

Nikon

**MULTIZOOM Microscope
AZ100 Setup Tool**

Software Manual

Introduction



Thank you for purchasing the Nikon products.

This manual describes how to install and use the application software Multizoom Microscope AZ100 Setup Tool for MULTI-PURPOSE ZOOM MICROSCOPE MULTIZOOM AZ100/AZ100M.

Refer to the hardware manual for detailed information on how to connect your microscope and discussions of the system configuration.

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■ Prerequisite knowledge

This manual assumes a basic familiarity with Windows. If you come across unfamiliar terms or operations while reading through this manual, consult the user's manual for your version of Windows.

■ About the example screens used in the manual

This manual describes various operations in Windows 7 and Windows 10 by showing Windows 7 screens as examples. Procedures are virtually identical for Windows 7 and Windows 10. Depending on the specific operating system (hereinafter referred to as OS) type or version, the actual appearance of the screen or operations may not correspond precisely to the example screens shown at various points throughout the manual. For information on operations or screens specific to your version of Windows, refer to the user's manual.

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1

Preparations

This chapter describes hardware and software requirements for Nikon Multizoom Microscope AZ100 Setup Tool and how to install and uninstall the software.

1.1

Hardware and Software Requirements

CAUTION

- Before installing Nikon Multizoom Microscope AZ100 Setup Tool, confirm that your PC meets the minimum requirements given below for memory and available hard disk space.
- Install the software before connecting your PC and microscope system (Multi-purpose Zoom Microscope Multizoom AZ100).

Personal computer main unit

Item	Specifications
CPU	Processor of 1 GHz or higher
Memory	1 GB or more (for 32-bit OS) 2GB or more (for 64-bit OS)
Hard disk drive	Minimum of 100 MB free space
Video RAM	128 MB or more
OS	Windows 7 Professional SP1 or later (32-bit/64-bit, Japanese or English version) Windows 10 Pro (64-bit, Japanese or English version)
Other	"Nikon Multizoom Microscope AZ100 Setup Tool" installer program can be downloaded from the website. "Nikon Multizoom Microscope AZ100 Setup Tool" is not guaranteed to be compatible with all PCs. Please contact your distributor for detailed compatibility information.

Display

Item	Specifications
Resolution	1,024 x 768 pixels. A monitor/video card capable of True Color output is recommended.

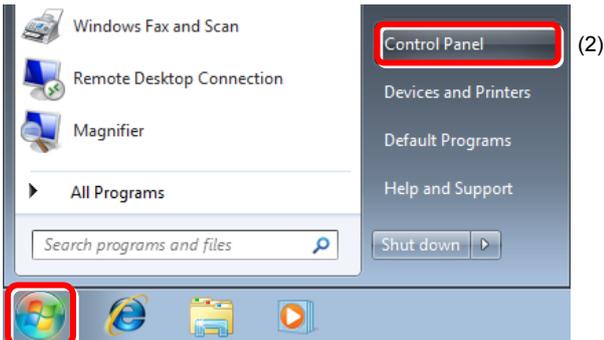
1.1.1 Checking Available RAM

Check the amount of available RAM in the [System Properties] dialog box.

[Memory requirements] There must be at least 1 GB (32-bit OS) or 2 GB (64-bit OS).

Procedure

▼ [Start] menu

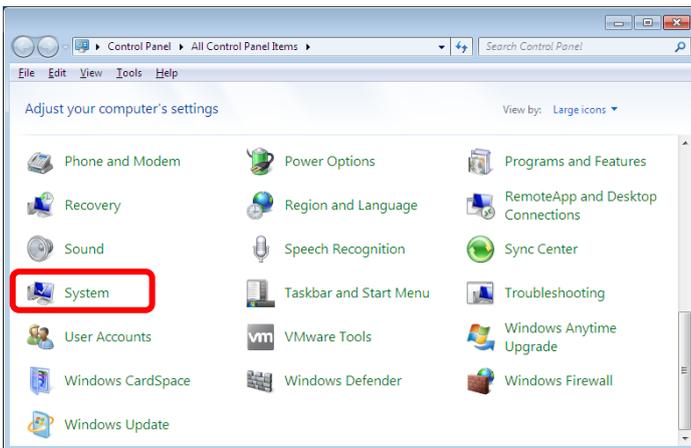


(1)

(1) Click the [Start] button.

(2) Click [Control Panel] to display the [Control Panel] window.

▼ Control Panel window

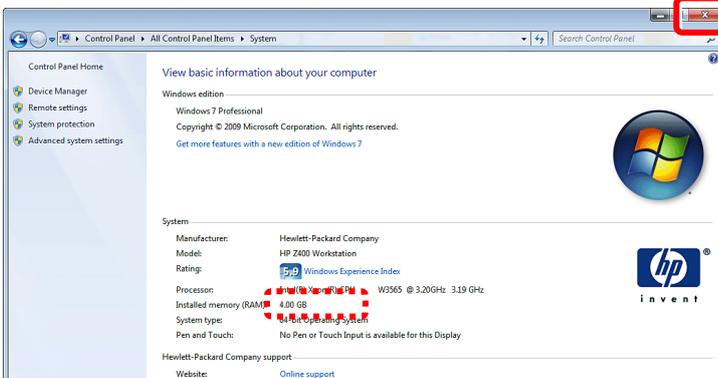


(3) Double-click the [System] icon in the [Control Panel] window.

The [System Properties] dialog box appears.

This figure shows the Control Panel window when [Large icons] is selected for View by.

▼ System Properties dialog box



(4) In the [System Properties] dialog box, check that the installed memory for 32-bit OS is at least 1 GB or the installed memory for 64-bit OS is at least 2 GB.

(5) Click the [Close] button to close the [System Properties] dialog box.

1.1.2 Checking the Free Hard Disk Space

Check the amount of free space on the hard disk in the [Computer] window.

If there is insufficient free space on the hard disk, increase the available free space by uninstalling any unnecessary applications.

[Hard disk] The hard disk must have at least 100 MB of free space.

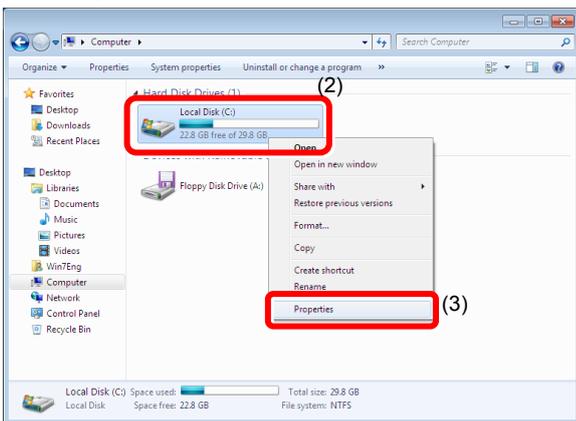
Procedure

▼ Desktop



- (1) Double-click the [Computer] icon.
The [Computer] window appears.

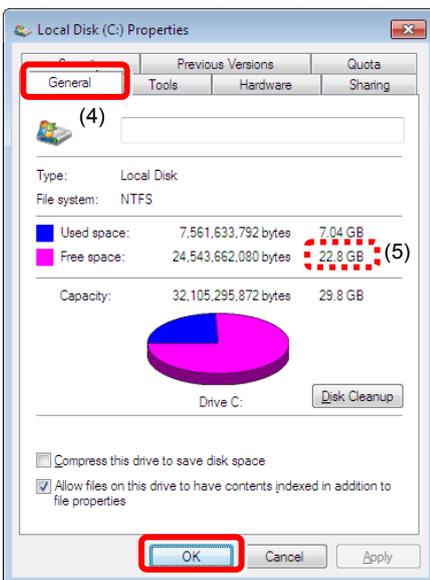
▼ Computer window



- (2) Right-click on the [Drive] icon in the [Computer] window for the drive on which you want to install the application.

- (3) Click [Properties] in the [Shortcut] menu.
The [Properties] dialog box for the selected drive appears.

▼ [Local Disk Properties] dialog box



- (4) Click the [General] tab of the [Properties] dialog box.

- (5) Check that at least 100 MB of free space is available on the hard disk.

- (6) Click the [OK] or the [Cancel] button to close the [Properties] dialog box.

(6)

1.2 Installing the Application

This section describes how to install the Nikon Multizoom Microscope AZ100 Setup Tool.

