BIXOLON®

Network Manual

BGT-100P/102P

mPOS Thermal Printer
Rev. 1.02

http://www.bixolon.com

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1. Specifications

(1) WLAN USB Adapter

BIXOLON printers require WLAN USB adapter to use the wireless LAN function.
WLAN USB Adapter for BIXOLON printers should be available from BIXOLON.
USB Adapter from market not BIXOLON is not guaranteed to be working properly with BIXOLON printers.

(2) Ethernet(LAN) / WLAN Protocol

Layer	Protocol
Network Layers	ARP, IP, ICMP
Transport Layers	TCP, UDP
Application Layers	DHCP, DNS Raw Print HTTP

(3) WLAN Security

- WEP
- WPA/WPA2 (TKIP/AES-CCMP/TKIP+AES) PSK
- EAP(PEAP, FAST, LEAP, TTLS)

2. How to Connect

Both Ethernet and WLAN can be configured through the printer's Ethernet interface. Likewise, both Ethernet and WLAN can also be configured though the printer's WLAN interface. When you want to change the Ethernet or WLAN of the printer, the network settings of the host (PC, PDA, etc) and Ethernet or WLAN of the printer must configured properly configured so that communication can be established.

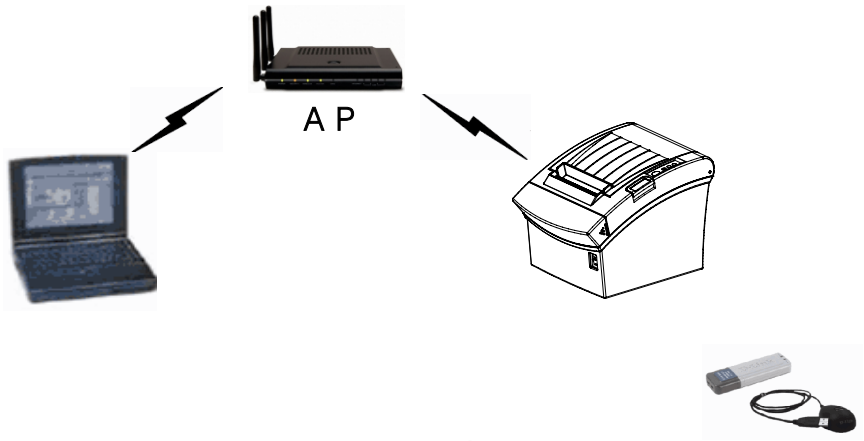
(1) Connecting Printer

1) Ethernet(LAN)

Connect the LAN cable to the printer
A direct cable or cross cable can be connected to the Hub or Host for use.

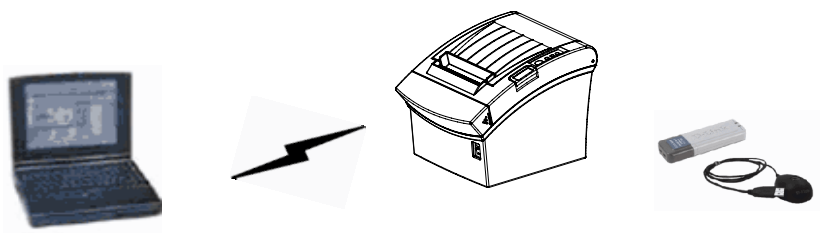
2) WLAN

Connect to the AP (Access Point) configured in Infrastructure mode in order to connect to the LAN/wireless network.



Infrastructure Mode

In order to configure the network between wireless terminals, connect to the terminal in Ad-hoc Mode.



Ad-hoc Mode

2-1 Initial Wireless LAN Connection (Windows 2000)

Windows 2000 does not support wireless network setting.
When you use Windows 2000, you need to set the utility option as below after installing utility program related to the wireless LAN driver that you use.

- Network mode : Ad-hoc
- SSID : BIXOLON_adhoc
- IP address : 192.168.1.2
- Subneet Mask : 255.255.255.0
- Authentication(Encription) : Open(None)

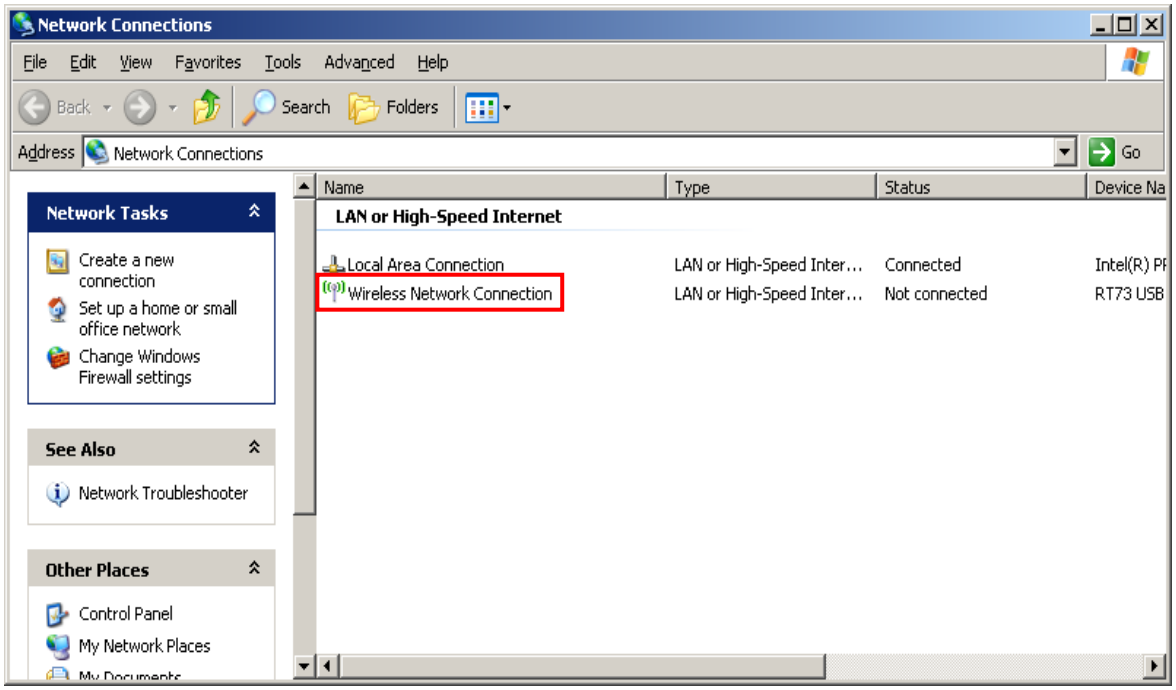
2-2 Initial Wireless LAN Connection (Windows XP)

When wireless utility program is installed, you have to set the wireless control values via the program, otherwise you have to terminate the program in order to do proper setting after following the steps “Control Panel>>Administrative tools>> Services>>Wireless Zero Configuration>>Start”.

