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**WI-FI INFO**

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# WI-FI CONNECTIVITY GUIDE

## OVERVIEW

### WI-FI ICON ON THE CONTROL PANEL

### CONNECTION OF THE PRINTER IN A WIRELESS (WI-FI) NETWORK

### INSTALLING THE PRINTER IN A WIRELESS NETWORK (WI-FI)

### TROUBLESHOOTING INSTALLATION PROBLEMS IN A WIRELESS (WI-FI) NETWORK

### USING THE WEB SERVER

### CHECKING FIREWALL SETTINGS

### WI-FI SYSTEM SPECIFICATIONS

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## OVERVIEW

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This guide describes the Wi-Fi capabilities of the photo wireless and wifi multifunction printer models. These models feature an internal interface board for wireless connection to a computer. This interface, compliant with the IEEE 802.11 b/g standard, transmits and receives information to/from the printer using radio waves.

Initial installation and any printer configuration are performed using the USB cable which can then be removed so that the printer can be used on the Wi-Fi (wireless) network.

After initial installation, the printer can be used from other computers in the Wi-Fi mode.

**note:** The printer is compatible with devices that comply with the 802.11 b/g standard.

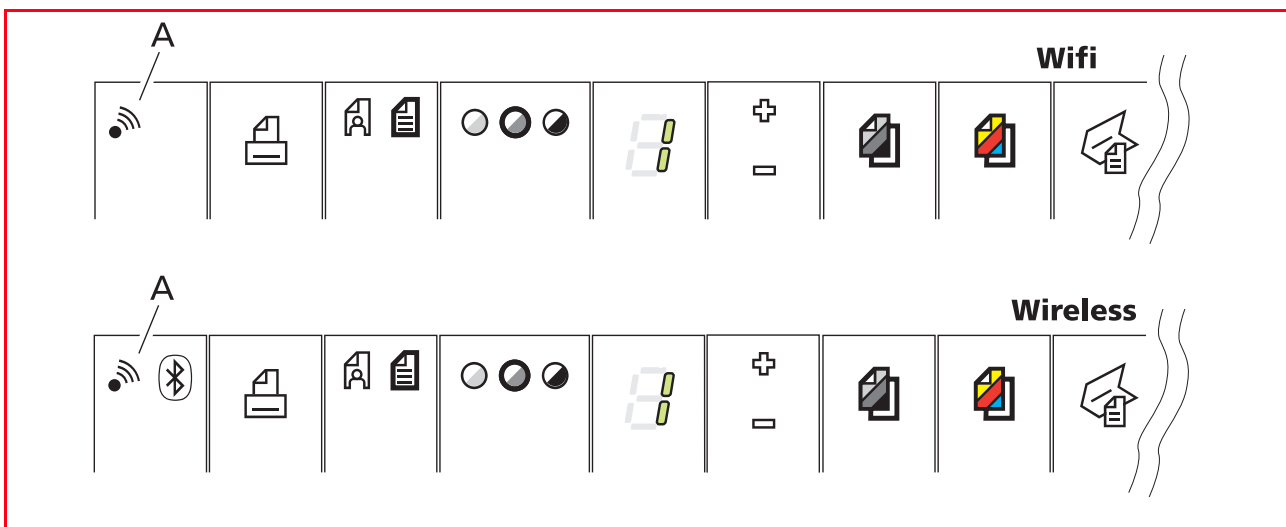
**note:** It is suggested to carry out installation in the Windows 2000 Service Pack 4, Windows XP Service Pack 2, or Macintosh OS X 10.2 or higher environments.

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## WI-FI ICON ON THE CONTROL PANEL

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The front panel features a LED-type readout for checking Wi-Fi connection status.



On the front panel of the printer, when the green LED (A) is:

- Off, the Wi-Fi system is disabled
- On, the Wi-Fi system is enabled
- Flashing, data transfer is underway.

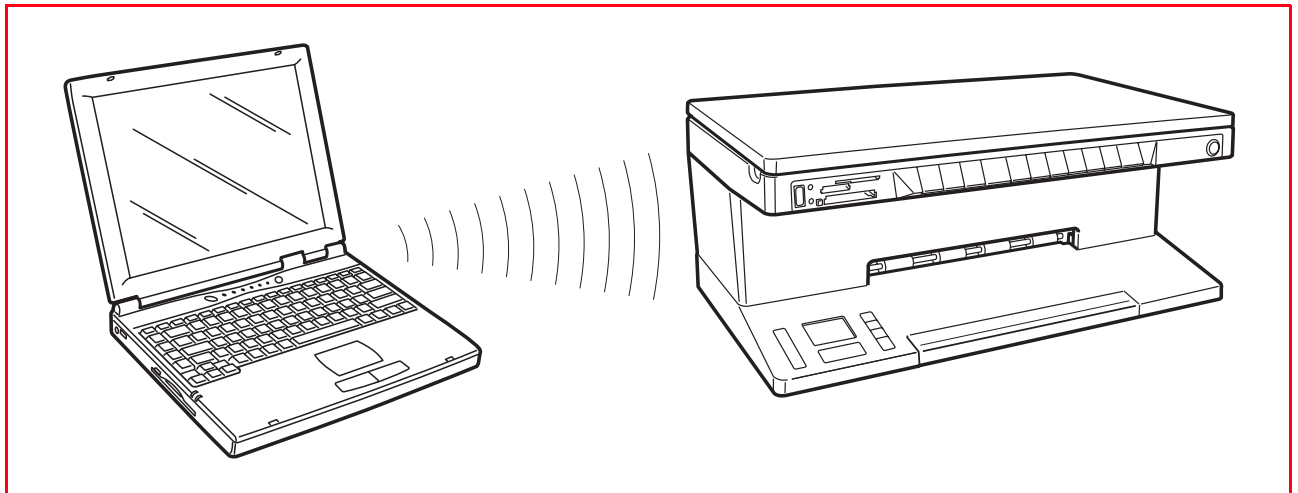
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## CONNECTION OF THE PRINTER IN A WIRELESS (WI-FI) NETWORK