CAUTION

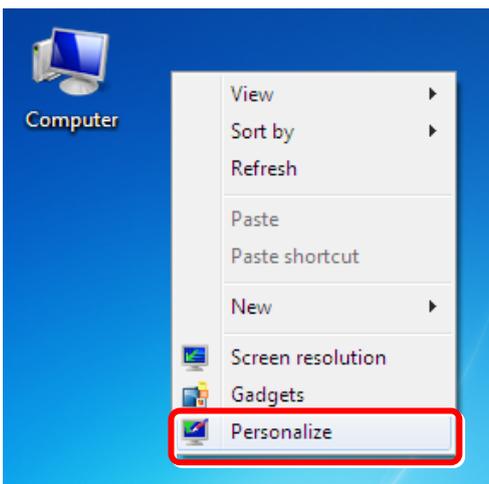
- Install the application before connecting the microscope system to the PC.
- To install the Nikon Multizoom Microscope AZ100 Setup Tool, you must login to your PC with a user account with Administrator rights.

1.2.1 Closing All Other Application

Before installing Nikon Multizoom Microscope AZ100 Setup Tool, close all system-resident programs such as the screensaver and anti-virus utility.

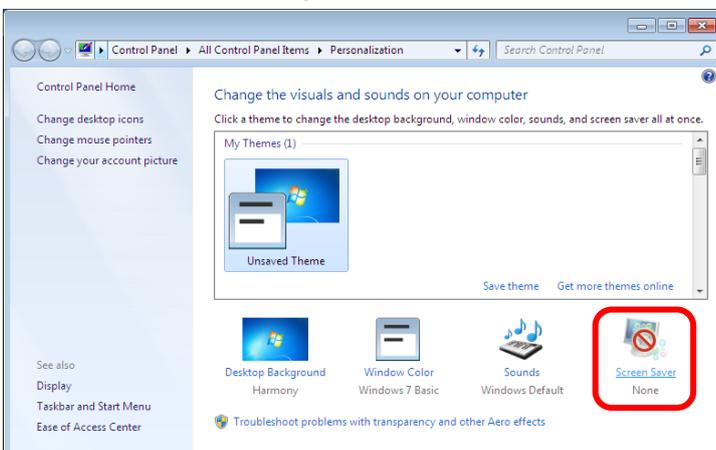
Closing the screen saver

▼ Shortcut menu on the desktop



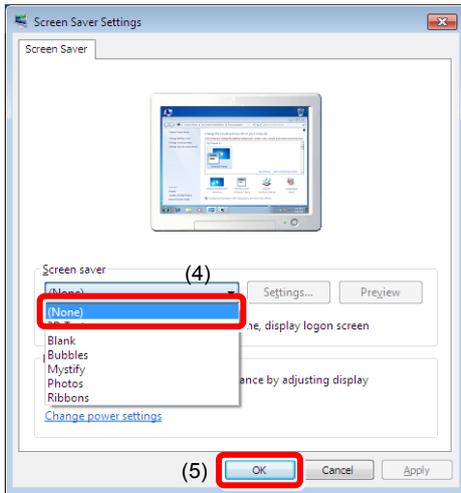
- (1) Right-click on the desktop to display a shortcut menu.
- (2) Click [Personalize] in the shortcut menu. The [Personalization] dialog box appears.

▼ [Personalization] dialog box



- (3) Click [Screen Saver] in the [Personalization] dialog box. The [Screen Saver] Settings dialog box appears.

▼ [Screen Saver Settings] dialog box



(4) In the [Screen Saver] Settings dialog box, select [(None)] from the [Screen saver] pulldown menu.

(5) Click the [OK] button.

1.2.2 Executing the Setup Wizard

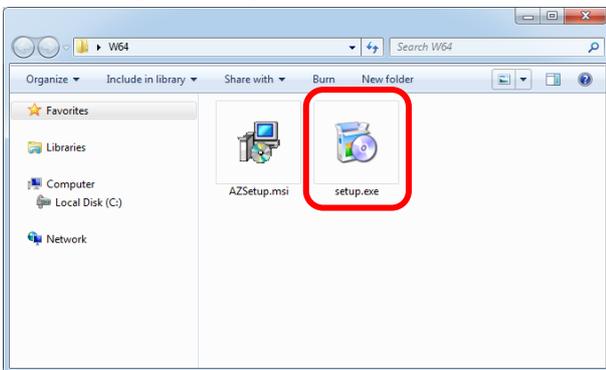
To install the application software, execute the installer (setup.exe) downloaded from the website, then follow the on-screen instructions.

CAUTION

- To install the Nikon Multizoom Microscope AZ100 Setup Tool, you must login as Administrator.
- For information on installing and uninstalling Nikon Multizoom Microscope AZ100 Setup Tool, refer to Section 1.3, "Installing and Uninstalling the Application."

Executing the setup wizard

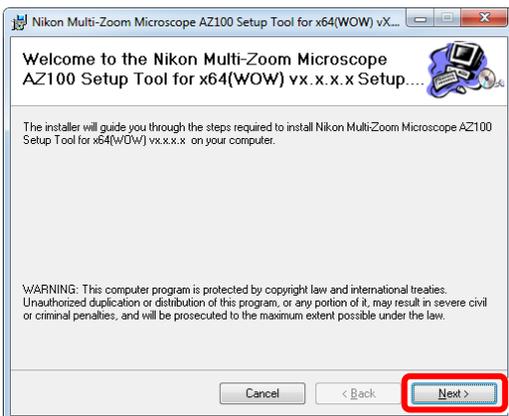
▼ Executing the Setup Wizard



- (1) Double-click the setup.exe file in the folder for the installer downloaded from the website. The Setup wizard startup dialog box appears.

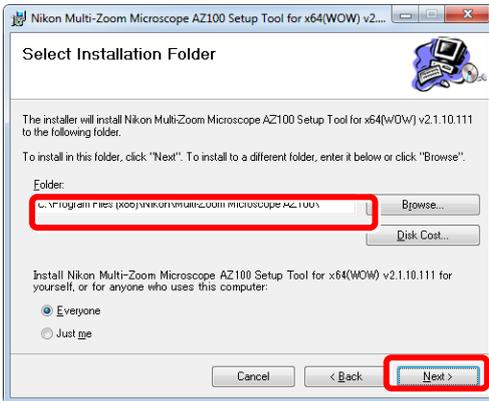
Installation procedure

▼ Setup wizard startup dialog box



- (1) Click the [Next] button in the Setup wizard startup dialog box. The Installation folder setup dialog box appears.

▼ Installation folder setup dialog box



- (2) In the Installation folder setup screen, specify the folder in which the Nikon Multizoom Microscope AZ100 Setup Tool will be installed.

Shown below is the default installation folder.

For 32-bit: C:\Programs Files\Nikon\
MultiZoom Microscope AZ100\

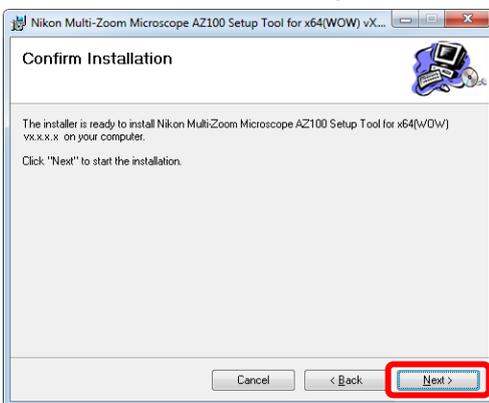
For 64-bit: C:\Programs Files (x86)\
MultiZoom Microscope AZ100\

To install the software in a different folder, click the [Browse...] button.

- (3) Select the desired folder and then click the [Next] button.

The Confirm Installation dialog box appears.

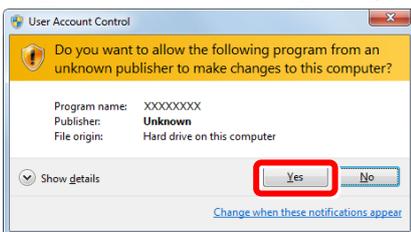
▼ Confirm Installation dialog box



- (4) Click the [Next] button in the Confirm Installation dialog box.

The software is installed in the specified folder.

