

Nikon

WT-7

User's Guide

For Those Using the WT-7 with the D810, D810A, D750, or D7200

See the manual supplied with the WT-7 for specifications and other information.

- Read this manual thoroughly before using the camera.
- After reading this manual, keep it in a readily accessible place for future reference.

En

What the WT-7 Can Do for Users of the D810, D810A, D750, and D7200

What the WT-7 Can Do for Users of the D810, D810A, D750, and D7200

This guide describes how to attach the WT-7 to a D810, D810A, D750, or D7200 digital camera and connect the camera to a computer, ftp server, or other device over Ethernet or wireless networks. It also describes the operations that can be performed once a connection is established.

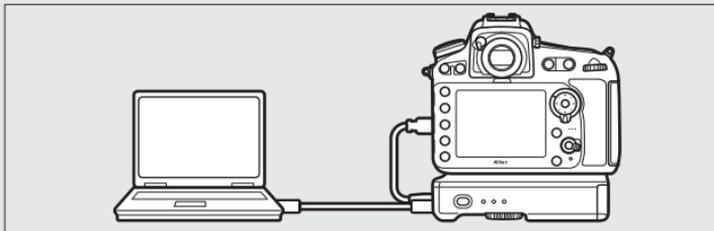
Before connecting the WT-7, confirm that the firmware for the camera and WT-7 have been updated to the latest version. For more information, visit the websites listed on page x.

Model Name: WT-7 (N1504)
Model Name: WT-7B (N1535)

Model Name: WT-7A (N1534)
Model Name: WT-7C (N1536)

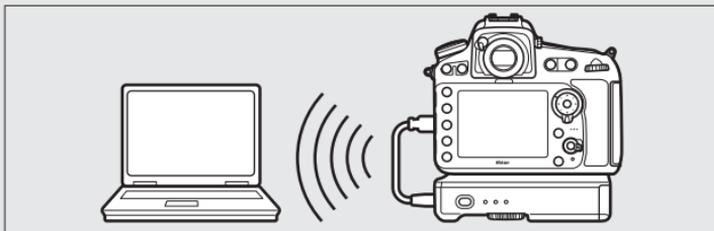
Before using the WT-7 network function, connect the camera to a network.

Ethernet Networks



For information on connecting to a computer, see page 9.
For information on connecting to an ftp server, see page 51.

Wireless Networks

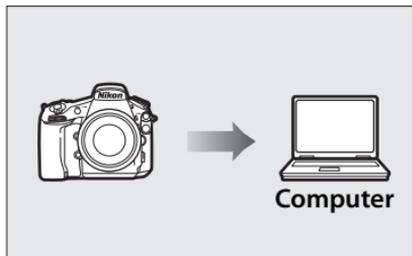


For information on connecting to a computer, see page 17.
For information on connecting to an ftp server, see page 57.

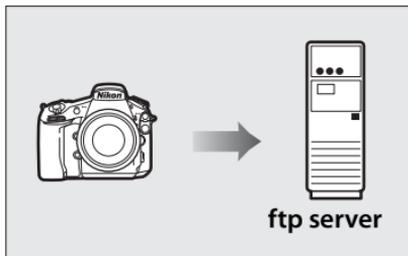
Once a network connection has been established, you can:

Upload existing photos and movies

Image Transfer (📖30)

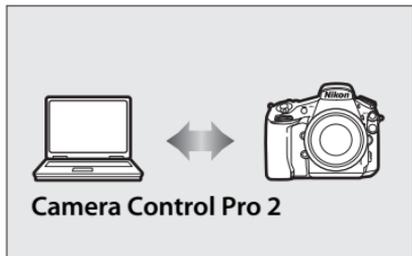


FTP Upload (📖70)

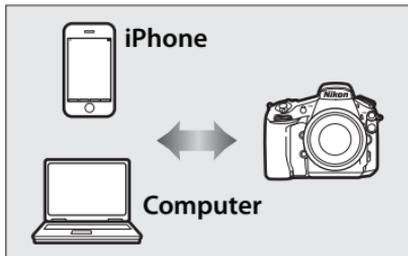


Take or browse photos remotely

Camera Control (📖35)



HTTP Server (📖38)



Nikon User Support for India and Australia

Contact a Nikon representative for technical assistance with the operation of your Nikon product or products. For information on the Nikon representatives in your area, visit <http://www.nikon-asia.com/support>.

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Memory Cards

Throughout this guide, CompactFlash and SD memory cards are referred to as “memory cards”.

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- Nikon will not be held liable for any damages resulting from the use of this product.
- While every effort has been made to ensure that the information in this guide is accurate and complete, we would appreciate it were you to bring any errors or omissions to the attention of the Nikon representative in your area (address provided separately).

Copyright

Comply with copyright notices. Under copyright law, photographs or recordings of copyrighted works made with the camera can not be used without the permission of the copyright holder. Exceptions apply to personal use, but note that even personal use may be restricted in the case of photographs or recordings of exhibits or live performances.

Security

Although one of the benefits of this product is that it allows others to freely connect for the wireless exchange of data anywhere within its range, the following may occur if security is not enabled:

- **Data theft:** Malicious third-parties may intercept wireless transmissions to steal user IDs, passwords, and other personal information.
- **Unauthorized access:** Unauthorized users may gain access to the network and alter data or perform other malicious actions. Note that due the design of wireless networks, specialized attacks may allow unauthorized access even when security is enabled.

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Background Knowledge

This guide assumes basic knowledge of ftp servers, local area networks (LANs), and wireless networks. For more information on installing, configuring, and using devices in a network, contact the manufacturer or network administrator.

Illustrations

The appearance and content of the software and operating system dialogs, messages, and displays shown in this guide may vary with the operating system used. For information on basic computer operations, see the documentation provided with the computer or operating system.

Camera Controls

The camera and menu operations described in this guide are for the D810 and may differ from those for the D810A, D750, and D7200.

Life-Long Learning

As part of Nikon's "Life-Long Learning" commitment to ongoing product support and education, continually-updated information is available on-line at the following sites:

- **For users in the U.S.A.:** <http://www.nikonusa.com/>
- **For users in Europe and Africa:** <http://www.europe-nikon.com/support/>
- **For users in Asia, Oceania, and the Middle East:** <http://www.nikon-asia.com/>

Visit these sites to keep up-to-date with the latest product information, tips, answers to frequently-asked questions (FAQs), and general advice on digital imaging and photography. Additional information may be available from the Nikon representative in your area. See the following URL for contact information: <http://imaging.nikon.com/>

Introduction

Thank you for your purchase of a WT-7 wireless transmitter for compatible Nikon digital cameras. Please read this guide thoroughly and keep it where all those who use the product can read it.

The following symbols and conventions are used throughout this guide:



This icon marks cautions, information that should be read before use to prevent damage to the product.



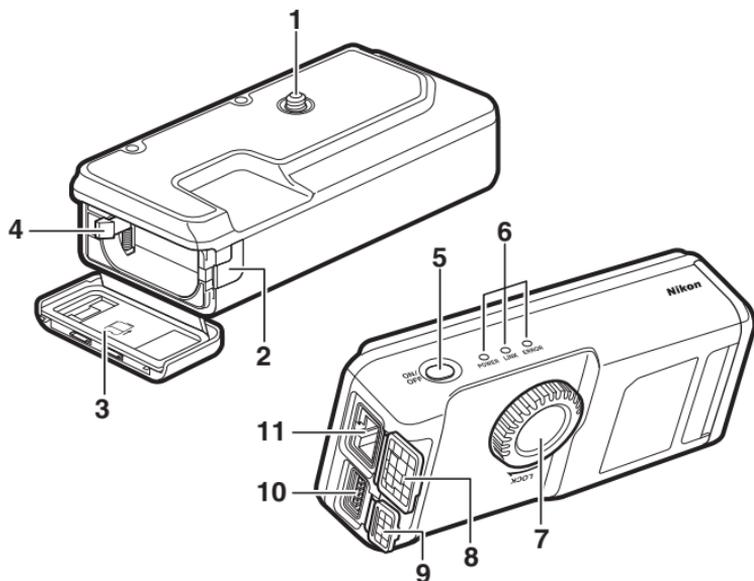
This icon marks notes, information that should be read before using the device.



This icon marks references to other pages in this guide.

Parts of the WT-7

Parts of the WT-7



1	Mounting screw	4	7	Attachment wheel	4
2	Power connector cover	6	8	Ethernet connector cover	
3	Battery-chamber cover	3	9	USB connector cover	
4	Battery latch	3	10	USB connector	4
5	Power switch	10, 18, 52, 58	11	Ethernet connector	
6	Status LEDs	33, 36, 41, 73			
	POWER (green/yellow), LINK (green), ERROR (orange)				

The **POWER LED**

When the WT-7 is on, the **POWER LED** glows green to indicate that the battery is fully charged or that an AC adapter is connected. At battery levels below 10%, it will flash to warn that the battery requires charging. When the WT-7 is turned off, the **POWER LED** briefly turns yellow as the product powers down.

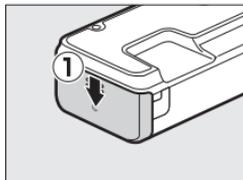
Getting Ready

Inserting the Battery

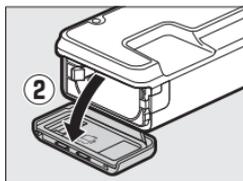
The WT-7 takes one EN-EL15 rechargeable Li-ion battery. Insert the battery as described below.

1 Open the battery-chamber cover.

Unlatch the cover by sliding it as shown (①).

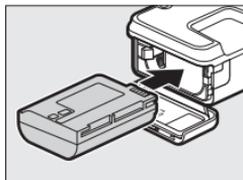


Open the cover (②).



2 Insert the battery.

Using the battery to keep the battery latch pressed to one side, slide the battery in until the latch clicks back into place. For safety precautions and information on charging the battery, see the battery and charger manuals.



3 Close the battery-chamber cover.

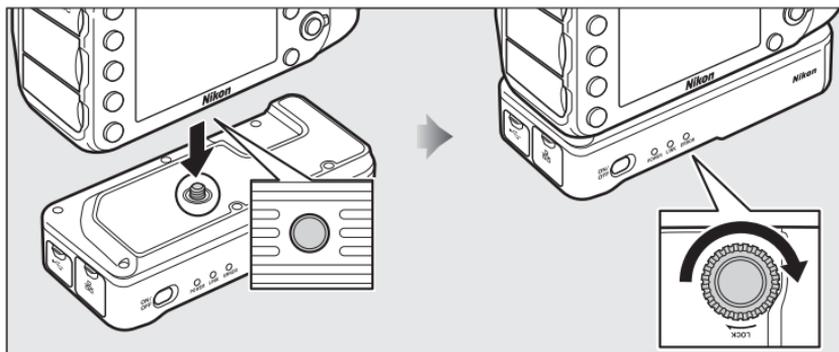
Reverse the instructions in Step 1 to close and latch the cover as shown. Be sure the cover is securely latched.



Attaching the WT-7

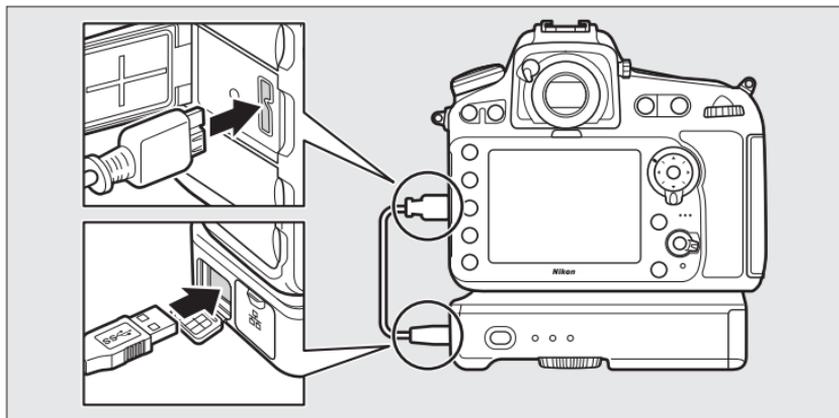
After checking that the camera is off, align the WT-7 mounting screw with the camera tripod socket and tighten by rotating the attachment wheel in the direction shown by the **LOCK** arrow.

Getting Ready



Connecting the USB Cable

Connect the WT-7 to the camera using the USB cable supplied with the WT-7 (D810 or D810A) or with the camera (D750 or D7200).



The Wireless Transmitter Utility

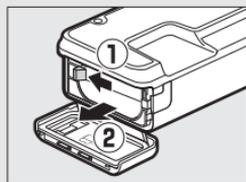
The Wireless Transmitter Utility is used for pairing in image transfer and camera control modes (☞15) and can also help create network profiles (☞88). You can install the utility after downloading it from the following website:

<http://downloadcenter.nikonimglib.com/>

Be sure to use the latest versions of the Wireless Transmitter Utility and the camera firmware.

Removing the Battery

Being careful not to drop the battery, open the WT-7 battery-chamber cover and remove the battery as shown at right.



Stand-By Mode

When the WT-7 is disconnected from the camera or the camera is turned off, the WT-7 will turn off automatically after the delay chosen for **Network > Options > Auto power off delay** in the camera setup menu (☞84), reducing the drain on the battery.

