

Canon

Network Setup Troubleshooting



Network Setup Troubleshooting

This manual describes troubleshooting tips for problems you may encounter when setting up.



- If you do not find a description for your trouble here, refer to "Troubleshooting" in the on-screen manual: **Basic Guide/Advanced Guide**.

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Troubles in Setup/Connections

1 Connection checklist

Before you proceed to Troubleshooting, confirm the following:

- The USB cable is securely connected to the correct port.
- The machine is turned on and the network device is on.
If it is, turn it off and then turn it on again.
- If the firewall function of your security software is turned on, a message may appear warning that Canon software is attempting to access the network. If the warning message appears, set the security software to always allow access.
- When using a router, connect the machine and computer to the LAN side (same network segment).
- The machine's LAN setting is configured according to your connection method.
To connect over wireless LAN, set **Change WLAN/LAN** to **Wireless LAN active**. To connect over wired LAN, set it to **Wired LAN active**.
For the procedure, refer to "Machine's LAN Setting" in the printed manual: **Getting Started**.
If you have changed the machine's LAN setting, set up the machine again following the procedures in "Install the Software" and onward in the printed manual: **Getting Started**.

Confirm the following before setting up on a wireless LAN:

- There is no barrier or obstacle between the access point and the machine.
- The access point is operating in IEEE802.11b or IEEE802.11g (2.4 GHz).

2 Cannot connect to the access point (the access point is not detected)

2.1 The target access point is not detected

- Refer to "1 Connection checklist" on page 1 and make sure there is no problem.
- If the machine or your computer cannot communicate with the target access point, follow the procedure below.
 - ❶ Ensure that the access point is on and then click **Update** in the **Access Points** screen.
 - ❷ If the access point is still not detected, move your machine closer to the access point and remove possible obstructions, then click **Update**.
 - ❸ Ensure that your computer can communicate with the access point.
 - ❹ Unplug the access point from the power outlet and plug it in, then click **Update**.
- Using your access point's utility software, check if your access point is set to the stealth mode, i.e., set not to broadcast its SSID, or is set to reject clients whose SSID is set to ANY. If so, click **Manual Setup** and enter the access point's SSID in **SSID (Windows)/Network Name (SSID)** (Macintosh). For details, refer to "5.1 The Access Points screen is displayed during setup" on page 3.

2.1 The target access point is not detected (continued)

- The wireless channel to be used may be limited depending on wireless network devices installed in the computer. Confirm the wireless channels available for the network device. For details, refer to the manual provided with your computer or your wireless network device. Make sure that the channel set to the access point is valid to communicate with the computer, confirmed above. If not, change the channel set to the access point.
- If MAC address filtering is enabled, we recommend that you register the machine's MAC address to the access point before entering setup. To confirm the MAC address of the machine, refer to "About Network Communication" - "Troubleshooting" in the on-screen manual: **Advanced Guide**.
- If the access point's IP address filtering is enabled, disable it during setup. After setup is complete, turn the IP filtering feature back on.
- If Client-to-Client Blocking is enabled, an access point may be capable of blocking all direct transmission among clients associated to it. If such feature is enabled, disable this feature while using the machine.

2.2 Cannot connect to the target access point

- Refer to "1 Connection checklist" on page 1 and make sure there is no problem.
- Confirm the network name/SSID of the target access point and set the machine to use the identical network name/SSID. If the network name/SSID is different in the machine and the access point, the machine cannot connect to the access point. For details, refer to "5.1 The Access Points screen is displayed during setup" on page 3.



- This machine does not support WPA/WPA2-Enterprise. When you select an access point set to use WPA/WPA2-Enterprise, it is grayed out and cannot be set up.

- Make sure that the machine and the access point can communicate with each other under this setting. When encryption is set to the access point, set up the encryption of the machine to match the settings of the access point. If the WEP/WPA/WPA2 (encryption key) is different in the machine and the access point, the machine cannot communicate with the access point. For details, refer to "3.2 How to set a WEP/WPA/WPA2 key" on page 2.

2.3 Using the machine in a multiple access point setup

Confirm the following the access point to be used can communicate with the machine and the computer.