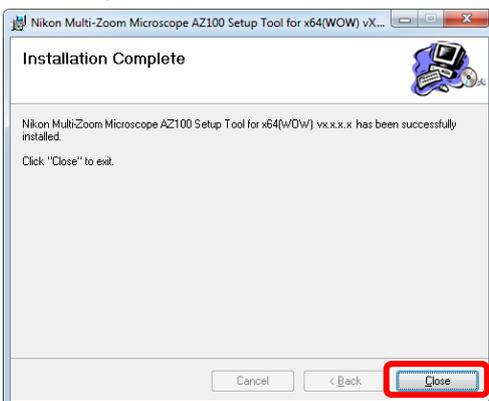
▼ [User Account Control] dialog box



- (5) When the [User Account Control] dialog box appears, click the [Yes] button.

The installation starts.

▼ Dialog box when installation is complete



- (6) After the installation, the dialog box shown on the left appears.

Click the [Close] button to exit the wizard.

The application is now installed.

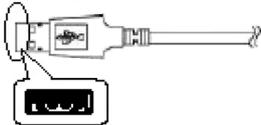
1.2.3 Installing Device Drivers

After installing Nikon Multizoom Microscope AZ100 Setup Tool, connect the microscope system to your PC with a USB cable. When the system is connected to the PC for the first time, the driver is installed automatically.

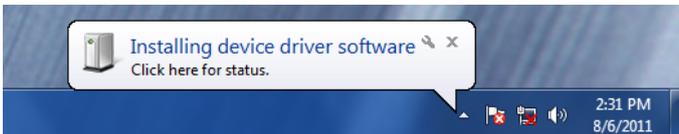
Windows 7

▼ USB connector

USB A connector



- (1) Plug the USB cable's A connector into the port on the PC and the other end into the USB port on the microscope system.



- (2) Turn on the microscope system.

The installation of the driver automatically starts.



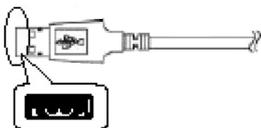
The driver is now installed.

Windows 10

On Windows 10, the driver of the microscope device may not be recognized automatically. In that case, reinstall the driver manually.

▼ USB connector

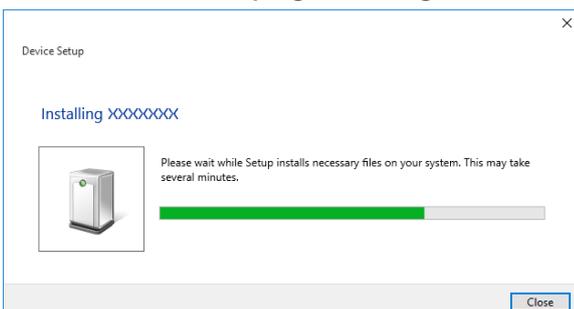
USB A connector



- (1) Plug the USB cable's A connector into the port on the PC and the other end into the USB port on the microscope system.

- (2) Turn on the microscope system.

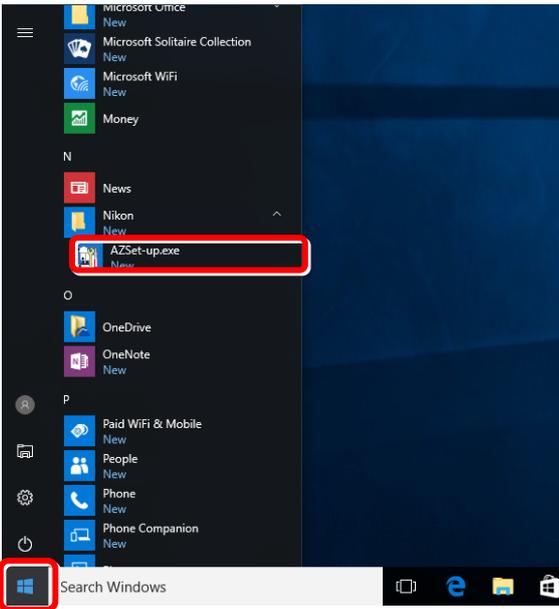
▼ Driver installation progress dialog box



- (3) The driver installation progress dialog box appears.

After the installation, click the [Close] button to close the dialog box.

▼ Starting the AZSetup



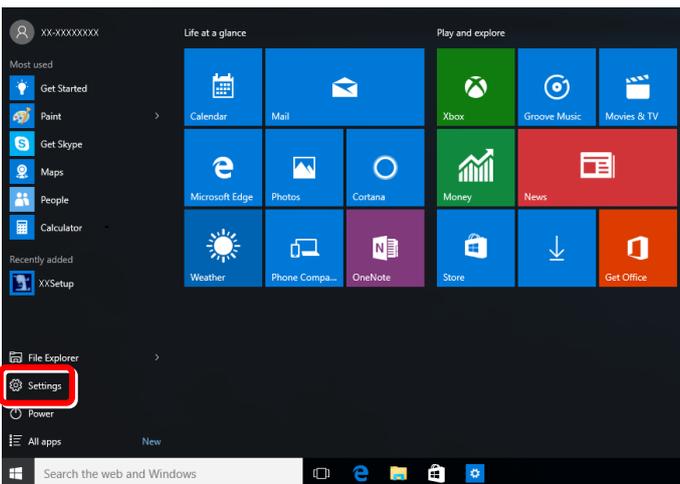
- (4) Click the [Start] button, [All apps], [Nikon], and [AZSet-up.exe] to start AZSetup. AZSetup main window opens.

If the AZSetup does not start correctly, install the driver again according to the following procedure.

Go to the next step.

- CAUTION
Do not unplug the USB cable that connects the microscope with the PC when AZSetup is running.

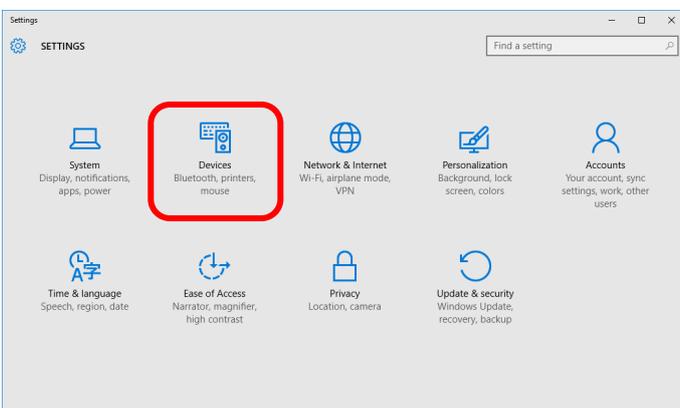
▼ Windows [Start] menu



- (5) Click the [Start] button at the lower left of the desktop screen to display the [Start] menu.

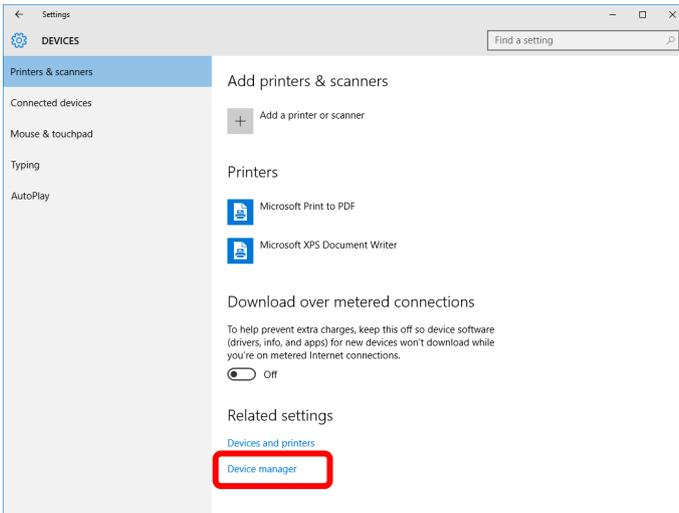
- (6) Click [Settings] to display the SETTINGS window.