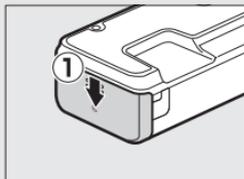
Battery Level

The level of the battery inserted in the WT-7 can be determined by connecting the WT-7 to the camera (□4) and checking the battery level using the **Options > Battery info** in the **Network** menu (□83).

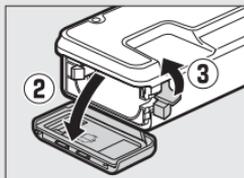
Using an AC Adapter

To prevent loss of power when adjusting settings or transmitting images, use a fully-charged battery or an optional EP-5B power connector and EH-5b AC adapter. An optional EH-5/EH-5a AC adapter can also be used. Insert the power connector as shown below.

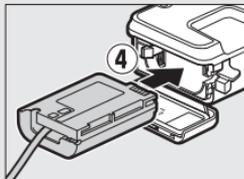
1 Unlatch the battery-chamber cover (①).



2 Open the battery-chamber (②) and power connector covers (③).



3 Using the power connector to keep the battery latch pressed to one side, slide the connector in until the latch clicks back into place (④).



4 Position the power connector so that the cord passes through the power connector slot and close the battery-chamber cover (⑤). Be sure that the cover is securely latched.



Network Functions Available with the D810, D810A, D750, and D7200

The WT-7 wireless transmitter connects D810, D810A, D750, or D7200 digital cameras to Ethernet and wireless networks. Photographs on the camera can then be transmitted to a computer or ftp server and the camera controlled remotely from a computer. The WT-7 supports the following functions:

FTP upload (☞70)	Upload existing photos and movies to a computer or ftp server, or upload new photos as they are taken.
Image transfer (☞30)	
Camera control (☞35)	Control the camera using optional Camera Control Pro 2 software and save new photos and movies directly to the computer.
HTTP server (☞38)	View and take pictures remotely using a browser-equipped computer or iPhone.

Before data can be transferred over a wireless or Ethernet network, the camera must be supplied with a *network profile* providing information on the host computer or ftp server.

Choosing a Power Source

To prevent the camera or WT-7 powering off unexpectedly during setup or data transfer, use fully-charged batteries or optional AC adapters designated for use with the camera or WT-7. For more on camera power sources, see the camera manual.

FTP Servers

Servers can be configured using standard ftp services available with supported operating systems, such as IIS (Internet Information Services). Connection to computers on other networks via a router, Internet ftp connections and ftp servers running third-party software are not supported.

Ethernet Connection

No adjustments to wireless LAN settings are required when the camera is connected to a LAN by an Ethernet cable.

HTTP Server Mode

Internet connections are not supported in http server mode.

Routers

Connection to computers on other networks via a router is not supported.

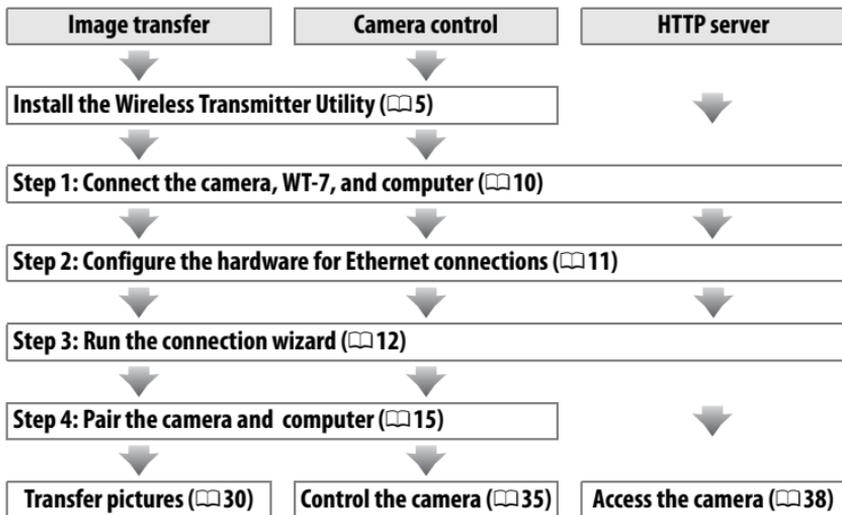
Firewall Settings

TCP ports 21 and 32768 through 61000 are used for ftp, TCP ports 22 and 32768 through 61000 for sftp, and TCP port 15740 and UDP port 5353 for connections to computers. File transfer may be blocked if the server firewall is not configured to allow access to these ports.

Transfer, Control, and HTTP

Ethernet Connections

Follow the steps below to connect via an Ethernet network. For information on wireless connections, see page 17.



Step 1: Connecting the Equipment

Before proceeding with the following steps, start the computer and log in.

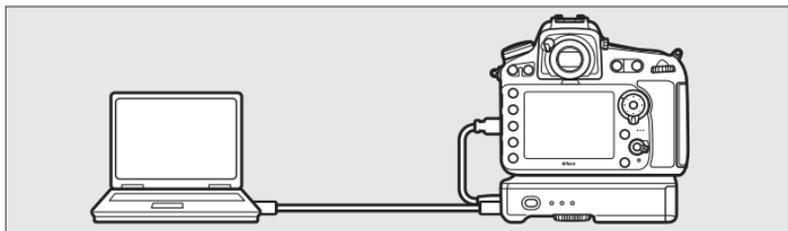
1 Insert a memory card.

Turn the camera off and insert a memory card (do not turn the camera off or disconnect the Ethernet cable while data are being transferred to the computer). This step can be omitted in camera control mode (□ 35).

2 Attach the WT-7 (□ 4).

3 Connect an Ethernet cable.

Connect the Ethernet cable as shown below. Do not use force or insert the connectors at an angle.

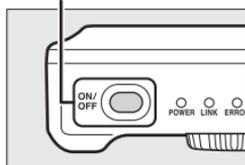


4 Turn the camera on.

Rotate the power switch to turn the camera on.

5 Press the power switch for about a second to turn the WT-7 on.

Power switch

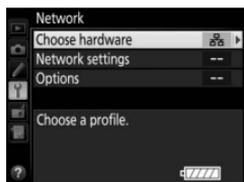


Step 2: Configuring the Hardware for Ethernet Connections

Configure the WT-7 for use with Ethernet networks.

1 Select **Choose hardware**.

In the setup menu, select **Network**, then highlight **Choose hardware** and press **↵**. The menu offers a choice of **Wired LAN** and **Wireless LAN**.



2 Select **Wired LAN**.

Highlight **Wired LAN** and press **ⓧ** to select the highlighted option and return to the network menu.

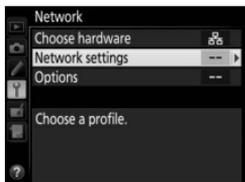


Step 3: The Connection Wizard

Follow the on-screen instructions to create a network profile.

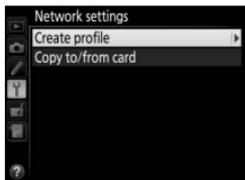
1 Display network profiles.

In the network menu, highlight **Network settings** and press  to display the profiles list and other network settings.



2 Select Create profile.

Highlight **Create profile** and press . Note that if the list already contains nine profiles, you will need to delete an existing profile using the  (FORMAT) button before proceeding ( 77).



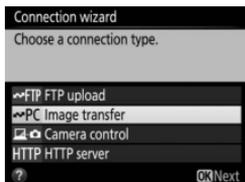
3 Start the connection wizard.

Highlight **Connection wizard** and press  to start the connection wizard.



4 Choose a connection type (7).

Highlight **Image transfer**, **Camera control**, or **HTTP server** and press .



5 Name the new network profile.

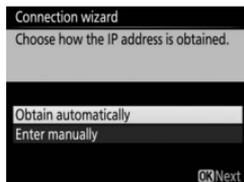
Enter the name that will appear in the profile list and press **OK** (to use the default name, press **OK** without making any changes). Profile names can be up to 16 characters long.



6 Obtain or select an IP address.

Highlight one of the following options and press **OK**.

- **Obtain automatically:** Select this option if the network is configured to supply the IP address automatically.
- **Enter manually:** When prompted, enter an IP address and subnet mask by pressing **←** and **→** to highlight segments and **↑** and **↓** to change. Press **OK** to proceed when entry is complete.



7 Choose your next step.

The IP address will be displayed; press **OK**. Your next step depends on the connection type selected in Step 4 on page 12:



If you chose **Image transfer** or **Camera control**, proceed to page 15.

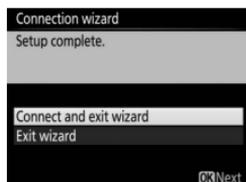


If you chose **HTTP server**, proceed to Step 8.

8 Exit the wizard.

Highlight one of the following options and press **OK**.

- **Connect and exit wizard:** Save the new network profile and connect to the server.
- **Exit wizard:** Save the new network profile and exit.



Proceed to “HTTP Server” (□ 38).

Routers

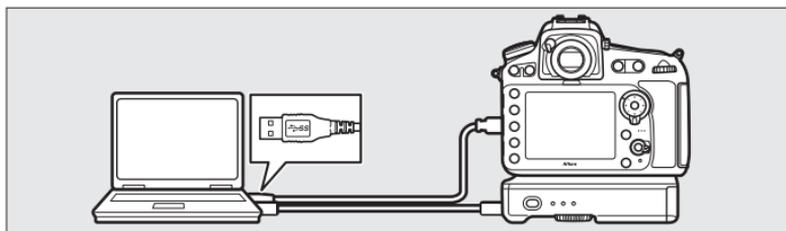
Connection to computers on other networks via a router is not supported.

Step 4: Pairing

If you selected **Image transfer** or **Camera control** in Step 4 of the connection wizard (📖 12), pair the camera with the computer as described below. Pairing allows the computer to connect to the camera.

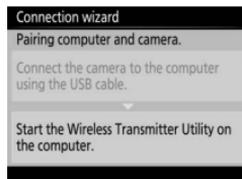
1 Connect the camera to the computer via USB.

Disconnect the USB cable from the WT-7 and connect it to the computer.



2 Start the Wireless Transmitter Utility.

When prompted, start the copy of the Wireless Transmitter Utility installed on the computer. Pairing will begin automatically.

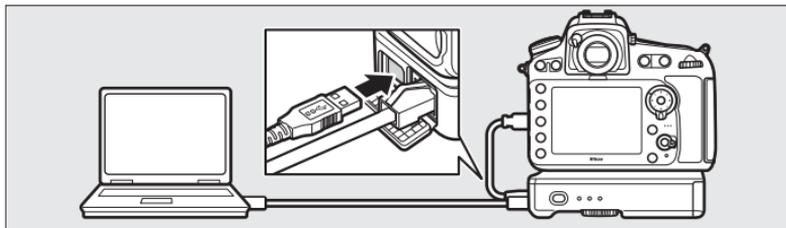


3 Disconnect the camera.

The message at right will be displayed when pairing is complete. Disconnect the USB cable from the computer and reconnect it to the WT-7.

Connection wizard

Pairing complete. Disconnect the USB cable from the computer and connect it to the UT-1/WT-7.



4 Exit the wizard.

Highlight one of the following options and press **OK**.

- **Connect and exit wizard:** Save the new network profile and connect to the server.
- **Exit wizard:** Save the new network profile and exit.

Connection wizard

Setup complete.

Connect and exit wizard

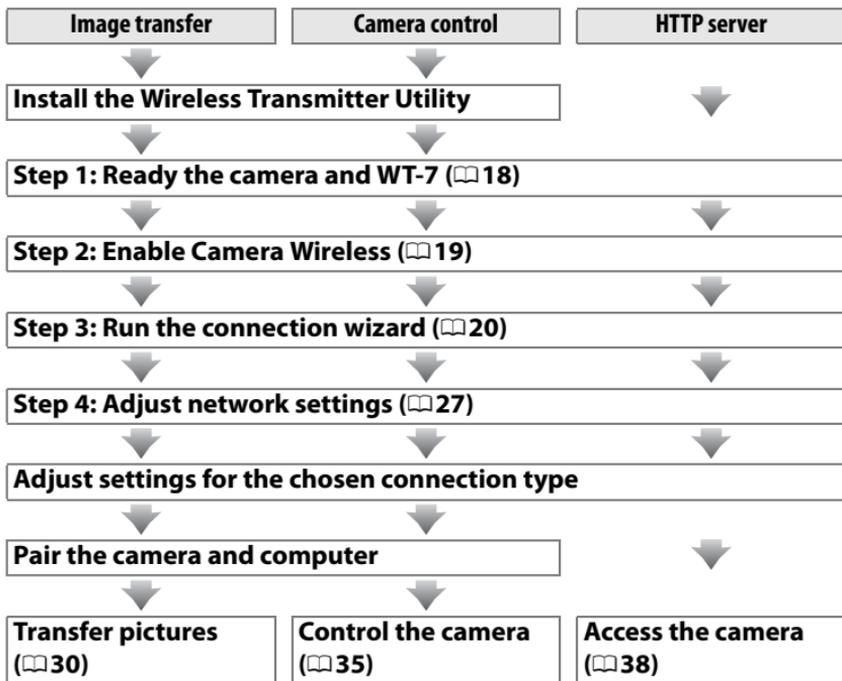
Exit wizard

OK/Next

Proceed to “Image Transfer” (📖 30) or “Camera Control” (📖 35).

Wireless Connections

Follow the steps below to connect to a wireless network.



Wireless LANs

These instructions assume that the computer and wireless LAN access point are already connected to the network.

