

Nikon

Wireless Transmitter

WT-6

User's Manual



- Read this manual thoroughly before using the camera.
- To ensure proper use of the camera, be sure to read "For Your Safety" (page v).
- After reading this manual, keep it in a readily accessible place for future reference.

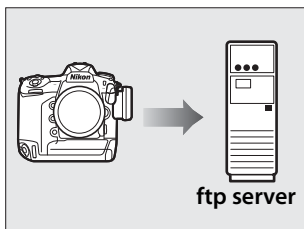
En

What the WT-6 Can Do for You

Starting from “Wireless Connections” (5), this manual describes how to use the WT-6 to connect the camera to a computer or ftp server over a wireless network. Once a connection has been established, you can:

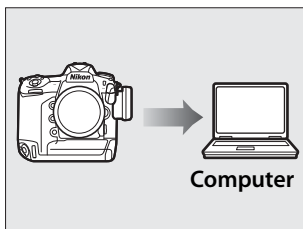
1 Upload existing photos and movies

FTP upload



See the Network Guide, 45

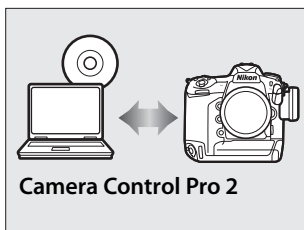
Image transfer



See the Network Guide, 14

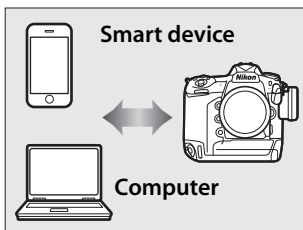
2 Take or browse photos remotely

Camera control



See the Network Guide, 18

HTTP server



See the Network Guide, 21

Model Name: WT-6 (N1503)

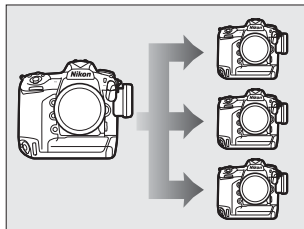
Model Name: WT-6B (N1527)

Model Name: WT-6A (N1526)

Model Name: WT-6C (N1528)

3 Control multiple cameras

Synchronized release



See the Network Guide, 49

Nikon User Support

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>.



Nikon Manual Viewer 2

Install the Nikon Manual Viewer 2 app on your smartphone or tablet to view Nikon digital camera manuals, anytime, anywhere. Nikon Manual Viewer 2 can be downloaded free of charge from the App Store and Google Play. Download of the app and any product manuals requires an Internet connection, for which fees may be levied by your phone or Internet service provider.

Trademark Information

Mac, OS X, and iPhone are registered trademarks of Apple Inc. in the United States and/or other countries. Windows is either registered trademarks, or trademarks of Microsoft Corporation in the United States and/or other countries. XQD is a trademark of Sony Corporation. CompactFlash is a trademark of SanDisk Corporation. All other trade names mentioned in this manual or the other documentation provided with this Nikon product are trademarks or registered trademarks of their respective holders.

Memory Cards

Throughout this manual, XQD and CompactFlash memory cards are referred to as “memory cards”.

Apple Public Source License

This product includes Apple mDNS source code that is subject to the terms of the Apple Public Source License located at URL ***<http://developer.apple.com/opensource/>***.

This file contains Original Code and/or Modifications of Original Code as defined in and that are subject to the Apple Public Source License Version 2.0 (the ‘License’). You may not use this file except in compliance with the License. Please obtain a copy of the License at ***<http://www.opensource.apple.com/license/apsl/>*** and read it before using this file.

The Original Code and all software distributed under the License are distributed on an ‘AS IS’ basis, WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, AND APPLE HEREBY DISCLAIMS ALL SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT OR NON-INFRINGEMENT. Please see the License for the specific language governing rights and limitations under the License.

For Your Safety

To prevent damage to your Nikon product or injury to yourself or to others, read the following safety precautions in their entirety before using this equipment. Keep these safety instructions where all those who use the product will read them.

The consequences that could result from failure to observe the precautions listed in this section are indicated by the following symbol:



This icon marks warnings, information that should be read before using this Nikon product to prevent possible injury.

■ ■ WARNINGS



Do not disassemble

Touching the product's internal parts could result in injury. In the event of malfunction, the product should be repaired only by a qualified technician. Should the product break open as the result of a fall or other accident, remove the battery and/or AC adapter and then take the product to a Nikon-authorized service center for inspection.



Cut power immediately in the event of malfunction

Should you notice smoke or an unusual smell coming from the equipment, immediately unplug the AC adapter and remove the battery, taking care to avoid burns. Continued operation could result in injury. After removing the battery, take the equipment to a Nikon-authorized service center for inspection.



Do not use in the presence of flammable gas

Do not use electronic equipment in the presence of flammable gas, as this could result in explosion or fire.



Keep dry

Do not immerse in or expose to water or rain. Failure to observe this precaution could result in injury or product malfunction due to fire or electric shock.



Do not handle with wet hands

Failure to observe this precaution could result in electric shock.



Keep out of reach of children

Failure to observe this precaution could result in injury. In addition, note that small parts constitute a choking hazard. Should a child swallow any part of this equipment, consult a physician immediately.

 **Do not remain in contact with the camera for extended periods while the device is on or in use**

Parts of the device become hot. Leaving the device in direct contact with the skin for extended periods may result in low-temperature burns.

 **Do not expose to high temperatures**

Do not leave the device in a closed vehicle under the sun or in other areas subject to extremely high temperatures. Failure to observe this precaution could result in fire or in damage to the casing or internal parts.

 **Follow the instructions of hospital and airline personnel**

■ ■ *Warning on use of wireless functions*

Any users with implantable cardiac pacemakers should make this product apart from the pacemakers by 30 cm or longer.

The pacemakers may be influenced by radio waves radiated from this product.

In places where people may be close to one another such as crowded trains, turn off the power of the WT-6 or disable the wireless LAN feature.

This is because WT-6 may be close to people using medical devices including cardiac pacemakers or hearing aids and have bad influences on the medical devices.

Turn off this product or turn off all wireless communication functions, such as wireless LAN, where medical institutions prohibit use of this product. Turn off this product or turn off all wireless communication functions, such as wireless LAN, if a medical device is used nearby, even if use of this product is permitted by a relevant medical institution.

Failure to follow this instruction may have some influences on medical equipment to cause accidents by malfunctions. For details, contact the medical institutions where this product may be used.

Turn off this product or turn off the wireless communication functions, such as wireless LAN, when use of wireless or electronic devices in aircraft is prohibited.

This product may have bad influences on electronic devices to cause accidents. For details, contact airline companies operating aircraft where this product may be used.

If this product induces radio disturbance to other devices during use of some wireless feature, disable the wireless feature or stop using this product.