▼ SETTINGS window



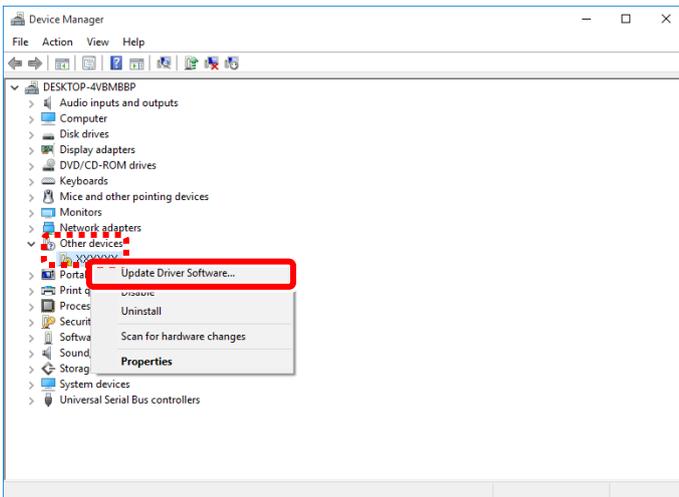
- (7) Click [Devices] to display the DEVICES window.

▼ DEVICES window



(8) Click [Device manager] to display the Device Manager window.

▼ Device Manager window

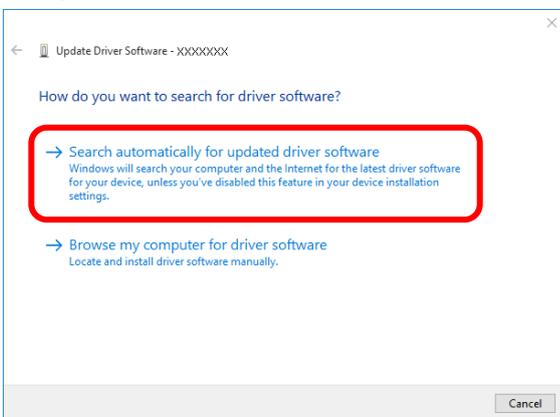


(9) Check the driver status.

If the microscope device name is displayed under “Other drivers”, driver detection is not successful.

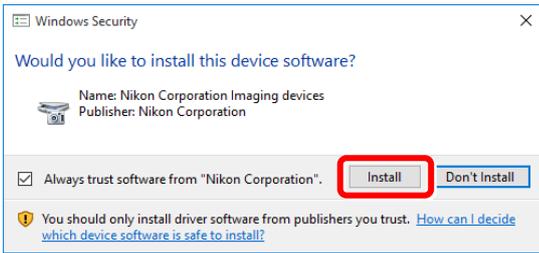
(10) Right-click on the microscope device name to display the sub menu, and select [Update Driver Software...].

▼ Update Driver Software



(11) Click [Search automatically for updated driver software].

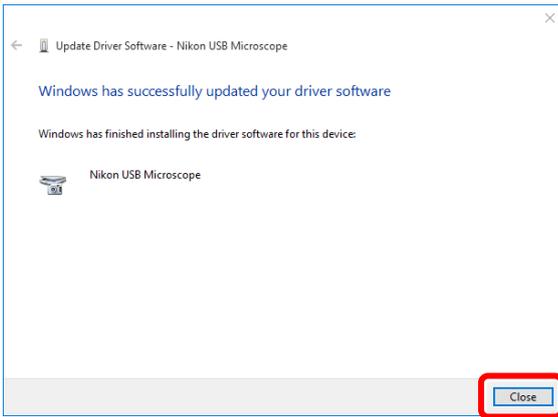
▼ Driver software installation



(12) Click the [Install] button.

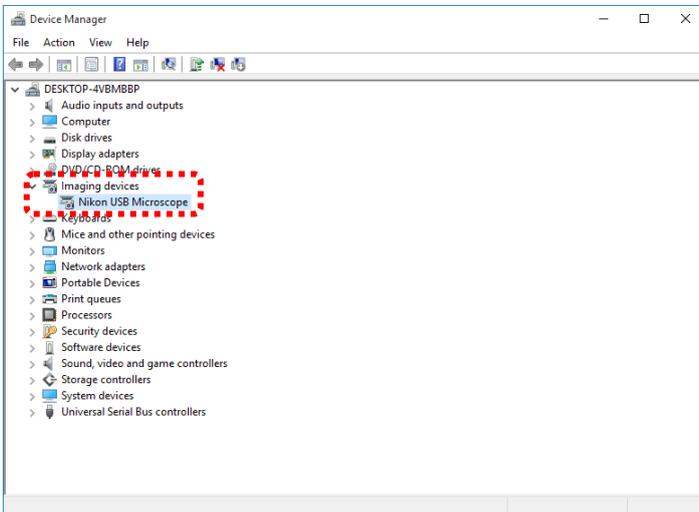
The driver installation starts.

▼ Driver software installation



(13) After installing the driver, click the [Close] button.

▼ Device Manager window



(14) In the Device Manager window, check that [Nikon USB Microscope] is displayed under [Imaging devices].

The driver is now reinstalled.

1.3 Uninstalling the Application

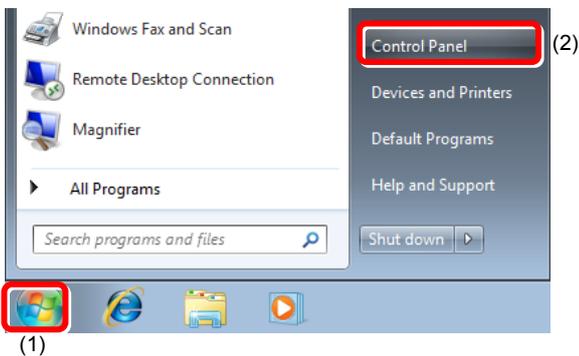
If you no longer need Nikon Multizoom Microscope AZ100 Setup Tool and wish to uninstall it (remove it from the hard disk drive), use the [Programs and Features] utility in the [Control Panel].

CAUTION

- Once uninstalled, the application software cannot be used unless it is installed again.

Uninstallation procedure

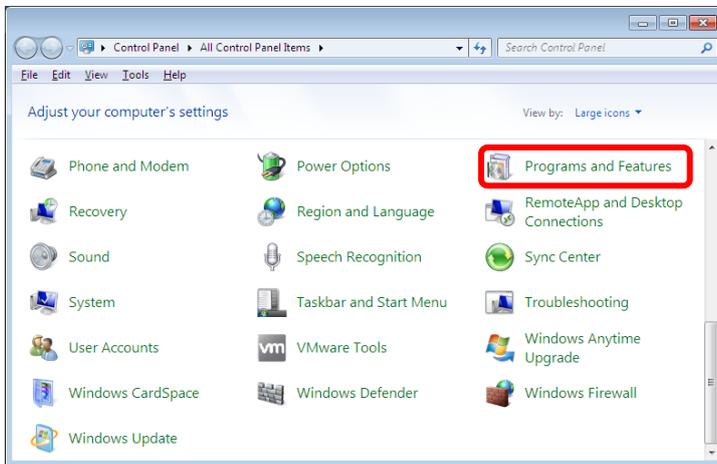
▼ [Start] menu



(1) Click the [Start] button.

(2) Click [Control Panel] to display the [Control Panel] window.

▼ Control Panel window

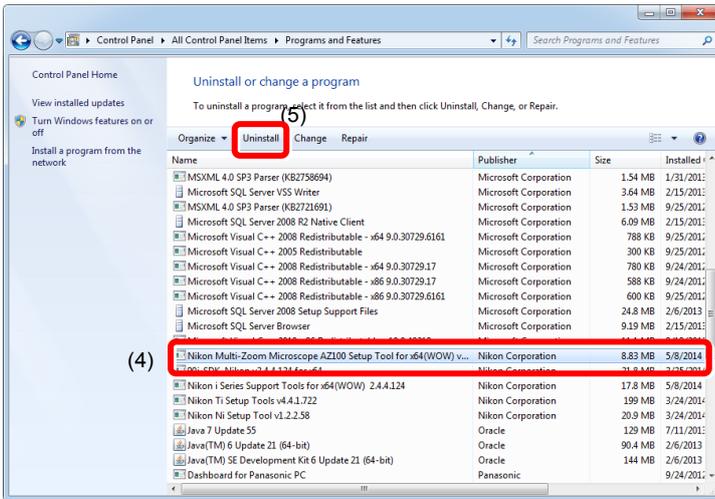


(3) Double-click the [Programs and Features] icon in the [Control Panel] window. The dialog box for selecting a program to uninstall appears.

This figure shows the Control Panel window when [Large icons] is selected for View by.