Step 1: Readyng the Equipment

After starting the computer and logging in, ready the camera and WT-7 as described below.

1 Insert a memory card.

Turn the camera off and insert a memory card (do not turn the camera off while data are being transferred to the computer). This step can be omitted in camera control mode (📖 7).

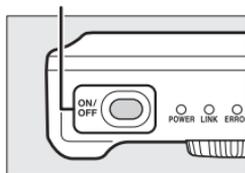
2 Attach the WT-7 (📖 4).

3 Turn the camera on.

Rotate the power switch to turn the camera on.

4 Press the power switch for about a second to turn the WT-7 on.

Power switch

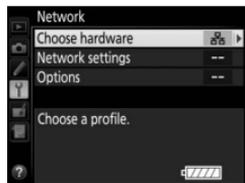


Step 2: Enable Camera Wireless

Ready the camera for connection to a wireless network.

1 Select **Choose hardware**.

In the setup menu, select **Network**, then highlight **Choose hardware** and press **▶**. The menu offers a choice of **Wired LAN** and **Wireless LAN**.



2 Select **Wireless LAN**.

Highlight **Wireless LAN** and press **OK** to select the highlighted option and return to the network menu.

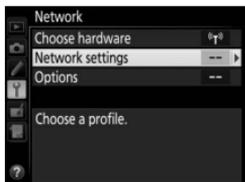


Step 3: The Connection Wizard

Follow the on-screen instructions to create a network profile.

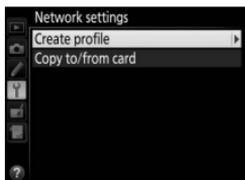
1 Display network profiles.

In the network menu, highlight **Network settings** and press **↩** to display the profiles list and other network settings.



2 Select Create profile.

Highlight **Create profile** and press **↩**. Note that if the list already contains nine profiles, you will need to delete an existing profile using the **🗑️ (FORMAT)** button before proceeding.



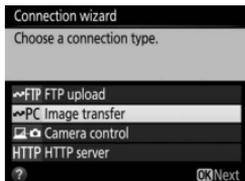
3 Start the connection wizard.

Highlight **Connection wizard** and press **↩** to start the connection wizard.



4 Choose a connection type (📖 7).

Highlight **Image transfer**, **Camera control**, or **HTTP server** and press **Ⓞ**.



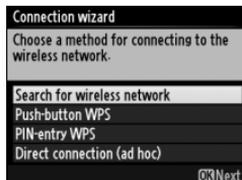
5 Name the new network profile.

Enter the name that will appear in the profile list and press **OK** (to use the default name, press **OK** without making any changes). Profile names can be up to 16 characters long.



6 Choose a connection method.

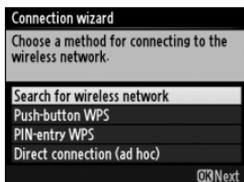
Highlight the connection method used by the network and press **OK**. More information can be found on the pages listed below.



Search for wireless network	Choose from a list of networks detected by the camera. Proceed to page 22.
Push-button WPS	Choose for wireless LAN access points with push-button WPS. Proceed to page 24.
PIN-entry WPS	Choose for wireless LAN access points with PIN-entry WPS. Proceed to page 25.
Direct connection (ad hoc)	Connect directly to a host computer or ftp server in ad hoc mode (supported in Windows 7 only). Proceed to page 26.

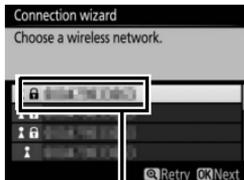
■ Search for Wireless Network

Select **Search for wireless network** in Step 6 on page 21 to choose from a list of the networks (wireless LAN access points) detected by the camera.



1 Choose a network.

Highlight a network SSID and press **OK** (if the desired network is not displayed, press **Search** to search again). If the selected network is encrypted (🔒), you will be prompted to enter the encryption key as described in Step 2. If the network is not encrypted, proceed to Step 3.



SSID

The network type is indicated by the icons to the left of the ID:

	Signal encrypted
	Infrastructure/ad hoc

Hidden SSIDs

Networks with hidden SSIDs are indicated by blank entries in the network list. If you select a network with a hidden SSID, you will be prompted to provide the network name; enter a name and press **OK** to proceed to Step 2.



2 Enter the encryption key.

Enter the encryption key and press **OK** (if the network uses open authentication, this dialog will not be displayed; proceed to Step 3).



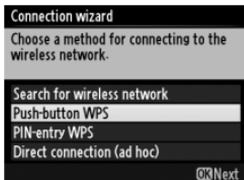
3 Choose your next step.

The message at right is displayed when a connection is established. Proceed to page 27.



■ ■ **Push-Button WPS**

Choose **Push-button WPS** in Step 6 on page 21 if the wireless LAN access point uses push-button WPS.



1 Press the WPS button on the wireless LAN access point.

For more information, see the documentation provided with the wireless LAN access point.

2 Press [OK] button on the camera.

The camera will connect to the access point automatically.



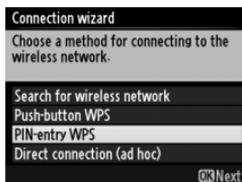
3 Choose your next step.

The message at right is displayed when a connection is established. Press [OK] and proceed to page 27.



■ ■ PIN-Entry WPS

Choose **PIN-entry WPS** in Step 6 on page 21 if the wireless LAN access point uses PIN-entry WPS.



1 Enter the PIN for the wireless LAN access point.

From a computer, enter the PIN for the wireless LAN access point. For more information, see the documentation provided with the wireless LAN access point.

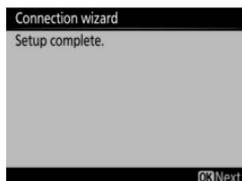
2 Press **OK** button on the camera.

The camera will connect to the access point automatically.



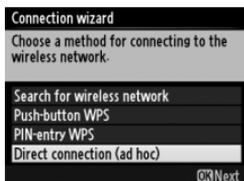
3 Choose your next step.

The message at right is displayed when a connection is established. Press **OK** and proceed to page 27.



■ Direct Connection (Ad Hoc)

To connect directly to an ftp server or computer in ad hoc mode, select **Direct connection (ad hoc)** in Step 6 on page 21.



1 Enter the SSID.

Enter a network name (SSID) and press **OK**. The default name is “WT” followed by the MAC address of the WT-7.



2 Enter the encryption key.

Enter an encryption key and press **OK** (the default key is “nikon”). Proceed to page 27.

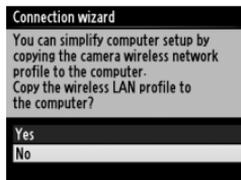


Step 4: Network Settings

Choose an IP address.

1 Choose whether to copy the profile to the computer.

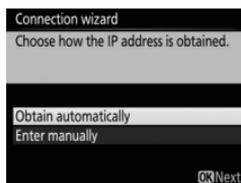
Highlight one of the options at right and press **OK**. To copy the new WT-7 network profile to the computer (□85), select **Yes** (note that network settings for other operating systems may be overwritten).



2 Obtain or select an IP address.

Highlight one of the following options and press **OK**.

- **Obtain automatically:** Select this option if the network is configured to supply the IP address automatically.
- **Enter manually:** When prompted, enter an IP address and subnet mask by pressing **←** and **→** to highlight segments and **↑** and **↓** to change. Press **OK** to proceed when entry is complete.



Routers

Connection to computers on other networks via a router is supported only when **HTTP server** is selected.

MAC Address Filtering

If the network uses MAC address filtering, the filter must be supplied with the MAC address of the WT-7. After attaching the WT-7 to the camera, choose **Network > Options > MAC address** from the camera setup menu and note the MAC address.

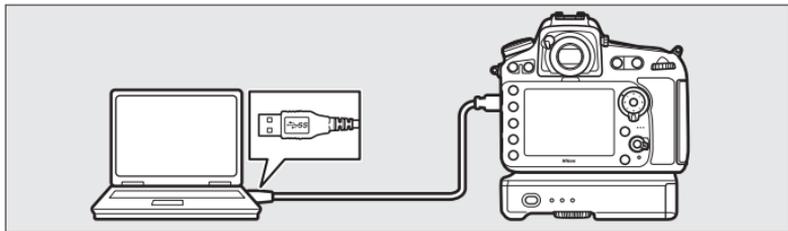
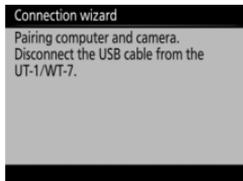
3 Confirm the IP address.

The camera IP address will be displayed as shown at right; press **OK**. If **Image transfer** or **Camera control** is selected, proceed to Step 4; otherwise, proceed to Step 6.



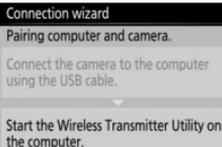
4 Connect the camera to the computer.

Disconnect the USB cable from the WT-7 and connect it to the computer.



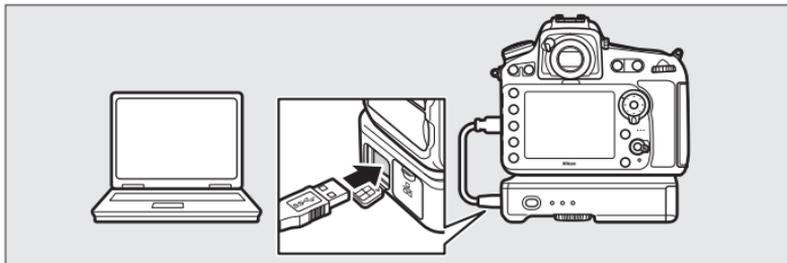
5 Start the Wireless Transmitter Utility.

When prompted, start the copy of the Wireless Transmitter Utility installed on the computer (□5). Pairing will begin automatically.



6 Disconnect the camera.

The message at right will be displayed when pairing is complete. Disconnect the USB cable from the computer and reconnect it to the WT-7.



7 Exit the wizard.

Highlight one of the following options and press **OK**.

- **Connect and exit wizard:** Save the new network profile and connect to the network.
- **Exit wizard:** Save the new network profile and exit.



Proceed to “Image Transfer” (□30), “Camera Control” (□35), or “HTTP Server” (□38).

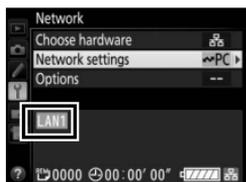
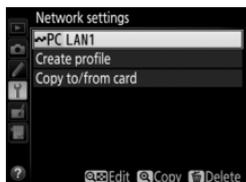
Image Transfer

Image transfer is used to upload photographs and movies to the computer from a camera memory card. The explanation that follows assumes that existing pictures are used.

1 Display network profiles.

In the setup menu, select **Network** > **Network settings** to display the profiles list. Image transfer profiles are indicated by a PC icon. Highlight a profile and press **OK** to select the highlighted profile and return to the network menu.

The profile name will be displayed in green when a connection is established.



2 View pictures.

Press the **Play** button to view pictures. Display the first picture to be sent in single-image playback or highlight it in the thumbnail list.



3 Upload pictures.

Press **OK**. A white transfer icon will appear on the picture and upload will begin immediately. The transfer icon turns green during upload, and turns blue when upload is complete. Additional pictures will be uploaded in the order selected.

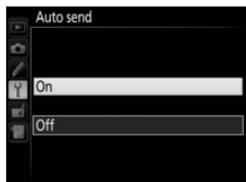


To upload a picture that has already been uploaded once, press **OK** once to remove the blue transfer icon, and then press **OK** again to mark the image with a white transfer icon.



Uploading New Photographs as They Are Taken

To upload new photographs as they are taken, select **On** for **Network > Options > Auto send** in the setup menu (☰81).



Interrupting Transmission/Removing Transfer Marking

To cancel transmission of images marked with white or green transfer icons, select the images during playback and press **OK**. The transfer icon will be removed. Any of the following actions will also interrupt transmission:

- Turning the camera off
- Selecting **Yes** for **Network > Options > Deselect all?** (p. 83; this option also removes transfer marking from all images)

During Upload

Do not remove the memory card or disconnect the Ethernet cable during upload.

Interval Timer Photography

Upload will be interrupted if the standby timer expires while interval timer photography is in progress. Choose a long standby time before starting the interval timer.

Loss of Signal

Wireless transmission may be interrupted if the signal is lost, but can be resumed by turning the camera off and then on again.

Turning the Camera Off

“Send” marking will be saved if the camera or WT-7 is turned off while transmission is in progress. Transmission of images marked with a “send” icon will resume when the camera or WT-7 is turned on.

Destination Folders

By default, images are uploaded to the following folders:

- **Windows:** \Users\\Pictures\Wireless Transmitter Utility
- **Mac:** /Users/(user name)/Pictures/Wireless Transmitter Utility

The destination folder can be selected using the Wireless Transmitter Utility.

Transfer Status

During playback, the status of images selected for upload is shown as follows:

: "Send"

Images that have been selected for upload are marked with a white  icon.

: "Sending"

A green  icon is displayed during upload.

: "Sent"

Images that have been uploaded successfully are marked with a blue  icon.

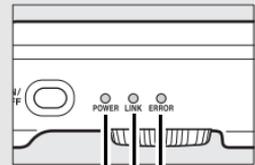


Network Status

The status of the link between the host and the WT-7 is shown by the status LEDs and by the display in the top level of the network menu.

