Nikon

Windows Vista
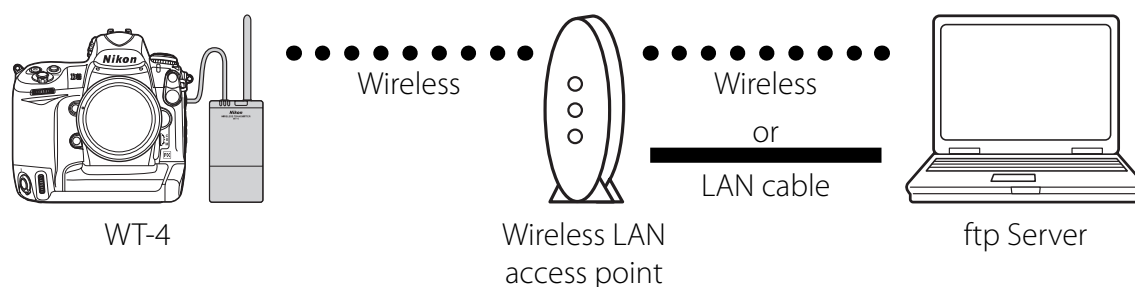
En

Configuring the WT-4 for ftp (Infrastructure Mode)

This document provides basic instructions on configuring the WT-4 wireless transmitter and a Windows Vista ftp server for transmission over an infrastructure network that includes a wireless LAN access point, or bridge.

Wireless   Wireless

or

LAN cable

WT-4   Wireless LAN access point   ftp Server

Introduction

This section describes a simple network consisting solely of a wireless LAN access point (bridge) connected to an ftp server via a LAN cable or wireless, with no connections to other networks or devices. Follow the steps below to use the WT-4 in this type of network.

1: Get Ready

Equipment

Ready the following:
- A WT-4 wireless transmitter
- A fully-charged EN-EL3e battery for the WT-4
- A Nikon D3 or D300 digital SLR camera
- A fully-charged battery for the camera (an EN-EL4a for the D3, a EN-EL3e for the D300)
- A computer with Windows Vista Ultimate/Business/Enterprise edition, the WT-4 Setup Utility, and Internet Information Services (IIS) * installed
- A wireless LAN access point
- A LAN cable
- A memory card
- A USB cable
- Manuals for the above equipment

Network Settings

Note the IP addresses, encryption, and other settings that will be used in the wireless LAN. The following are intended as examples only.
- IP address for the WT-4: 192.168.1.4
- IP address for the ftp server: 192.168.1.3
- IP address of the wireless LAN access point: 192.168.1.2
- Subnet mask: 255.255.255.0
- FTP server port: 21
- Network name (SSID): WT-4
- Communication mode: Infrastructure
- Authentication: WPA-PSK
- Encryption: TKIP
- Encryption key: abcde123

*Internet Information Services (IIS)

The Internet Information Services (IIS) supplied with Windows Vista Ultimate/Business/Enterprise can be used to create an ftp server; for more information, see "Installing IIS" (available under separate cover).
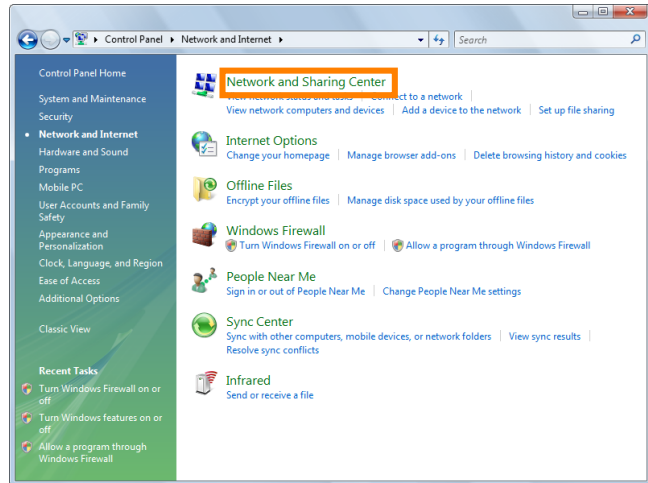
2: Assign the ftp Server an IP Address

Choose an address for the ftp server. The following IP address is intended as an example only.

• **IP address**: 192.168.1.3

• **Subnet mask**: 255.255.255.0
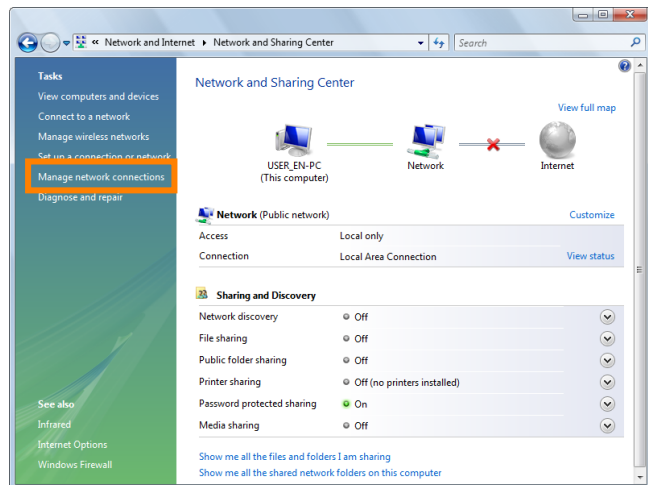
• **TCP port**: 21

2 - 1

Open the **Network and Internet** > **Network and Sharing Center** control panel.
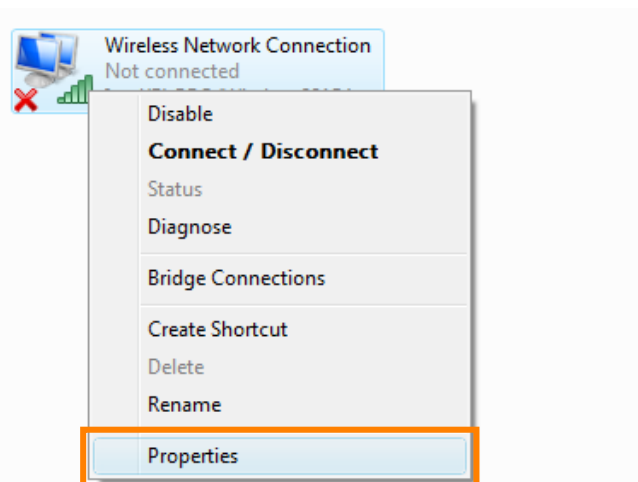
2 - 2

Select **Manage network connections**.