1.3 Uninstalling the Application

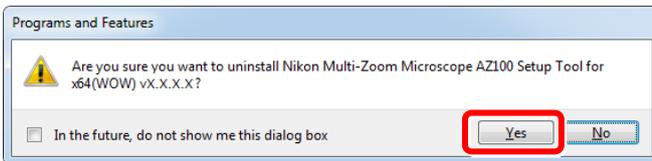
▼ Dialog box to select programs to be uninstalled



(4) Select the [Nikon Multi-Zoom Microscope AZ100 Setup Tool] from the list in the dialog box.

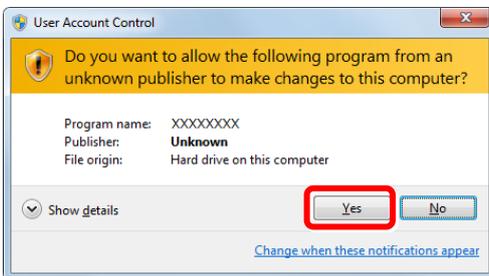
(5) Click the [Uninstall] button.

▼ Programs and Features dialog box



(6) When the [Programs and Features] dialog box appears, click the [Yes] button. The uninstallation starts.

▼ User Account Control dialog box



(7) When the [User Account Control] dialog box appears, click the [Yes] button.

The uninstallation progress dialog box appears and the application is deleted from the PC.

The application is now uninstalled.

2

AZ100 Setup Tool Configuration

When the Nikon Multizoom Microscope AZ100 Setup Tool is installed, the following application software is installed on the PC.

- **AZSetup**

When connecting the microscope system to the PC for the first time or when changing the microscope system configuration, use this application software to set the microscope system information, and to send and register the information to the microscope system.

For more details about the software operation, refer to Chapter 3, "AZSetup Operation."

CAUTION

- **If you are using Nikon Multi-purpose Zoom Microscope Multizoom AZ100/AZ100M for the first time, register the microscope system information in the microscope main body using AZSetup.**
- **Although the transmitted information is stored in memory in the microscope system, transmitting new information will overwrite information previously stored in memory. Nikon recommends saving setup information made in AZSetup in a file after assigning the file an appropriate name.**
- **Only one microscope system can be connected to a PC.**

3

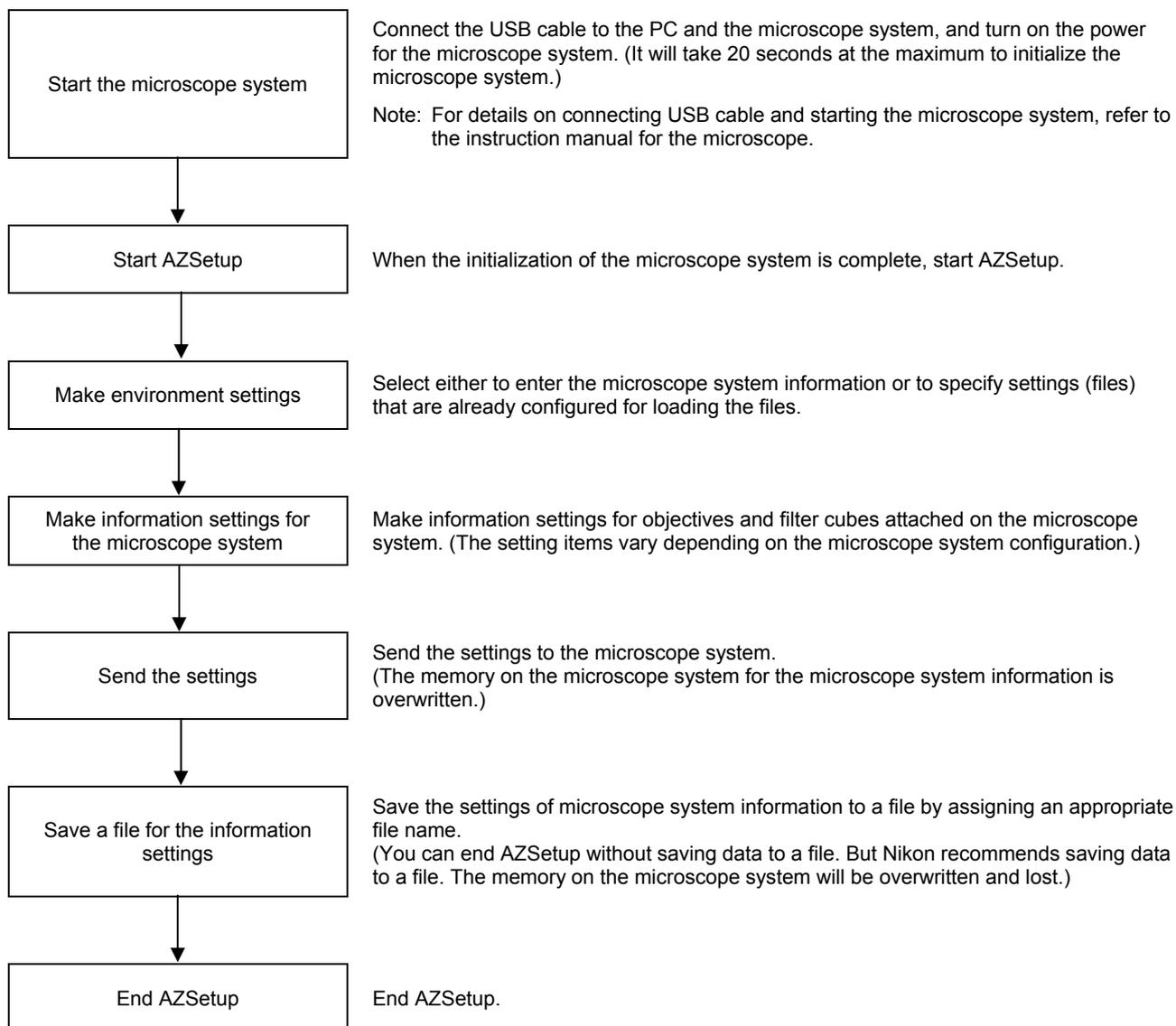
AZSetup Operation

AZSetup is used to perform initialization of the multi-purpose zoom microscope.

When you connect a PC and a microscope system for the first time, use AZSetup to set information for the microscope system, to send the information to the microscope system, and to register the information into the system memory.

3.1 AZSetup Workflow

Shown below is the AZSetup workflow when setting information for the microscope system.



3.1.1

Setting Item List

Shown below is a list of items that can be set:

Selecting the Setup Mode (3.4)

- └─ Normal Setup (3.4.1)
- └─ File Setup (3.4.2)
- └─ Returning the Settings to the Factory Default Condition (3.4.3)

Setting Up Objectives (3.5)

- └─ Objective Settings (3.5.1)

Filter Cube Setup (3.6)

- └─ Filter Cube Settings (3.6.1)

Zooming and Zdrive Setup (3.7)

- └─ Zooming/focusing setting (3.7.1)

Data Transfer Process (3.8)

- └─ Data transfer to the microscope
- └─ Data save to a file

3.2 Starting and Ending AZSetup

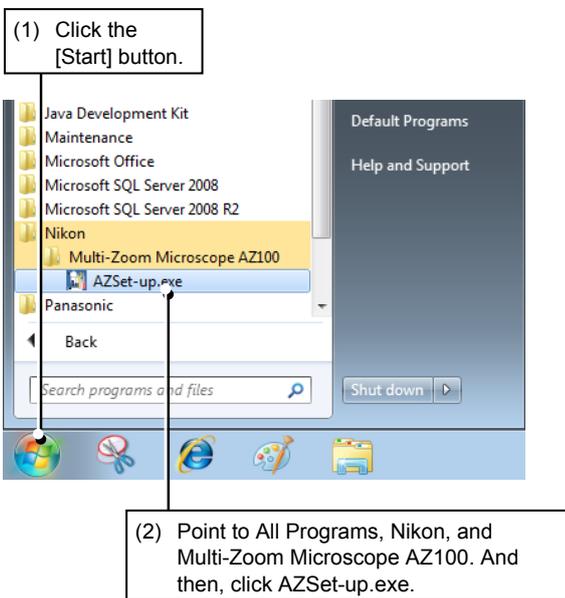
You can start and end AZSetup in several ways.