The Status LEDs

The **POWER** LED lights when the WT-7 is on. Signal quality is shown by the **LINK** LED: the faster the LED flashes, the better the signal and the faster data can be transmitted. The **ERROR** LED flashes to show that an error has occurred.



Status	POWER	LINK	ERROR
WT-7 off	● (off)	● (off)	● (off)
USB cable not connected	○ (on)	● (off)	● (off)
Connecting to host	○ (on)	○ (on)	● (off)
Waiting to send or sending data	○ (on)	✳ (flashes)	● (off)
Connection error	○ (on)	● (off)	✳ (flashes)
WT-7 hardware or battery malfunction	✳ (flashes)	✳ (flashes)	✳ (flashes)

The Status Display

Network status can also be viewed in the top level of the network menu.

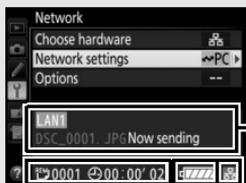


Image Transfer

: The estimated time required to send the remaining images.

Battery level: The charge state of the battery in the WT-7.

Status area: The status of the connection to the host. The host name is displayed in green when a connection is established. While files are being transferred, the status display shows "Now sending" preceded by the name of the file being sent. Any errors that occur during transfer are also displayed here ( 100).

Signal strength: Wireless signal strength. Ethernet connections are shown by .

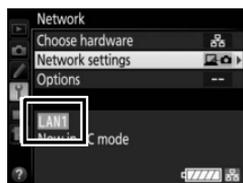
Camera Control

Select this option to control the camera from a computer running Camera Control Pro 2 (available separately) and save photographs directly to the computer hard disk instead of the camera memory card (movies will still be saved to the camera memory card; insert a memory card before shooting movies). Note that the camera standby timer do not turn off when the camera is in camera control mode.

1 Display network profiles.

In the setup menu, select **Network** > **Network settings** to display the profiles list. Camera control profiles are indicated by a  icon. Highlight a profile and press **OK** to select the highlighted profile and return to the network menu.

The profile name will be displayed in green when a connection is established.



2 Start Camera Control Pro 2.

Start the copy of Camera Control Pro 2 (available separately) installed on the host computer. For information on using Camera Control Pro 2, see the Camera Control Pro 2 manual (pdf).

Ethernet Networks

Do not disconnect the Ethernet cable while the camera is on.

Wireless Networks

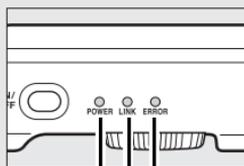
Operations may take longer on wireless networks. If the signal is disrupted while pictures are being transferred to Camera Control Pro 2, the LED on the WT-7 will flash orange; turn the camera off and then on again. Transfer will resume when the connection is re-established. Note that transfer can not be resumed if you turn the camera off again before transfer is complete.

Network Status

The status of the link between the host and the WT-7 is shown by the status LEDs and by the display in the top level of the network menu.

The Status LEDs

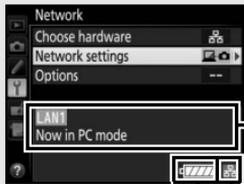
The **POWER** LED lights when the WT-7 is on. Signal quality is shown by the **LINK** LED: the faster the LED flashes, the better the signal and the faster data can be transmitted. The **ERROR** LED flashes to show that an error has occurred.



Status	POWER	LINK	ERROR
WT-7 off	● (off)	● (off)	● (off)
USB cable not connected	○ (on)	● (off)	● (off)
Connecting to host	○ (on)	○ (on)	● (off)
Waiting to send or sending data	○ (on)	⚡ (flashes)	● (off)
Connection error	○ (on)	● (off)	⚡ (flashes)
WT-7 hardware or battery malfunction	⚡ (flashes)	⚡ (flashes)	⚡ (flashes)

The Status Display

Network status can also be viewed in the top level of the network menu.



Battery level: The charge state of the battery in the WT-7.

Status area: The status of the connection to the host. The host name is displayed in green when a connection is established. Any errors that occur during transfer are also displayed here (book 100).

Signal strength: Wireless signal strength. Ethernet connections are shown by .

HTTP Server

Select **HTTP server** to view the pictures on the camera memory card or take photographs from the web browser on a computer or iPhone (see page 42 for system requirements). Up to five users can access the camera at one time, although only one can take photographs. Note that the exposure meters do not turn off automatically when the camera is in http server mode.

HTTP Server

1 Display network profiles.

In the setup menu, select **Network** > **Network settings** to display the profiles list. HTTP server profiles are indicated by a HTTP icon. Highlight a profile and press **OK** to select the highlighted profile and return to the network menu.

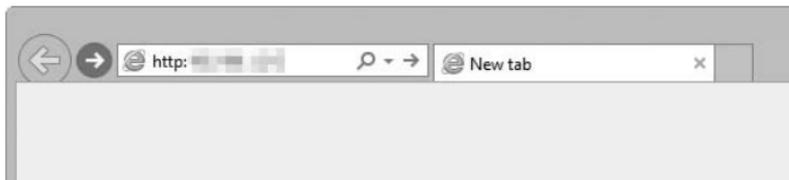
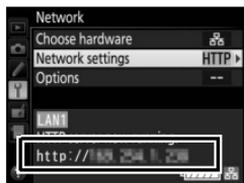
The URL used for connection to the camera is displayed when a connection is established.



2 Launch the web browser on the computer or iPhone.

3 Enter the camera URL.

Enter the camera URL ("http://" followed by the camera IP address, as shown in the network menu) in the browser window address field.



4 Log in.

Enter your user name and password in the web browser login dialog (the user name and password are set using **Network > Options > HTTP user settings** in the network menu as described on page 83; the default user name is “nikon” while the default password is blank).



5 Choose a language.

6 Choose an operating mode.

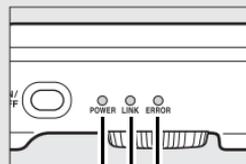
Choose **Shooting/Viewer** to take pictures (☞43, 47) and **Shooting/Viewer** or **Viewer** to view existing pictures (☞45, 49). Up to five users at a time can connect using **Viewer**, but only one user at a time can connect using **Shooting/Viewer** (if another user is already connected using **Shooting/Viewer**, **Shooting/Viewer** will not be displayed and only four users will be able to connect using **Viewer**).

Network Status

The status of the link between the host and the WT-7 is shown by the status LEDs and by the display in the top level of the network menu.

The Status LEDs

The **POWER** LED lights when the WT-7 is on. Signal quality is shown by the **LINK** LED: the faster the LED flashes, the better the signal and the faster data can be transmitted. The **ERROR** LED flashes to show that an error has occurred.



Status	POWER	LINK	ERROR
WT-7 off	● (off)	● (off)	● (off)
USB cable not connected	○ (on)	● (off)	● (off)
HTTP server starting up	○ (on)	○ (on)	● (off)
HTTP server in operation	○ (on)	⚡ (flashes)	● (off)
Connection error	○ (on)	● (off)	⚡ (flashes)
WT-7 hardware or battery malfunction	⚡ (flashes)	⚡ (flashes)	⚡ (flashes)

The Status Display

Network status can be viewed in the top level of the network menu.



Status area: The status of the connection to the host. The camera URL is displayed in green when a connection is established. Errors are also displayed here (📶 100).

Battery level: The charge state of the battery in the WT-7.

Signal strength: Wireless signal strength. Ethernet connections are shown by 📶.

HTTP Server System Requirements

Operation has been confirmed with the following systems:

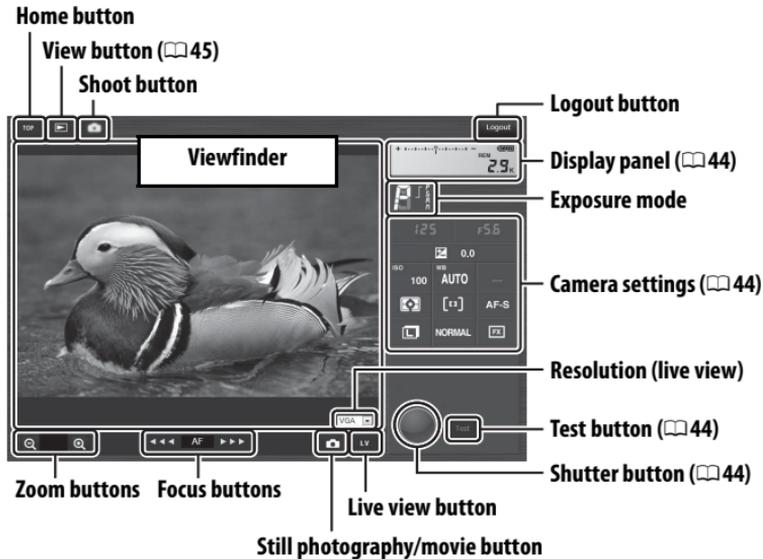
Windows	
OS	Windows 10, Windows 8.1, Windows 7
Browser	<ul style="list-style-type: none"> • Windows 10: Microsoft Edge • Windows 8.1: Internet Explorer 11 • Windows 7: Internet Explorer 10
Monitor	<ul style="list-style-type: none"> • Resolution: 1,024 × 768 pixels (XGA) or more; 1,280 × 1,024 pixels (SXGA) or more recommended • Color: 24-bit color (True Color) or more
Mac	
OS	OS X version 10.11, 10.10, or 10.9
Browser	<ul style="list-style-type: none"> • OS X version 10.11: Safari 9 • OS X version 10.10: Safari 8 • OS X version 10.9: Safari 7
Monitor	<ul style="list-style-type: none"> • Resolution: 1,024 × 768 pixels (XGA) or more; 1,280 × 1,024 pixels (SXGA) or more recommended • Color: 24-bit color (millions of colors) or more
iPhone	
OS	iOS 9, iOS 8
Browser	The version of Safari included with the operating system

Computer Web Browsers

This section describes the http server displays for computer web browsers (note that the display varies with the model of camera). Click to adjust camera settings. For information on the displays for iPhones, see page 47.

The Shooting Window

The following controls can be accessed by selecting **Shooting/Viewer** on the server home page. To display the view through the camera lens in the viewfinder area, click the live view button. Click the button again to exit live view.



📎 Movie Live View

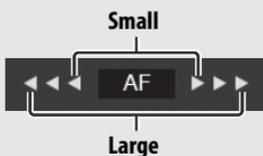
The information at right appears in the camera settings area (📖44) in movie live view.



Display panel	Contains the exposure indicator and shows the battery level and number of exposures remaining.
Camera settings	Settings for still photography and movie recording can be adjusted by clicking the icons in the camera settings panel. See the camera manual for more information.
Shutter button	Take a photograph or start and end movie recording. To focus, click the desired subject in the viewfinder area.
Test button	Take a test photo and display it in the viewfinder without recording it to the camera memory card. Not available in movie live view.

Focus Buttons

The size of the focus adjustment increases with the distance of the button from the center of the display.

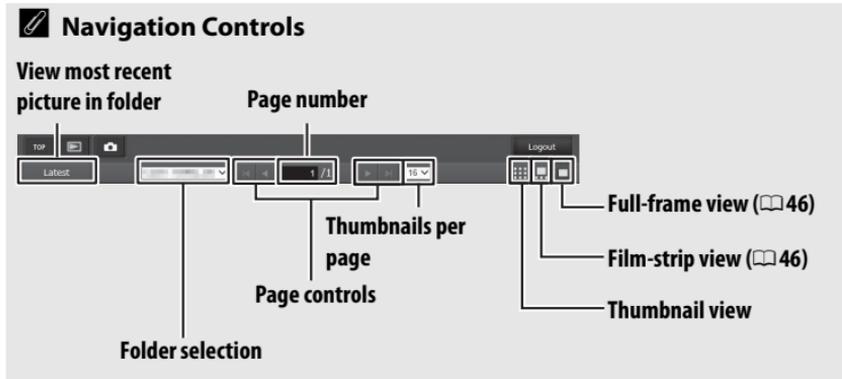


The Viewer Window

The viewer window can be accessed by selecting **Viewer** on the server home page or clicking the view button in the shooting window. The viewer window for computer web browsers offers a choice of thumbnail, film-strip (📖46), and full-frame views (📖46).

Thumbnail View

View multiple small (“thumbnail”) images per page. The controls at the top of the window can be used for navigation.



■ ■ *Film-Strip View*

Choose the picture displayed from the thumbnails at the bottom of the window.

HTTP Server



Current picture (click ◀ or ▶ to view additional pictures)

Copy current picture to computer

Thumbnails (click to select)

■ ■ *Full-Frame View*

View pictures full frame.