2 - 3

Right-click the network icon (**Wireless Network Connection** if the access point and ftp server are connected via a wireless network, **Local Area Connection** if the access point is connected by a LAN cable) and select Properties from the menu that appears. A "User Account Control" dialog will be displayed; click **Continue**.
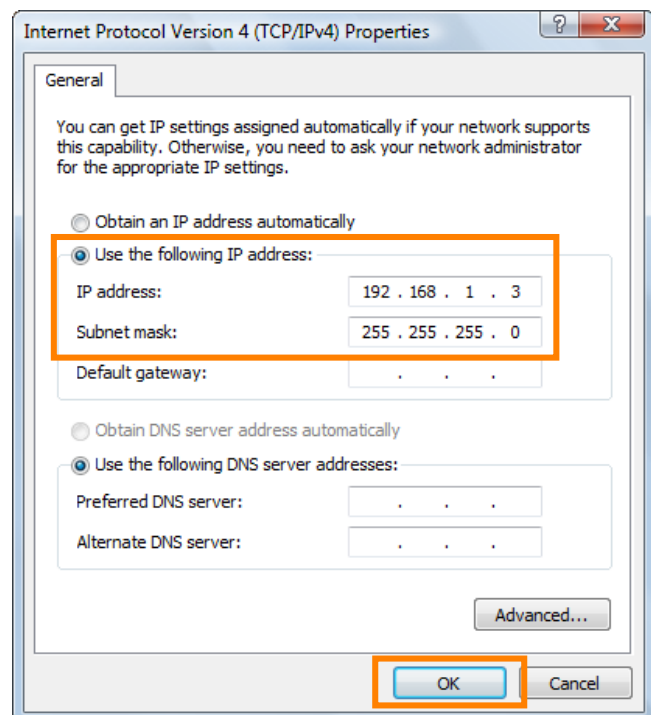
2 - 4

Select **Internet Protocol Version 4 (TCP/IP)** and click **Properties**.
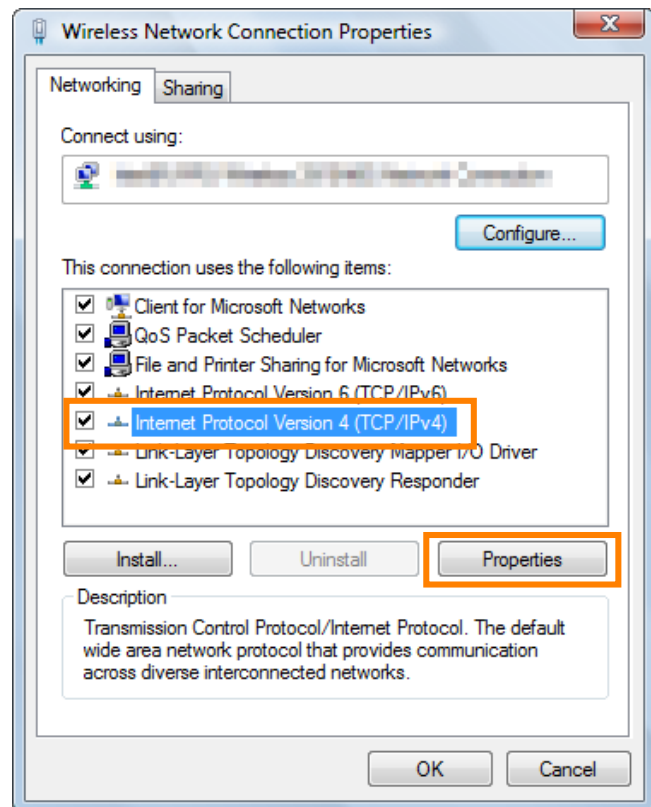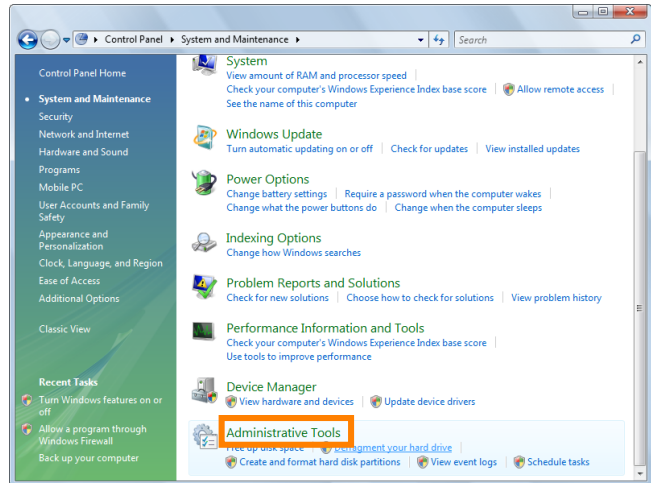
2 - 5

Select **Use the following IP address** and enter the IP address and subnet mask for the ftp server. Click **OK** to exit and then click **OK** to close the properties dialog. This completes the process of assigning an IP address to the ftp server.
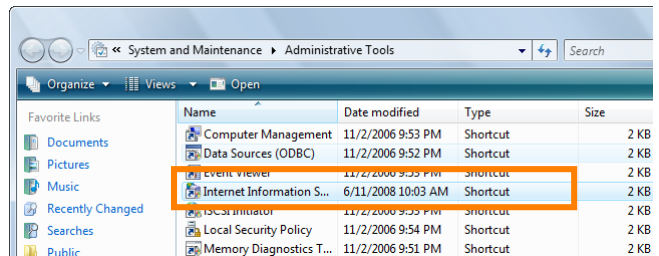
3: Create an ftp Server

3 - 1

Go to the **System and Maintenance** > **Administrative Tools** control panel.
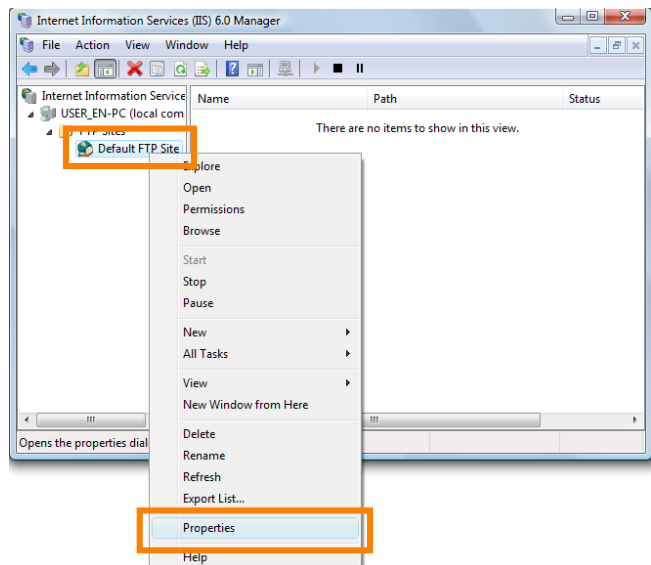
3 - 2

Double-click **Internet Information Servers (IIS) 6.0 Manager**.