Failure to follow this instruction may have some influences on other devices to cause accidents by malfunctions.

Notices

- No part of the manuals included with this product may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form, by any means, without Nikon's prior written permission.
- Nikon reserves the right to change the appearance and specifications of the hardware and software described in these manuals at any time and without prior notice.
- 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 these manuals 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).

This product is controlled by the United States Export Administration Regulations (EAR). The permission of the United States government is not required for export to countries other than the following, which as of this writing are subject to embargo or special controls: Cuba, Iran, North Korea, Sudan, and Syria (list subject to change).

The use of wireless devices may be prohibited in some countries or regions. Contact a Nikon-authorized service representative before using the wireless features of this product outside the country of purchase.

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.

Notice for Customers in the U.S.A. and Canada

This device complies with Part 15 of FCC Rules and Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Nikon WT-6A

FCC ID: CGJ1152EA

IC: 4634A-1152EA

FCC CAUTION

1. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
2. The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Nikon Corporation may void the user's authority to operate the equipment.

FCC Radio Frequency Interference Statement

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Notes on 5GHz band use

1. 5.15-5.25GHz band is restricted to indoor operations only.
2. High-power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

Compliance with FCC requirement 15.407(c)

Data transmission is always initiated by software, which is the passed down through the MAC, through the digital and analog baseband, and finally to the RF chip. Several special packets are initiated by the MAC. These are the only ways the digital baseband portion will turn on the RF transmitter, which it then turns off at the end of the packet. Therefore, the transmitter will be on only while one of the aforementioned packets is being transmitted. In other words, this device automatically discontinue transmission in case of either absence of information to transmit or operational failure.

Compliance with IC(RSS-210)A9.4.4)

Compliance with IC requirement RSS-210 A9.4.4 Data transmission is always initiated by software, which is the passed down through the MAC, through the digital and analog baseband, and finally to the RF chip. Several special packets are initiated by the MAC. These are the only ways the digital baseband portion will turn on the RF transmitter, which it then turns off at the end of the packet. Therefore, the transmitter will be on only while one of the aforementioned packets is being transmitted. In other words, this device automatically discontinue transmission in case of either absence of information to transmit or operational failure.

Co-location

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

FCC/IC RF Exposure Statement

The available scientific evidence does not show that any health problems are associated with using low power wireless devices. There is no proof, however, that these low power wireless devices are absolutely safe. Low power Wireless devices emit low levels of radio frequency energy (RF) in the microwave range while being used. Whereas high levels of RF can produce health effects (by heating tissue), exposure of low-level RF that does not produce heating effects causes no known adverse health effects. Many studies of low-level RF exposures have not found any biological effects. Some studies have suggested that some biological effects might occur, but such findings have not been confirmed by additional research. WT-6A has been tested and found to comply with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines.

Nikon Inc.,
1300 Walt Whitman Road, Melville, New York
11747-3064, U.S.A. Tel.: 631-547-4200

Notice for Customers in Europe

R&TTE Directive



We, the manufacturer (Nikon Corporation) hereby declare that this Wireless Transmitter (WT-6) is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

AT	BE	BG	CY	CZ	DK	EE	FI
FR	DE	GR	HU	IE	IT	LV	LT
LU	MT	NL	PL	PT	RO	SK	SI
ES	SE	GB	IS	LI	NO	CH	TR
HR							

Symbol for Separate Collection in European Countries

This symbol indicates that electrical and electronic equipment is to be collected separately.

The following apply only to users in European countries:

- This product is designated for separate collection at an appropriate collection point. Do not dispose of as household waste.
- Separate collection and recycling helps conserve natural resources and prevent negative consequences for human health and the environment that might result from incorrect disposal.
- For more information, contact the retailer or the local authorities in charge of waste management.

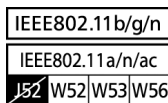


Declaration of Conformity

A copy of the original DoC for our products as it relates to R&TTE can be found at the following website:

http://imaging.nikon.com/support/pdf/DoC_WT-6.pdf

This device complies with radio-frequency regulations. The content of certification labels not affixed to the device is given below.



Available Channels

The WT-6 is available in four versions, each destined for use in a different region in compliance with local regulations governing the use of wireless devices (for information on countries not listed in the following table, contact a Nikon representative). Use each model only in the region for which it is intended.

Version	For use in	Channels	
		2.4 GHz band	5 GHz band
WT-6	The 32 countries of the EU-EFTA (Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, the United Kingdom), Australia, Japan, New Zealand, Saudi Arabia, South Africa, Thailand, Turkey	1–13	36–64, 100–140
WT-6A	Argentina, Brazil, Canada, Chile, India, Mexico, Panama, Taiwan, U.S.A.	1–11	36–64, 149–165
WT-6B	Korea, Russia, Singapore	1–13	36–64
WT-6C	China, Hong Kong, Malaysia	1–13	149–165

5GHz band

The channels available for 5GHz band are listed below.

Version	Location	Mode	Channels			
			W52	W53	W56	W58
			36–48	52–64	100–140	149–165
WT-6	Indoor	Infrastructure	✓	✓	✓	—
		Access point	—	—	—	—
	Outdoor	Infrastructure	Prohibited	Prohibited	✓	—
		Access point	—	—	—	—
WT-6A	Indoor	Infrastructure	✓	✓	—	✓
		Access point	—	—	—	—
	Outdoor	Infrastructure	Prohibited	Prohibited	—	✓
		Access point	—	—	—	—
WT-6B	Indoor	Infrastructure	✓	✓	—	—
		Access point	—	—	—	—
	Outdoor	Infrastructure	✓	✓	—	—
		Access point	—	—	—	—
WT-6C	Indoor	Infrastructure	—	—	—	✓
		Access point	—	—	—	—
	Outdoor	Infrastructure	—	—	—	✓
		Access point	—	—	—	—

Table of Contents

What the WT-6 Can Do for You.....	ii
For Your Safety	v
Notices.....	vii

Introduction **1**

Connection Types.....	3
Attaching the WT-6.....	4

Wireless Connections **5**

Step 1: Getting Ready	7
Step 2: Enable Camera Wireless	8
Step 3: The Connection Wizard	8
Step 4: Network Settings	16

Appendices **22**

Accessing the Camera.....	22
Creating Network Profiles with the Wireless Transmitter Utility.....	28
Troubleshooting	40
Specifications	42
Index.....	44

Introduction

Thank you for your purchase of a WT-6 wireless transmitter for compatible Nikon digital cameras. The WT-6 is for use exclusively in the country of sale; operation in other jurisdictions is not guaranteed. Users who are unsure as to the country of purchase are requested to contact a Nikon-authorized service representative for more information. Please read this manual thoroughly and keep it where all those who use the product can read it.

The principal difference between the WT-6 and WT-6A/B/C is in the number of channels supported; unless otherwise stated, all references to the WT-6 also apply to the WT-6A/B/C.