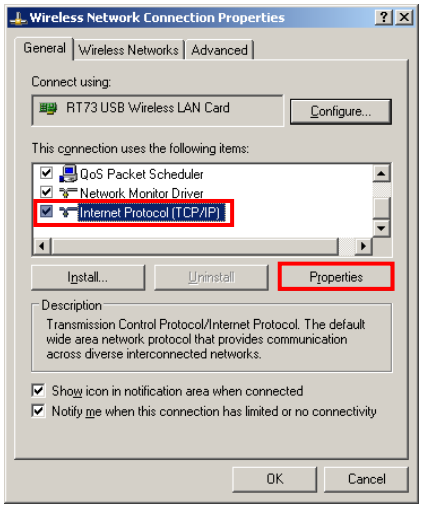
1) Right click on the 

icon, and select Properties.

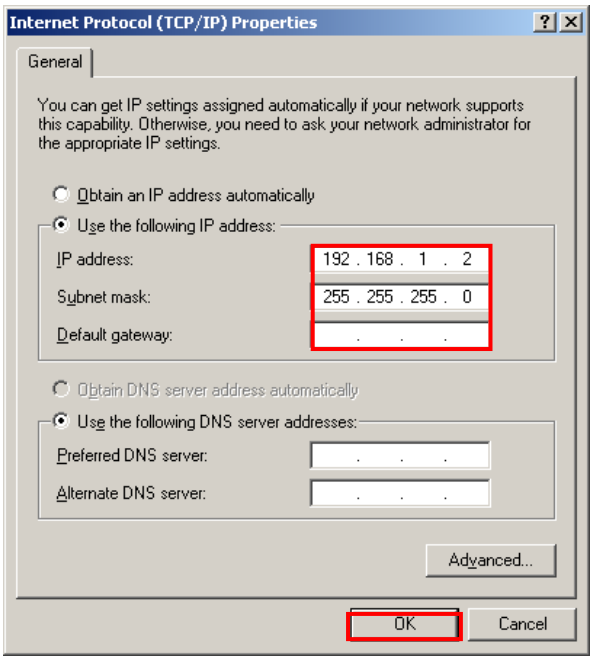
2) Select and right click on the Wireless Network Connection, and then select Properties.



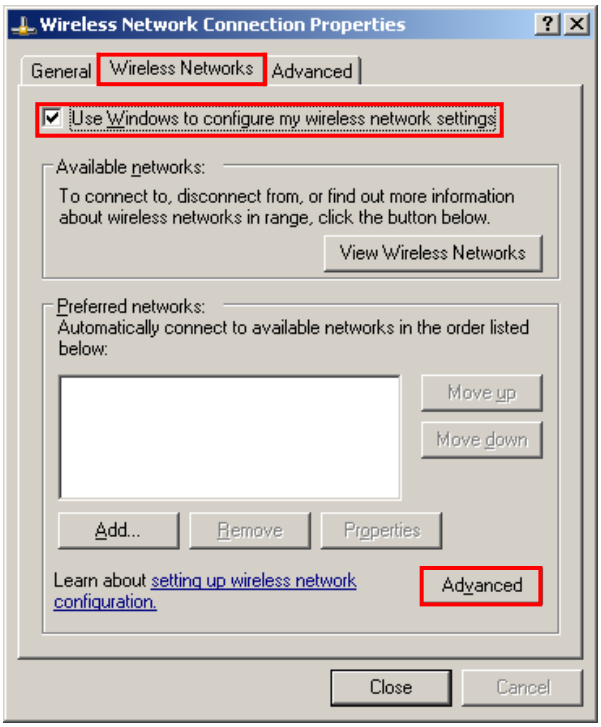
3) Select Internet Protocol (TCP/IP), and then click “Properties”.



4) Set the IP settings as shown below, and then click “OK”.

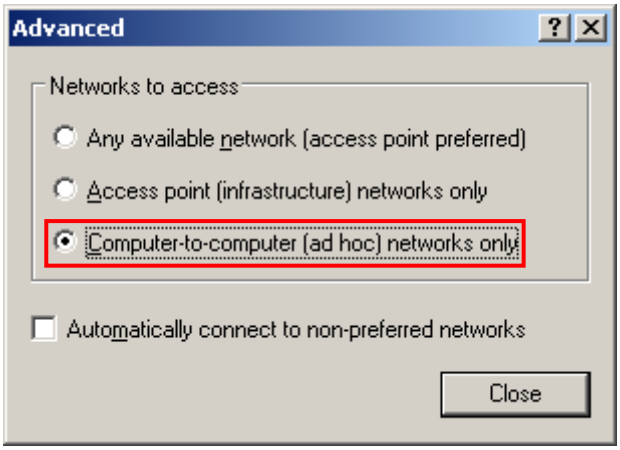


5) Select the Wireless LAN tab, and then select “Use Windows to configure my wireless network settings.”

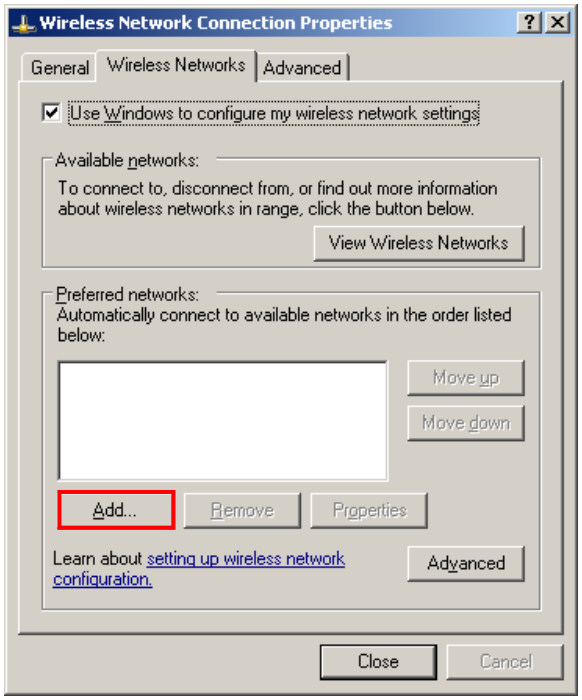


Click the “Advanced” button.