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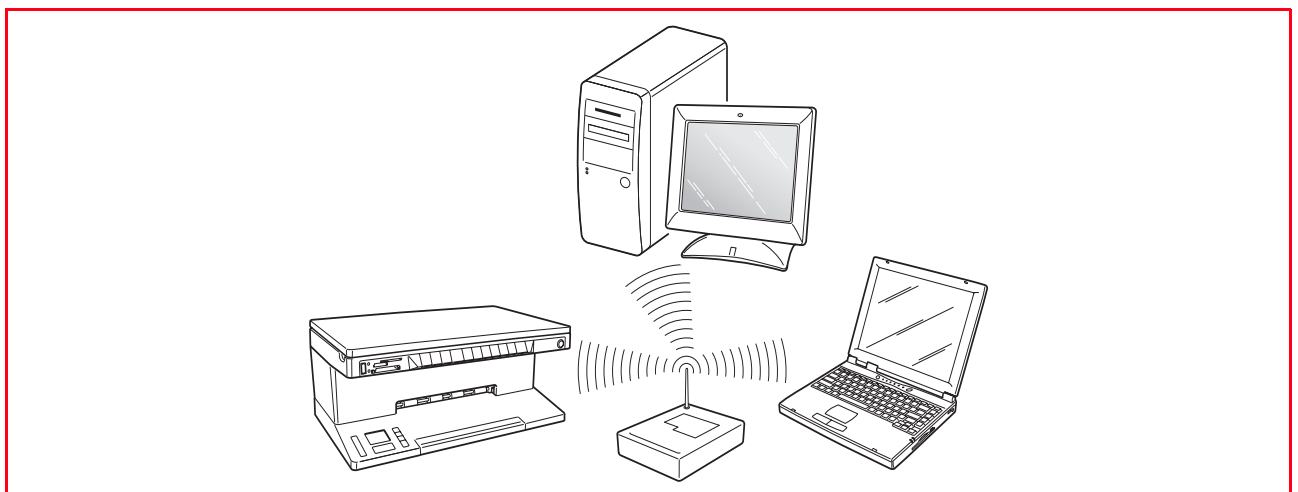
The printer can be connected directly to a computer (Ad-Hoc mode) or via an existing wireless network (Infrastructure mode):

- **Ad-Hoc (Peer-to-Peer) (factory setting):** The printer communicates directly with the computer; to create the connection, both must have a wireless adapter. Check that the computer to be connected to the printer is equipped with a wireless device and that this is active; consult the operator guide provided with the computer. Use of the Ad-Hoc mode is generally restricted to simple, reduced-size wireless networks as there is a considerable downgrading of performance after connecting several network peripherals.



**note:** For the photo wireless model, if wireless and Bluetooth connectivity are available they cannot be used at the same time.

- **Infrastructure (access point):** The printer communicates with the network computers via a wireless access point. The access point acts as hub (signal repeater) and may have a central gateway for connection of the peripherals. Each computer and printer must have a wireless network adapter for connection to the access point.



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## INSTALLING THE PRINTER IN A WIRELESS NETWORK (WI-FI)

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### PREREQUISITES

The following items are required when installing or configuring the printer for the first time:

- A USB cable (not included with the printer)
- A desktop or portable computer with an active wireless device
- In the case of installation in the infrastructure mode, a operational wireless network.

**note:** If the portable or desktop computer is newly purchased, refer to the product User Guide to activate and configure the wireless network settings.

### INSTALLATION

To correctly install the printer in the Wi-Fi network:

- Perform the USB installation
- *Activate the printer's Wi-Fi component*  
To enable wireless data exchange from the computer, use the printer software (Toolbox application) by choosing the Ad-Hoc mode (Peer-to-Peer) or Infrastructure (access point) mode.
- Create a network connection between the computer and printer
- *Perform the Wi-Fi installation*  
To add the printer to the list of available printers.