Symbols and Conventions

The following symbols and conventions are used throughout this manual:



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 manual.

Save where otherwise noted, it is assumed that default camera settings are used.

Background Knowledge

This manual assumes basic knowledge of ftp servers and local area networks (LANs). For more information on installing, configuring, and using devices in a network, contact the manufacturer or network administrator. For information on setting up connections to a wireless networks in Windows 10, Windows 8.1, Windows 7, and Mac OS X, see the online help for the Wireless Transmitter Utility network profile creation software.

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/**](http://www.nikonusa.com/)
- **For users in Europe and Africa:** [**http://www.europe-nikon.com/support/**](http://www.europe-nikon.com/support/)
- **For users in Asia, Oceania, and the Middle East:** [**http://www.nikon-asia.com/**](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/**](http://imaging.nikon.com/)

Illustrations

Camera menus and operations are taken from the Nikon D5. The appearance and content of the software and operating system dialogs, messages, and displays shown in this manual may vary with the operating system used. For information on basic computer operations, see the documentation provided with the computer or operating system.

Connection Types

The WT-6 offers a choice of the following connection types:

FTP upload	Upload existing photos and movies to a computer or ftp server, or upload new photos as they are taken.
Image transfer	
Camera control	Control the camera using optional Camera Control Pro 2 software and save new photos and movies directly to the computer.
HTTP server	View and take pictures remotely using a browser-equipped computer or smart device.
Synchronized release	Synchronize the shutter releases for multiple remote cameras with a master camera.

For more information, see the *Network Guide*.

FTP Servers

Servers can be configured using standard ftp services available with supported operating systems, such as IIS (Internet Information Services); for more information, see the *Network Guide*. Connection to ftp networks via a router is supported, but Internet ftp connections and connection to ftp servers running third-party software are not.

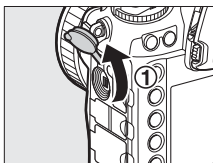
HTTP Sever Mode

Internet connections are not supported in http server mode.

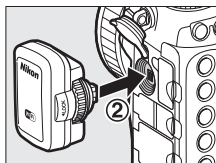
Firewall Settings

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.

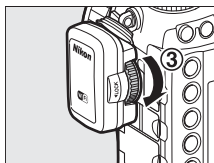
Attaching the WT-6



- ① Open the camera's peripheral connector cover and rotate it up out of the way.



- ② Fully insert the WT-6 connector into the camera peripheral connector.



- ③ Rotate the locking wheel to lock the WT-6 in place.

✓ Power Source

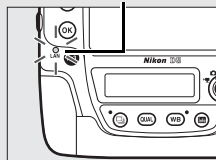
The WT-6 is not equipped with a battery or power switch. Power is supplied from the camera.

🔌 Connection Status

Connection status is shown by the camera network indicator.

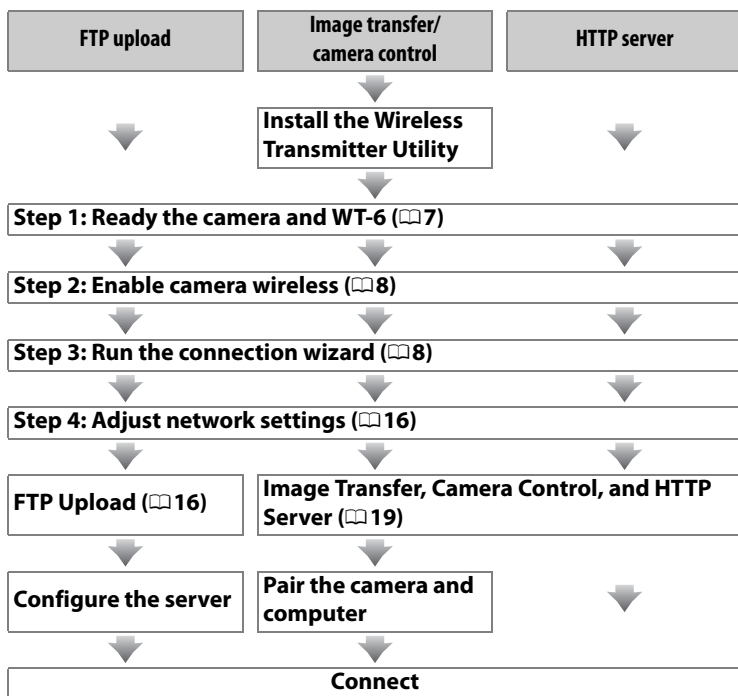
Network indicator	Status
● (off)	Network functions disabled.
○ (green)	Waiting to connect.
⚙ (flashes green)	Connected.
⚙ (flashes amber)	Error.

Network indicator



Wireless Connections

Follow the steps below to connect to a wireless network.



Network Guide

For information on using a wireless network once the camera and WT-6 are connected, see the *Network Guide*.

Choosing a Power Source

To prevent the camera powering off unexpectedly during setup or data transfer, use a fully-charged battery or an optional AC adapter designated for use with your camera. For more information, see the camera manual.

The Wireless Transmitter Utility

The Wireless Transmitter Utility must be installed on computers connecting to the camera in image transfer or camera control mode. See the *Network Guide* for information about the Wireless Transmitter Utility.

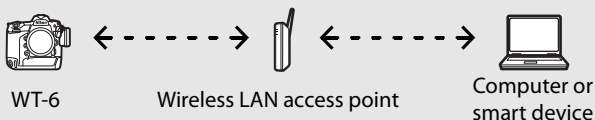
Synchronized Release

Network profiles are not required in synchronized release mode. For more information, see the *Network Guide*.

Infrastructure and Access Point Modes

Connections to wireless networks may be in infrastructure or access point mode.

Infrastructure mode: Connection via a wireless LAN access point.



Access point mode: The camera serves as an access point for direct connection to a computer or smart device.



Wireless LANs

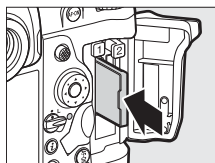
These instructions are intended for customers with an existing wireless LAN, and in the case of infrastructure networks assume that the computer and access point are already connected to the network.

Step 1: Getting Ready

After starting the computer and logging in, ready the camera and WT-6 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 (📖 ii).

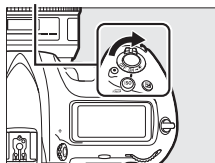


2 Attach the WT-6 (📖 4).

3 Turn the camera on.

Rotate the power switch to turn the camera on.

Power switch



Removing the WT-6

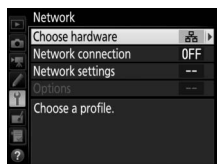
Turn the camera off, remove the WT-6, and replace the peripheral connector cover.

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  to select the highlighted option and return to the network menu.