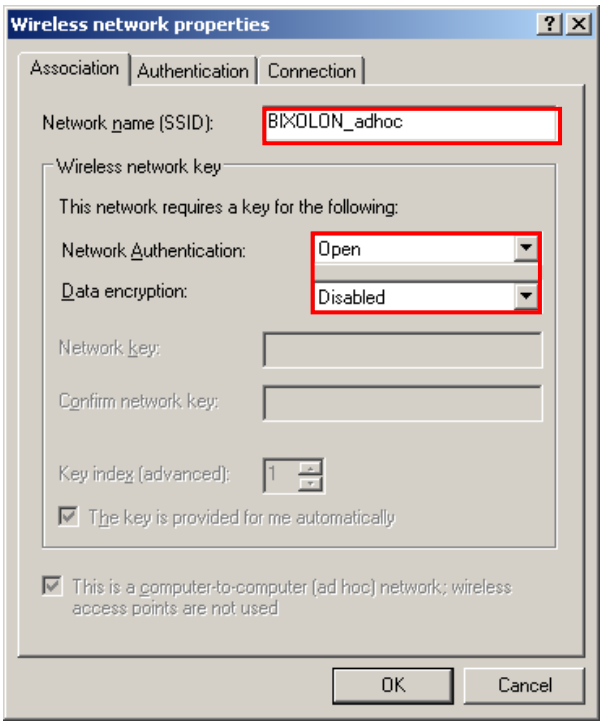
6) Select “Computer-to-computer (ad hoc) network only.”



7) Click the “Add” button.

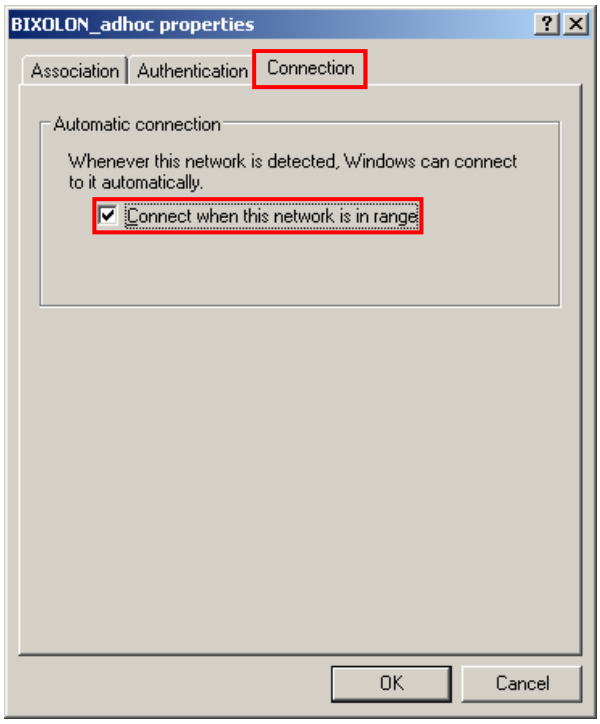


8) Enter “BIXOLON_adhoc” as the Network name (SSID).
Network Authentication: Select Open
Data Encryption: Select Disabled

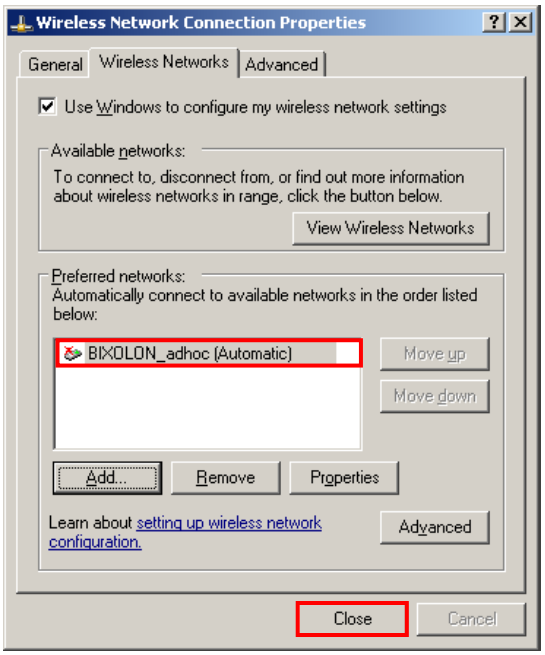


Click the “OK” button.

9) Click the “Connect” tab and check “Connect when this network is in range.”



10) Check whether the settings are updated as shown below, and then click “Close”

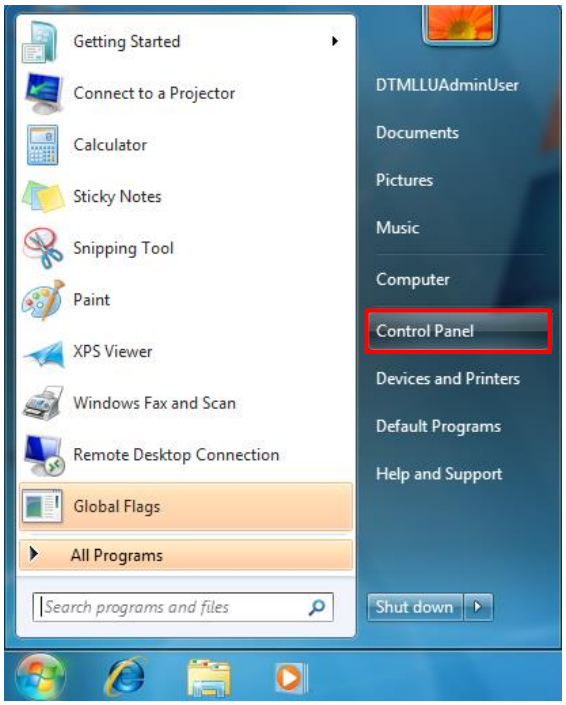


When the printer is set to the default value (Adhoc mode, SSID: BIXOLON_adhoc), it will automatically connect.