The USB and Wi-Fi installations are performed by using the same "Installation" CD-ROM that is provided with the printer; upon completion of the installation the cable (USB) and wireless (Wi-Fi) connections can be used.

### USB INSTALLATION FOR WINDOWS

- 1 Turn on the computer and insert the "Installation" CD-ROM in the computer's CD-ROM drive.  
**note:** Connect the USB cable only when instructed to do so.  
**note:** If the first window of the guided procedure is not displayed automatically, proceed to start-up manually: click **Start > Execute > Browse**, select the CD-ROM drive and then click Setup.exe.
- 2 In the initial screen page, select the **Language** required and click **Next**; in the following screen pages, read the information displayed and continue until the following window is shown on the screen:




- 3 Click the **USB** button and follow the instructions displayed, clicking **Next** until reaching the end of the installation.
- 4 A windows is displayed informing you that installation has been completed and instructing you to click the **End** button and then to connect the USB cable.  
**note:** If you require further information during installation, click the **?** button to consult the on-line user documentation.
- 5 Connect the USB cable (not included) to the printer and to the personal computer. Turn on the printer and wait for the automatic recognition in order to complete installation.
- 6 Remove the "Installation" CD-ROM from the CD-ROM drive.
- 7 USB installation has been completed. For instructions on how to use of the printer, click **Start > Programs or All programs > Olivetti** and consult the documentation.

## ACTIVATING THE PRINTER WI-FI COMPONENT

- 1 Connect the USB cable and turn on the printer.
- 2 Open the Toolbox program (**Start > Programs** or **All the programs > Olivetti > Toolbox**).
- 3 Click the **Settings** button and then **Wireless**.
- 4 Tick the **Enable wireless communication** check box and select the required mode:
  - **Ad-Hoc (Peer-to-Peer)**: to connect the computer directly to the printer (factory settings)  
OR
  - **Infrastructure**: to connect the printer to the computer via an existing wireless network, the following characteristics of the network must be known: Name of the network, wireless connection mode and encryption settings (WEP, EAP PSK). For information regarding the Wi-Fi parameters, consult the network administrator.
- 5 Press **Send Settings**.
- 6 Wait for automatic reception of the new settings on the printer (this takes a few minutes). The green light of the Wi-Fi icon on the front panel of the printer switches on.
- 7 At the end, close the **Toolbox** program.
- 8 Turn the printer off and then on again and wait for the green LED on the front panel to come on.

## CREATING THE CONNECTION BETWEEN THE COMPUTER AND THE PRINTER UNDER WINDOWS

- 1 With the right-mouse button, click the **wireless network icon**  on the applications bar (the wireless network icon may vary and is normally represented by radio waves). The "Wireless network connection status" window is displayed.
- 2 Click the **Display wireless network** button.
- 3 With a click, select the network combined with the Olivetti printer (if this is not available, try to update the contents of the window by clicking the **Update network list** button)
- 4 Create the connection by clicking the **Connect** button.
- 5 Wait for the confirmation that the computer and the Olivetti printer have been connected.

## WI-FI INSTALLATION IN AD-HOC MODE (PEER-TO-PEER)

- 1 Disconnect the **USB** cable and insert the "Installation" CD-ROM in the computer's CD-ROM drive. In the initial screen page, select the **Language** and then click **Next** to continue with the installation.  
**note:** If the first window of the guided procedure is not displayed automatically, proceed to start-up manually: click **Start > Execute > Browse**, select the CD-ROM drive and then click Setup.exe.
- 2 Continue with the installation until the screen page with the **Add** and **Options** items is displayed.
- 3 Click **Add** to install the printer for the Wi-Fi connection.  
In the next screen page, select **Wi-Fi** and then click **Next**.
- 4 Follow the instructions of the installation program as far as the printer selection window is concerned. You may be asked to re-boot your computer. Upon completion of the printer re-boot, the Wi-Fi installation routine starts from step 2.
- 5 Select the printer that is highlighted and confirm by clicking **Next**.  
If the printer is not displayed, see "Installation troubleshooting in a wireless network", section "The printer is not recognized during installation".
- 6 Wait for the display of the message indicating that the printer installation is completed and then click **End**.  
The printer has been added to the list of printers available on the system and can now operate in the Wi-Fi environment.

## CONNECTION OF OTHER COMPUTERS TO THE PRINTER IN WI-FI MODE

When the computer is connected to the printer in Wi-Fi mode, a local network has been created. Other computers can be added to this network by simply carrying out Wi-Fi installation, thus the USB connection is no longer required.

However, the following operations are necessary:

- Activate of the Wi-Fi device of the computer to be connected.
- Create the connection with the printer.
- Insert the "Installation" CD-ROM in the CD-ROM drive and carry out installation in the Wi-Fi mode (see the section entitled "Wi-Fi Installation").

## WI-FI INSTALLATION IN INFRASTRUCTURE MODE

For the installation of your printer in the infrastructure mode, there are different configurations available depending on the type of existing network. It is suggested that you consult your network administrator for detailed information.

Provided below is a sample installation of a printer in a wireless network using an access point (or wireless router) configured with an active DHCP that assigns the IP addresses.