Windows XP may automatically connect to an unintended access point. Follow the steps below to make your access point the highest priority.

- ❶ Select **Start and Connect To**.
- ❷ Right click **Wireless Network Connection** and select **Properties**.
- ❸ Click **Wireless Networks** tab and confirm that **Use Windows to configure my wireless network settings** is checked.
- ❹ Confirm that the target access point is displayed in the **Preferred networks** list.
If the access point is not set to the top in the list, select and move the access point to the top of the list using the **Move up**.

If multiple networks are available when using Macintosh, select **System Preferences**, select **Network**, select **AirPort** and click **Advanced** (Mac OS X v.10.4.x/v.10.3.9: select **Network Port Configuration**), then change the priority of the network name that you want to use. If the network name is not set to the highest priority, select and move it to the top of the list (the highest priority).

3 How to set a network key/network password

3.1 About Network Key (Windows)/Network Password (Macintosh)

An encryption key used in wireless networks. As using passwords, settings must match among the access point, the machine, and the computer. A WEP key is used in the WEP authentication method, while Passphrase or Pre-Shared Key is used in the WPA/WPA2 authentication method.



- Names of network keys vary depending on your access point or application software.

3.2 How to set a WEP/WPA/WPA2 key

- When using WEP

The key length, key format, the key to use (out of 1 to 4), and the authentication method must match among the access point, the machine, and the computer.

For access points that use automatically generated WEP keys, use the hexadecimal key format for the machine.

If you do not know the access point WEP key, refer to documentation provided with the access point or contact its manufacturer.

Example:

Using 64 bit key length, when the string "canon" is entered, an access point generates the following codes.

- Key 1: C9 42 28 B8 AE
- Key 2: 87 C0 FB 05 6B
- Key 3: 9A 15 FB F6 F3
- Key 4: 62 56 67 58 44

In order to communicate with such an access point, you must configure the machine to use the key generated by the access point by entering it in hexadecimal format.

Normally, select **Auto** for the Authentication. Otherwise, select **Open System** or **Shared Key** according to the setting of the access point.

When entering a **WEP key** in **Network Key** or **Network Password** on the **Access Points** screen, the key number is set to 1 and the Authentication is set to **Auto**. The key length and format are based upon value of the entered key.



- When using AirPort, confirm the settings in **Wireless Security** of **AirPort Admin Utility**.
 - Select **64 bit** if **40 bit WEP** is selected for the **Key Length** in the AirPort Base Station.
 - Select 1 for **Key ID**. Otherwise the computer will not be able to communicate with the machine via the access point.

3.2 How to set a WEP/WPA/WPA2 key (continued)

- When using WPA/WPA2

The authentication method, passphrase, and dynamic encryption type must match on the access point, the machine, and the computer.

Enter the passphrase configured on the access point (a sequence of between 8 and 63 alphanumeric characters, or a 64-character hexadecimal number). If you do not know the passphrase, refer to the manual provided with the access point, or contact its manufacturer. Select either **TKIP (Basic Encryption)** or **AES (Secure Encryption)** for the dynamic encryption method.



- This machine supports WPA-PSK (WPA-Personal) or WPA2-PSK (WPA2-Personal). WPA/WPA2-Enterprise is not supported.

4 Cannot connect to the machine (the machine is not detected)

4.1 The machine is not detected

- Refer to "1 Connection checklist" on page 1 and make sure there is no problem.
- If the access point is configured to use access control, register the IP address or the MAC address of the machine or disable the access control.
- Confirm the network name/SSID of the target access point and set the machine to use the identical network name/SSID. If the network name/SSID is different in the machine and the access point, the machine cannot connect to the access point. For details, refer to "5.1 The Access Points screen is displayed during setup" on page 3.
- Make sure that the machine and the access point can communicate with each other under this setting. When encryption is set to the access point, set up the encryption of the machine to match the settings of the access point. If the WEP/WPA/WPA2 (encryption key) is different in the machine and the access point, the machine cannot communicate with the access point. For details, refer to "3.2 How to set a WEP/WPA/WPA2 key" on page 2.
- The wireless channel to be used may be limited depending on wireless network devices installed in the computer. Confirm the wireless channels available for the network device. For details, refer to the manual provided with your computer or your wireless network device. Make sure that the channel set to the access point is valid to communicate with the computer, confirmed above. If not, change the channel set to the access point.