Current picture (click ◀ or ▶ to view additional pictures)

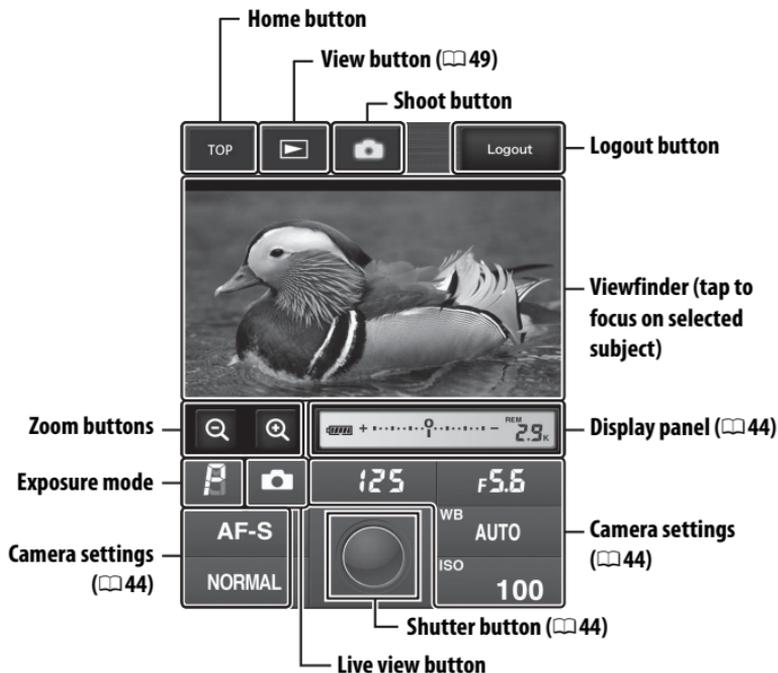
Copy current picture to computer

iPhone Web Browsers

This section describes the http server displays for iPhone web browsers (note that the display varies with the model of camera). Tap to adjust camera settings. For information on computer displays, see page 43.

The Shooting Window

The following controls can be accessed by selecting **Shooting/Viewer** on the server home page. Use the live view button to start live view photography (📷) or movie live view (🎥). The view through the camera lens will be displayed in the viewfinder area. To exit live view, use the live view button to turn live view off.



The Live View Button

Tap to choose from live view off, photo live view, and movie live view.



Movie Live View

The information at right appears in the camera settings area ( 44) in movie live view.

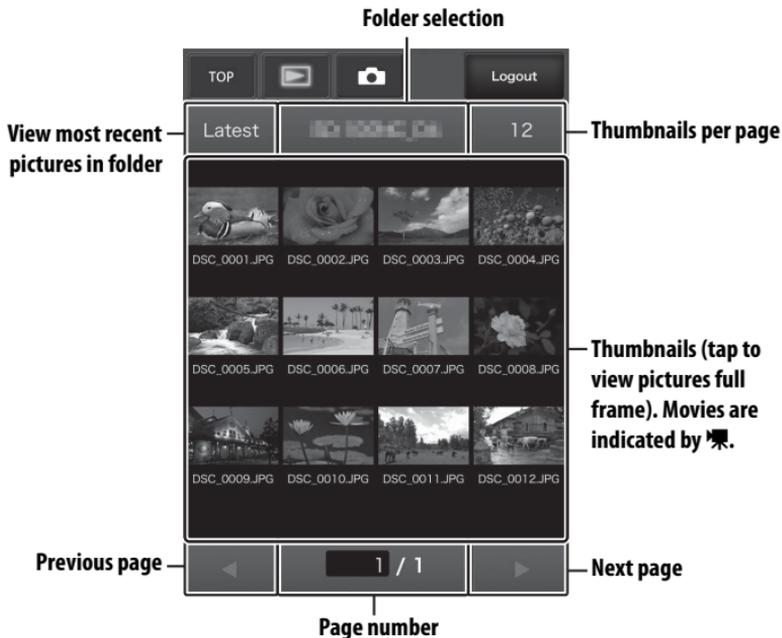


The Viewer Window

The viewer window can be accessed by selecting **Viewer** on the server home page or tapping the view button in the shooting window. The viewer window for iPhone web browsers offers a choice of thumbnail and full-frame views (☞50).

Thumbnail View

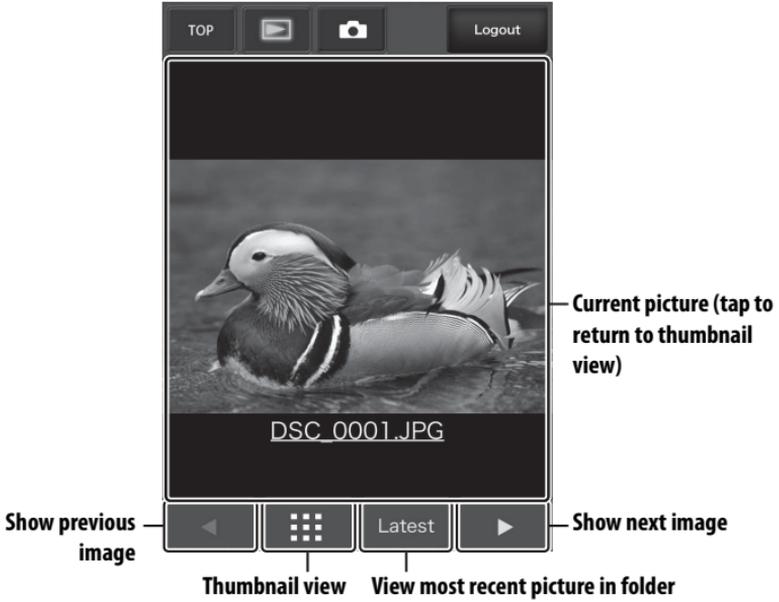
View multiple small (“thumbnail”) images per page. The controls at the top and bottom of the thumbnail area can be used for navigation.



■ Full-Frame View

View pictures full frame.

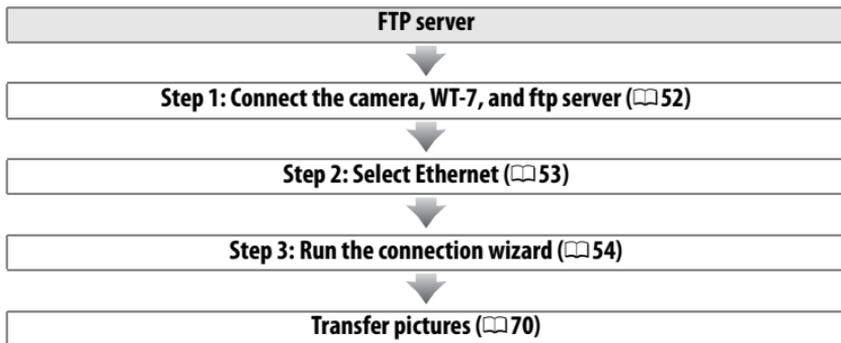
HTTP Server



FTP

Ethernet Connections

Follow the steps below to connect to an ftp server via an Ethernet network. For information on wireless connections, see page 57.



✔ Choosing a Power Source

To prevent the camera or WT-7 powering off unexpectedly during setup or data transfer, use fully-charged batteries or optional AC adapters designated for use with the camera or WT-7. For more on camera power sources, see the camera manual.

🔗 FTP Servers

Servers can be configured using standard ftp services, such as IIS (Internet Information Services), available with supported operating systems (📖 90). Connection to computers on other networks via a router, Internet ftp connections and ftp servers running third-party software are not supported.

Step 1: Connecting the Hardware

After starting the ftp server, connect the camera as described below.

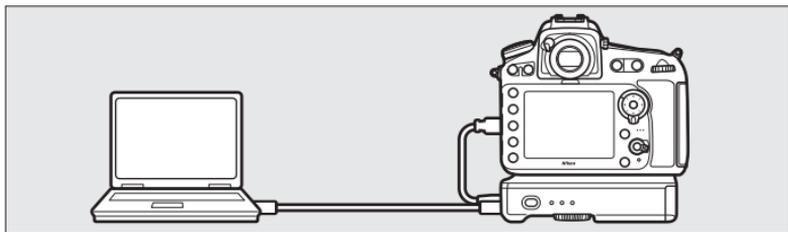
1 Insert a memory card.

Turn the camera off and insert a memory card (do not turn the camera off or disconnect the Ethernet cable while data are being transferred to the computer).

2 Attach the WT-7 (📖 4).

3 Connect an Ethernet cable.

Connect the camera to the ftp server as shown below. Do not use force or insert the connectors at an angle.

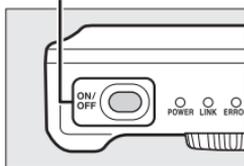


4 Turn the camera on.

Rotate the power switch to turn the camera on.

5 Press the power switch for about a second to turn the WT-7 on.

Power switch

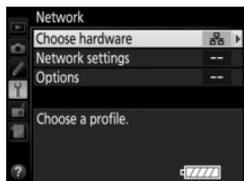


Step 2: Configuring the Hardware for Ethernet Connections

Configure the WT-7 for use with Ethernet networks.

1 Select **Choose hardware**.

In the setup menu, select **Network**, then highlight **Choose hardware** and press **↵**. The menu offers a choice of **Wired LAN** and **Wireless LAN**.



2 Select **Wired LAN**.

Highlight **Wired LAN** and press **ⓧ** to select the highlighted option and return to the network menu.

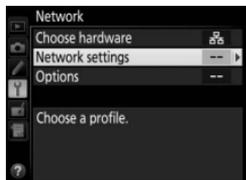


Step 3: The Connection Wizard

Follow the on-screen instructions to create a network profile.

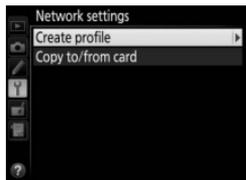
1 Display network profiles.

In the network menu, highlight **Network settings** and press **▶** to display the profiles list and other network settings.



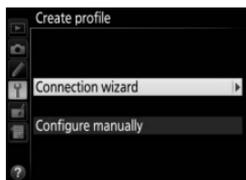
2 Select Create profile.

Highlight **Create profile** and press **▶**. Note that if the list already contains nine profiles, you will need to delete an existing profile using the **FORMAT** button before proceeding (**77**).



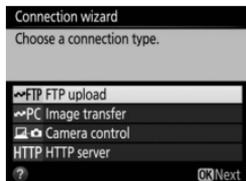
3 Start the connection wizard.

Highlight **Connection wizard** and press **▶** to start the connection wizard.



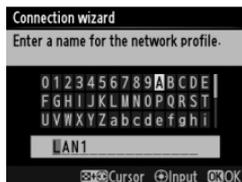
4 Choose a connection type.

Highlight **FTP upload** and press **OK**.



5 Name the new network profile.

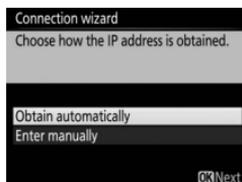
Enter the name that will appear in the profile list and press **OK** (to use the default name, press **OK** without making any changes). Profile names can be up to 16 characters long.



6 Obtain or select an IP address.

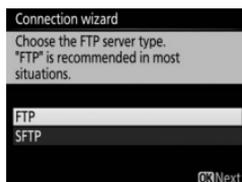
Highlight one of the following options and press **OK**.

- **Obtain automatically:** Select this option if the network is configured to supply the IP address automatically.
- **Enter manually:** When prompted, enter an IP address and subnet mask by pressing **Left** and **Right** to highlight segments and **Up** and **Down** to change. Press **OK** to proceed when entry is complete.



7 Choose the server type.

Highlight **FTP** or **SFTP** (secure ftp) and press **OK**.



8 Enter the IP address.

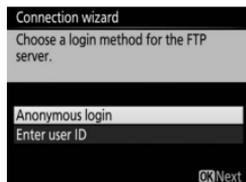
Enter the server URL or IP address and press **OK** to connect.



9 Log in.

Highlight one of the following options and press **OK**.

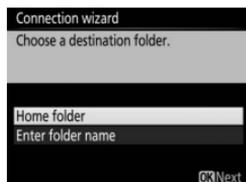
- **Anonymous login:** Select this option if the server does not require a user ID or password.
- **Enter user ID:** Enter a user ID and password when prompted and press **OK**.



10 Choose a destination folder.

Highlight one of the following options and press **OK**.

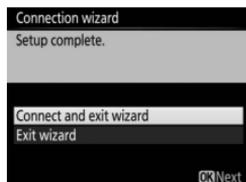
- **Home folder:** Select this option to upload pictures to the server's home folder.
- **Enter folder name:** Select this option to upload pictures to another folder (the folder must already exist on the server). Enter a folder name and path when prompted and press **OK**.



11 Exit the wizard.

Highlight one of the following options and press **OK**.

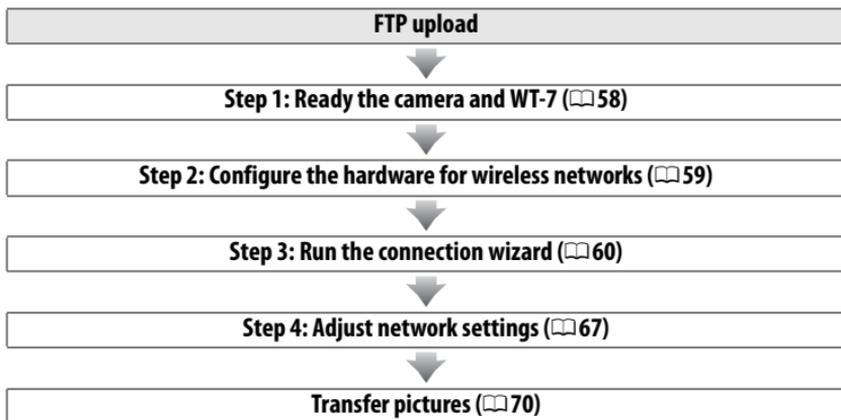
- **Connect and exit wizard:** Save the new network profile and connect to the server.
- **Exit wizard:** Save the new network profile and exit.



Proceed to “FTP Upload” (□□70).

Wireless Connections

Follow the steps below to connect to a wireless network.



Wireless LANs

These instructions assume that the computer and wireless LAN access point are already connected to the network.

Step 1: Connecting the Equipment

After starting the computer and logging in, ready the camera and WT-7 as described below.