**note:** The DHCP is a system that simplifies network management by automatically assigning an IP address to every machine connected to the network.

### Configuring the printer for operation in an infrastructure environment

- 1 Install the printer for USB operation as explained in the section entitled "USB installation for Windows" or "USB installation for Macintosh".
- 2 Make a note of the following wireless access point network (or wireless router) settings:
  - **SSID:** Indicates the name of the wireless connection that the printer must belong to. You must define the exact name of the network so as to be able to add the printer to the group of devices belonging to the existing network.
  - **WEP Key:** The network can use WEP (Wired Equivalent Privacy) encryption to provide a first-level protection against occasional unauthorised user access. A maximum of four WEP keys are available.
  - **WPA-PSK:** EAP/PSK authentication uses WPA encryption and requires a pre-shared key. This mode provides a better and more secure level of protection with respect to the WEP. PSK (Pre-Shared Key) uses passwords or keys that are entered manually to activate the protection.
- 3 Attach the printer's USB cable to the computer and then power on the printer.
- 4 Open the Toolbox program (**Start > Programs or All programs > Olivetti > Toolbox**).
- 5 Click the **Settings** button and then **Wireless**.
- 6 Tick the **Allow wireless communication** selection box and then select the **Infrastructure** mode. Enter the network characteristics that you have noted previously: Network name (SSID), Wireless connection mode and encryption settings (WEP key and WPA-PSK).
- 7 Check the information just entered and then click **Send settings**.
- 8 Wait for the printer to automatically receive its new settings (this requires a few minutes): the green Wi-Fi icon on the control panel comes on to indicate that the data were successfully received.
- 9 Close the **Toolbox**.
- 10 Turn the printer off and then on again. Wait for the green LED on the control panel to come on.

### Wi-Fi installation

- 1 Disconnect the **USB** cable and insert the "Installation" CD-ROM in the drive again. In the start-up screen, select your **Language**, click **Next** and continue with the installation. note: If the installation start-up screen is not automatically displayed after you insert the CD-ROM in the drive, click **Start > Run > Browse**, select the CD-ROM drive and then click on Setup.exe to manually launch the installation.
- 2 Follow the instructions displayed until the screen with the following two options is displayed: **"Add"** and **"Options"**.
- 3 Click **Add** to install the printer for Wi-Fi connection. In the next screen that is displayed, click Wi-Fi and then Next.
- 4 Follow the instructions displayed by the installation program until the printer selection screen is displayed. You may be asked to re-boot your computer. Upon completion of the printer re-boot, the Wi-Fi installation routine starts from step 2.
- 5 Select the printer that is highlighted and click **Next** to confirm your selection. If by any chance the printer is not displayed, refer to "Solving installation errors in a Wi-Fi network", section "The printer is not recognized during installation".
- 6 When the message indicating the conclusion of the printer installation process is displayed, click **End**. The printer is now listed among the available printers and is ready to work in a wireless environment.

## USB INSTALLATION FOR MACINTOSH

- 1 Connect the USB cable (non included) to the printer and to the computer, then turn on the printer.
- 2 Turn on the computer and insert the "Installation" CD-ROM in the CD-ROM drive.
- 3 Double click on the CD-ROM icon on the desktop and then on **Olivetti Series Installer.app**.
- 4 Follow the instructions displayed and perform the installation.
- 5 USB installation is completed.  
**note:** To terminate installation, you may be asked to re-boot your computer..

## WI-FI INSTALLATION FOR MACINTOSH

- 1 Connect the USB cable (non included) to the printer and to the computer, then turn on the printer.
- 2 Run the **Toolbox** program from the desktop or from the list of available programs.
- 3 Click the **Settings** button and then **Wi-Fi Settings** in the next window.
- 4 Click **Wireless Settings** and activate the **Wireless Status** mode.
- 5 Set the wireless mode:
  - **Ad-Hoc (Peer-to-Peer):** the most common factory settings for direct connection of the computer to the printer  
or
  - **Infrastructure** mode: in this case, to connect the printer to the computer via an existing wireless network, the following characteristics of the network must be known: Name of the network, wireless connection mode and encryption settings (WEP).  
For information regarding the Wi-Fi parameters, consult the network administrator.
- 6 Click **Apply** and wait for automatic reception of the new settings on the printer (this takes a few minutes).
- 7 The green light of the Wi-Fi icon on the front panel of the printer comes on.
- 8 Close the **Toolbox** program.

## ADDING THE PRINTER UNDER MACINTOSH

- 1 Set the printer by clicking **System preferences > Print and Fax >**.
- 2 Select the Olivetti printer listed and press the "+" key, search for and select the Olivetti printer to add it to the list of available printers.
- 3 The printer is now listed as an available printer and can operate in the Wi-Fi environment.

## CONNECTION OF OTHER COMPUTERS TO THE PRINTER IN WI-FI MODE (MACINTOSH)

When the computer is connected to the printer in Wi-Fi mode, a local network has been created. Other computers can be added to this network by simply carrying out Wi-Fi installation, thus the USB connection is no longer required.