4.2 No machine is detected after the network settings are changed in Windows

Wait until the IP address is assigned to the computer. You may need to restart your computer. Search for the machine again after confirming a valid IP address is assigned to the computer.

5 The following screen is displayed during setup

5.1 The **Access Points** screen is displayed during setup

The Access Points screen is displayed when:

- No access point is detected.
- Multiple access points are detected.

Select the target access point, then perform necessary operation such as setting of encryption.

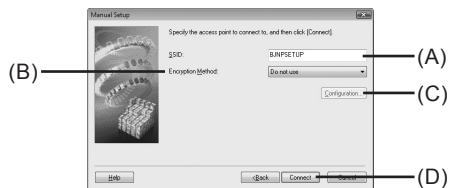
If you want to specify access point manually, click **Manual Setup** in the **Access Points** screen. Enter the settings for the target access point in the **Manual Setup** screen, then click **Connect**. The target access point is searched with the specified settings.

For changing settings of the access point, refer to the manual provided with the access point or contact its manufacturer.



- If you connect to a network that is not protected with security measures, there is a risk of disclosing data such as your personal information to a third party.

Windows



(A) SSID

Enter the SSID set to the access point. The SSID is case sensitive. When using AirPort, enter the network name (SSID) in alphanumeric characters. SSID is also called ESS-ID. For details, refer to the manual provided with the access point or contact its manufacturer.

(B) Encryption Method

- **Do not use**
Select to disable encryption.
- **Use WEP**
Transmission is encrypted using the WEP key you specified.
- **Use WPA/Use WPA2**
Transmission is encrypted using the passphrase (WPA/WPA2 key) you specified. The actual encryption key is renewed automatically at a certain time interval, making the transmission harder to break.



- If a WEP key/Passphrase (WPA/WPA2 key) has not been set, a detailed settings dialog box is displayed. To change the settings, click the **Configuration** in the **Manual Setup** dialog box. For details, refer to “3.1 About Network Key (Windows)/Network Password (Macintosh)” on page 2.

5.1 The **Access Points** screen is displayed during setup (continued)

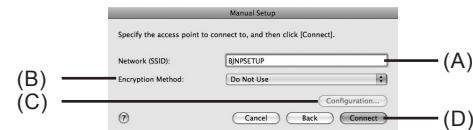
(C) Configuration

The detailed settings dialog box is displayed. The network password (WEP) or the network key (WPA/WPA2) selected in **Encryption Method** can be confirmed and changed.

(D) Connect

Connects to the specified access point.

Macintosh



(A) Network (SSID)

Enter the Network (SSID) set to the access point. The Network (SSID) is case sensitive. When using AirPort, enter the Network (SSID) in alphanumeric characters.

SSID is also called ESS-ID. For details, refer to the manual provided with the access point or contact its manufacturer.

(B) Encryption Method

- **Do not use**
Select to disable encryption
- **Use Password (WEP)**
Transmission is encrypted using the password (WEP key) you specified.
- **Use WPA/Use WPA2**
Transmission is encrypted using the passphrase (WPA/WPA2 key) you specified. The actual encryption key is renewed automatically at a certain time interval, making the transmission harder to break.



- If a password (WEP key)/passphrase (WPA/WPA2 key) has not been set, a detailed settings screen is displayed. To change the settings, click the **Configuration** in the **Manual Setup** dialog. For details, refer to “3.1 About Network Key (Windows)/Network Password (Macintosh)” on page 2.

(C) Configuration

The detailed settings screen is displayed. The password (WEP key) or the passphrase (WPA/WPA2 key) selected in **Encryption Method** can be confirmed and changed.

(D) Connect

Connects to the specified access point.

5.2 The **An access point could not be detected** is displayed during setup

This message is displayed when no access point is detected. Clicking the **OK** displays the **Access Points** screen. For details, refer to “2.1 The target access point is not detected” on page 1.