The method explained here, using the [Start] menu to start and the [Cancel] button in the operation window to end, is a normal method.

3.2.1 Starting Up

Procedure

▼ [Start] menu



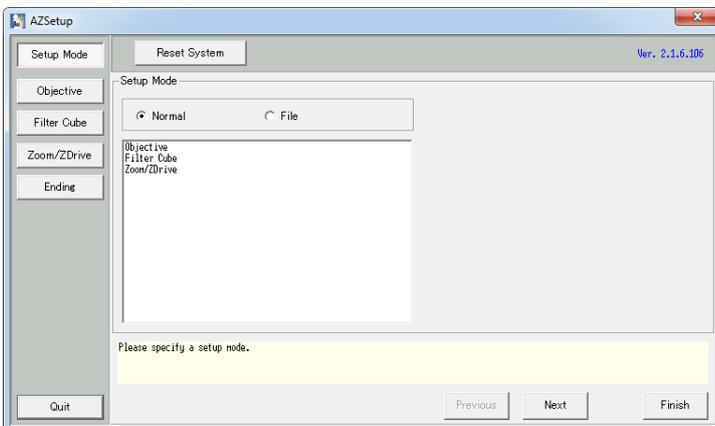
Confirm that the microscope is connected before starting the PC.

- (1) Click the [Start] button.
- (2) Point to All Programs, Nikon, and Multi-Zoom Microscope AZ100. And then click AZSet-up.exe.

■ CAUTION

Do not unplug the USB cable that connects the microscope with the PC while AZSetup is running.

▼ AZSetup main window

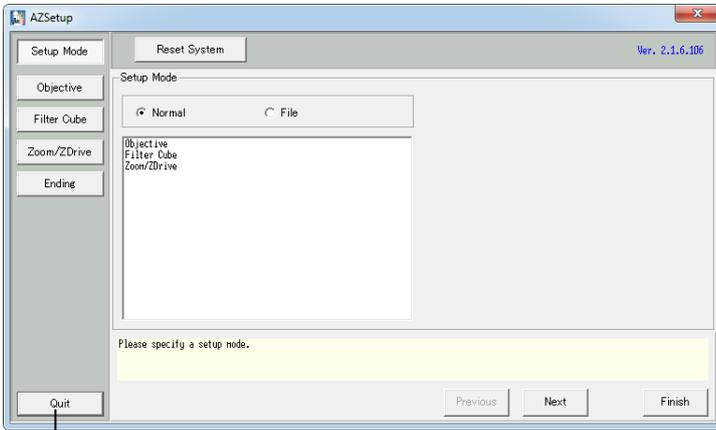


The AZSetup starts, and then the AZSetup main window opens.

3.2.2 Ending the Software

Procedure

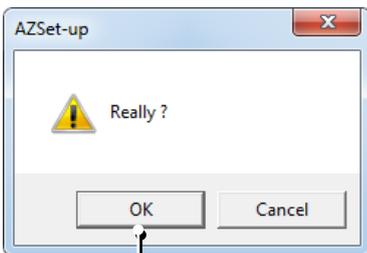
▼ AZSetup main window



(1) Click the [Quit] button.

- (1) Click the [Quit] button.
The end confirmation dialog box opens to display "Really?".

▼ End confirmation dialog box



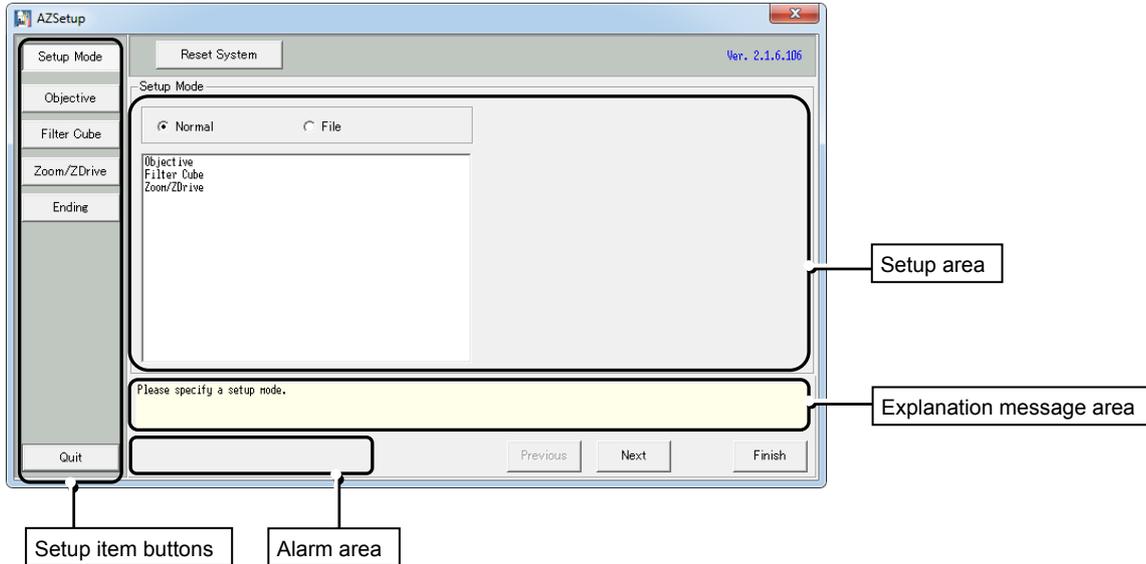
(2) Click the [OK] button.

- (2) In the end confirmation dialog box, click the [OK] button to end the AZsetup.

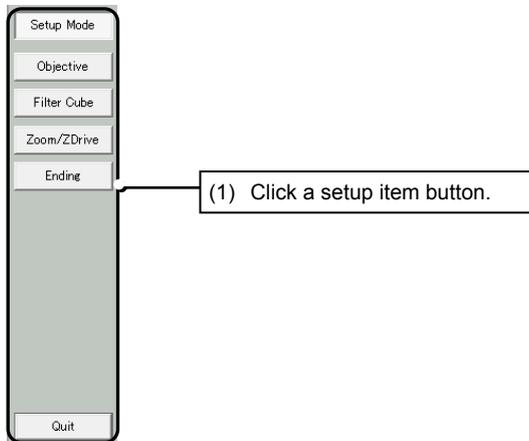
3.3 Layout of the AZSetup Main Window

The AZSetup main window consists of setup item buttons, explanation message area, alarm area, and setup area.

▼ AZSetup main window



▼ Setup item buttons



The setup item buttons are shown on the left of the main window and arranged from top to bottom in order of setup sequence. Follow this sequence when setting up items.

- (1) When you click a button for any setup item, the middle part of the main window changes to a setup screen for that item.

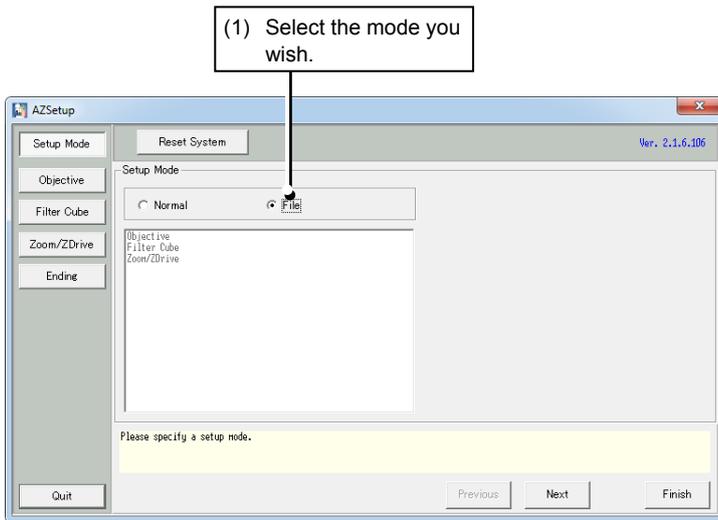
■ **Note:**

Depending on the system configuration, some items here may not need to be set. In that case, such buttons are disabled.

3.4 Selecting the Setup Mode

In the Setup Mode view, select the way to enter the microscope system information. You can enter new information or load the information from a file.

▼ Setup Mode view



(1) There are two actions, [Normal] or [File], in the Setup Mode view.

Each is detailed below:

- Normal
You can enter new information required for the microscope system.
- File
You can enter the information of the microscope system from a file.