However, the following operations are necessary:

- Activate of the Wi-Fi device of the computer to be connected.
- Create the connection with the printer.
- Insert the "Installation" CD-ROM in the CD-ROM drive and perform installation in Wi-Fi mode (refer to the section entitled "Wi-Fi Installation").

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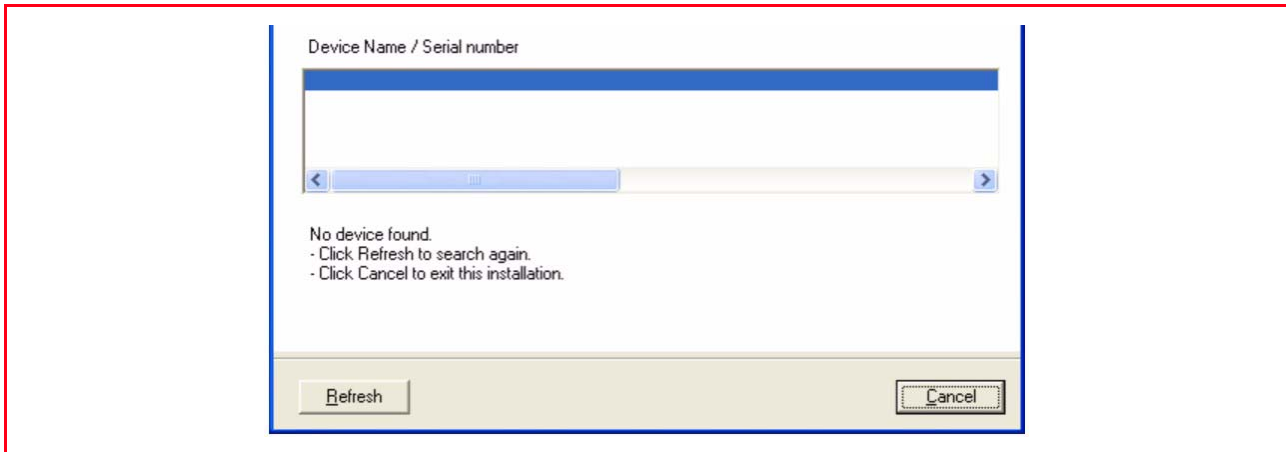
## TROUBLESHOOTING INSTALLATION PROBLEMS IN A WIRELESS (WI-FI) NETWORK

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Listed below are the more frequent problems that may arise.

### THE PRINTER IS NOT RECOGNISED DURING A SPECIFIC INSTALLATION PROCESS

Before starting a Wi-Fi installation, the Wi-Fi system on the computer must be active and the printer and computer must have been connected together as explained in the sections entitled "Activating the printer's Wi-Fi component" and "Creating a connection between computer and printer".



If the printer is not displayed in the selection window during the Wi-Fi installation, refer to the following:

- 1 Click the **Retry** (Update) button. If the printer is displayed as highlighted, continue installation. See the "Wi-Fi installation" chapter from step 5.
- 2 Connection could be prevented by an active firewall.  
To check the presence of a firewall:
  - a Click **Start** > **Control panel** > **Security check of the PC** > **Windows firewalls** to open the window dedicated to the firewall.
  - b Check the status of the firewall:  
If it has not been activated continue from step 3.  
If it has been activated, open the **Exceptions** window and continue with the next step.
  - c Check that the Bonjour program is present in the list of "Programs and services" and that it has been selected (ticked). Click on the "**OK**" button to exit and continue with the suggestion at point 3.
  - d If the Bonjour, program is not present, click **Update program** > **Browse** to select the contents of the hard disk, **C:> Programs > Bonjour > mDNSresponder.exe**.
  - e Click **Open** to add the program and confirm by clicking **OK**.
  - f Bonjour appears in the list Programs and services. Check that the tick sign is present (the path may vary according to the settings selected for the computer).
  - g Click the **OK** button to exit.
  - h Click the **Retry** (Update) button and restart "Wi-Fi installation" from step 5.
- 3 Click the **Cancel** button and turn off the printer.
  - a Turn the printer on again and wait for the green light of the Wi-Fi icon to lights up on the front panel.
  - b Repeat installation from the "Creating a connection between the computer and the printer".