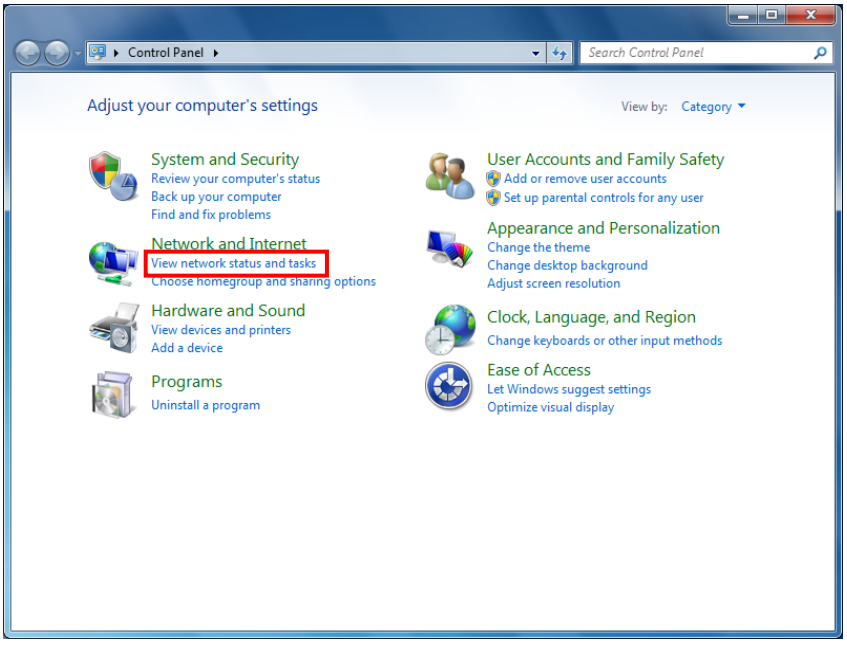
2-3 Initial Wireless LAN Connection (Windows VISTA, Windows 7, 8, 10)

When wireless utility program is installed, you have to set the wireless control values via the program, otherwise you have to terminate the program in order to do proper setting after following the steps “Control Panel>>Administrative tools>>Services>>Wireless Zero Configuration>>Start”.

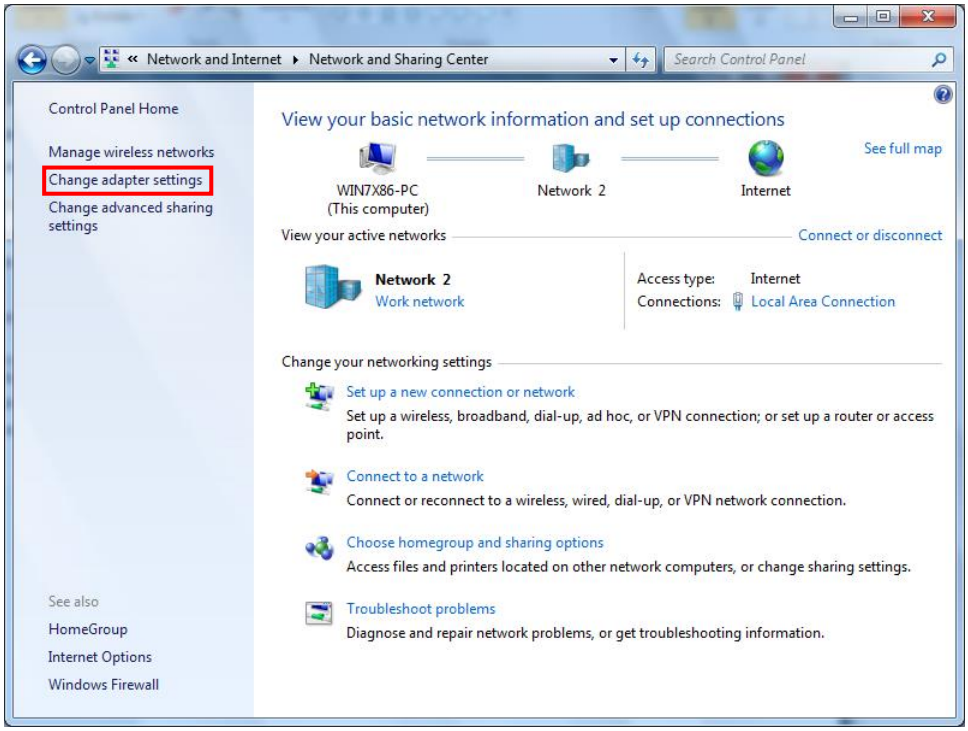
1) Click the “Start>>Control Panel”.



2) Click the “View network status and tasks”.

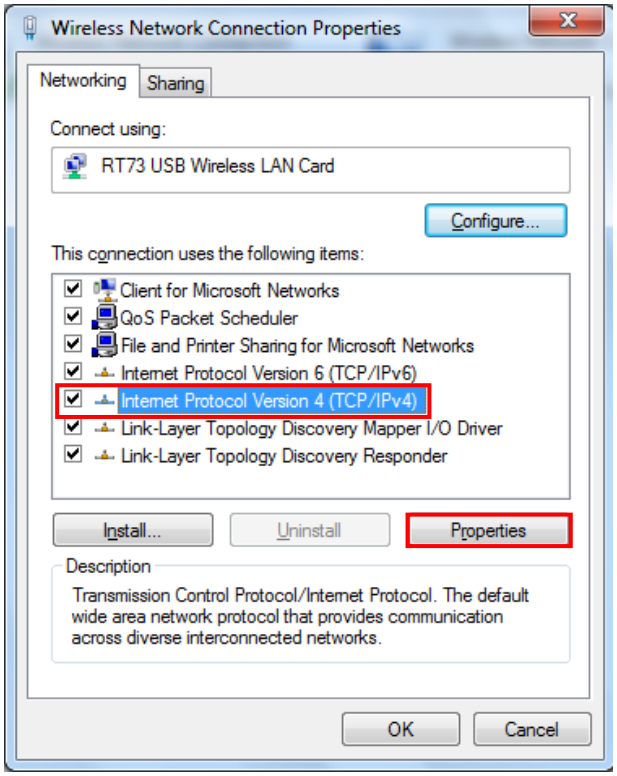


3) Click the “Change adapter settings”.