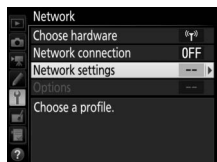


Step 3: The Connection Wizard

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

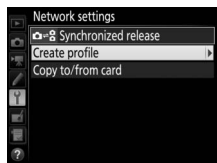
1 Display network profiles.

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  () button before proceeding.



The Wireless Transmitter Utility

The Wireless Transmitter Utility ( 6) can also be used to create network profiles. See page 28.

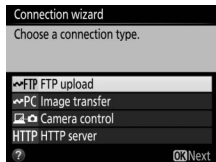
3 Start the connection wizard.

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



4 Choose a connection type. (book icon 3)

Highlight a connection type and press .



5 Name the new network profile.

A default profile name will be displayed; to change the name as described in “Text Entry” (book icon 10), press the center of the multi selector. The profile name will appear in the **Network > Network settings** list in the camera setup menu. Press  to proceed to the next step when entry is complete.



Profile name

Text Entry

The following dialog is displayed when text entry is required.

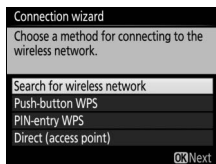


To enter a new letter at the current cursor position, tap the letters on the touch-screen keyboard (tap the keyboard selection button to cycle through the upper-case, lower-case, and symbol keyboards). You can also use the multi selector to highlight the desired character in the keyboard area and press the center of the multi selector to insert the highlighted character at the current cursor position (note that if a character is entered when the field is full, the last character in the field will be deleted). To delete the character under the cursor, press the  (FORMAT) button. To move the cursor to a new position, tap the display or hold the   button and press  or .

To complete entry and close the dialog, press . To exit without completing text entry, press MENU.

6 Choose a connection method.

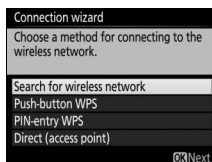
Highlight the connection method used by the network and press . More information can be found on the pages listed below.



Search for wireless network	Choose from a list of networks detected by the camera. Proceed to page 11.
Push-button WPS	Choose for wireless LAN access points with push-button WPS. Proceed to page 12.
PIN-entry WPS	Choose for wireless LAN access points with PIN-entry WPS. Proceed to page 14.
Direct (access point)	Connect directly to a host computer or ftp server in access point mode, with the camera serving as an access point. Proceed to page 15.

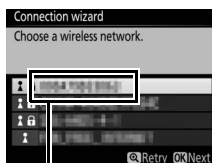
■ Search for Wireless Network

Select **Search for wireless network** in Step 6 on page 10 to choose from a list of the networks (wireless LAN access points) detected by the camera.



1 Choose a network.

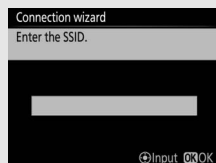
Highlight a network SSID and press **OK** (if the desired network is not displayed, press **Q** to search again). Encrypted networks are indicated by a **lock** icon; if the selected network is encrypted, you will be prompted to enter the encryption key as described in Step 2. If the network is not encrypted, proceed to Step 3.



SSID

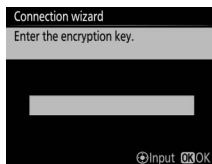
Hidden SSIDs

Networks with hidden SSIDs are indicated by blank entries in the network list. If you highlight a blank entry and press **OK**, you will be prompted to provide the network name; press the center of the multi selector, enter a name (**10**), and then press **OK** to proceed to Step 2.



2 Enter the encryption key.

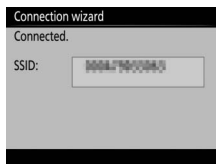
Press the center of the multi selector and enter the encryption key (**10**) and press **OK** (if the network uses open authentication, this dialog will not be displayed; proceed to Step 3).



3 Choose your next step.

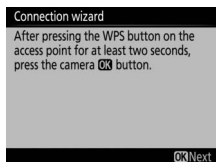
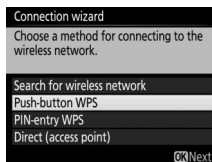
The message at right is displayed when a connection is established. Your next step depends on the connection type selected in Step 4 on page 9:

- **FTP upload:** Proceed to page 16.
- **Image transfer:** Proceed to page 19.
- **Camera control:** Proceed to page 19.
- **HTTP server:** Proceed to page 19.



■ Push-Button WPS

Choose **Push-button WPS** in Step 6 on page 10 if the wireless LAN access point uses push-button WPS.

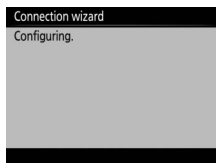


1 Press the WPS button on the wireless LAN access point.

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

2 Press [OK] button on the camera.

The WT-6 will connect to the access point automatically.



3 Choose your next step.

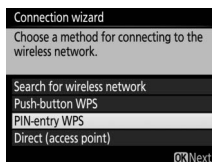
The message at right is displayed when a connection is established. Your next step depends on the connection type selected in Step 4 on page 9:

- **FTP upload:** Proceed to page 16.
- **Image transfer:** Proceed to page 19.
- **Camera control:** Proceed to page 19.
- **HTTP server:** Proceed to page 19.



■ PIN-Entry WPS

Choose **PIN-entry WPS** in Step 6 on page 10 if the wireless LAN access point uses PIN-entry WPS.

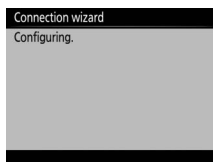


1 Enter the PIN for the wireless LAN access point.

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 WT-6 will connect to the access point automatically.



3 Choose your next step.

The message at right is displayed when a connection is established. Your next step depends on the connection type selected in Step 4 on page 9:

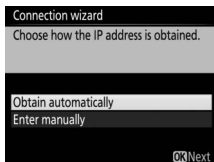
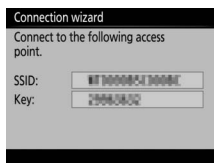
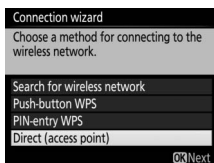


- **FTP upload:** Proceed to page 16.
- **Image transfer:** Proceed to page 19.
- **Camera control:** Proceed to page 19.
- **HTTP server:** Proceed to page 19.

■ Direct (Access Point)

Selecting **Direct (access point)** in Step 6 on page 10 enables access point mode, in which the camera serves as a wireless access point. The camera SSID and encryption key will be displayed in the monitor.

On the computer or smart device, enter the SSID and encryption key displayed in the camera monitor (□ 22). For more information, see the documentation provided with the computer or smart device. Your next step depends on the connection type selected in Step 4 on page 9:



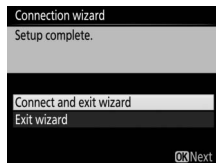
If you choose FTP upload, go to Step 3 on page 16.



If you choose Image transfer, go to Step 3 on page 20.