1 Insert a memory card.

Turn the camera off and insert a memory card (do not turn the camera off while data are being transferred to the computer).

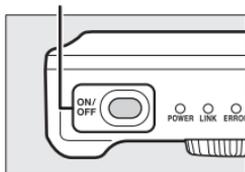
2 Attach the WT-7 (📖4).

3 Turn the camera on.

Rotate the power switch to turn the camera on.

4 Press the power switch for about a second to turn on the WT-7.

Power switch

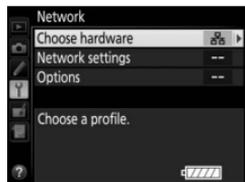


Step 2: Enable Camera Wireless

Ready the camera for connection to a wireless network.

1 Select **Choose hardware**.

In the setup menu, select **Network**, then highlight **Choose hardware** and press **▶**. The menu offers a choice of **Wired LAN** and **Wireless LAN**.



2 Select **Wireless LAN**.

Highlight **Wireless LAN** and press **OK** to select the highlighted option and return to the network menu.

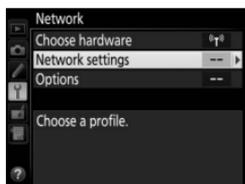


Step 3: The Connection Wizard

Follow the on-screen instructions to create a network profile.

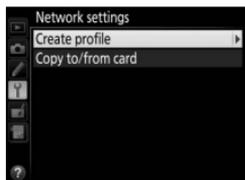
1 Display network profiles.

In the network menu, highlight **Network settings** and press \rightarrow to display the profiles list and other network settings.



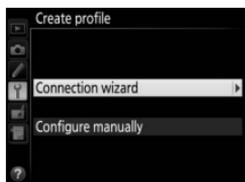
2 Select Create profile.

Highlight **Create profile** and press \rightarrow . Note that if the list already contains nine profiles, you will need to delete an existing profile using the trash (FORMAT) button before proceeding.



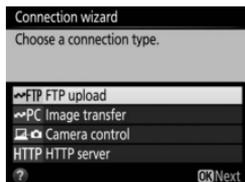
3 Start the connection wizard.

Highlight **Connection wizard** and press \rightarrow to start the connection wizard.



4 Choose FTP upload (7).

Highlight **FTP upload** and press OK .



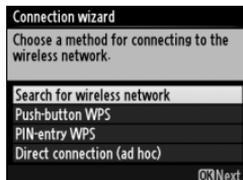
5 Name the new network profile.

Enter the name that will appear in the profile list and press **OK** (to use the default name, press **OK** without making any changes). Profile names can be up to 16 characters long.



6 Choose a connection method.

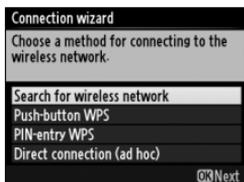
Highlight the connection method used by the network and press **OK**. More information can be found on the pages listed below.



Search for wireless network	Choose from a list of networks detected by the camera. Proceed to page 62.
Push-button WPS	Choose for wireless LAN access points with push-button WPS. Proceed to page 64.
PIN-entry WPS	Choose for wireless LAN access points with PIN-entry WPS. Proceed to page 65.
Direct connection (ad hoc)	Connect directly to a host computer or ftp server in ad hoc mode (supported in Windows 7 only). Proceed to page 66.

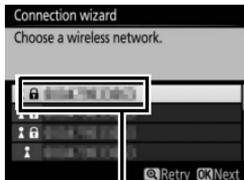
■ Search for Wireless Network

Select **Search for wireless network** in Step 6 on page 61 to choose from a list of the networks (wireless LAN access points) detected by the camera.



1 Choose a network.

Highlight a network SSID and press **OK** (if the desired network is not displayed, press **Search** to search again). If the selected network is encrypted (🔒), you will be prompted to enter the encryption key as described in Step 2. If the network is not encrypted, proceed to Step 3.



SSID

The network type is indicated by the icons to the left of the ID:

	Signal encrypted
	Infrastructure/ad hoc

Hidden SSIDs

Networks with hidden SSIDs are indicated by blank entries in the network list. If you select a network with a hidden SSID, you will be prompted to provide the network name; enter a name and press **OK** to proceed to Step 2.



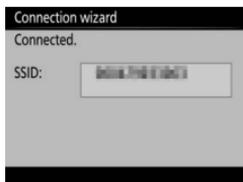
2 Enter the encryption key.

Enter the encryption key and press **OK** (if the network uses open authentication, this dialog will not be displayed; proceed to Step 3).



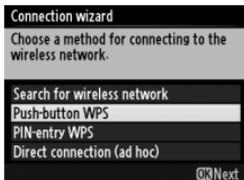
3 Choose your next step.

The message at right is displayed when a connection is established. Proceed to page 67.



■ ■ Push-Button WPS

Choose **Push-button WPS** in Step 6 on page 61 if the wireless LAN access point uses push-button WPS.



1 Press the WPS button on the wireless LAN access point.

For more information, see the documentation provided with the wireless LAN access point.

2 Press **OK** button on the camera.

The camera will connect to the access point automatically.



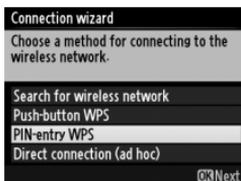
3 Choose your next step.

The message at right is displayed when a connection is established. Proceed to page 67.



■ ■ PIN-Entry WPS

Choose **PIN-entry WPS** in Step 6 on page 61 if the wireless LAN access point uses PIN-entry WPS.



1 Enter the PIN for the wireless LAN access point.

From a computer, enter the PIN for the wireless LAN access point. For more information, see the documentation provided with the wireless LAN access point.

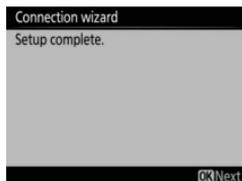
2 Press **OK** button on the camera.

The camera will connect to the access point automatically.



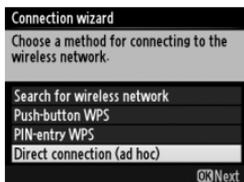
3 Choose your next step.

The message at right is displayed when a connection is established. Proceed to page 67.



■ Direct Connection (Ad Hoc)

To connect directly to an ftp server or computer in ad hoc mode, select **Direct connection (ad hoc)** in Step 6 on page 61.



1 Enter the SSID.

Enter a network name (SSID) and press **OK**. The default name is “WT” followed by the MAC address of the WT-7.



2 Enter the encryption key.

Enter an encryption key and press **OK** (the default key is “nikon”). Proceed to page 67.



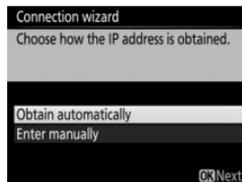
Step 4: Network Settings

Follow the steps below to connect to the ftp server.

1 Obtain or select an IP address.

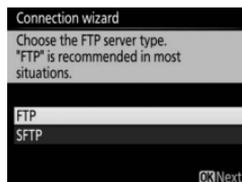
Highlight one of the following options and press **OK**.

- **Obtain automatically:** Select this option if the network is configured to supply the IP address automatically. The camera will display the IP address provided by the network; press **OK** to proceed.
- **Enter manually:** When prompted, enter an IP address and subnet mask by pressing **←** and **→** to highlight segments and **↑** and **↓** to change. Press **OK** when entry is complete. The camera will display the selected IP address; press **OK** to proceed.



2 Choose the server type.

Highlight **FTP** or **SFTP** (secure ftp) and press **OK**.



3 Enter the IP address.

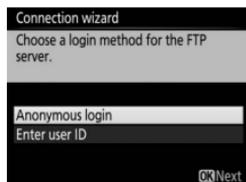
Enter the server URL or IP address and press **OK** to connect.



4 Log in.

Highlight one of the following options and press **OK**.

- **Anonymous login:** Select this option if the server does not require a user ID or password.
- **Enter user ID:** Enter a user ID and password when prompted and press **OK**.



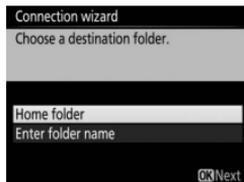
MAC Address Filtering

If the network uses MAC address filtering, the filter must be supplied with the MAC address of the WT-7. After attaching the WT-7 to the camera, choose **Network > Options > MAC address** from the camera setup menu and note the MAC address.

5 Choose a destination folder.

Highlight one of the following options and press **OK**.

- **Home folder:** Select this option to upload pictures to the server's home folder.
- **Enter folder name:** Select this option to upload pictures to another of the folders existing on the server. Enter a folder name and path when prompted and press **OK**.



6 Exit the wizard.

Highlight one of the following options and press **OK**.

- **Connect and exit wizard:** Save the new network profile and connect to the server.
- **Exit wizard:** Save the new network profile and exit.



Proceed to "FTP Upload" (□70).

FTP Upload

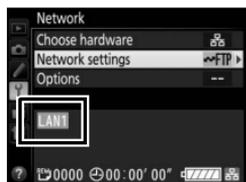
Photos and movies can be uploaded from camera memory cards to an ftp server as described below, or photos can be uploaded as they are taken. For information on setting up an ftp server, see page 90.

FTP Upload

1 Display network profiles.

In the setup menu, select **Network** > **Network settings** to display the profiles list. FTP server profiles are indicated by a  icon. Highlight a profile and press  to select the highlighted profile and return to the network menu.

The profile name will be displayed in green when a connection is established.



2 View pictures.

Press the  button to view pictures.
Display the first picture to be sent full frame or highlight it in the thumbnail list.



3 Upload pictures.

Press . A white transfer icon will appear on the picture and upload will begin immediately. The transfer icon turns green during upload, and turns blue when upload is complete. Additional pictures will be uploaded in the order selected.

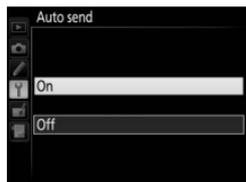


To upload a picture that has already been uploaded once, press  once to remove the blue transfer icon, and then press  again to mark the image with a white transfer icon.



Uploading New Photographs as They Are Taken

To upload new photographs as they are taken, select **On** for **Network** > **Options** > **Auto send** in the setup menu (☐81).



Interrupting Transmission/Removing Transfer Marking

To cancel transmission of images marked with white or green transfer icons, select the images during playback and press ⓧ. The transfer icon will be removed. Any of the following actions will also interrupt transmission:

- Turning the camera off
- Selecting **Yes** for **Network** > **Options** > **Deselect all?** (☐83; this option also removes transfer marking from all images)

✓ During Upload

Do not remove the memory card or disconnect the Ethernet cable during upload.

✎ Interval Timer Photography

Upload will be interrupted if the standby timer expires while interval timer photography is in progress. Choose a long standby time before starting the interval timer.

✎ Loss of Signal

Wireless transmission may be interrupted if the signal is lost, but can be resumed by turning the camera off and then on again.

✎ Turning the Camera Off

“Send” marking will be saved if the camera or WT-7 is turned off while transmission is in progress. Transmission of images marked with a “send” icon will resume when the camera or WT-7 is turned on.

Transfer Status

During playback, the status of images selected for upload is shown as follows:

: "Send"

Images that have been selected for upload are marked with a white  icon.

: "Sending"

A green  icon is displayed during upload.

: "Sent"

Images that have been uploaded successfully are marked with a blue  icon.

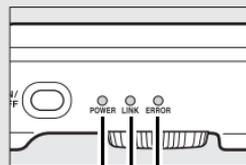


Network Status

The status of the link between the host and the WT-7 is shown by the status LEDs and by the display in the top level of the network menu.

The Status LEDs

The **POWER** LED lights when the WT-7 is on. Signal quality is shown by the **LINK** LED: the faster the LED flashes, the better the signal and the faster data can be transmitted. The **ERROR** LED flashes to show that an error has occurred.

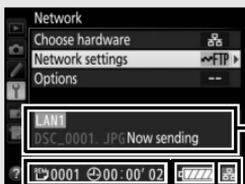


Status	POWER	LINK	ERROR
WT-7 off	● (off)	● (off)	● (off)
USB cable not connected	○ (on)	● (off)	● (off)
Connecting to host	○ (on)	○ (on)	● (off)
Waiting to send or sending data	○ (on)	✳ (flashes)	● (off)
Connection error	○ (on)	● (off)	✳ (flashes)
WT-7 hardware or battery malfunction	✳ (flashes)	✳ (flashes)	✳ (flashes)

The Status Display

Network status can also be viewed in the top level of the network menu.

FTP Upload



 : The estimated time required to send the remaining images.

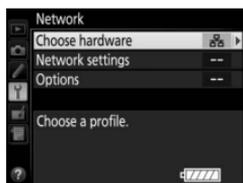
Battery level: The charge state of the battery in the WT-7.

Status area: The status of the connection to the host. The host name is displayed in green when a connection is established. While files are being transferred, the status display shows "Now sending" preceded by the name of the file being sent. Any errors that occur during transfer are also displayed here ( 100).

Signal strength: Wireless signal strength. Ethernet connections are shown by .

Menu Guide

This section describes the settings available for the **Network** option in the camera setup menu when the WT-7 is connected.



Choose Hardware

Choose the hardware used to connect to the network: Ethernet (**Wired LAN**) or wireless LAN (**Wireless LAN**).