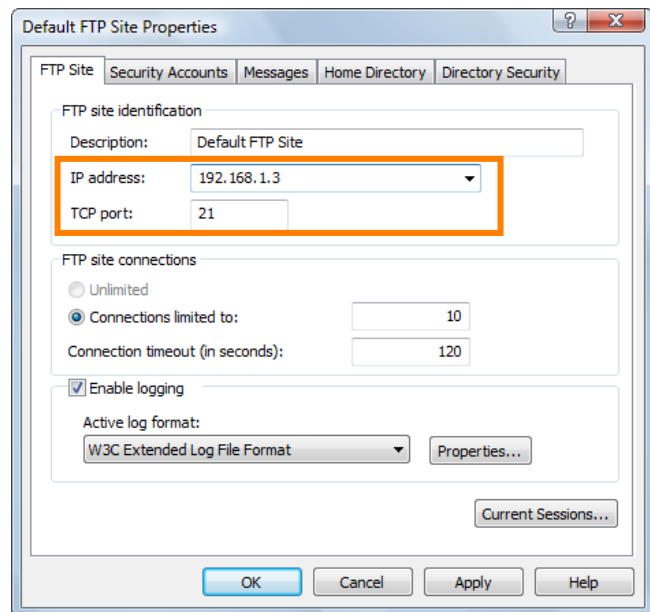A "User Account Control" dialog will be displayed; click **Continue**.

3 - 3

Right-click **Default FTP Site** and select **Properties** from the menu that appears.
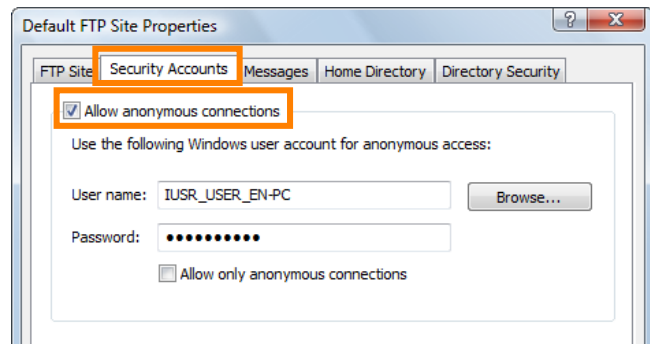
3 - 4

Select the IP address entered in 2 - 5 (pg. 4) and enter a **TCP port** number. The port number is normally 21.

3 - 5

Open the **Security Accounts** tab. To allow anonymous connections, select **Allow anonymous connections**.

* If you do not wish to allow anonymous connections, do not select this option.

3 - 6

Open the **Home Directory** tab and select **A directory located on this computer**. The root directory for images uploaded from the WT-4 is listed in the **Local path** text box; choose a folder and select **Read** , **Write** , and **Log visits**.

🖉 "Local Path"

If **Allow anonymous connections** was selected in Step 3–5, you will not be authorized to access the default ftp home directory (the default directory is the \inetpub\ftproot folder on the drive to which Windows is installed). and consequently will not be able to upload images. Create a folder in the root directory on the drive to which Windows is installed and select this folder as the home directory.
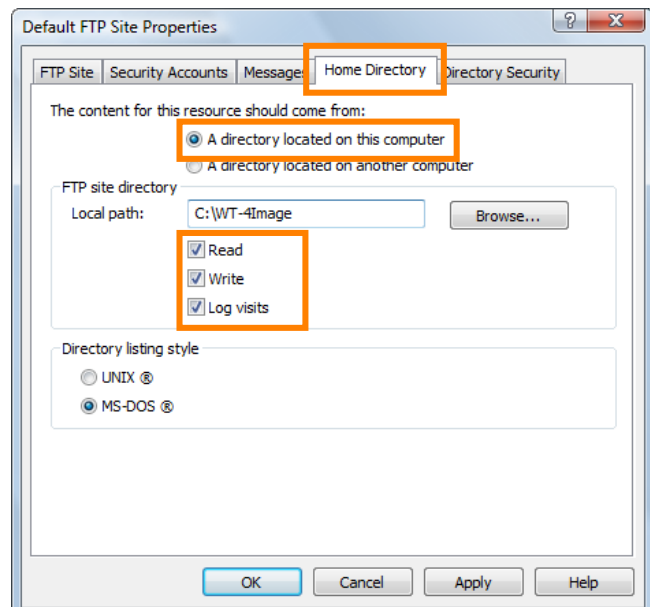
4: Configure the Wireless LAN Access Point

Configure the wireless LAN access point as described below. For more information, see the documentation provided by the manufacturer.

- **Network name (SSID)**: Enter the network identifier (network name or SSID), which may be up to 36 characters long. The network in this example uses the identifier WT-4.

- **Wireless mode**: Choose 801.11g or 801.11b.

- **Channel**: Automatic.

- **Wireless security**
  - **Authentication**: Choose from open system, shared key, WPA-PSK, or WPA2-PSK. The network in this example uses **WPA-PSK**.
  - **Encryption**: If you selected open system or shared key authentication, choose 64- or 128-bit WEP. If you selected WPA-PSK or WPA2-PSK authentication, choose TKIP or AES. The network in this example uses **TKIP**.
  - **Encryption key**: If you selected 64-bit WEP encryption, enter a 5-character ASCII or 10-digit hexadecimal key. If you selected 128-bit WEP encryption, enter a 13-character ASCII or 26-digit hexadecimal key. If you selected TKIP or AES, enter an ASCII key of from 8 to 63 characters or a 64-digit hexadecimal key. The network in this example uses **abcde123**.
  - **ANY connection**: Enable this option to make the network SSID public. This makes it easier to connect to the network, but also makes the network less secure. This option may not be available on some access points. In this example, we will enable ANY connection.