If you choose Camera control, go to Step 3 on page 20.



If you choose HTTP server, go to Step 6 on page 21.

Step 4: Network Settings

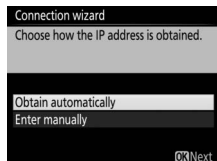
■ FTP Upload

If you selected **FTP upload** in Step 4 on page 9, follow the steps below to connect to an existing ftp server. Skip Step 1 if you selected **Direct (access point)** in Step 6 on page 10.

1 Obtain or select an IP address.

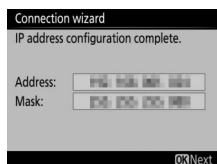
Highlight one of the following options and press **OK**.

- **Obtain automatically:** Select this option if the network is configured to supply the IP address automatically. Proceed to Step 2.
- **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 exit when entry is complete, then press **OK** again to proceed to Step 2.



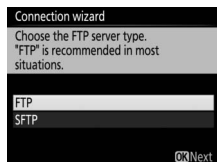
2 Confirm the IP address.

The camera IP address will be displayed as shown at right; press **OK**.



3 Choose the server type.

Highlight **FTP** or **SFTP** (secure ftp) and press **OK**. If you selected **Direct (access point)** in Step 6 on page 10, proceed to Step 5.



🔧 Firewall Settings

Ports 21 and 32768 through 61000 are used for ftp, ports 22 and 32768 through 61000 for sftp. File transfer may be blocked if the server firewall is not configured to allow access to these ports.

4 Enter the IP address.

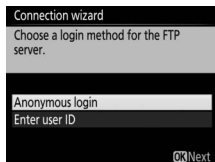
Press the center of the multi selector and enter the server URL or IP address (□10) and press **OK**, and then press **OK** to connect.



5 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**.



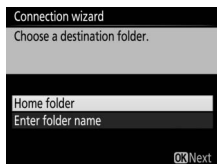
MAC Address Filtering

If the network uses MAC address filtering, the filter must be supplied with the MAC address of the WT-6. After attaching the WT-6 to the camera, choose **Network > Options > MAC address** from the camera setup menu and note the MAC address.

6 Choose a destination folder.

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

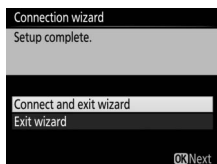
- **Home folder:** Select this option to upload pictures to the server's home folder.
- **Enter folder name:** Select this option to upload pictures to another of the folders existing on the server. Enter a folder name and path when prompted and press **OK**.



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



For more information on using wireless networks, see the *Network Guide*.

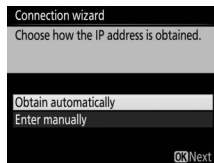
■■ Image Transfer, Camera Control, and HTTP Server

If you choose any of the above options in Step 4 on page 9, follow the steps below to connect to an existing network. Where you will start depends on the option selected in Step 6 on page 10: if you selected an option other than **Direct (access point)**, start at Step 1; otherwise, proceed to Step 2, below (**Image transfer** or **Camera control**), or to Step 5 on page 21 (**HTTP server**).

1 Obtain or select an IP address.

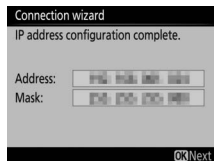
Highlight one of the following options and press **OK**.

- **Obtain automatically:** Select this option if the network is configured to supply the IP address automatically.
- **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.



2 Confirm the IP address.

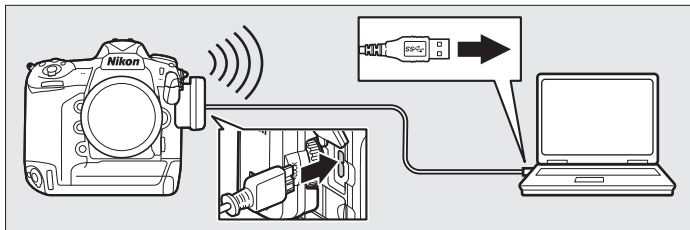
The camera IP address will be displayed as shown at right; press **OK**. If **Image transfer** or **Camera control** is selected, proceed to Step 3; otherwise, proceed to Step 6.



3 Connect the camera to the computer.

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

Connection wizard
Pairing computer and camera.
Connect the camera to the computer using the USB cable.
Start the Wireless Transmitter Utility on the computer.



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-6. After attaching the WT-6 to the camera, choose **Network > Options > MAC address** from the camera setup menu and note the MAC address.

Firewall Settings

TCP port 15740 and UDP port 5353 are used for host computer connections. Computer firewalls must be configured to allow access to these ports, as otherwise the computer may not be able to access the WT-6.

4 Start the Wireless Transmitter Utility.

When prompted, start the copy of the Wireless Transmitter Utility installed on the computer (📖 6). Pairing will begin automatically.

Connection wizard

Pairing computer and camera.

Connect the camera to the computer using the USB cable.

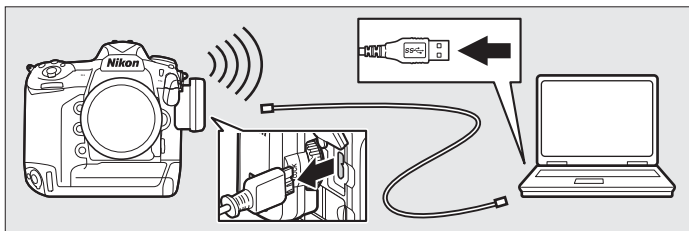
Start the Wireless Transmitter Utility on the computer.

5 Disconnect the camera.

The message at right will be displayed when pairing is complete. Disconnect the USB cable.

Connection wizard

Pairing complete.
Disconnect the USB cable.



6 Exit the wizard.

Highlight one of the following options and press ⓧ.

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

Connection wizard

Setup complete.

Connect and exit wizard
Exit wizard

ⓧ Next

For more information on using wireless networks, see the *Network Guide*.

Appendices

Accessing the Camera

After creating a network profile, turn the camera on and follow the steps below to access the camera from a computer or iPhone.

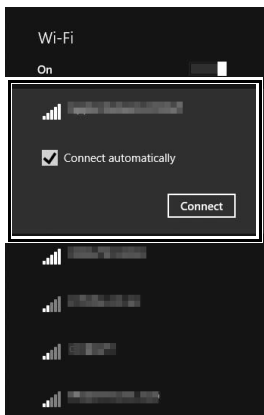
Windows 8.1	22
Windows 7	24
Mac OS X	25
iPhone	26

■ ■ Windows 8.1

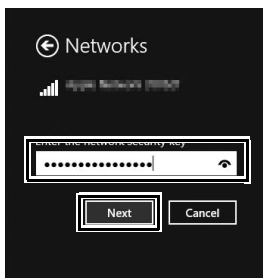
1 Click the Internet Access icon in the taskbar.