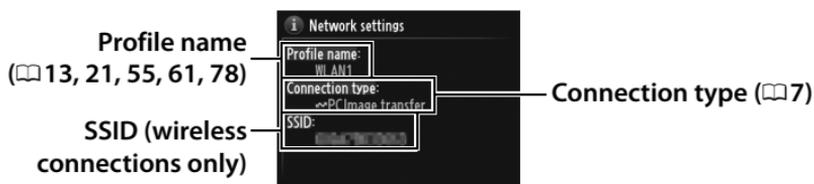
Network Settings

Highlight **Network settings** and press to display the network profiles list, where you can create new profiles or select an existing profile.

Network Settings

The Profile List

The camera can store up to nine network profiles. Highlight a profile and press to connect to the highlighted host computer or ftp server, or press (FORMAT) to delete the highlighted profile (□77). To view information on the highlighted profile, press (□78/?).



To edit the highlighted profile, press (□78).

Create Profile

Choose **Connection wizard** to create network profiles with the help of a wizard (□12, 20, 54, 60), **Configure manually** to enter ftp and http server settings manually (□98).

Copy to/from Card

This option is available only with ftp and http server connections. Select **Copy profile from card** to copy profiles from the memory card to the profile list. Selecting **Copy profile to card** displays the camera profile list; highlight a profile and press **OK** to copy the profile (excluding the encryption key and ftp password) to the card (password-protected profiles can not be copied; 78). If there are two memory cards inserted in the camera, the card in the primary slot will be used for both “copy from” and “copy to” operations.

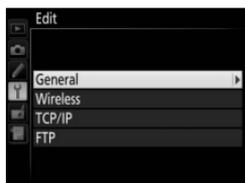
Deleting Network Profiles

Press **Format** (FORMAT) to delete the profile currently highlighted in the profile list. A confirmation dialog will be displayed; highlight **Yes** and press **OK**.



Editing Network Profiles

To edit network profiles, highlight the profile in the profile list, press **Q**, and choose from the following options:



Network Settings

General	Edit the profile name and password.
Wireless	Edit wireless settings (wireless connections only; 79).
TCP/IP	Edit TCP/IP settings (80).
FTP	Edit ftp settings (80).

General

Choose **Profile name** to edit the profile name, **Password protection** to enter a profile password and enable or disable password protection. Enabling password protection prevents others from viewing network settings.



Editing Profiles

If the shutter-release button is pressed while menus are displayed, the monitor will turn off and any changes to the current profile will be lost.

■ Wireless

Edit the following wireless settings:

- **SSID (required):** Enter the name (SSID) of the network on which the host computer or ftp server is located.
- **Communication mode:** Select **Infrastructure** for wireless communication via a wireless network access point, **Ad hoc** if the camera is connected to the ftp server or computer directly.
- **Channel:** Select a channel (ad hoc only; in infrastructure mode, the channel will be selected automatically).
- **Authentication:** The authentication used on the network. Choose from open system, shared key, WPA-PSK, and WPA2-PSK (infrastructure) or open system and shared key (ad hoc).
- **Encryption:** The encryption used on the network. The options available depend on the authentication used:
 - Open:** None; 64- or 128-bit WEP
 - Shared:** 64- or 128-bit WEP
 - WPA-PSK:** TKIP; AES
 - WPA2-PSK:** AES
- **Encryption key:** If the network uses encryption, enter the network key. The number of characters required depends on the type of key used:

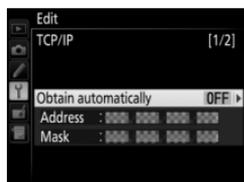
	WEP (64-bit)	WEP (128-bit)	TKIP, AES
Number of characters (ASCII)	5	13	8–63
Number of characters (hex)	10	26	64

- **Key index:** If WEP64 or WEP128 is selected for **Encryption** in infrastructure mode, choose a key index matching that used by the access point or host computer. A key index is not required when **No encryption** is selected.



■ ■ TCP/IP

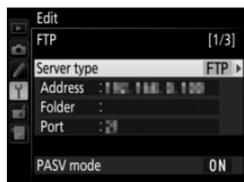
If the network is configured to supply IP addresses automatically, select **Enable** for **Obtain automatically**. Otherwise select **Disable** and enter the following information:



- **Address/Mask:** Enter an IP address and subnet mask.
- **Gateway:** If the network requires a gateway address, select **Enable** and enter the address supplied by the network administrator.
- **Domain Name Server (DNS):** If a Domain Name Server exists on the network, select **Enable** and enter the address supplied by the network administrator.

■ ■ FTP

Edit the following ftp settings:



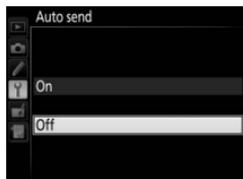
- **Server type:** Choose ftp or sftp and enter the URL or IP address (required), destination folder, and port number.
- **PASV mode:** Select **Enable** to enable PASV mode.
- **Anonymous login:** Select **Enable** for anonymous login, or select **Disable** to supply a **User ID** and **Password**.
- **Proxy server:** If a proxy server is required for ftp, select **Enable** and enter the address and port number for the proxy server.

Options

Edit the following settings.

Auto Send

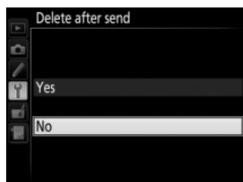
If **On** is selected for image transfer or ftp server connections, photos will automatically be uploaded to the computer or ftp server as they are taken (note, however, that photos can only be taken when a memory card is inserted in the camera). Movies can not be uploaded using this option; transfer movies during playback as described on pages 30 and 70.



Options

Delete After Send

Select **Yes** to delete photographs from the camera memory card automatically once upload is complete (image transfer and ftp server connections only; files marked for transfer before this option is selected are unaffected). Regardless of the option selected for file number sequence in the camera Custom Settings menu, sequential number is used while this option is in effect, even if the folder changes or the memory card is replaced. Deletion may be suspended during some camera operations.



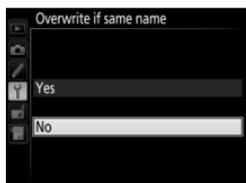
Send File As

When transferring NEF+JPEG images to a computer or ftp server (image transfer and ftp server connections only), choose whether to upload both the NEF (RAW) and JPEG files or only the JPEG copy.



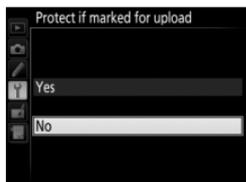
Overwrite If Same Name

Choose **Yes** to overwrite files with duplicate names during upload to an ftp server, **No** to add numbers to the names of newly uploaded files as necessary to prevent existing files being overwritten.



Protect If Marked for Upload

Select **Yes** to automatically protect files marked for upload to an ftp server. Protection is removed as the files are uploaded.



Send Folder

Select a folder for upload (image transfer and ftp server connections only). All photos in the selected folder (including those already marked as "sent") will be uploaded, beginning immediately. Movies can not be uploaded using this option; transfer movies during playback as described on pages 30 and 70.



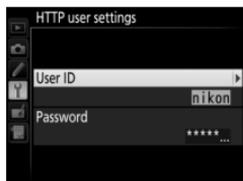
Deselect All?

Select **Yes** to remove transfer marking from all images selected for upload to a computer or ftp server (image transfer and ftp server connections only). Upload of images with a “sending” icon will immediately be terminated.



HTTP User Settings

Enter a user name and password for connection to an http server (http server connections only).



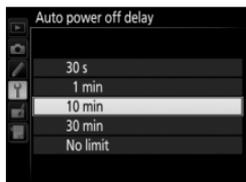
Battery Info

Display information for the battery inserted in the WT-7. The five-level **Battery age** display shows the battery age: 0 indicates that battery performance is unimpaired, 4 that the battery has reached the end of its charging life and requires replacement.



Auto Power off Delay

Choose how long the WT-7 remains on once the camera has turned off or the USB connection to the camera is terminated.



MAC Address

Display the MAC address of the hardware selected for **Choose hardware** (□75).



Firmware Version

View the current WT-7 firmware version.



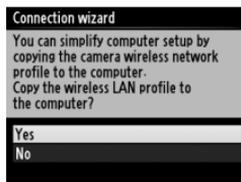
Appendices

Copying Profiles

Camera network profiles can be copied to a computer, which will then automatically be configured for wireless connection (note that Windows 7 is required if you wish to use this option in ad-hoc mode).

1 Enable copying.

When the connection wizard prompts you to choose whether to copy the profile to a computer (□27), highlight **Yes** and press **OK**.



2 Connect the camera to the computer.

When prompted, connect the camera to the computer using the USB cable supplied with the camera.



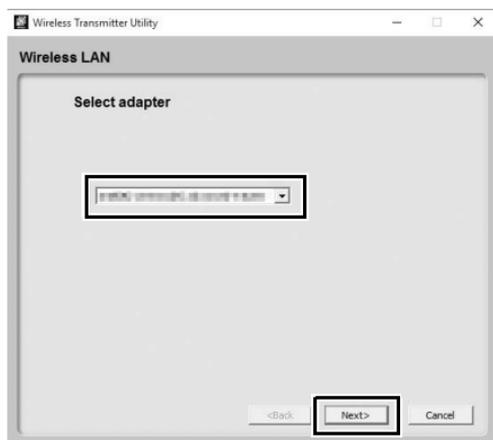
3 Start the Wireless Transmitter Utility.

When prompted, start the copy of the Wireless Transmitter Utility installed on the computer (□5).



4 Choose an adapter.

Choose an adapter from the pull-down menu and click **Next**. If **Image transfer** or **Camera control** is selected, the Wireless Transmitter Utility will automatically pair the camera and computer.



5 Disconnect the camera.

The camera will display the message shown at right when the process is complete. After disconnecting the USB cable from the computer and connecting it to the WT-7, exit the Wireless Transmitter Utility.

The camera will display the options shown at right; choose an option to exit the wizard.

Connection wizard

Setup complete. Disconnect the USB cable from the computer and connect it to the UT-1/WT-7.

Connection wizard

Setup complete.

Connect and exit wizard

Exit wizard

Next

Ad Hoc Mode

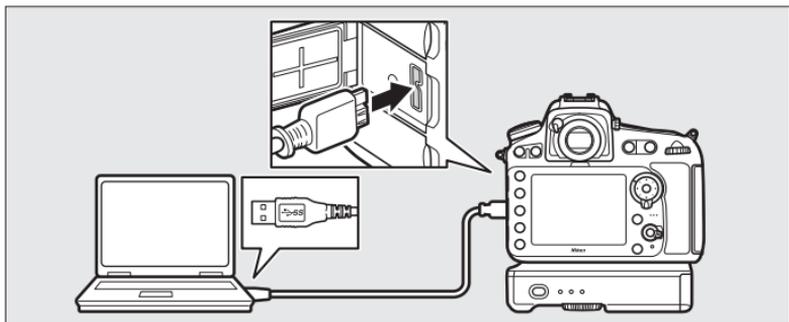
The camera will not automatically connect in ad hoc mode. Choose the network profile on the computer before connecting.

Creating Profiles on a Computer

The Wireless Transmitter Utility (☞5) can be used to create network profiles.

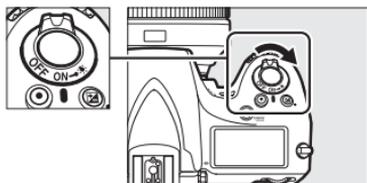
1 Connect the camera.

Start the computer and connect the camera using the USB cable supplied with the camera.



2 Turn the camera on.

Rotate the power switch to turn the camera on.



3 Start the Wireless Transmitter Utility.

Double-click the Wireless Transmitter Utility icon on the desktop (Windows) or click the Wireless Transmitter Utility icon in the Dock (Mac).

4 Create a profile.

Follow the on-screen instructions to create a network profile.

Creating an FTP Server

Images can be uploaded to ftp servers created using the standard ftp services included with Windows 10 (Enterprise/Pro/Home), Windows 8.1, Windows 8.1 (Enterprise/Pro), and Windows 7 (Professional/Enterprise/Ultimate). Under Windows, Internet Information Services (IIS) are required to configure ftp servers (installation instructions are available from Microsoft).

The following settings are used below for illustrative purposes:



ftp server

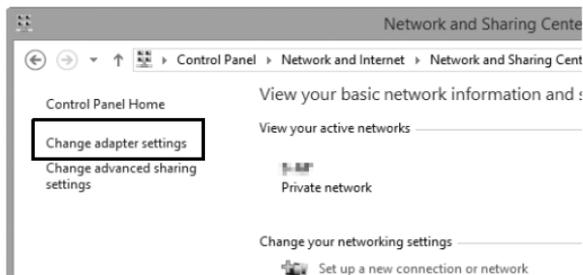
IP address: 192.168.1.3
Subnet mask: 255.255.255.0
ftp server port: 21

1 Go to Network and Sharing Center.

Click **Control Panel > Network and Internet > Network and Sharing Center**.

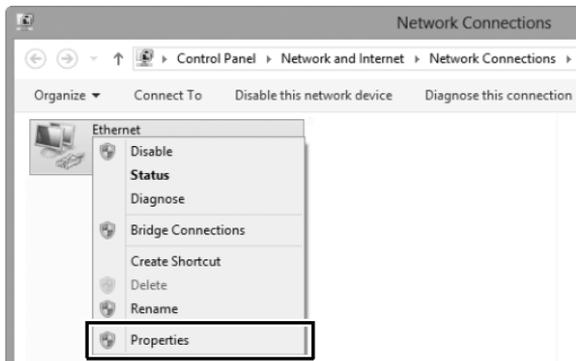
2 Display the network adapter list.