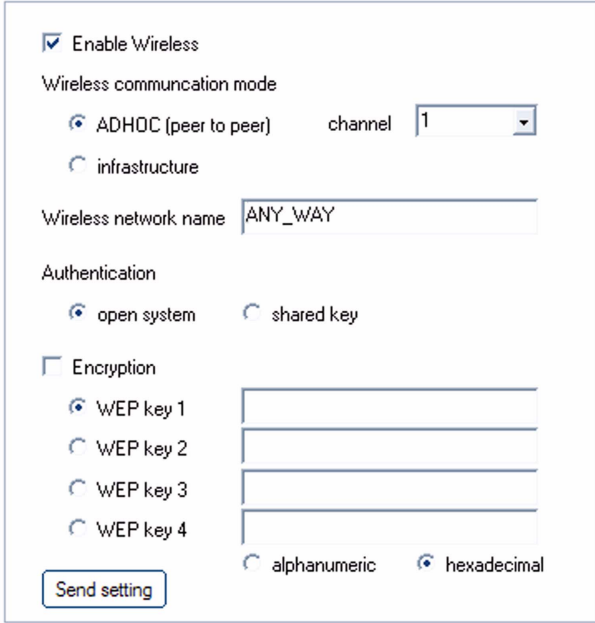
## THE PRINTER IS NOT RECOGNISED DURING INFRASTRUCTURE INSTALLATION

To connect the printer to a computer by means of an existing wireless network, it is necessary to know the following network information: Network name, wireless connection mode and encryption settings (WEP, EAP PSK).

**note:** Contact the network administrator for all information regarding the Wi-Fi parameters.

**note:** Check the firewall settings that could prevent the recognition of the printer. See the section entitled "Firewall settings".

**note:** The Toolbox software with the related Wi-Fi settings is Windows 2000/XP-compatible. Under Macintosh OS X 10.2 or later, the Toolbox software can be run from the system desktop from the listing of available programs or by double clicking the Toolbox document in the folder where the printer software was installed.



Enter the parameters of the network so that the printer can be recognised on the network, making sure that the Wi-Fi network on which the printer is to be installed is operative.

The wireless settings required are: SSID (network name) of the network used, wireless channel (only Ad-Hoc mode) used by the computer; method of communication, WEP key used by the wireless network.

**note:** The desktop computer or portable with wireless network connection support (only for Ad-Hoc mode) must be operational and correctly configured.

Described below are the network parameter definition fields:

- **Enable wireless:** To enable or disable wireless communication; if disabled, the printer can be accessed in any case via the USB connection.
- **Wireless communication mode:** Makes it possible to select the type of connection for the Wi-Fi network, which may be:
  - **Ad-Hoc (Peer-to-Peer) (pre-defined setting):** The printer communicates directly with the computer without passing through an access point or basic station. Each wireless peripheral in an Ad-Hoc network must have a wireless network adapter. The adapter allows each peripheral to communicate with the other network peripherals. Use of Ad-Hoc mode is usually restricted to simple, relatively small wireless networks as performance tends to deteriorate considerably following connection of six peripherals in the network.
  - **Infrastructure (access point):** The printer communicates with the networked computers through an access point. The access point enables wireless networks to connect to wired networks. In the infrastructure mode, all wireless data exchange between networked peripherals passes through the access point. Every peripheral of the wireless network must be equipped with a wireless network adapter.
  - **Channel:** Indicates the path on which digital information travels. By default the channel is automatically selected, however a specific channel can be chosen to improve data reception/transmission in case of interference (Ad-Hoc mode).

- **Wireless network name (SSID):** Indicates the name of the wireless connection to which the printer must belong. The precise name of the network must be declared in order to add the printer to the existing group of network devices.
- **Authentication:** Selecting this mode allows connection to other devices present on the wireless network that require user authentication.
  - **Open system:** When the network devices do not have access protections and the network is therefore open for any type of connection.
  - **Shared key:** When network devices have common network access protection.
  - **EAP PSK (Infrastructure):** EAP means Extensible Authentication Protocol and uses the PSK algorithm. A single-direction authentication protocol, which authenticates the client using a password protected by the PSK algorithm. PSK (Pre-Shared Key) uses manually-entered passwords or keys to permit protection. PSK is designed for easy installation by the user at home or in small offices.
- **Encryption:** This is the type of protection that can be activated on the network. A network with open system authentication does not protect users according to their identity and generally requires entry of the correct SSID.
  - **WEP:** This network could use WEP (Wired Equivalent Privacy) encryption to provide a first level of protection against occasional, indiscrete users. Up to 4 WEP keys are available: **WEP key 1, WEP key 2, WEP key 3, WEP key 4.** The protection keys may be alphanumeric or hexadecimal.
  - **WPA:** In Infrastructure mode with EAP/PSK authentication, WPA encryption is used. This mode provides an improved, safer method of protection compared with WEP.

## DECLARATION OF NETWORK ADDRESSES

After declaring the type of network, you must enter the parameters for recognition of the printer which must comply with the specifications of the TCP/IP network protocol; therefore, network address (IP), subnet mask and gateway.

It is suggested to save or print this Configuration page; the data are important for any subsequent setting. However, it is always possible to display this page opening the Toolbox program, selecting the "Wireless" network settings or from the menu **Start > Programs > Any\_way Wi-Fi > Configuration.**

The screenshot displays a network configuration window with the following fields and values:

Field	Value
Network	<input checked="" type="checkbox"/> manual IP configuration
host name	QAW00A0C579E033
IP	192 . 168 . 30 . 100
subnet mask	255 . 255 . 255 . 0
default gateway	192 . 168 . 30 . 1
idle timeout	60 [seconds]
primary WINS server	192 . 168 . 30 . 2
secondary WINS server	192 . 168 . 30 . 3
<b>MDNS</b>	
service name	ANY_WAY (00A0C579E033)
domain name	QAW00A0C579E033.local

At the bottom of the window, there is a button labeled "Send setting".