2 Select the network name (SSID) and click **Connect**.

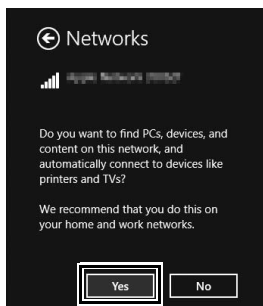


3 Enter the encryption key and click **Next**.



4 Connect.

When the message "Do you want to find PCs, devices, and content on this network, and automatically connect to devices like printers and TVs?" is displayed, click **Yes** to connect to the network, or **No** to exit without connecting.



5 Confirm that the connection is successful.

An icon is displayed in the taskbar when a connection is established.



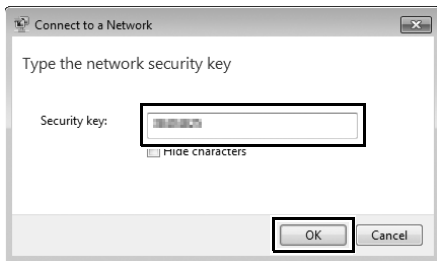
1 Click the Internet Access icon in the taskbar.



2 Select the network name (SSID) and click **Connect**.



3 Enter the encryption key and click **OK**.

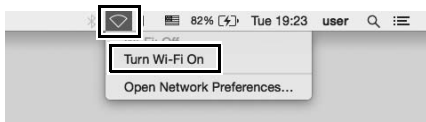


4 Confirm that the connection is successful.

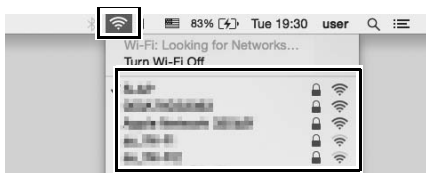
An icon is displayed in the taskbar when a connection is established.



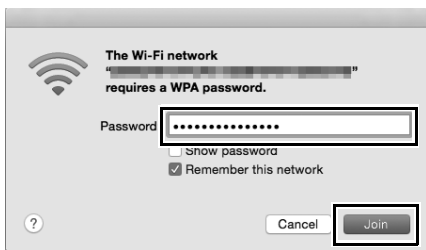
1 Click the Wi-Fi icon and select Turn Wi-Fi On.



2 Click the Wi-Fi icon and select the network name (SSID).



3 Enter the encryption key and click Join.



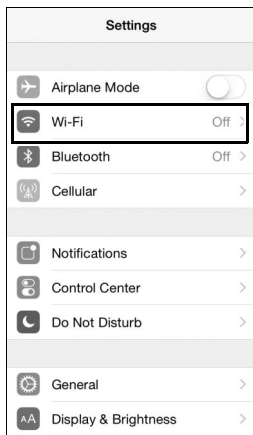
4 Confirm that the connection is successful.

The icon shown at right is displayed in the taskbar when a connection is established.

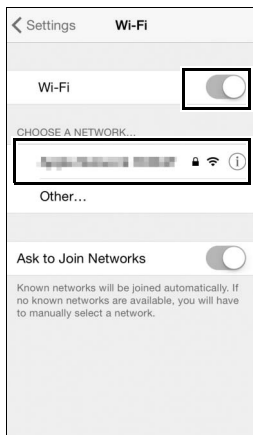


1 Tap **Settings** in the iPhone “Home” screen.

2 Tap **Wi-Fi**.



3 Enable **Wi-Fi** and select the network name (SSID).



4 Enter the encryption key and tap Join.



5 Confirm that the connection is successful.

A check appears next to the network name when a connection is established.

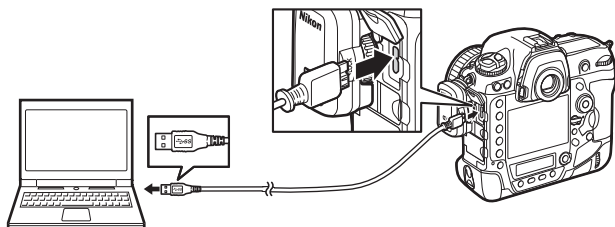


Creating Network Profiles with the Wireless Transmitter Utility

Network profiles can be created using the Wireless Transmitter Utility installed on the computer (📖6).

1 Connect the camera.

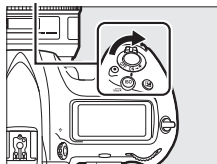
Use the USB cable supplied with the camera to connect the camera to the computer as shown below.



2 Turn the camera on.

Rotate the power switch to turn the camera on.

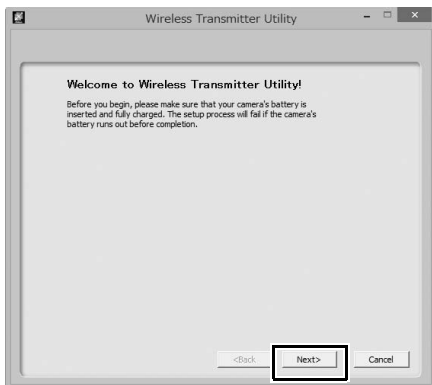
Power switch



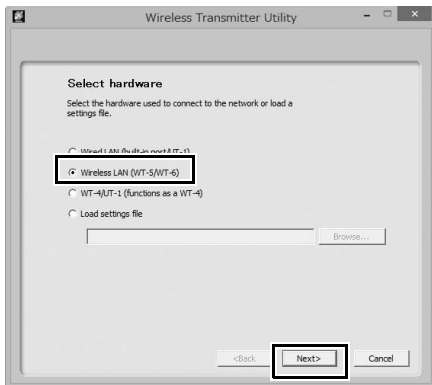
3 Start the Wireless Transmitter Utility.

- **Windows:** Double-click the Wireless Transmitter Utility icon on the desktop.
- **Mac:** Click the Wireless Transmitter Utility icon in the Dock.

4 Click Next.



5 Select Wireless LAN (WT-5/WT-6) and click Next.



6 Select Add/edit profiles and click Next.



"Setup Picture Folder"

To choose the destination for images uploaded to the computer in image transfer mode, select **Setup picture folder** in Step 6 and click **Next**. The dialog at right will be displayed; click the "Browse..." and choose a destination.

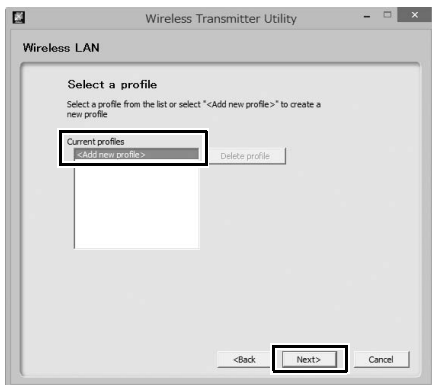
If you do not choose another destination, pictures will be uploaded to:

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

To display pictures in the Explorer (or in Mac OS X, the Finder), Capture NX-D, or ViewNX-i when upload is complete, select **Open images with this application after transfer** and choose the desired application (only applications that are currently installed will be listed).