Click **Change adapter settings**.



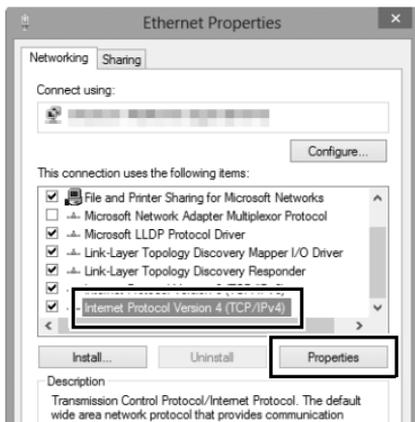
3 Open the network properties dialog.

If you are connecting via a wireless LAN adapter, right-click **Wi-Fi** (Windows 8.1) or **Wireless Network Connection** (Windows 7) and select **Properties**. If you are connecting via Ethernet, right-click **Ethernet** (Windows 8.1) or **Local Area Connection** (Windows 7) and select **Properties**.



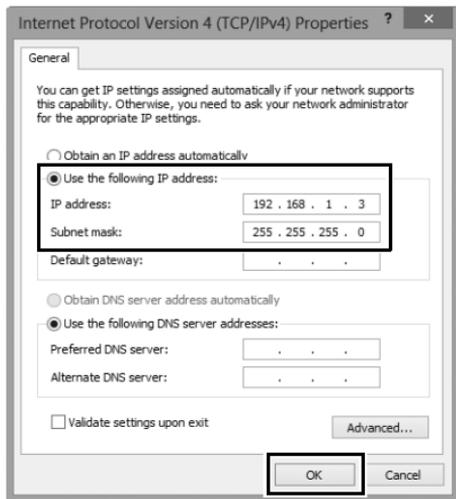
4 Display TCP/IP settings.

Select **Internet Protocol Version 4 (TCP/IPv4)** and click **Properties**.

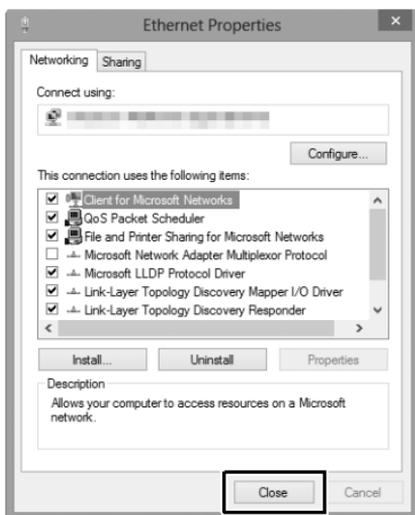


5 Enter an IP address and subnet mask.

Enter an IP address and subnet mask for the ftp server and click **OK**.



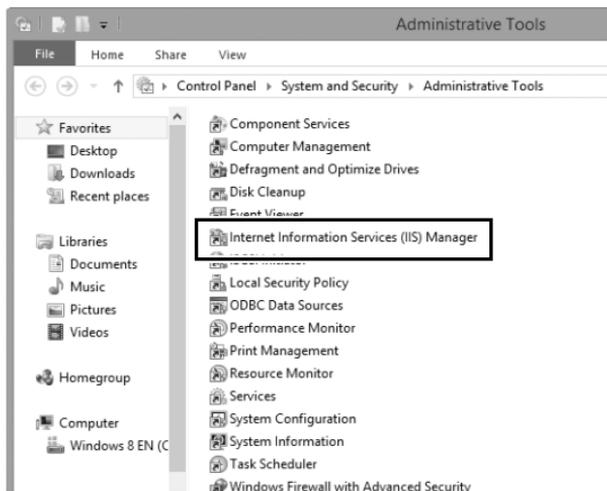
-
- 6** Close the network properties dialog.
Click **Close**.



-
- 7** Open Administrative Tools.
Click **Control Panel > System and Security > Administrative Tools**.

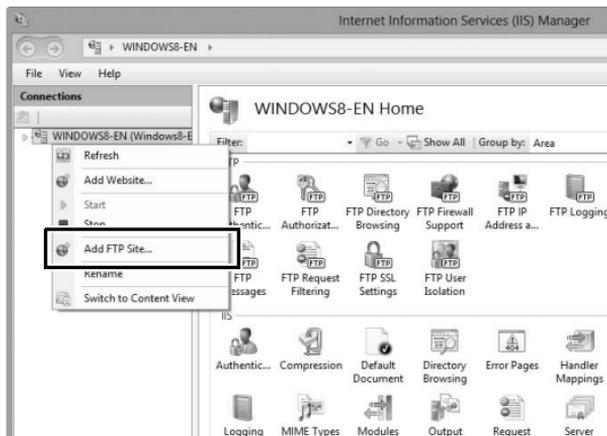
8 Open the IIS manager.

Double-click **Internet Information Services (IIS) Manager**.



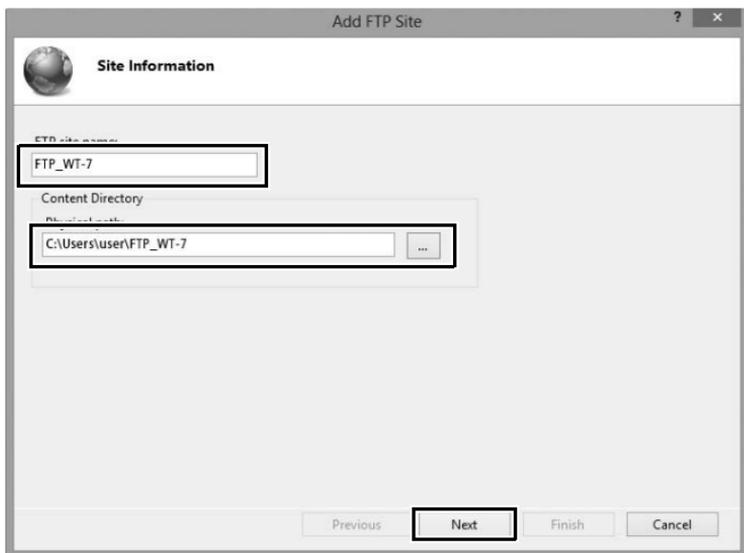
9 Select Add FTP Site...

Right-click the computer user name and select **Add FTP Site...**



10 Enter site information.

Name the site and choose the path to the folder that will be used for ftp upload. Click **Next** to proceed.



The screenshot shows a window titled "Add FTP Site" with a "Site Information" tab. The "FTP Site Name" field contains "FTP_WT-7". The "Content Directory" field contains "C:\Users\user\FTP_WT-7". The "Next" button is highlighted with a black box. The "Previous", "Finish", and "Cancel" buttons are also visible.

Anonymous Login

To allow anonymous login, select a folder in the user's public folder as the content directory.

11 Choose binding and SSL options.

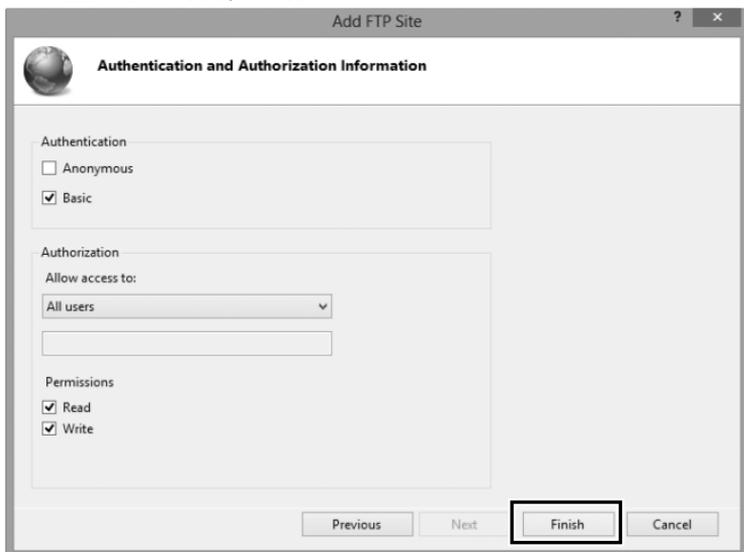
Select the IP address entered in Step 5, note the port number, select **Start FTP site automatically**, and check **No SSL**. Click **Next** to proceed.

The screenshot shows the 'Add FTP Site' dialog box with the 'Binding and SSL Settings' tab selected. The 'Binding' section includes a dropdown for 'IP Address' (192.168.1.3) and a text box for 'Port' (21). There is an unchecked checkbox for 'Enable Virtual Host Names' and a text box for 'Virtual Host (example: ftp.contoso.com)'. The 'Start FTP site automatically' checkbox is checked. Under the 'SSL' section, the 'No SSL' radio button is selected, while 'Allow SSL' and 'Require SSL' are unselected. The 'SSL Certificate' dropdown is set to 'Not Selected', with 'Select...' and 'View...' buttons to its right. At the bottom, there are four buttons: 'Previous', 'Next' (highlighted with a black box), 'Finish', and 'Cancel'.

12 Choose authentication options.

Adjust settings as described below and click **Finish**.

- **Authentication:** Basic
- **Allow access to:** All users
- **Permissions:** Read/Write



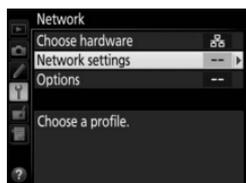
The screenshot shows a Windows-style dialog box titled "Add FTP Site" with a subtitle "Authentication and Authorization Information". The dialog is divided into three sections: Authentication, Authorization, and Permissions. In the Authentication section, the "Basic" checkbox is checked, while "Anonymous" is unchecked. In the Authorization section, the "Allow access to:" dropdown menu is set to "All users". In the Permissions section, both "Read" and "Write" checkboxes are checked. At the bottom of the dialog, there are four buttons: "Previous", "Next", "Finish", and "Cancel". The "Finish" button is highlighted with a black rectangular border.

Manual Profile Creation

Follow the steps below to manually configure the camera for connection to ftp and http servers. Note that changes to the current profile will be lost if the camera is turned off during setup; to prevent unexpected loss of power, use fully-charged batteries or optional AC adapters designated for use with the camera and WT-7. If you are connecting to an ftp server behind a firewall, you may also need to adjust firewall settings to create exceptions for the ftp ports used by the camera (ports 21, 22, and 32768 through 61000).

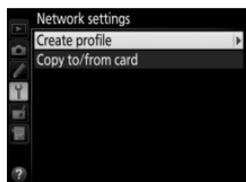
1 Display network profiles.

In the network menu, highlight **Network settings** and press  to display the profiles list and other network settings.



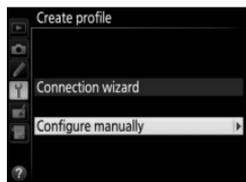
2 Select Create profile.

Highlight **Create profile** and press . Note that if the list already contains nine profiles, you will need to delete an existing profile using the  () button before proceeding (77).



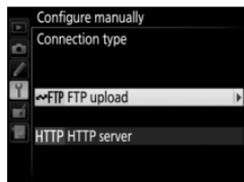
3 Select Configure manually.

Highlight **Configure manually** and press .



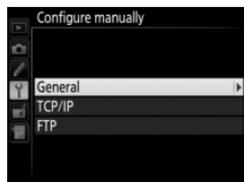
4 Select a connection type.

Highlight **FTP upload** or **HTTP server** and press .



5 Adjust settings.

Adjust settings as described in "Editing Network Profiles" (📖 78).



Editing Profiles

If the shutter-release button is pressed while menus are displayed, the monitor will turn off and any changes to the current profile will be lost. Choose a longer monitor off delay for Custom Setting in the camera menus.

Troubleshooting

Troubleshooting

Problem	Solution	Page
"POWER" LED does not light.	<ul style="list-style-type: none">• Turn the WT-7 on.• Confirm that the battery is inserted and fully charged.	10, 18, 52, 58 3, 83
Excessive radio interference.	Adjust the position of the wireless access point or host computer.	—
All LEDs flash at once.	WT-7 hardware or battery malfunction. Contact a Nikon-authorized service representative.	—
Camera displays TCP/IP or FTP error.	<ul style="list-style-type: none">• Check settings for host and/or wireless LAN adapter and adjust camera settings appropriately.• Check firewall settings.• Confirm that you can write to the destination folder on the ftp server.• Highlight the network profile created with the camera and press the  button, then select FTP and choose a different option for PASV mode.	9, 17, 51, 57, 78 8 — 80

Problem	Solution	Page
Camera displays wireless error.	<ul style="list-style-type: none"> • Confirm that host and wireless LAN adapter are on. • Ensure that there are no obstacles between WT-7 and wireless LAN adapter. • Check settings for host and/or wireless LAN adapter and adjust camera settings appropriately. 	— — 17, 57, 78
Camera displays “Ethernet cable is not connected”.	Connect Ethernet cable or select Wireless LAN for Choose hardware.	10, 52, 75
Memory card error displayed.	Confirm that memory card is properly inserted.	—
Transfer interrupted before all photographs are sent.	Transfer will resume if WT-7 is turned off and then on again.	10, 18, 52, 58
USB cable disconnected during transmission.	Reconnect the USB cable. Do not turn the camera off.	—
No connection is established when the camera URL is entered in a web browser (http server connections only).	Confirm that the browser is not using a proxy connection.	80

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