- **IP address**: Turn any "obtain automatically" options off and enter the IP address manually. Be sure that the address is different from the addresses used for the ftp server and WT-4. The addresses for the access point, ftp server, and WT-4 must however belong to the same class. In this example, we will use the following address for the access point, while the ftp server and WT-4 are assigned 192.168.1.3 and 192.168.1.4, respectively:

- **IP address**: 192.168.1.2

- **Subnet mask**: 255.255.255.0

- **Default gateway**: ---.---.---.---

- **DNS server**: ---.---.---.---

- **MAC address**: If the network uses MAC address filtering, the filter must be supplied with the MAC address of the WT-4. After attaching the WT-4 to the camera, turn the WT-4 on, select **Wireless transmitter** > **Device info** > **MAC address** from the camera setup menu, and note the MAC address.

# 5: Configure the ftp Server for Wireless Access

This step is only required if the ftp server connects to the access point via a wireless LAN.
If the ftp server is connected to the wireless access point via a LAN cable, proceed to 6 (pg. 11). The settings you choose in 5 should conform to the network settings selected in 4 (pg. 7).

- **Network name (SSID)**: WT-4
- **Security type**: WPA-PSK
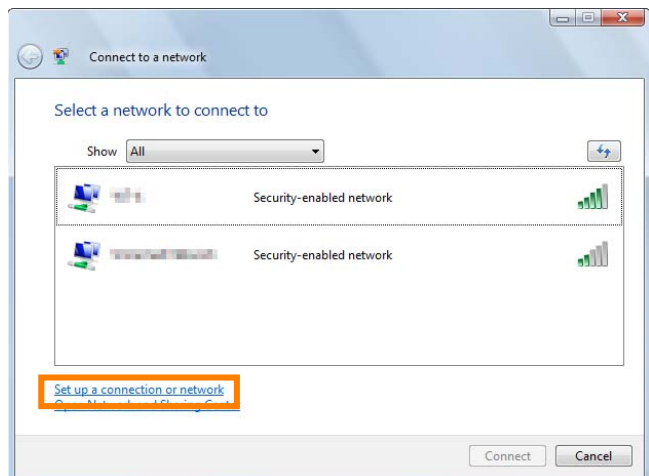- **Encryption type**: TKIP
- **Security key/Passphrase**: abcde123

5 - 1

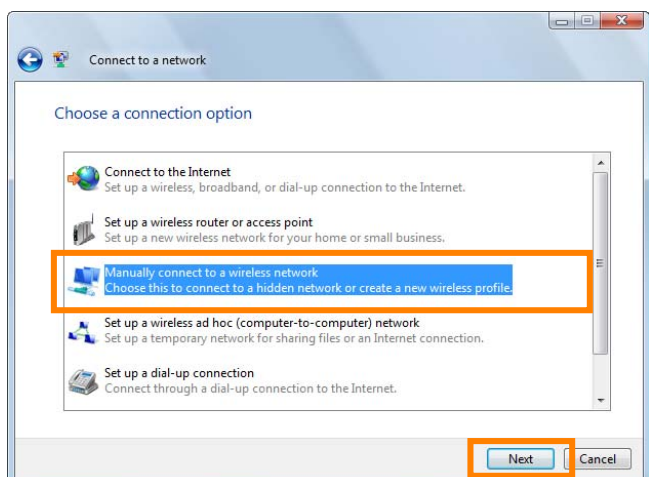Click the **Start** orb and select **Connect To**.
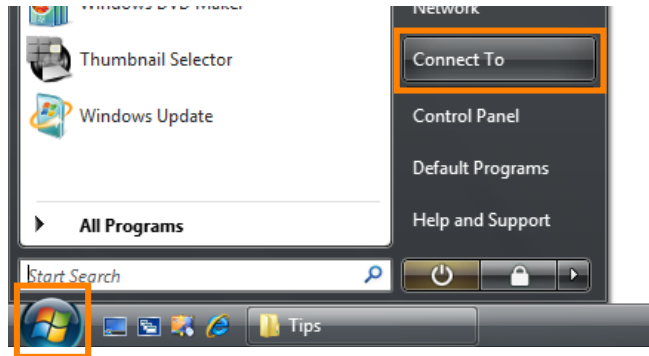
5 - 2

Click **Set up a connection or network**.

5 - 3

Select **Manually connect to a wireless network** and click **Next**.

If **Manually connect to a wireless network** is not displayed, install the necessary driver software as described in the documentation for the wireless LAN adapter.

5 - 4

After entering a network name and choosing security options to match those selected for the wireless LAN access point, click **Next**.
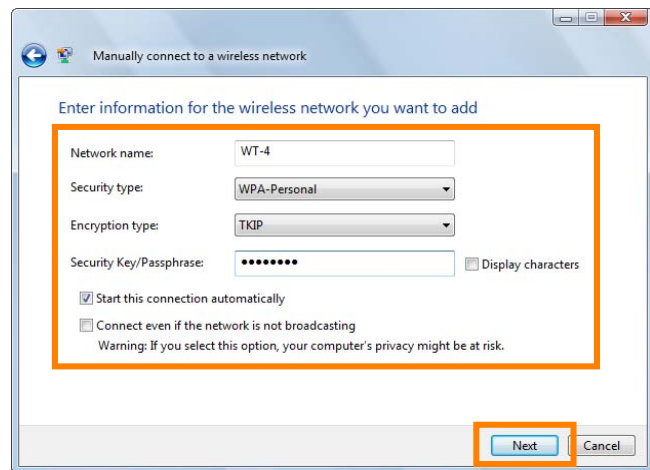
- **Network name (SSID):** Enter a name of up to 32 characters. The network in this example uses the identifier **WT-4**.

- **Security type:** Choose from **No authentication (Open)**, **WEP**, **WPA-Personal**, and **WPA2-Personal**. **WPA-Enterprise**, **WPA2-Enterprise**, and **802.1x** can not be used with the WT-4.