5.3 The **Printer could not be connected to the specified access point** is displayed during setup

This message is displayed when the machine could not connect to the target access point. Clicking the **OK** displays the **Access Points** screen. For details, refer to "2.2 Cannot connect to the target access point" on page 1.

5.4 The **Another access point with the same SSID exists** is displayed during setup

Cancel the current setup and change the SSID of the access point, then start the setup again.

5.5 The **New port could not be created** is displayed during setup

Uninstall the drivers, then setup the machine again following the procedures in "Install the Software" and onward in the printed manual: **Getting Started**.

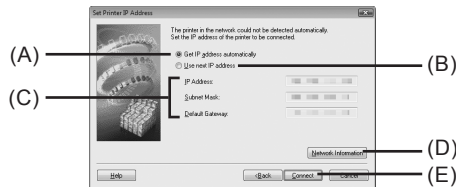
5.6 The **Set Printer IP Address** screen is displayed during setup

The following screen is displayed if no machine was detected on the network. Make sure of the following, and click the **Connect**.

- The network devices are turned on, and the machine and the computer are connected to the network.
- The machine and the computer are connected with the USB cable.
- The IP address to be set for the machine is displayed on the **Set Printer IP Address** screen. If it is different from the address you want to set for the machine, select **Use next IP address** and enter the desired IP address.
(If the machine is turned off, the **Set Printer IP Address** screen does not appear.)

If it still fails, specify the IP address of the machine and click **Connect** to retry the detection of the machine.

Windows



(A) **Get IP address automatically**

Select to use an IP address provided by a DHCP server. This requires that the DHCP function is enabled on the router or access point.

(B) **Use next IP address**

Select to manually specify an IP address, for example if there is no DHCP server functionality in the network environment in which you are using the machine.

5.6 The **Set Printer IP Address** screen is displayed during setup (continued)

(C) **IP Address/Subnet Mask/Default Gateway**

Enter each value to specify a fixed IP address when **Use next IP Address** is selected.

(D) **Network Information**

Displays the **Network Information** dialog box.

Click this button to confirm network settings when your access point or your machine cannot be detected automatically during setup for use over the network. This button is enabled when an access point was not detected or could not be connected.

(E) **Connect**

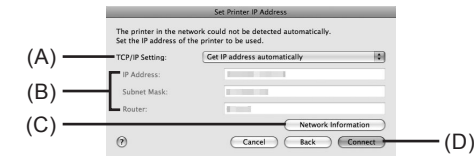
Searches for the machine with the specified settings.

If the machine is still not be detected with a specified IP address, refer to "4.1 The machine is not detected" on page 2.



- Clicking the **Back** displays the **Access Points** dialog box.

Macintosh



(A) **TCP/IP Setting**

Select **Get IP address automatically** or **Use following IP address**. Select **Get IP address automatically** to use an IP address provided by a DHCP server. This requires that the DHCP function is enabled on the router. Select **Use following IP address** to manually specify an IP address, for example if there is no DHCP server functionality in the network environment in which you are using the machine.

(B) **IP Address/Subnet Mask/Router**

Enter each value to specify a fixed IP address when **Use following IP address** is selected.

(C) **Network Information**

Displays the **Network Information** window.

Click this button to confirm network settings when your access point or your machine cannot be detected automatically during setup for use over the network. This button is enabled when an access point was not detected or could not be connected.

(D) **Connect**

Searches for the machine with the specified settings.

If the machine is still not be detected with a specified IP address, refer to "4.1 The machine is not detected" on page 2.



- Clicking the **Back** displays the **Access Points** dialog.

5.7 The **Enter Password** screen is displayed during setup

The **Enter Password** screen is displayed if an administrator password is set to the machine which has already been set up.

Admin Password

Enter the administrator password you have set. The administrator password consists of alphanumeric characters and is no longer than 32 characters. The password is case sensitive. For security, your entry will be displayed by "*" (asterisks) for Windows and "•" (bullets) for Macintosh.

5.8 The **You have connected the printer to an unsecured wireless network** is displayed during setup

Security is not configured on the access point.

The machine can still be used, so continue the setup procedure to complete it.



- If you connect to a network that is not protected with security measures, there is a risk of disclosing data such as your personal information to a third party.