■ **Note:**

After entering the information from a file, you can edit the information to use.

3.4.1**Normal Setup****Normal setup**

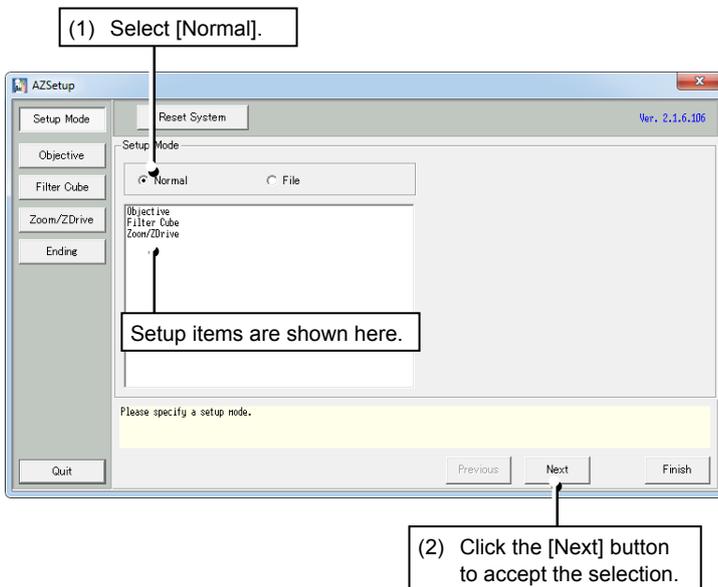
When Normal is selected in the Setup Mode view, setup items are shown in the list box.

Note:

Setup items vary depending on the system configuration.

Example:

- Objective
- Filter Cube
- Zoom/ZDrive

▼ Setup Mode view

(1) Select [Normal] in the Setup Mode view.

(2) Click the [Next] button to accept the selection. The screen proceeds to the objective setup view (3.5.1).

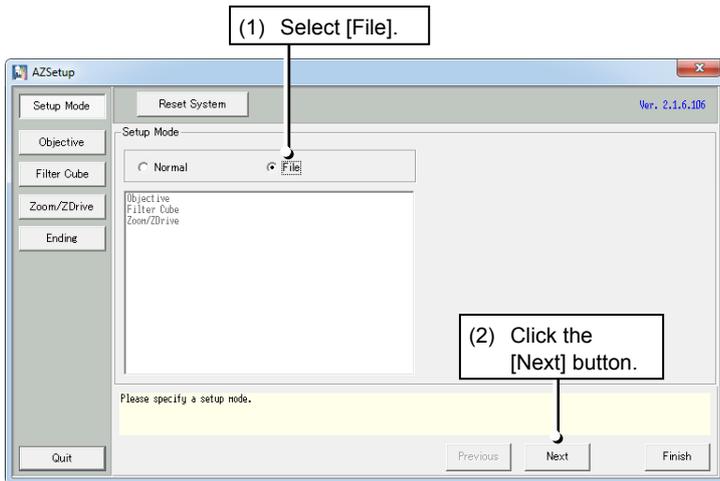
3.4.2 File Setup

Setup with a file

You can enter the information of the microscope system from a file when it is prepared.

The information of the microscope system can be modified in AZSetup.

▼ Setup Mode view



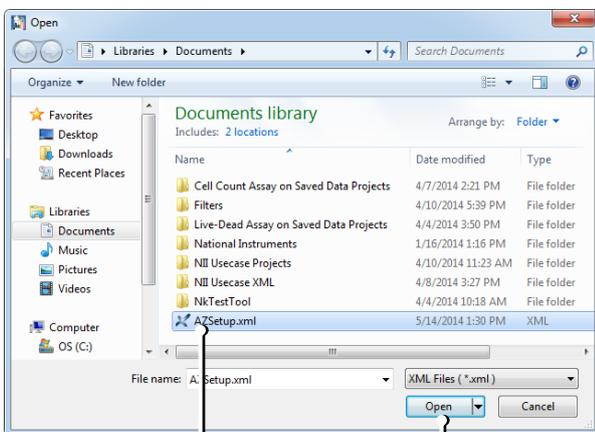
(1) Select [File] in the Setup Mode view.

(2) Click the [Next] button to show the file selection window.

■ Note:

The file selection window appears only when the [Next] button is clicked. It does not appear when [Previous] or [Finish] is clicked.

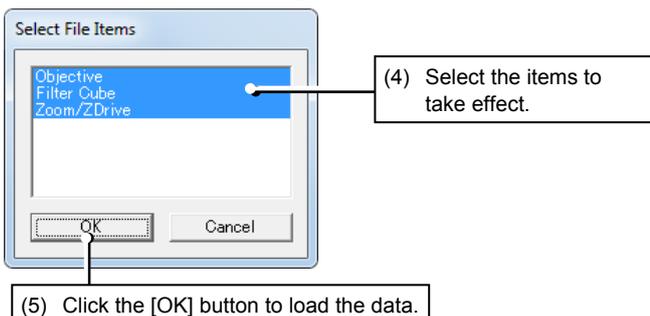
▼ File selection window



(3) Select a file (***.xml) and click the [Open] button.

The data is read, from the selected file and then the Select File Items dialog box appears.

▼ Select File Items dialog box



(4) Select the items to take effect.

■ Note:

By default, all items are selected.

(5) Click the [OK] button.

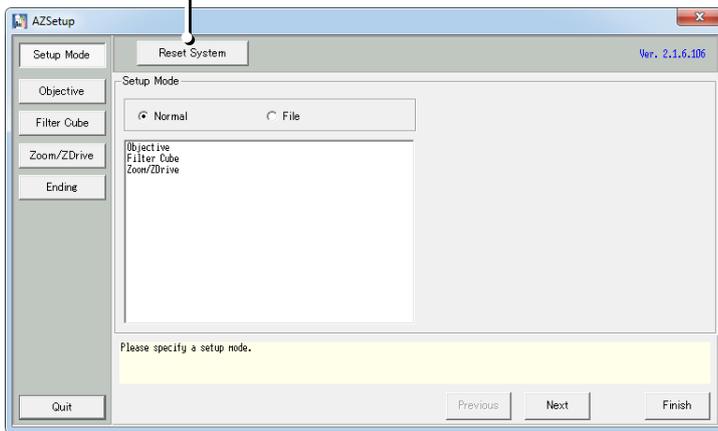
The data of the selected items is read and reflect the settings in AZSetup. Setup mode selection ends.

3.4.3 Returning the Settings to the Factory Default Condition

The microscope system settings can be reset to the factory default condition by performing the following procedure:

▼ Accessories view

(1) It is used to return the settings to the factory default condition.



- (1) Click the [Reset System] button.
- (2) A confirmation dialog box appears. Click the [OK] button to reset the settings.
- (3) When the confirmation dialog box appears to prompt you to restart the system, click the [OK] button.
- (4) When the end confirmation dialog box appears, click the [OK] button. AZSetup ends.

■ **Note:**

After resetting the microscope system settings, make sure to turn off the microscope main body and then turn on again. Besides, end and restart AZSetup.

3.5 Setting Up Objectives

Setting up the objective allows you to monitor the nosepiece state in real time.

The following items can be set for objectives.

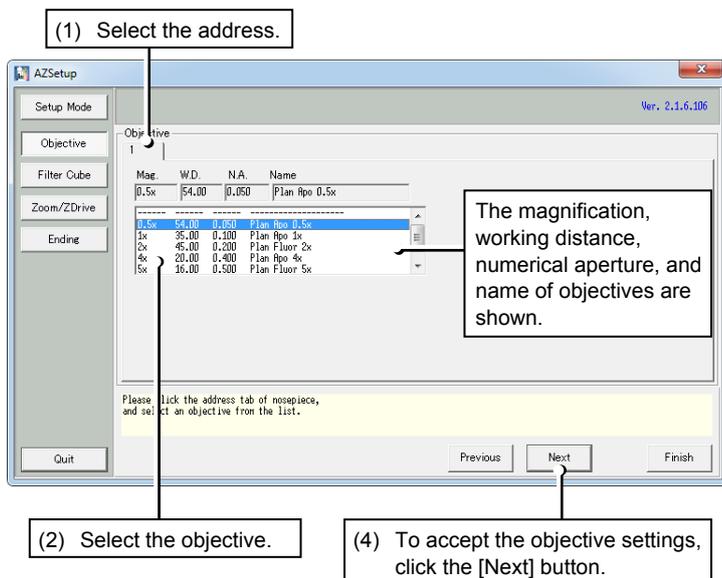
- **Objective settings: (only for the microscope system with the nosepiece)**
Specify objective information for each address (socket) on the nosepiece.