- **Encryption type:** The type of encryption available depends on the options selected for **Security type**:
  - None (open system): **None**
  - WEP: **WEP**
  - WPA, WPA2: **TKIP**, **AES**

- **Security key/Passphrase:** If **WEP** is selected for Security type, enter a 5- or 13-character ASCII key or 10- or 26-digit hexadecimal key. Entering a five-character ASCII or ten-digit hexadecimal key enables 64-bit encryption, a 13-character ASCII or 26-digit hexadecimal key 128-bit encryption. ASCII keys may contain letters, punctuation, and the numbers 0–9, hexadecimal keys the numbers 0–9 and the letters a, b, c, d, e, and f. If **TKIP** or **AES** is selected for **Security type**, enter an ASCII key of 8 to 63 characters or a 64-digit hexadecimal key.

5 - 5

Click **Connect to…**.
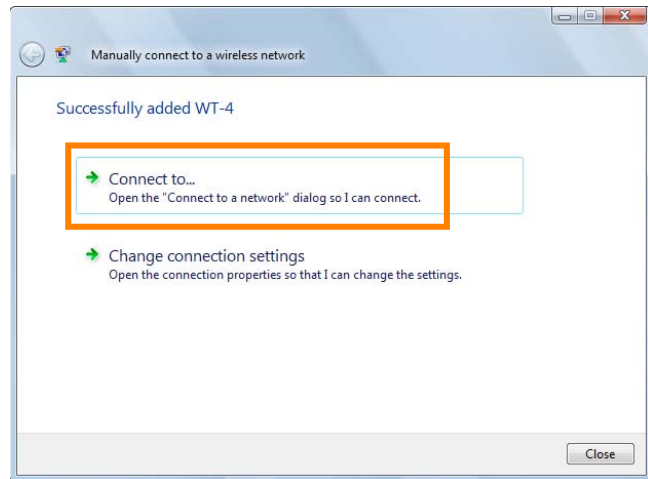
5 - 6

Confirm that **Connected** appears next to the network name entered in 4 (pg. 7) and click **Cancel**. Network setup is now complete.

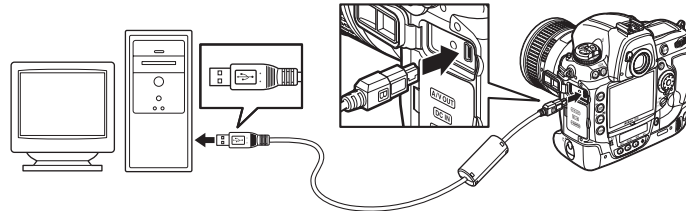**Configuring the WT-4 for ftp (Infrastructure Mode)**
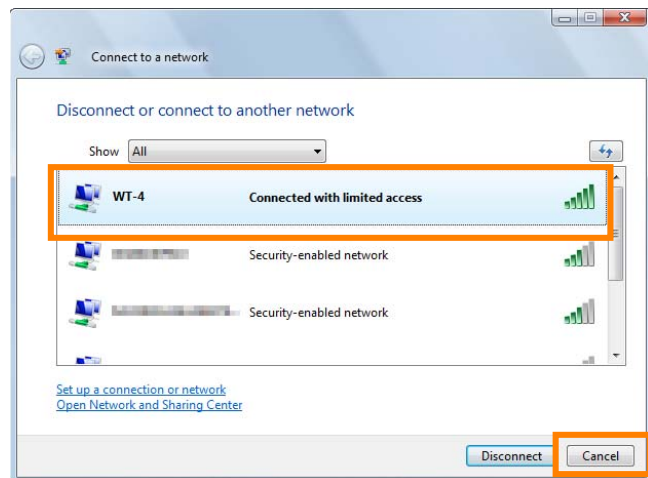
6: Copy the Network Profile to the Camera

Use the WT-4 setup utility to copy the network profile to the camera. Before proceeding, make sure that **MTP/PTP** is selected for the **USB** option in the camera setup menu.
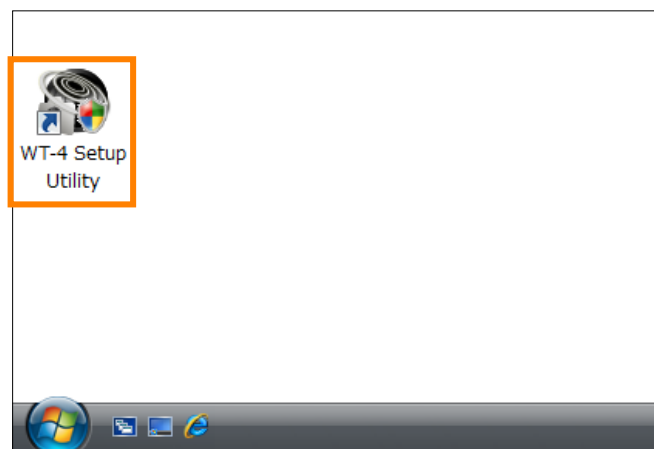
6 - 1

After starting the computer, use the supplied USB cable to connect the camera and turn the camera on.
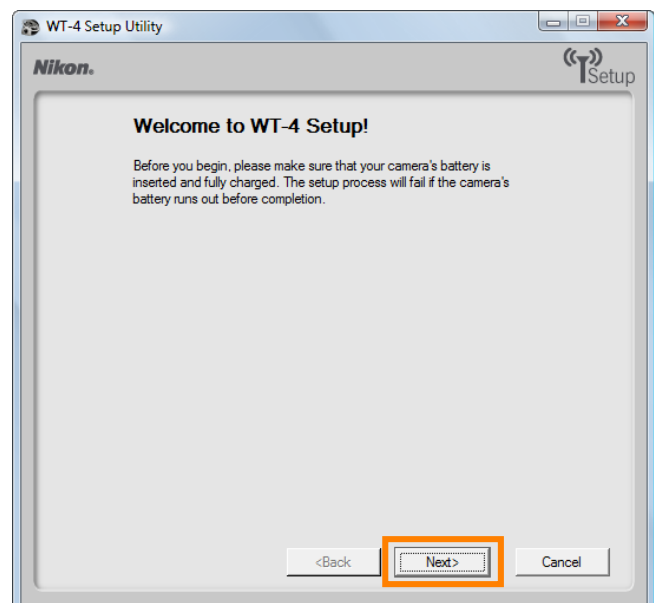