5.9 The **Communication with the Card Slot failed** is displayed during setup

This message is displayed when installation of the network drive of the Card Slot fails during setup.

Wait for a while, then click **Retry**.

Windows

(A) **Retry**

Click to retry the network setup of the Card Slot.

(B) **Skip**

Click to continue installation without the network setup of the Card Slot.

If it fails again after clicking **Retry**, follow the procedure below.

- Make sure that the computer is communicating with the network properly, then try again.
- Disable the Windows Firewall function, or open port 137:139 to allow communication with the machine following the procedure below. For information on other security software, refer to its instruction manual or contact its manufacturer.



- If you disabled the firewall function, disconnect your network from the Internet. To do this, configure your router not to connect to the Internet or WAN.

To disable the Windows Firewall:

- 1 Open the screen for setting Windows Firewall.
 - Windows Vista
Click **Start > Control Panel > Allow a program through Windows Firewall**. User **Account Control** dialog box appears, click **Continue**.
 - Windows XP/2000
Click **Start > Control Panel > Security Center > Windows Firewall**.
- 2 Select the **General** tab, check **Off**, then click **OK**.

5.9 The **Communication with the Card Slot failed** is displayed during setup (continued)

To open port 137:139:

- 1 Open the screen for setting Windows Firewall.
 - Windows Vista
Click **Start > Control Panel > Allow a program through Windows Firewall**. User **Account Control** dialog box appears, click **Continue**.
 - Windows XP/2000
Click **Start > Control Panel > Security Center > Windows Firewall**.
- 2 Select the **Exceptions** tab, and click **Add port**.
- 3 On the **Add a Port** dialog box, input the following information, and click **OK**.
 - Name: Input any name for the port.
 - Port number: Input "137".
 - TCP/UDP: Select **TCP**.
- 4 Repeat steps 2 and 3.
On the **Add a Port** dialog box, input the same information as you did in step 3 except for selecting **UDP** in **TCP/UDP**.
- 5 Use the same procedure to open the other ports (138TCP, 138UDP, 139TCP, and 139UDP).
- 6 Confirm that the port names are added on the **Exceptions** sheet, and click **OK**.

- Change the workgroup name to "WORKGROUP" following the procedure below.

- 1 Open the **System Properties** screen.
 - Windows Vista
Click **Start**, right-click **Computer**, select **Properties**, then click **Change settings** in the **Computer name, domain, and workgroup settings** column. User **Account Control** dialog box appears, click **Continue**.
 - Windows XP/2000
Right-click **My Computer**, then select **Properties**.
- 2 Select the **Computer Name** tab, then click **Change**.
- 3 Change the workgroup name to "WORKGROUP", then click **OK**.



- If the problem is not resolved, click **Skip** to complete the installation without the network setup of the Card Slot. After installation is complete, to mount the Card Slot using the Canon IJ Network Tool, refer to "Using the Card Slot over a Network" in "About Network Communication" in "Appendix" of the on-screen manual: **Advanced Guide**. To mount the Card Slot manually, refer to "Cannot Mount the Card Slot" in "About Network Communication" in "Troubleshooting" of the on-screen manual: **Advanced Guide**.

Macintosh

- Make sure that a memory card is inserted in the Card Slot. If it is not inserted, insert it.



- Depending on the Mac OS version, the authentication screen may appear. If it appears, click **OK**.
- If the problem is not resolved, click **Skip** to complete the setup without the network setup of the Card Slot. To mount the Card Slot manually, refer to "Cannot Mount the Card Slot" in "About Network Communication" in "Troubleshooting" of the on-screen manual: **Advanced Guide**.

5.10 The **The Card Slot is already mapped as Network Drive to this computer is displayed during setup**

The Card Slot has already been mapped as the network drive. The Card Slot is already available. Click **OK** to close the screen, then click **Next** on the Network **Setup of the Card Slot** screen.

5.11 The **Cannot map any more drives, because all the drive letters are assigned is displayed during setup**

Click **Skip** to complete the setup. After software installation is complete, remove any drive letter and try the network setup of the Card Slot again using the Canon IJ Network Tool.