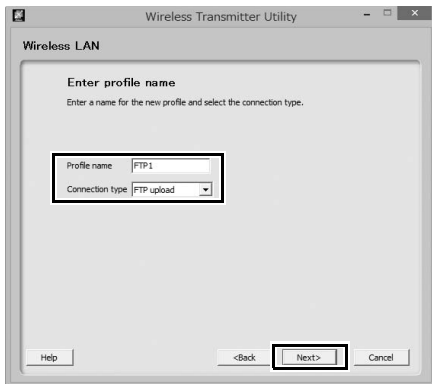


7 Select Add new profile and click Next.



8 Enter the following information and click Next.

- **Profile name:** Enter a name of up to 16 characters.
- **Connection type:** Choose FTP upload, Image transfer, Camera control, or HTTP server (📖 ii).

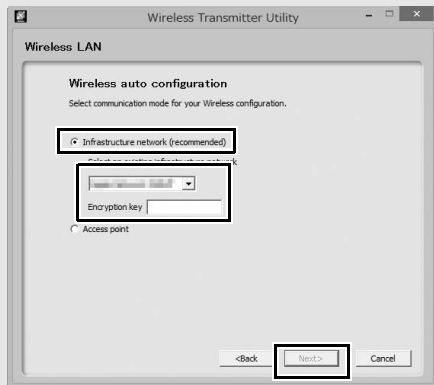


9 Select Manual setup (for advanced users) and click Next.



"Automatic Setup"

When connecting to an infrastructure network for the first time, select **Automatic setup (recommended)**. The following dialog will be displayed; select **Infrastructure network (recommended)** and choose the network from the pull-down menu. Mac users must also choose the encryption type and key index from separate pull-down menus. Click **Next** to proceed to Step 12 (📖37).



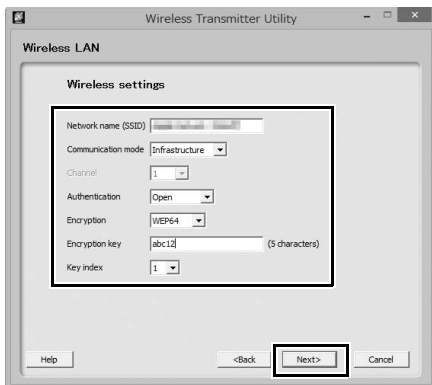
Automatic setup is not available for connection to networks for which a profile already exists or to third-party wireless LAN adapters, networks using static IP addresses, or computers that are not configured for connection to a wireless LAN access point.

10 Enter the following information and click **Next**.

- **Network name (SSID):** Enter the name of the network on which the host computer or ftp server is located.
- **Communication mode:** Select **Infrastructure** or **Access point**.
- **Channel:** Select a channel (access point mode only; in infrastructure mode, the WT-6 will choose the channel automatically). Note that if a matching SSID is found on a different channel, the WT-6 may change the channel automatically.
- **Authentication:** The authentication used on the network. Choose from open system, shared key, WPA-PSK, and WPA2-PSK (infrastructure) or open system and WPA2-PSK (access point mode).
- **Encryption:** The encryption used on the network. The options available depend on the authentication used.
 - Open:** 64- or 128-bit WEP (infrastructure mode only); none
 - 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**, choose a key index (the default index is **1**). A key index is not required when **None** is selected.



The image shows a screenshot of the 'Wireless Transmitter Utility' window, specifically the 'Wireless LAN' settings dialog. The dialog is titled 'Wireless LAN' and contains a section labeled 'Wireless settings'. This section is enclosed in a black rectangular box. Inside this box, the following settings are visible: 'Network name (SSID)' with a text input field; 'Communication mode' set to 'Infrastructure'; 'Channel' set to '1'; 'Authentication' set to 'Open'; 'Encryption' set to 'WEP64'; 'Encryption key' set to 'abc12' with a note '(5 characters)'; and 'Key index' set to '1'. Below the 'Wireless settings' box, there are three buttons: 'Help', '<Back', and 'Next>'. The 'Next>' button is highlighted with a black rectangular box. To the right of the 'Next>' button is a 'Cancel' button.

Wireless Transmitter Utility

Wireless LAN

Wireless settings

Network name (SSID)

Communication mode: Infrastructure

Channel: 1

Authentication: Open

Encryption: WEP64

Encryption key: abc12 (5 characters)

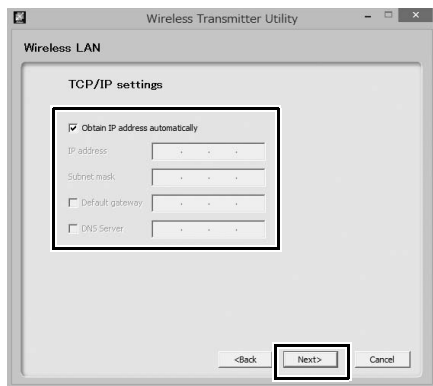
Key index: 1

Help <Back Next> Cancel

11 Enter IP address information and click **Next**.

If the network is configured to supply IP addresses automatically using a DHCP server or Auto IP, select Obtain IP address automatically. Otherwise remove the check from this option and enter the following information:

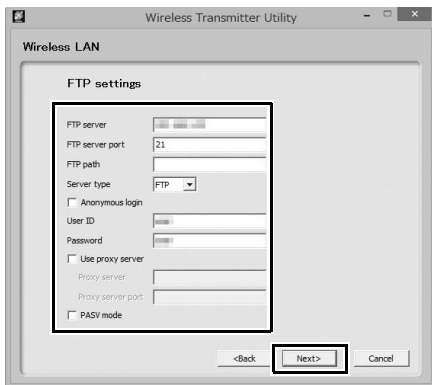
- **IP address/Subnet mask:** Enter an IP address and subnet mask for the WT-6. Choose an IP address that is not already assigned to other devices on the network.
- **Default gateway:** If the network requires a gateway address, select this option and enter the address supplied by the network administrator.
- **DNS Server:** If a Domain Name Server exists on the network, select this option and enter the address supplied by the network administrator.



12 Enter ftp settings and click Next.

The following options will be displayed if you selected FTP upload in Step 8 (□31). If you selected another option, proceed to Step 13 (□38).

- **FTP server:** Enter the URL or IP address of the ftp server.
- **FTP server port:** Enter the port number for the ftp server (□3).
- **FTP path:** Choose the folder to which pictures will be uploaded.
- **Server type:** Choose **FTP** or **SFTP**.
- **Anonymous login:** Select this option for anonymous login, or leave this option unchecked to supply a User ID and Password.
- **Use proxy server:** If a proxy server is required for ftp, select this option and enter the server name and port number for the proxy server.
- **PASV mode:** Select this option to use PASV mode.