6 - 2

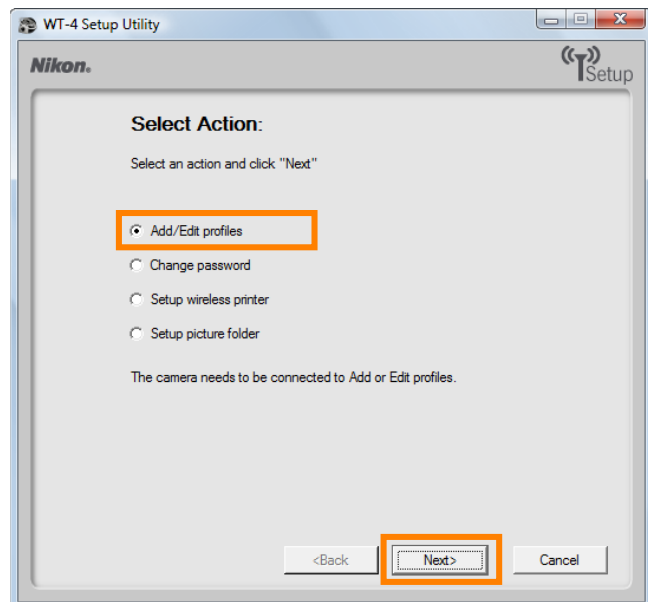Double-click the **WT-4 Setup Utility** icon on the desktop.

6 - 3

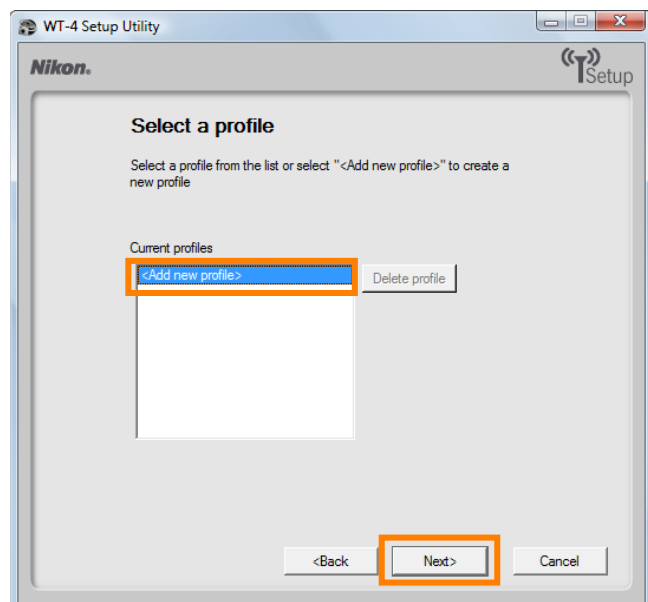The dialog shown below will be displayed; click **Next**.

6 - 4

Select **Add/Edit profiles** and click **Next**.

6 - 5

Select **Add new profile** and click **Next**.

6 - 6

Enter the following information and click **Next**:

- **Profile name**: Enter a name of up to 16 characters (in this example, **FTP1**).

- **Profile type**: Choose **FTP Server**.

- **Interface type**: Choose **Wireless & Ethernet** for networks that include wireless, or **Ethernet only** for Ethernet-only networks.

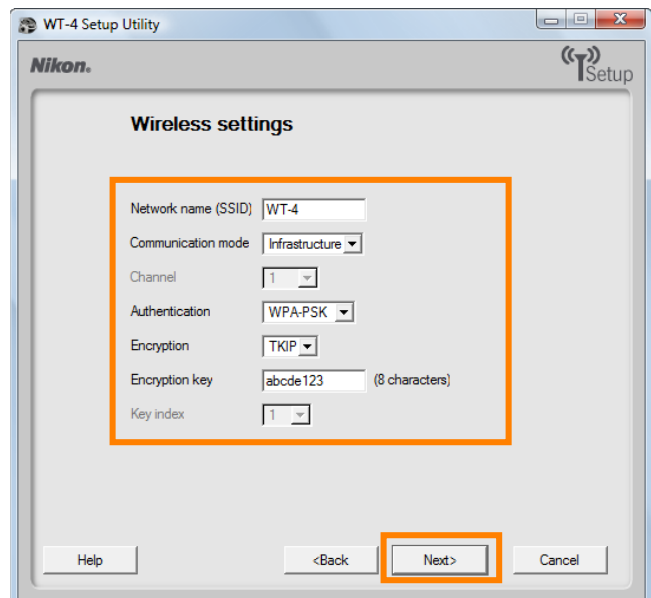**Configuring the WT-4 for ftp (Infrastructure Mode)**
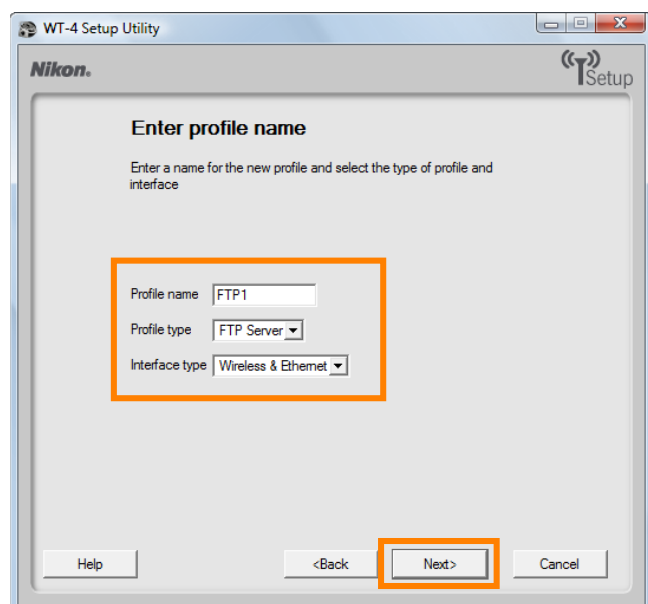
6 - 7