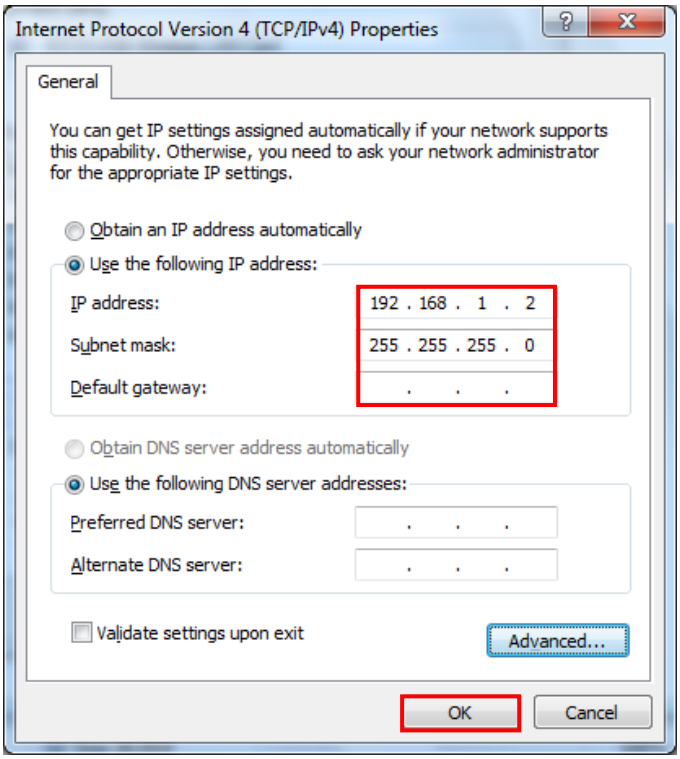


Click the “wireless network adaptor’s Properties”.

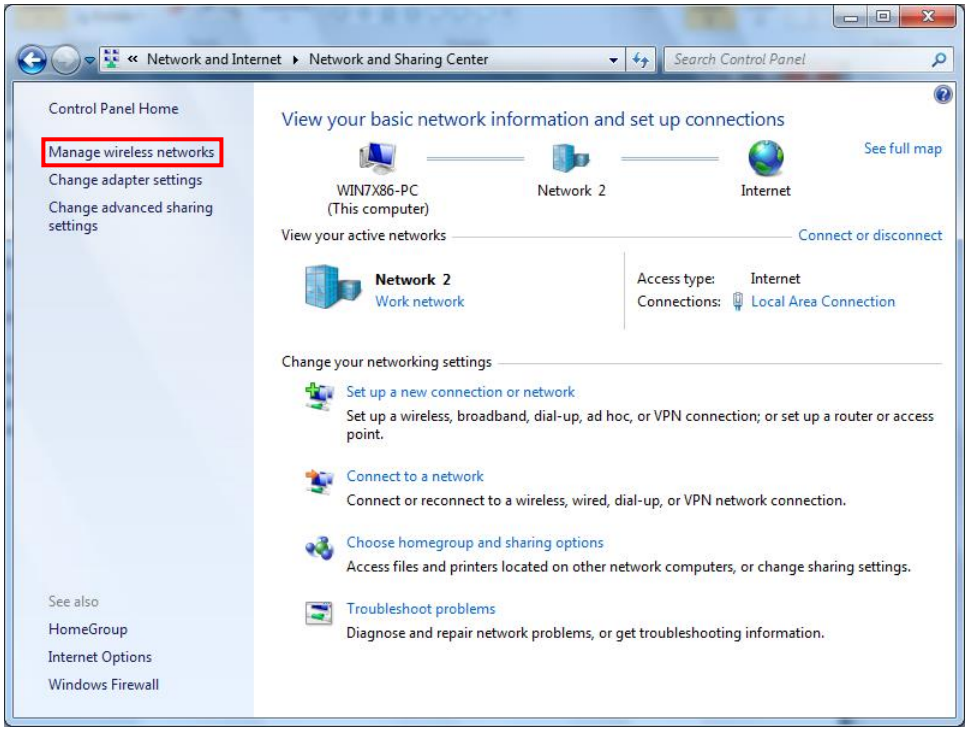
4) Select “Internet Protocol Version 4(TCP/IPv4)”, and then click “Properties”.



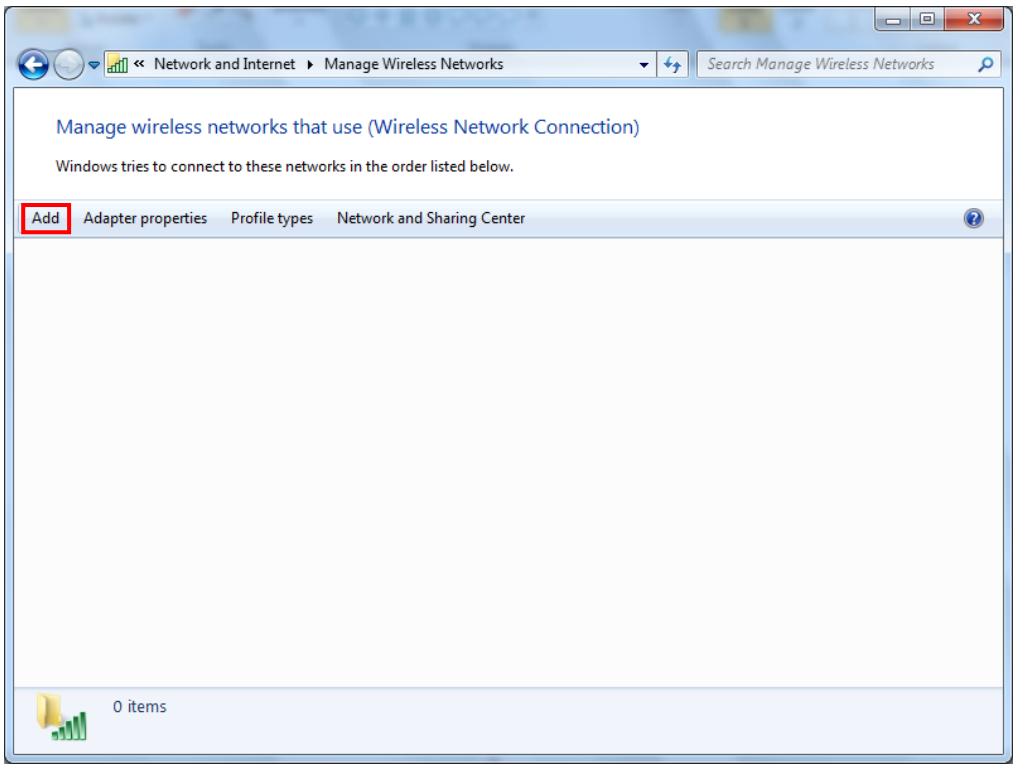
5) Set the IP settings as shown below, and then click “OK”.