3.5.1 Objective Settings

To show the objective setup view, click the [Next] button in the Setup Mode view or click the [Objective] button in the setup item buttons.

On the objective setup view, specify the information on the objective for each address of the nosepiece.

▼ Objective setup view



- (1) Select the address of the objective from the tab to specify the information.
When a file is read, the information about the specified objective appears.
- (2) Select the objective from the list box.
- (3) To specify information for nosepiece addresses 1 to 3, return to Step (1), and repeat the setup procedure Steps (1) and (2).
- (4) To accept the objective settings, click the [Next] button.

- **Note:**
When no objective is attached, select [---].

3.6 Filter Cube Setup

Setting up the filter cube allows you to monitor the operating state of the filter cube inserted in real time.

The following items can be set for filter cubes.

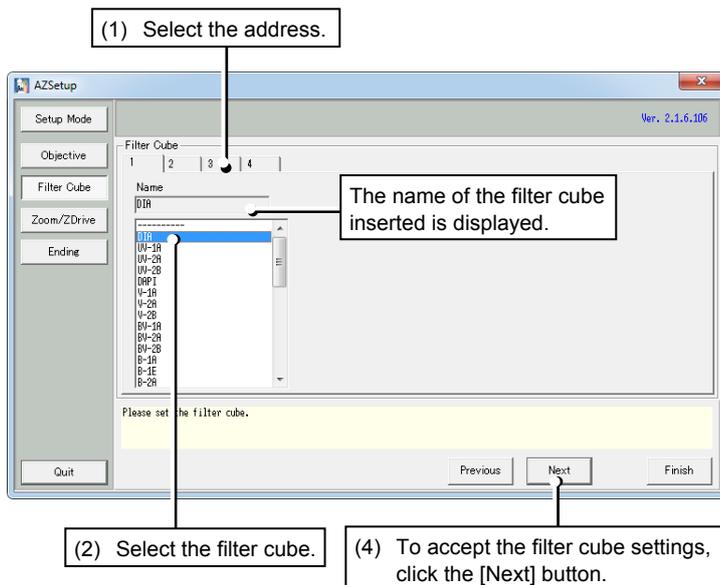
- **Filter cube settings:**
Specify filter cube information for each address (position) of the filter cube.

3.6.1 Filter Cube Settings

To show the Filter Cube setup view, click the [Next] button in the objective setup view or click the [Filter Cube] button in the setup item buttons.

Specify filter cube information for each address (position) of the filter cube.

▼ Filter Cube setup view



- (1) Select the address of the filter cube from the tab to specify the information.
- (2) Select the filter cube from the list box.
- (3) To specify information for filter cube addresses 1 to 4, repeat the setup procedure Steps (1) and (2).
- (4) Click the [Next] button to accept the settings of the filter cubes.

- **Note:**
When no filter cube is attached, select [---].

3.7 Zooming and ZDrive Setup

Specify the zoom initialization permission for the microscope system and the Z-direction drive range of the focus mounting section.

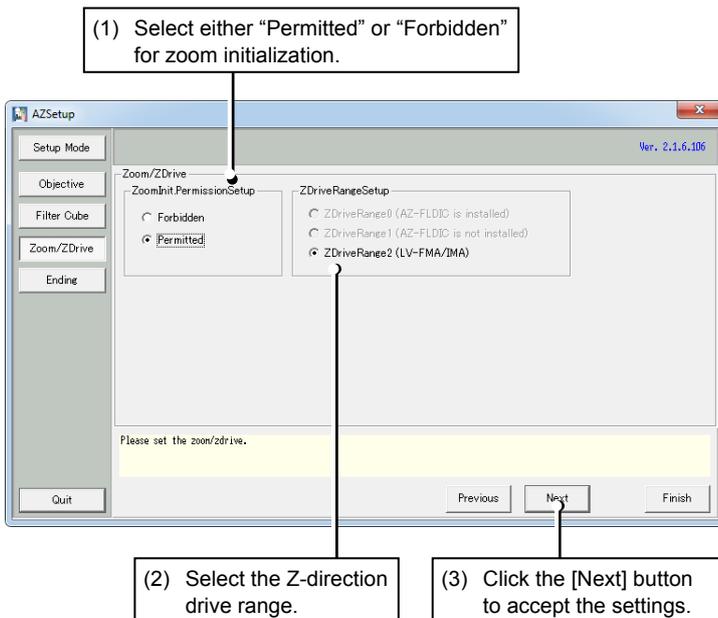
The following items can be set in the Zoom/ZDrive information.

- **Zoom and ZDrive settings**
Permit or forbid the initialization of the zooming function and set the Z-direction drive range of the focus mounting section.

3.7.1 Zoom and Focusing Setting

To show the Zoom/Zdrive setup view, click the [Next] button in the Filter Cube view or click the Zoom/ZDrive button in the setup item buttons. On this view, you can set the zoom initialization setting and the Z-direction drive range setting of the focus mounting section.

▼ Zoom/ZDrive setup view



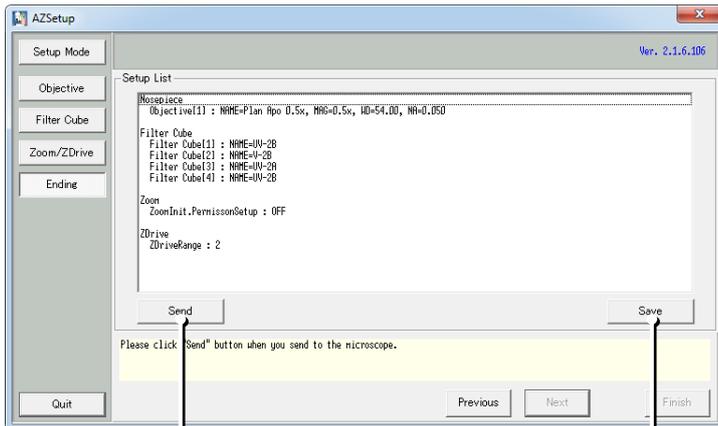
- (1) Select either "Permitted" or "Forbidden" for zoom initialization.
- (2) Select the Z-direction drive range.
- (3) To accept the settings and end the Zoom/ZDrive settings, click the [Next] button.

3.8 Data Transfer Process

To show the Ending view, click the [Next] button on the Zoom/ZDrive setup view or click the [Ending] button in the setup item buttons.

You can send the data to the microscope system on the Ending view. The data will be registered in the microscope system. You can save the data to a file on this view if necessary.

▼ Ending view



(1) Click the [Send] button to accept the contents.

(2) Click the [Save] button to save the data to a file.

(1) All of the information you've set is displayed in this view.

Check the displayed contents. After checking the contents, click the [Send] button. This completes the settings, and the information is sent to the microscope system.

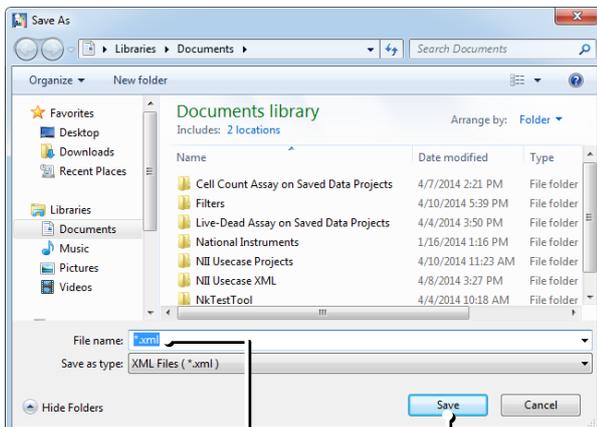
The data will be registered in the microscope system.

■ Note:

If you wish to modify the data, click the [Previous] button or click the corresponding button in the setup item buttons.

(2) To save the information to a file, click the [Save] button.

▼ File save window



(3) Enter the file name.

(4) Click the [Save] button.

(3) Enter the file name in the file save window.

(4) Click the [Save] button to save the information to the file.