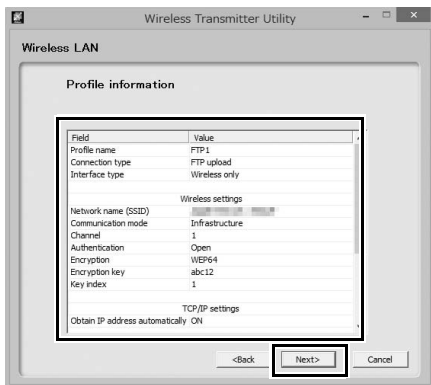


The screenshot shows a window titled "Wireless Transmitter Utility" with a sub-tab "Wireless LAN". Inside, the "FTP settings" section is highlighted with a red rectangle. The settings include: "FTP server" (text field), "FTP server port" (text field with "21"), "FTP path" (text field), "Server type" (dropdown menu set to "FTP"), "Anonymous login" (unchecked checkbox), "User ID" (text field), "Password" (text field), "Use proxy server" (unchecked checkbox), "Proxy server" (text field), "Proxy server port" (text field), and "PASV mode" (unchecked checkbox). At the bottom, there are three buttons: "<Back", "Next>" (highlighted with a red rectangle), and "Cancel".

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.

13 Confirm that settings are correct and click Next.



14 Select Finish wizard and click Next.



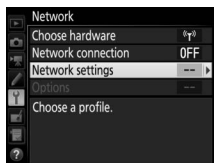
15 Turn the camera off and disconnect the USB cable.

16 Connect the WT-6.

Insert a memory card in the camera, connect the WT-6, and turn the camera on.

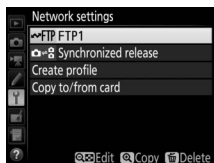
17 Display network profiles.

Select **Network** in the camera setup menu, then highlight **Network settings** and press  to display the profiles list.



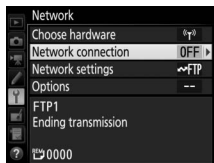
18 Select the new network profile.

Highlight the new network profile and press  to return to the network menu.



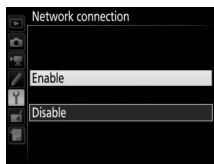
19 Select Network connection.

Highlight **Network connection** and press .



20 Select Enable.

Highlight **Enable** and press  to connect to the network.



Troubleshooting

Problem	Solution	Page
Excessive radio interference.	Adjust the position of the wireless access point or host computer.	—
The camera displays a TCP/IP or ftp error.	Check settings for the host and/or wireless LAN adapter and adjust camera settings appropriately.	5
	Check firewall settings.	16, 20
	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.	—
"Connecting to PC" does not clear from the camera display.	Check firewall settings.	20
The camera displays a wireless error.	Confirm that the host and wireless LAN adapter are on.	—
	Confirm that there are no obstacles between the WT-6 and the adapter.	—
	Check settings for the host and/or wireless LAN adapter and adjust camera settings appropriately.	5
	In direct (access point) mode, confirm that the computer or smart device is not connected to another network.	—
The camera displays a memory card error.	Confirm that the card is properly inserted.	7

Problem	Solution	Page
Transfer is interrupted before all photographs are sent.	Transfer will resume if the camera is turned off and then on again.	—
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.	—

Specifications

Type	WT-6/WT-6A/WT-6B/WT-6C
Wireless	
Standards	WT-6/WT-6A/WT-6B/WT-6C: 802.11a/b/g/n/ac
Communications protocols	IEEE802.11a: OFDM IEEE802.11g: OFDM IEEE802.11b: DSSS IEEE802.11n: OFDM IEEE802.11ac: OFDM
Operating frequency (MHz)	WT-6: 5180-5320 MHz (36/40/44/48/52/56/60/64 ch) 5500-5700 MHz (100/104/108/112/116/120/124/128/132/136/140 ch) 2412-2472 MHz (1–13 ch) WT-6A: 5180-5320 MHz (36/40/44/48/52/56/60/64 ch) 5745-5825 MHz (149/153/157/161/165 ch) 2412-2462 MHz (1–11 ch) WT-6B: 5180-5320 MHz (36/40/44/48/52/56/60/64 ch) 2412-2472 MHz (1–13 ch) WT-6C: 5745-5825 MHz (149/153/157/161/165 ch) 2412-2472 MHz (1–13 ch)
Approximate range (line of sight)*	Approximately 200 m (656.1 ft)
Data rates†	IEEE 802.11a/g: 6, 9, 12, 18, 24, 36, 48 and 54 Mbps IEEE 802.11b: 1, 2, 5.5 and 11 Mbps IEEE 802.11n: 300 Mbps maximum IEEE802.11ac: 866.7 Mbps maximum
Security	Authentication: Open system, shared key, WPA-PSK, WPA2-PSK Encryption: 128/64 bit WEP, TKIP, AES
Wireless setup	Supports WPS2.0
Access protocols	Infrastructure and access point modes

Power consumption	3.0 W maximum
Operating environment	Temperature: 0–40 °C/32–104 °F Humidity: 85% or less (no condensation)
Weight	Approximately 33 g/1.2 oz (body only)
Dimensions (W × H × D)	Approximately 35.5 mm × 49.0 mm × 30.0 mm (1.3 in. × 1.9 in. × 1.1 in.)

* With large antenna at wireless LAN access point. Range varies with signal strength and presence or absence of obstacles.

† Maximum logical data rates according to IEEE standard. Actual rates may differ.

- Nikon reserves the right to change the appearance and specifications of the hardware and software described in this manual at any time and without prior notice. Nikon will not be held liable for damages that may result from any mistakes that this manual may contain.

Index

A

Access point 6, 10, 15, 34
Automatic setup 33

C

Camera control 3, 5, 19
Channel xi, 34, 42
Choose hardware 8
Connection status 4
Connection wizard 5, 8

D

DHCP server 36
Direct (access point) 10, 15
DNS server 36

E

Error 40

F

Firewall 16, 20, 37
Folder 18, 30
FTP server 3, 5, 16, 37
FTP upload 3, 5, 16

H

HTTP server 3, 5, 19

I

Image transfer 3, 5, 19
Infrastructure 6, 33, 34
IP address 16, 19, 36

M

MAC address 17, 20
Memory card 7

N

Network indicator 4

P

PASV mode 37
PIN-entry WPS 10, 14
Port 16, 20, 37
Push-button WPS 10, 12

S

Search for wireless network 10, 11
SSID 11, 34
Synchronized release 3, 6

T

Text entry 10

W

Wireless LAN access point 6, 11
Wireless Transmitter Utility 5, 6, 21

No reproduction in any form of this manual, in whole or in part (except for brief quotation in critical articles or reviews), may be made without written authorization from NIKON CORPORATION.