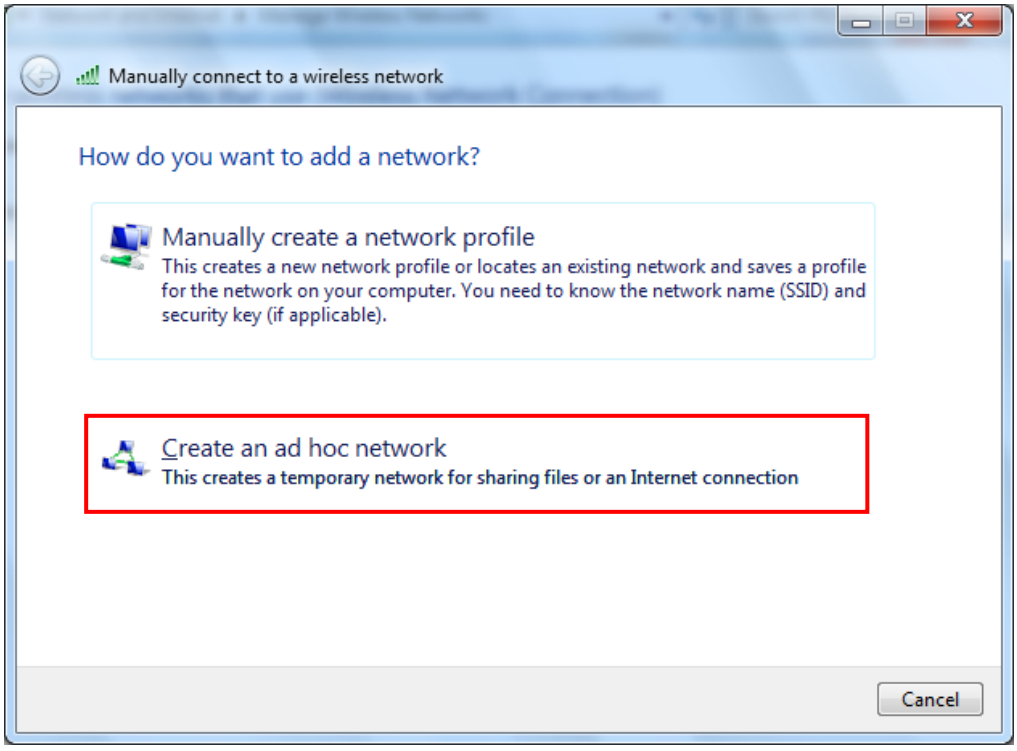
6) Click the “Manage wireless networks”.



7) Click the “Add”.

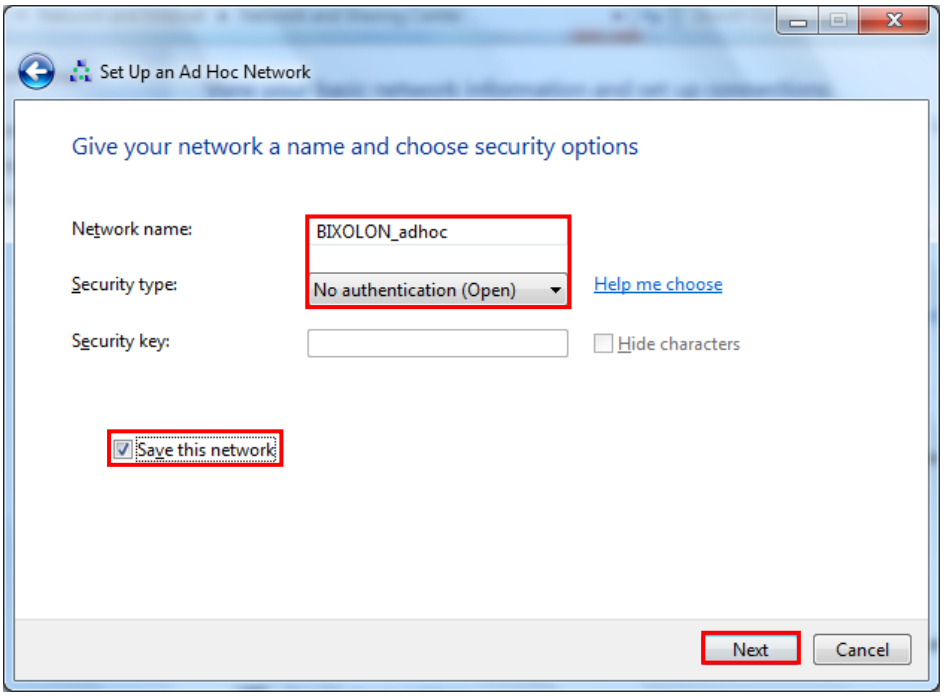


8) Click the “Create an ad hoc network”.

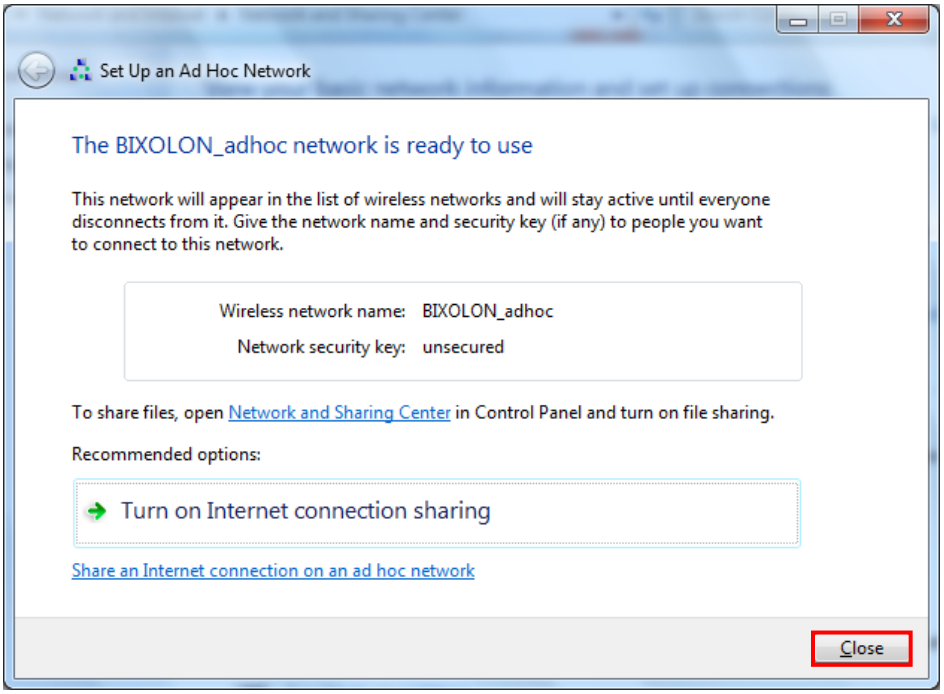


9) Click the “Next”.