5.12 The **Timeout error** screen is displayed during WPS setup

This screen is displayed when WPS setup is not completed within the specified time (2 minutes for the push button method, and 10 minutes for the PIN code method). Retry following the procedures below.

- When using the push button method
 - 1 Press the **OK** button.
The **Push button method** screen returns.
 - 2 When the access point is ready, press the **OK** button on the machine, then press the WPS button on the access point within two minutes.
- When using the PIN code method
 - 1 Press the **OK** button.
The **WPS setting** screen returns.
 - 2 Select **PIN code method** and press the **OK** button.
A new PIN code appears.
 - 3 Set the new PIN code to the access point or computer.

6 Re-setting the machine

6.1 Re-setting the machine

- Restore the machine to the factory default and set up the machine again. For details, refer to “Restoring the Machine to the Factory Settings” on page 7.
To set up the machine again, follow the procedures in “Install the Software” and onward in the printed manual: **Getting Started**.
- If you have changed the connection method via **Change WLAN/LAN** in the machine's LAN setting, you need to setup the machine again. To do so, follow the procedures in “Install the Software” and onward in the printed manual: **Getting Started**.

7 The admin password set to the machine was forgotten

7.1 The admin password set to the machine was forgotten

Restore the machine setting to factory default.
All settings previously set will be lost after initialization. Set up the machine again to use it. For details, refer to “6.1 Re-setting the machine” on page 6.

8 Changing the port name

8.1 Changing the port name

To change the port name, click **View Setup Results** in the **Setup Completion** dialog box, then click **Set Port Name**.

The **Set Port Name** dialog box is displayed, where you specify the port name. By changing the port name, you can change the name of the machine. When you set up an additional computer to use the machine whose port name you changed, the machine is displayed with the changed port name. When two or more computers are set up, the changed name is displayed. When multiple computers or machines are present, this can be used to change the name to one that is easy to remember.



Port Name

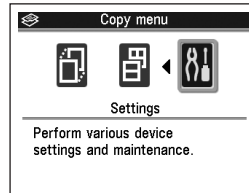
Port names should consist of alphanumeric characters and be no longer than 21 characters, excluding the prefix. The port name includes the fixed prefix “CNBJNP_”, which you do not need to enter.

Restoring the Machine to the Factory Settings

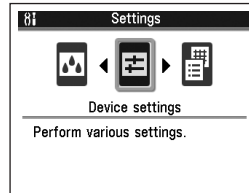
1 Initializing using the machine's Operation Panel

Follow these steps to restore the machine's network settings to factory defaults.

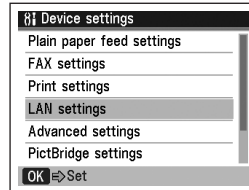
- 1 Press the **Menu** button, use the ◀ or ▶ button to select **Settings**, then press the **OK** button.



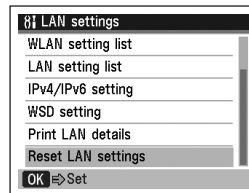
- 2 Select **Device settings** and press the **OK** button.



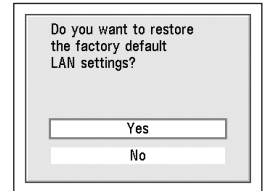
- 3 Use the ▲ or ▼ button to select **LAN settings**, then press the **OK** button.



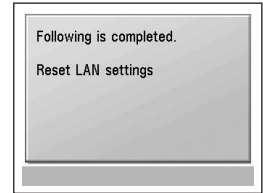
- 4 Select **Reset LAN settings** and press the **OK** button.



- 5 Make sure that **Yes** is selected and press the **OK** button.



- 6 Confirm that the right screen appears. After a while, the **LAN settings** screen returns.



The machine's network settings are restored to factory defaults.