Select **Manual setup** and click **Next**.
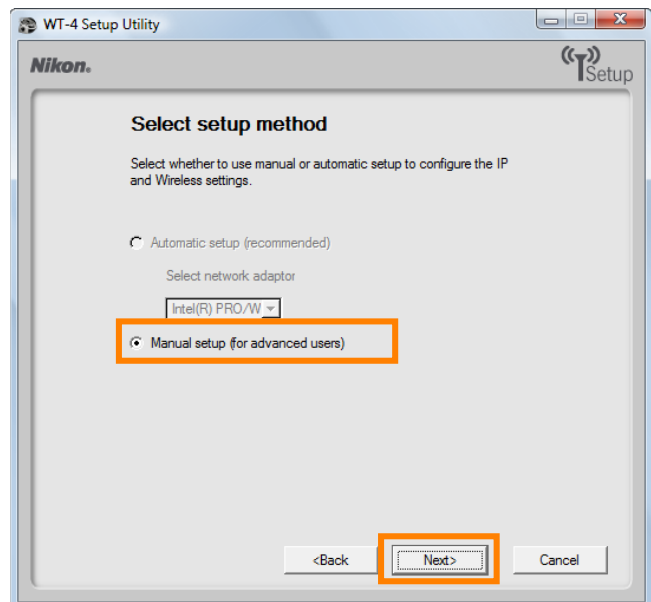
6 - 8

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

- **Network name (SSID)**: WT-4
- **Communication mode**: Infrastructure
- **Authentication**: WPA-PSK
- **Encryption**: TKIP
- **Encryption key**: abcde123

Configuring the WT-4 for ftp (Infrastructure Mode)

6 - 9

After removing the check from **Obtain IP address automatically**, enter an IP address and subnet mask and click **Next**.

• **IP address**: 192.168.1.4

• **Subnet mask**: 255.255.255.0

• **Default gateway**: Remove the check from this option.

• **DNS Server**: Remove the check from this option.
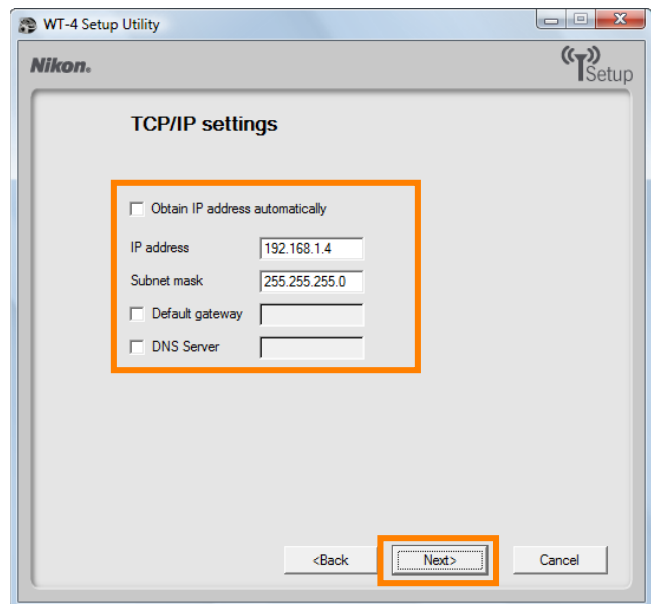
🖉 *Choosing an IP Address*

Be sure that the address for the WT-4 is different from the addresses used for the ftp server and access point. The addresses for the access point, ftp server, and WT-4 must however belong to the same class. In this example, we will use 192.168.1.2 for the access point, 192.168.1.3 for the ftp server, and 192.168.1.4 for the WT-4.

## 6 - 10

Enter ftp settings and click **Next**.

• **FTP server**: Enter IP address you selected in 2 - 5 (pg. 4; in this example, 192.168.1.3).

• **FTP server port**: Enter FTP server port you selected in 3 - 4 (pg. 6; in this example, 21).

• **FTP path:** Leave this field blank to upload pictures to the folder specified in 3 - 6 (pg. 6).

• **Anonymous login**: Select this option for anonymous login, or leave this option unchecked to supply a **User ID** and **Password**.

• **User ID**: If you will not be using anonymous log-in, enter a User name for the ftp server.

• **Password**: If you will not be using anonymous log-in, enter the administrator password.

• **Use proxy server**: Remove the check from this option.

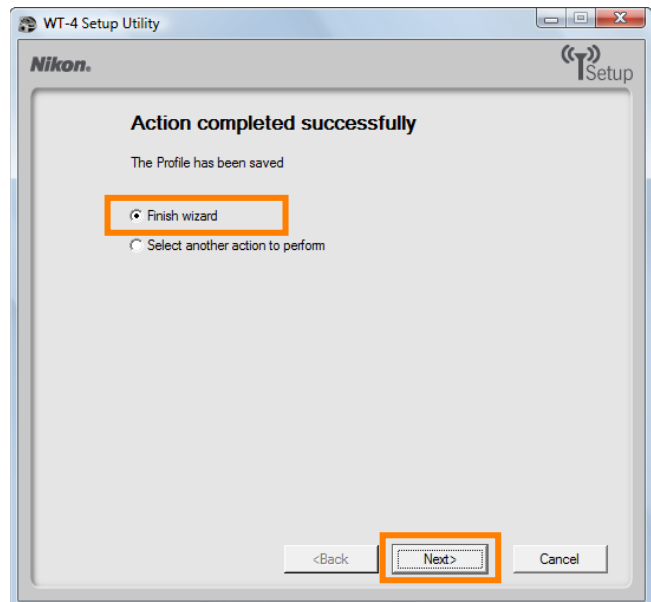• **PASV mode**: Remove the check from this option.

Configuring the WT-4 for ftp (Infrastructure Mode)