Described below are the network address definition fields:

- **Manual IP configuration:** Manual configuration is necessary when a DHCP server that assigns a network address automatically is not available. In this case, manual configuration, which consists in entering the available network addresses (IP, subnet mask, gateway), is necessary.
- **Host name:** Is the name of the printer in the network.
- **IP, subnet mask, default gateway:** The univocal names of the network parameters are those required by TCP/IP (Transmission Control Protocol/Internet Protocol standard, a communication protocol that defines the method of data transmission to network peripherals). Virtually, all modern

operating systems offer TCP/IP assistance and most large networks use the TCP/IP protocol for network traffic. Indicate the IP address, subnet mask and the pre-defined Gateway maintaining the same class of addresses as the Wireless router or access Point.

- **Idle timeout [seconds]:** Indicates the time during which the peripheral may wait to receive data on the network (this depends on the characteristics of the network, in particular speed).
- **Primary and secondary WINS Server:** Indicate the characteristics of any WINS type servers present in the network for management of peripherals.
- **MDNS:** Multicast Domain Name Server. Is used with local and Ad-Hoc networks that do not use central DNS servers. To execute service names with this method, an alternative DNS called mDNS is used. Using the mDNS, the computer identifies and uses any printer connected to the LAN. It can also work with any other peripheral enabled for Ethernet displayed on the network; in this case, declare the name of the service and the name of the domain.  
**note:** The MDNS method is particularly useful for connection in a Macintosh environment. Refer to the OS X 10.2 or higher system for further information.

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## USING THE WEB SERVER

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Permits simple, trouble-free management of the printer (set as network peripheral). This function is available only if the Wireless connection (Wi-Fi mode) has been activated from the Toolbox program. Using the internet (WEB) browser, it is possible to check status, to configure network parameters or access printer functions.

When using the printer network mode, care must be taken when entering network keys in order to use it correctly.

The settable network keys are of the WEP type (Wired Equivalent Privacy) or WPA.

WPA stands for Wi-Fi Protected Access. This method provides interoperable protection based on standards to promote a considerable increase the level of data protection and access control for a wireless LAN. To improve data encryption, WPA uses TKIP (Temporal Key Integrity Protocol). For stricter user authentication, WPA implements EAP/PSK (Extensible Authentication Protocol).

**note:** WPA supports two basic solutions: Enterprise and Home/ SOHO. In the Enterprise environment with IT resources, the WPA access is used together with an authentication server for management and control of a centralized access. In a Home/SOHO environment, WPA is executed in a special home mode called PSK (Pre-Shared Key) which uses manually-entered passwords or keys for protection. PSK is designed for simple installation by the user at home or in a small office.

**note:** Toolbox software with Wi-Fi settings is compatible with the Windows 2000/XP, Macintosh OS X 10.2 version or higher environment.

### ACCESSING THE WEB SERVER MODE

Follow the procedure described below to access the Web Server mode:

- 1 From the system browser, enter the IP address of the printer in the address field of the browser (if this has been set manually) or from **Start > Programs > Any\_way Wi-Fi > Configuration**.

**note:** The default password is "**admin123**".

**note:** In the Macintosh OS X 10.2 or higher environment, it can be run from **Toolbox > Settings > Settings Wi-Fi**.

The **Login Page** of "Web Server" mode is displayed.

In the navigation menu of the **Login Page**, enter the **Password**.

- 2 The Web page of the printer can be used to:
  - Check printer status
  - Display network statistics
  - Set network configuration
  - Scan pages on the network.

- 3 Click **Apply** to confirm the settings.

**note:** The connection may be lost when modifying the wireless network settings of the Web Server. If the connection is lost, it may be necessary to use new settings for reconnection. If the Server Web loses the network connection, it may be necessary to restore the pre-defined values and reinstall the software.

**note:** The "Server Web" mode uses the TCP/IP protocol for data exchange with the printer and must therefore be correctly installed and enabled on the computer.

## ENTERING WEP KEYS

To enter WEP keys in the Web Server mode, proceed as follows:

- 1 Click the **Networking/Wireless** tab.
- 2 Go to the Encryption section where you can add the Static coding parameters (WEP).
- 3 Click **Activated**.
- 4 Enter the WEP keys used by the network. Select whether the keys entered are Alphanumeric or Hexadecimal. Select the key to be used for encryption of the data transmitted.
- 5 Click **Apply** to save the keys in the printer.  
**note:** If you have forgotten the WEP keys, display these via the access point. If the access point does not display the keys, reconfigure the network and assign new keys.

## ENTERING WPA KEYS

The WPA (Wi-Fi Protected Access) function affords interoperable protection based on standards to promote a considerable increase the level of data protection and access control for a wireless LAN. To increase data encryption, WPA uses TKIP (Temporal Key Integrity Protocol). For stricter user authentication, WPA implements EAP (Extensible Authentication Protocol). If WPA is used on the network, PSK (Pre-Shared Key) authentication is used.