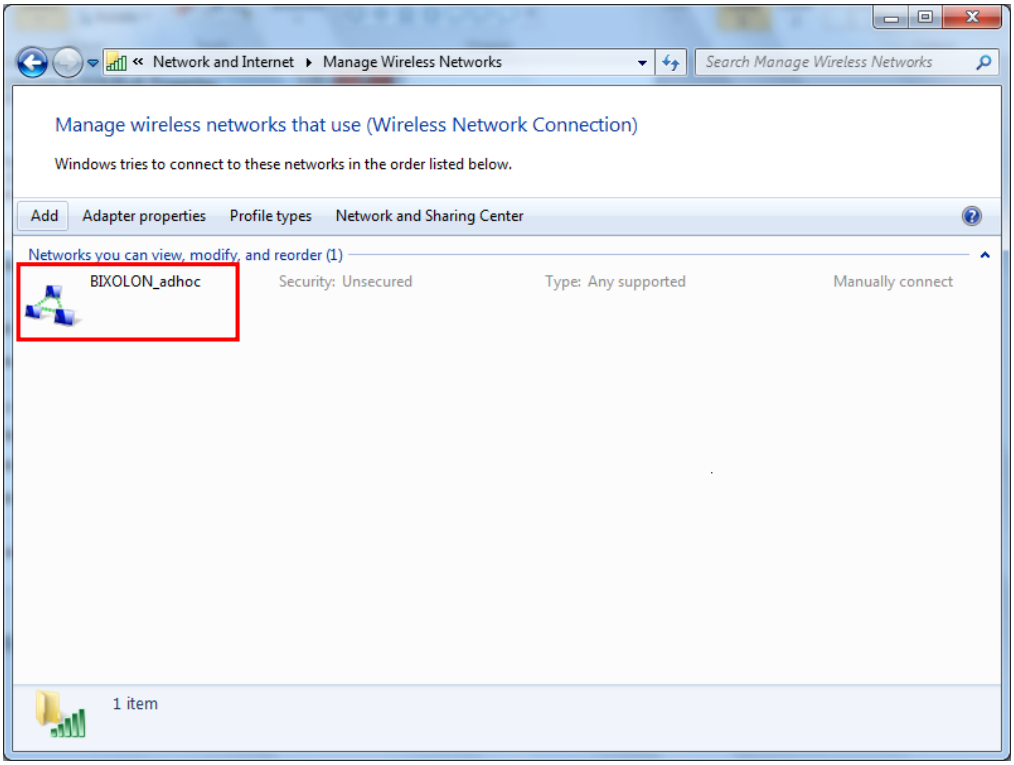
10) “Network name” = BIXOLON_adhoc,
“Security type” = Open,
“Save this network” check, and then click the “Next”.



11) Click the “Close”.



12) After completing configuration, Bixolon_adhoc network will be created.



When the printer is set to the default value (Adhoc mode, SSID: BIXOLON_adhoc), it will automatically connect.

3. Configuration

LAN Setting Values

Classification	Item	Remarks	Input Range
Home		LAN setting status display	
Network	Inactivity Time	TCP connection hold time	0~3600 integer(Sec)
	IP Assignment Method	IP assignment method	DHCP/Manual
	IP Address	Printer IP	IP Address
	Subnet Mask	Subnet mask	IP Address
	Gateway	Default Gateway	IP Address
	DNS	Domain name server IP	IP Address

WLAN Setting Values

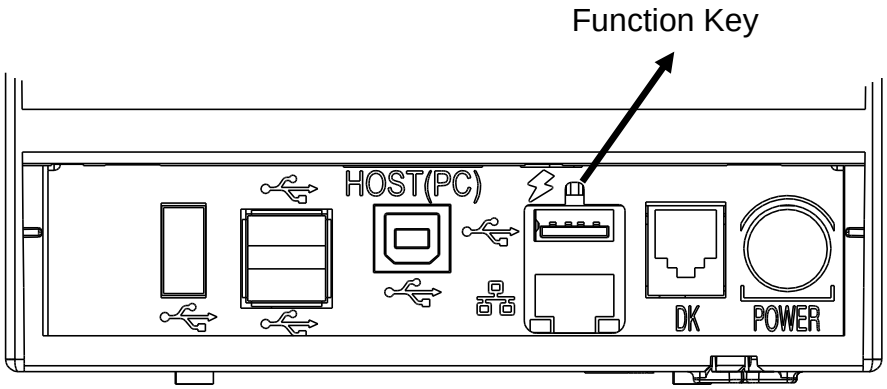
Classification	Item	Remarks	Input Range
Home		WLAN setting status display	
Network	Network Mode	Wireless LAN operating mode	Infrastructure/Adhoc
	Adhoc Channel	Channel when creating Adhoc network	1~14
	SSID	ID of the AP to connect	1~32 letters
	Inactivity Time	TCP connection hold time	0~3600 integer
	IP Assignment Method	IP Assignment Method	DHCP/Manual
	IP Address	Printer IP	IP Address
	Subnet Mask	Subnet mask	IP Address
	Gateway	Default Gateway	IP Address
	DNS	Domain name server IP	IP Address
Authentication	Authentication	Wireless LAN authentication method	open, shared, wpa1/2-psk, wpa1/2
	Cryptograph	Wireless LAN encryption method	none,WEP64/128,TKIP,AES
	EAP Mode	Authentication method	none,PEAP,TLS,LEAP,FAST
	WEP Key	Key for WEP encryption method	WEP64 (5 Ascii, 10 Hex) WEP128 (13 Ascii, 26 Hex)
	PSK Key	Key for PSK encryption method	1~64 letters
	Authentication ID	ID for EAP Authentication	1~32 letters
	Authentication PW	Password for EAP Authentication	1~32 letters

4. Network Status Check

Provides network (WLAN, Ethernet, Bluetooth) Information.