Factory Default

Wireless LAN	Active
SSID	BJNPSETUP
Data encryption	Disable
TCP/IP settings	Obtain an IP address automatically <ul style="list-style-type: none"> • IP address: 192.168.1.123 (default) • Subnet mask: 255.255.255.0 • Default gateway: 0.0.0.0
Wired LAN	Inactive
TCP/IP settings	Obtain an IP address automatically <ul style="list-style-type: none"> • IP address: 192.168.2.123 (default) • Subnet mask: 255.255.255.0 • Default gateway: 0.0.0.0

Specifications

1 MX860 series

General Specifications	
Printing resolution (dpi)	9600 (horizontal)* x 2400 (vertical) * Ink droplets can be placed with a pitch of 1/9600 inch at minimum.
Interface	<p>USB Port: Hi-Speed USB *1</p> <p>Direct Print Port: PictBridge Bluetooth v2.0 (Option) *2 *3 *4 USB flash drive</p> <p>LAN Port: Wired LAN: 100BASE-TX/10BASE-T Wireless LAN: IEEE802.11b/IEEE802.11g *5</p> <p>*1 A computer that complies with Hi-Speed USB standard is required. Since the Hi-Speed USB interface is fully upwardly compatible with USB 1.1, it can be used at USB 1.1. *2 Maximum speed: 1.44 Mbps *3 JPEG/PNG only *4 Bluetooth connection is for printing only. *5 Setup possible through WPS (Wi-Fi Protected Setup) and WCN (Windows Connect Now).</p>
Print width	8 inches /203.2 mm (for Borderless Printing: 8.5 inches/216 mm)
Acoustic noise level	Approx. 43.5 db(A) * When printing in the standard print quality mode on Photo Paper Plus Glossy II .
Operating environment	Temperature: 5 to 35°C (41 to 95°F) Humidity: 10 to 90% RH (no condensation)
Storage environment	Temperature: 0 to 40°C (32 to 104°F) Humidity: 5 to 95% RH (no condensation)
Power supply	AC 100-240V, 50/60 Hz
Power consumption	Printing (Copy): Approx. 21 W Standby (minimum): Approx. 4.1 W * OFF: Approx. 1.6 W * * USB connection to PC
Eternal dimensions	Approx. 19.4 (W) x 17.1 (D) x 8.9 (H) inches Approx. 491 (W) x 437 (D) x 226 (H) mm * With the Paper Support and Paper Output Tray retracted.
Weight	Approx. 11.8 kg (Approx. 26.1 lb) * With the Print Head and ink tanks installed.
Print Head/Ink	Total 2,368 nozzles (PGBK 320 nozzles, Y/DyeBK each 256 nozzles, C/M each 768 nozzles)
ADF capacity	A4 or Letter size: Max. 35 sheets (20 lb / 75 gsm paper), up to 0.20 inches / 5 mm in height Legal size: Max. 30 sheets (20 lb / 75 gsm paper), up to 0.16 inches / 4 mm in height Other sizes: 1 sheet

Copy Specifications	
Multiple copy	Max 99 pages
Intensity adjustment	9 positions, Auto intensity (AE copy)
Reduction/Enlargement	25%-400% (1% unit)

Scan Specifications	
Scanner driver	TWAIN/WIA (Windows Vista and Windows XP only)
Maximum scanning size	Platen Glass: A4/Letter/8.5" x 11.7" (216 x 297 mm) ADF: A4/Letter/8.5" x 14.0" (216 x 356 mm)
Scanning resolution	Optical resolution (horizontal vertical) max: 2400 dpi x 4800 dpi Interpolated resolution max: 19200 dpi x 19200 dpi
Gradation (Input/Output)	Gray: 16 bit/8 bit Color: 48 bit/24 bit (RGB each 16 bit/8 bit)

Network Specifications	
Communication protocol	TCP/IP
Wireless LAN	<p>Supported Standards: IEEE802.11b/IEEE802.11g</p> <p>Transfer speed: IEEE802.11b: 11/5.5/2/1 Mbps IEEE802.11g: 54/48/36/24/18/12/9/6 Mbps</p> <p>Frequency bandwidth *1: 2.412 GHz-2.462 GHz or 2.412 GHz-2.472 GHz</p> <p>Channel *1: 1-11 or 1-13</p> <p>Communication distance: Indoors 50 m *2</p> <p>Security: Encryption by WPA-PSK, WPA2-PSK, or WEP (64/128 bits), and access control by passwords</p> <p>*1 Frequency bandwidth and available channels differ depending on country or region. *2 Effective range varies depending on the installation environment and location.</p>
Wired LAN	<p>Supported Standards: IEEE802.3u (100BASE-TX)/IEEE802.3 (10BASE-T)</p> <p>Transfer speed: 10M/100Mbps (auto switching)</p>