In the Web Server mode proceed as follows:

- 1 Click the **Networking** tab.
- 2 In the network Settings page, click the **Wireless** tab.
- 3 Go to the Authentication section and click **Advanced configuration**. The wireless communication mode page is displayed.
- 4 Select **Infrastructure** and click **Next**. A page with the name of the wireless network is displayed.
- 5 Select a network name (SSID) from the list of networks identified or enter the name of a new wireless network. Click **Next**. The Wireless authentication page is displayed.
- 6 Select **EAP/PSK**. Enter a password Phrase (with a length of between 8 and 63 characters including spaces) that will be used by the software to generate a pre-shared key.  
**note:** All network peripherals must use the same phrase as password.
- 7 Carry out the instructions displayed to configure the printer for the type of authentication and coding selected. On completion, click **Next**. The Configuration preview page is displayed.
- 8 Check that the information is correct, click **Apply** to save the keys in the printer.

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## CHECKING FIREWALL SETTINGS

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With the UDP protocol, data is exchanged on port 5353 by the mDNSResponder.exe application. During printer installation in the Wi-Fi mode (after activating the printer's Wi-Fi component via USB), the mDNS service attempts to connect to the printer for detection. If connection is inhibited by a firewall, printer detection will not be possible.

Some software firewalls (with the exception of the firewall provided by Microsoft in Windows XP) warn the user that the mDNS service is attempting to use the network (Wi-Fi, in this case), thus grant the possibility of authorising or not the connection, even permanently.

Instead, the firewall of Windows XP does not cause inconvenience since the mDNS service automatically enables the firewall during installation, thus adding an entry in the list of exceptions. It is therefore not necessary to authorize the connection except in particular cases where the firewall's configuration has been changed.

Connection to the mDNSResponder.exe service can therefore be opened in one of two ways:

- By implementing a rule for program authorization regardless of which port was used for data exchange with the printer.
- Enabling all connections made (from any application or service) through the specific port/protocol pair.

### WINDOWS XP ENVIRONMENT

For firewall management, refer to the Windows XP Help or:

- 1** Click **Start > Control panel > PC security check > Windows firewalls**: A firewall-dedicated window opens.
- 2** Check the status of firewall:  
If the firewall was not activated, proceed with the other checks.  
If the firewall was activated, open the Exceptions window and continue with the next step.
- 3** Make sure that the "Bonjour" program is included in the "Programs and services" listing and that it is selected (ticked).
- 4** If the tick mark is not present, click **Add program > Browse** to select the hard disk drive contents, **C:> Programs> Bonjour > mDNSresponder.exe**
- 5** Click **Open** to add the program and confirm by clicking **OK**.  
Bonjour is included in the Programs and services listing. Make sure that the tick mark is present (the path may vary depending on the computer's settings).
- 6** Click **OK** to exit.
- 7** Click the **Retry** (Update) button and continue with step 5 of section "Wi-Fi installation".

### Wi-Fi System Specifications

Wireless interface	<ul style="list-style-type: none"><li>• The wireless connection system is integrated in the printer and uses the IEEE 802.11 b/g protocol: data are transmitted using high frequency radio waves.</li><li>• The wireless system includes a network adapter and the radio wave system. The USB connection and Wi-Fi connection can be used at the same time.</li></ul>
Transmission Speed	<ul style="list-style-type: none"><li>• 54 Mbps on 2.4 GHz band, if available.</li></ul>
Available functions	<ul style="list-style-type: none"><li>• All the functions can be used by the connection via cable and via the wireless connection (only reading of the memory card is not available).</li></ul>
Web server	<ul style="list-style-type: none"><li>• For simple management of the printer, use the web browser through which it is possible to check status, define and modify setting parameters.</li></ul>
Communication mode	<ul style="list-style-type: none"><li>• <b>Peer-to-Peer:</b> The integrated wireless network connection can connect directly with a PC equipped with wireless functions for an ad hoc mode connection.</li><li>• The peer-to-peer method of connection is used for small/medium web connections as the increase of the number of network connections reduces the quality and range of the connection. This type of connection is set by default.</li><li>• <b>Infrastructure:</b> The printer is connected with a network of PCs via an access point connected to a central hub or gateway that connects all the wireless peripherals or with an Ethernet connection.</li><li>• Installation and configuration of the printer in Infrastructure mode requires connection with an USB cable, which may be removed once the parameters for network connection in wireless mode have been set.</li></ul>
Security Settings	<ul style="list-style-type: none"><li>• SSID (Service Set Identifier).</li><li>• WEP (Wired Equivalent Privacy) key. Via Web Server mode it is possible to install WPA (Wi-Fi Protected Access) keys in PSK (Pre Shared Key) mode Home/SOHO. <b>note:</b> To enter the network protection keys, the EWS must be accessed before installing the software via the USB connection.</li></ul>