- Method1) Push the below “Function Key” button
- Method2) Open the Printer Cover >> Push the Feed Button >> Close the Printer Cover
  >> Release the Feed Button

*) It prints network information and controllable device list connected to USB port



[WLAN Configuration]
- MAC Addr
- Network
- Auth
- Encrypt
- Essid
- Wlan_DHCP
- IP_Addr
- Netmask
- Gateway
- Port

[Ethernet Configuration]
- MAC Addr
- ETH_DHCP
- IP_Addr
- Netmask
- Gateway
- Port

[Bluetooth Configuration]
- Device Name
- Firmware Version
- AUTH & ENCRY
- Connection Mode
- Auto Reconnect
- Serial Number
- PIN Code
- MAC Addr

[Active USB Devices]

5. Troubleshooting

When printing doesn't work
Check network setting

When using Ethernet

- IP Address
  Check whether the IP Address band of the printer rand the AP (or wireless terminals) are the same. The first three digits of the four digit value in the IP Address must be the same.
- Subnet Mask
  Check whether the subnet mask of the printer matches with the one in AP (or wireless terminal).
- Port
  Check whether the port configured in the printer and the host (PC, PDA) are the same.

When using WLAN
Check the wireless network setting of the AP and the printer.
(Refer to Configuration for checking/changing the printer settings)

- SSID
  Check whether the SSID of the printer matches with the one in AP (or wireless terminal)
- 802.11 mode
  Check whether the Protocol of the WLAN USB Adapter matches with the one in AP (or wireless terminal)
- Network Mode
  Check the network mode of the printer.
  Network mode must be set to "Infrastructure" to connect to AP and "Ad-hoc" to connect between wireless terminals.
- IP Address
  Check the band of the IP Address.
  Check whether the band of the printer and the AP (or wireless terminals) are the same.
  The first three digits of the four digit value of the IP address must be the same.
- Subnet Mask
  Check whether the subnet mask of the printer matches the one in AP (or wireless terminal).

- Port
  Check whether the port configured in the printer and the host (PC, PDA) are the same.
- Authentication / Encryption
  Check the authentication/encryption setting status.
  Check whether the settings of the printer and the AP (wireless terminals) are the same.

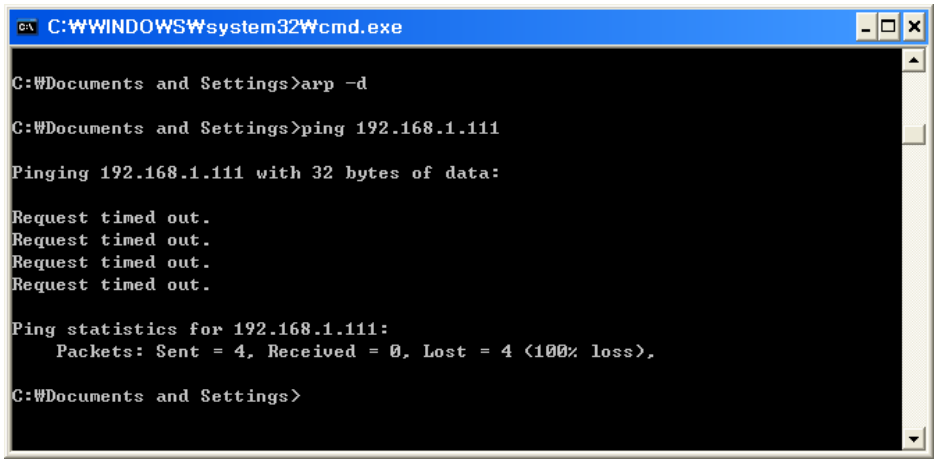
PING Check

Checking IP collision

- When entering IP address manually without using DHCP, you must check whether the corresponding IP address is used by other equipment. The printer may not work normally when there is a collision in the IP address.
- When the printer is turned off, carry out the Ping Test to the printer IP.

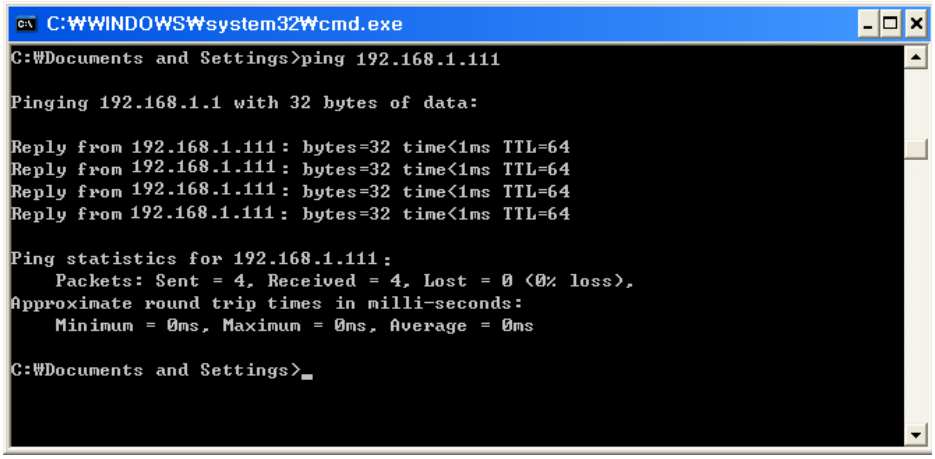
Ping TEST

- Turn off the printer.
- Select “Run” from the Windows Start menu, and then enter “cmd”.
- Enter “ARP –d” and delete ARP table.
- Enter “ping {printer IP}”.
- ARP –d, ping {IP address}



When you see “Request timed out.” as shown below, it means that there is no collision. The corresponding IP can be used.

On the other hand, if there is a reply as shown below, then the corresponding IP is used by another network terminal and it cannot be used for the printer IP.



Check Cable

When using Ethernet

- In order to check whether the problem is due to the LAN cable, connect the cable connected to the printer to other terminals or the PC to confirm whether its operation is normal.

When using WLAN

- It is recommended to use the USB extended cable provided by BIXOLON.
- Connect the USB extended cable and WLAN dongle to other terminals.