Windows Vista

14
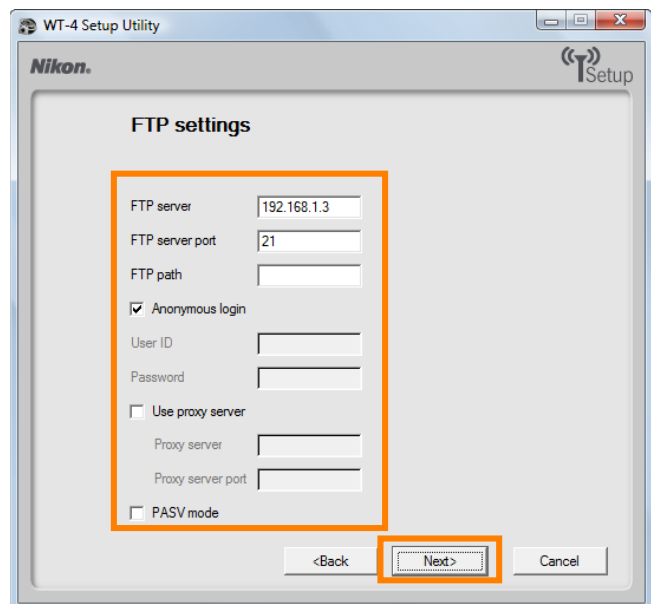
6 - 11

Confirm that settings are correct and click **Next**.
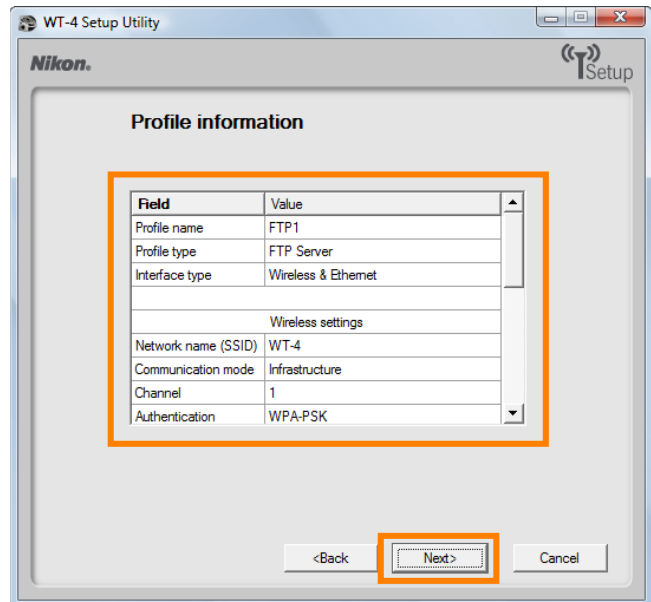
6 - 12

Select **Finish wizard** and click **Next**.

6 - 13

Turn the camera off and disconnect the USB cable. The network profile has now been copied to the camera.

Configuring the WT-4 for ftp (Infrastructure Mode)

7: Connect to the ftp Server

In this step, you will establish a wireless connection between the WT-4 and the ftp server. Before connecting the WT-4, select **MTP/PTP** for the **USB** option in the camera setup menu and confirm that the host computer is running and the user is logged in.

7 - 1

Insert a memory card in the camera, connect the WT-4, and turn the camera on.

7 - 2

Select **Transfer mode** for the **Wireless transmitter** > **Mode** option in the camera setup menu.

Mode

⟋⟍ Transfer mode ▶
⊞ Thumbnail select mode
▣ PC mode
占 Print mode

?
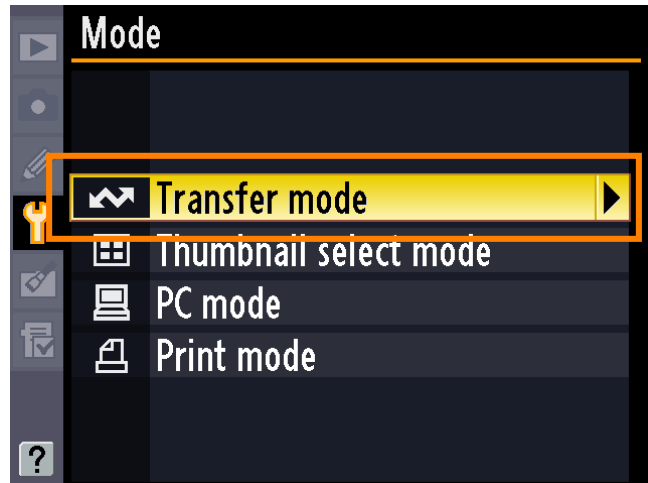
7 - 3

A list of available connection profiles will be displayed. Highlight the desired profile and press ⓞⓚ.

Choose profile ⟋⟍

⟨ᵗⁱ⟩品 FTP1 ⓞⓚ
FTP registration

?   ⊞Q Edit   🗑 Delete
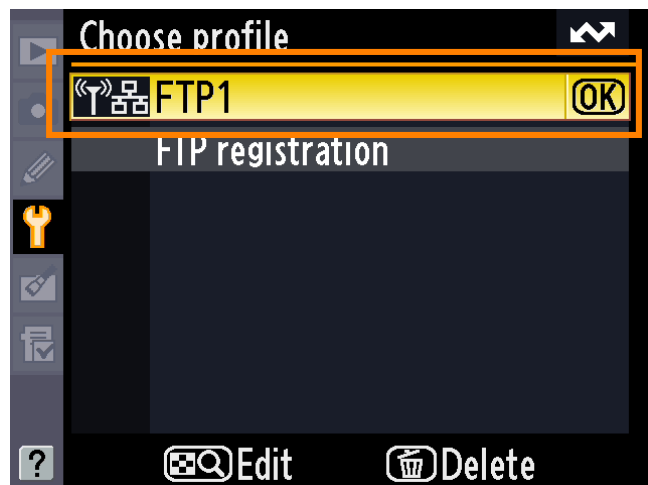
7 - 4

Return to the wireless transmitter menu and turn the WT-4 on. The profile name will be highlighted in green when a connection is established.

This completes the process of connecting to the ftp server.
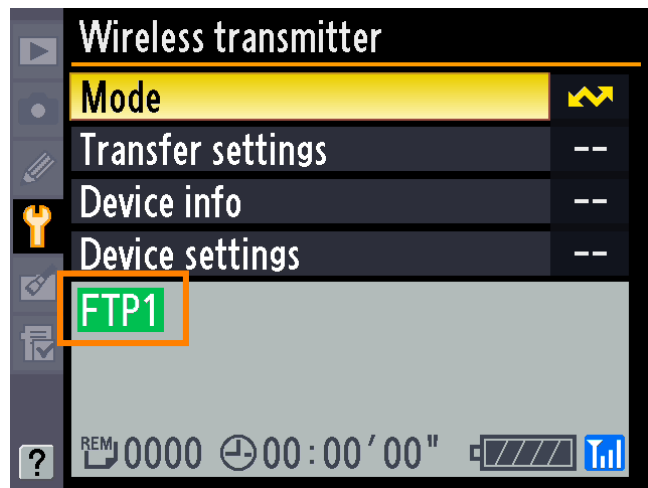
✎ ***Third-Party Security Software***

Third-party security software with firewall support may block the ftp server port, preventing access to the ftp server. This can be avoided by setting the software to allow protocols send and receive access to TCP ports 20 and 21. For more information, see the documentation for the software or firewall.

Configuring the WT-4 for ftp (Infrastructure Mode)