Fax Specifications	
Applicable line	Public Switched Telephone Network (PSTN)
Compatibility	G3 / Super G3 (Mono & Color Fax)
Data compressing system	MH, MR, MMR, JPEG
Modem type	Fax modem
Modem speed	33600 / 31200 / 28800 / 26400 / 24000 / 21600 / 19200 / 16800 / 14400 / 12000 / 9600 / 7200 / 4800 / 2400 bps Automatic fallback
Transmission speed	Black & white: Approx. 3 seconds/page at 33.6 Kbps, ECM-MMR, transmitting from memory (Based on ITU-T No.1 chart for US specifications and Canon FAX Standard chart No.1 for others, both in standard mode or Canon FAX Standard chart No.1, standard mode.) Color: Approx. 1 minute/page at 33.6 Kbps, ECM-JPEG, transmitting from memory (Based on Canon COLOR FAX TEST SHEET.)
Scanning image processing	Halftones: 256 levels of gray Density adjustment: 3 levels
Memory	Transmission/reception: 250 pages (Based on ITU-T No.1 chart for US specifications and Canon FAX Standard chart No.1 for others, both in standard mode.)
Fax resolution	Black & white Standard: 8 pels / mm x 3.85 lines / mm (203 pels / inch x 98 lines / inch) Black & white Fine, Photo: 8 pels / mm x 7.70 lines / mm (203 pels / inch x 196 lines / inch) Black & white Extra fine: 300 x 300 dpi Color: 200 x 200 dpi
Dialing	Automatic dialing One-touch speed dial (5 destinations) Coded speed dial (100 destinations) Group dial (max. 104 destinations) Regular dialing (with Numeric buttons) Automatic redialing Manual redialing (with the Redial/Pause button)
Telephone networking	TTI (Transmit Terminal Identification) ECM transmission Activity report (after every 20 transactions) Sequential broadcasting (max. 106 destinations) Manual redialing (max.10 transactions) Automatic reception Remote reception by telephone (Default ID: 25) DM Preventive Function etc.

Minimum System Requirements		
☞ Conform to the operating system's requirements when higher than those given here.		
	Windows	Macintosh
Operating System	Windows Vista, Vista SP1	Mac OS X v.10.5
Processor	1 GHz processor	Intel processor, PowerPC G5, PowerPC G4
RAM	512 MB	(867 MHz or faster) 512 MB
	Windows XP SP2, SP3	Mac OS X v.10.4
	300 MHz processor	Intel processor, PowerPC G5, PowerPC G4,
	128 MB	PowerPC G3
	Windows 2000 Professional SP4	Mac OS X v.10.3.9
	300 MHz processor	PowerPC G5, PowerPC G4, PowerPC G3
	128 MB	128 MB
Browser	Internet Explorer 6.0 or later	Safari
Hard Disk Space	600 MB Note: For bundled software installation.	700 MB Note: For bundled software installation.
CD-ROM Drive	Required	
Display	XGA 1024 x 768	
	<ul style="list-style-type: none"> Windows: Note: Operation can only be guaranteed on a PC with Windows Vista, XP or 2000 pre-installed. Some functions may not be available with Windows Media Center. To upgrade from Windows XP to Windows Vista, first uninstall software bundled with the Canon inkjet printer. Macintosh: Hard Disk must be formatted as Mac OS Extended (Journaled) or Mac OS Extended. 	

Additional System Requirements for the on-screen manuals		
	Windows	Macintosh
Browser: Easy Guide Viewer	Browser: Help Viewer	
Note: Microsoft Internet Explorer 6.0 or later must be installed. The on-screen manual may not be displayed properly depending on your operating system or Internet Explorer version. We recommend that you keep your system up to date with Windows Update.	Note: The on-screen manual may not be displayed properly depending on your operating system. We recommend that you keep your system up to date.	

Specifications are subject to change without notice.

About Consumables

Consumables (ink tanks / FINE Cartridges) are available for 5 years after production has stopped.

Canon