedure.

1. The dialog for language selection will be open.

   ![Image of language selection dialog]

   Please select a language, then click **OK**. **If you select “Japanese”, the following messages will be shown in Japanese.** Next, judge PC status.
Open [Control user account] and [Security warning] dialog based on system security: click [Yes], [Continue] or [Allow] for continuing installing.

2. It will be inquiry for delete installed application or not. It has no relate of version.

Click **OK** button.
3. Uninstalling.

![Uninstalling dialog box]

4. Uninstall of Multifunction Analyzer for Multifunction Analyzer finish.

![Maintenance Complete dialog box]
4.2 Uninstall by add or delete application

1. Open Control Panel

   Windows 8:
   - [All apps] >> [Control Panel]

   Or
   - [Desktop]  [File Explorer]  [Computer] >> [Open Control Panel]

   Windows 7/Vista:
   - [Start] >> [Control Panel]
2. Click [Uninstall a program] icon.

3. Diagram of [Uninstall or change a program] will open

Double click [MultifunctionAnalyzer]
Follow procedure on displayed on screen.
4. The dialog for language selection will be open. Please select a language, then click **OK**. If you select “Japanese”, the following messages will be shown in Japanese. Next, it will be inquiry for delete installed application or not. It has no relate of version.

5. Uninstalling.
6. Uninstall of Multifunction Analyzer finish.

![Installation Complete](image)

InstallShield Wizard has finished performing maintenance operations on Multifunction Analyzer.

Click **Finish**

7. Multifunction Analyzer was deleted from this dialog.

![Uninstall Complete](image)

If it cannot uninstall successfully, other applications become unstable where it influences.
## History

<table>
<thead>
<tr>
<th>Revision</th>
<th>Section</th>
<th>Chapter</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>E090946-03</td>
<td>Initial version</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E090946-04</td>
<td>Install</td>
<td>1.3</td>
<td>UI language selection is added.</td>
</tr>
<tr>
<td></td>
<td>Uninstall</td>
<td>4.1, 4.2</td>
<td></td>
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<tr>
<td>E090946-05</td>
<td>Install</td>
<td>1.3</td>
<td>URL is changed.</td>
</tr>
<tr>
<td>E090946-06</td>
<td>Install</td>
<td>1.3</td>
<td>URL is changed.</td>
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<tr>
<td>E090946-07</td>
<td>Operation environment</td>
<td>1.1</td>
<td>Notes is added.</td>
</tr>
<tr>
<td>E090946-08</td>
<td>Operation environment</td>
<td>1.1</td>
<td>Windows XP is removed.</td>
</tr>
<tr>
<td></td>
<td>Install USB driver</td>
<td>2</td>
<td>Description of Device manager for Multifunction Analyzer Ver. 1.8 or newer id added</td>
</tr>
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<td></td>
<td>Install procedure of</td>
<td>2.4</td>
<td>Windows XP is removed.</td>
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<tr>
<td></td>
<td>Windows XP</td>
<td>4.2.2</td>
<td>Windows XP is removed.</td>
</tr>
</tbody>
</table>
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