BIXOLON®

User's Manual

Ethernet Interface

Rev. 5.00

SRP-270
SRP-275
SRP-280
SRP-350
SRP-350plus
SRP-370 / 372
SRP-770 / 770II
SLP-T400

http://www.bixolon.com

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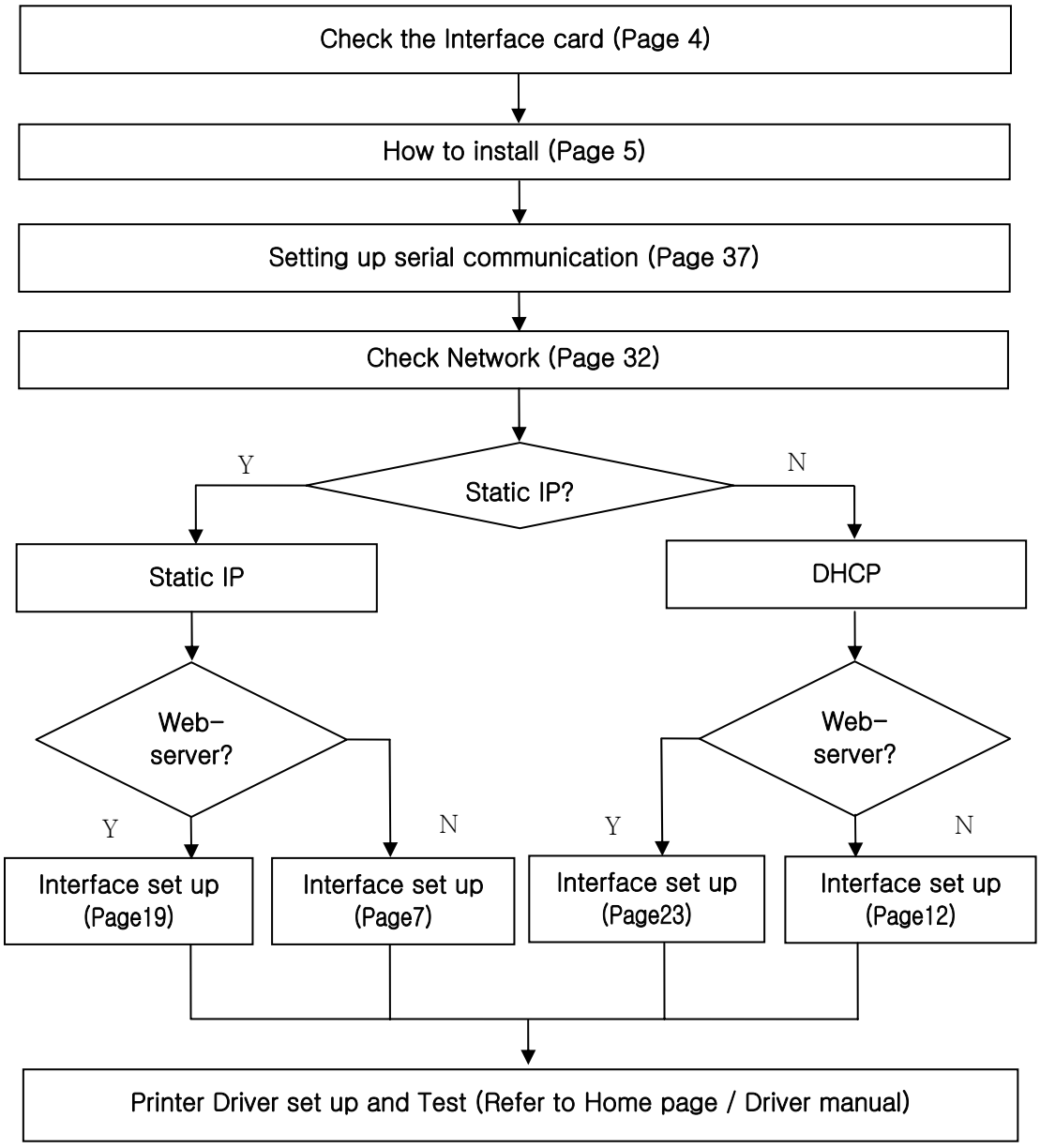
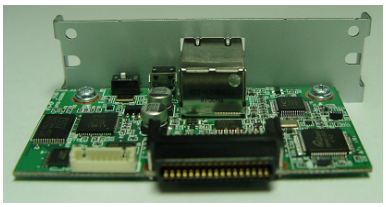
1. Interface setting Guiding



2. Manual Information

The purpose of this manual is to provide information on the operation and usage instructions of the Ethernet Interface for the BIXOLON Printers.

3. Interface card and available printer

Printer	Interface Card	Hardware version	Picture
SRP-270 SRP-280 SRP-350	IFA-E TYPE	V5.x.x	
SRP-350Plus SRP-370 SRP-372	IFA-E TYPE	V5.x.x	
SRP-275	IFC-E TYPE	V5.x.x	
SRP-350 SRP-350Plus	IFA-EP TYPE	V1.x.x	
SRP-770 SLP-T400	IFA-EO TYPE	V3.x.x	
SRP-770II	ON Board	-	Printer Integrated

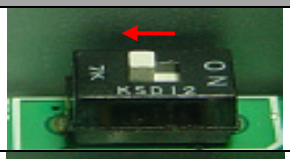
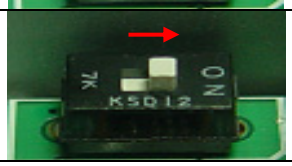
4. How to install

1) Check the interface version

[Note]
- Each version uses its own Configuration Tool.

2) Turn of the printer and insert the interface card.

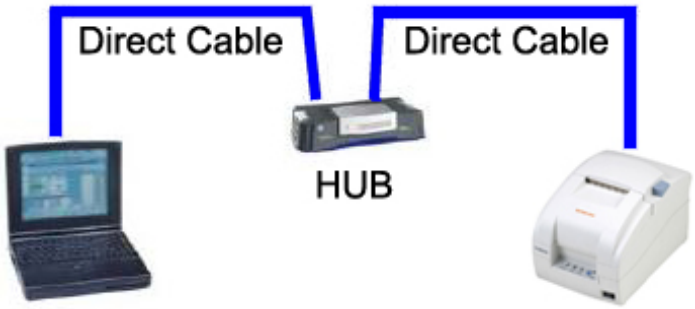
[Note]
IFA-EP supports SRP-350 and SRP-350Plus. When a user installs IFA-EP on printer, user can select a model by using dip-switch of IFA-EP.

Interface Card	Printer	Picture
IFA-EP TYPE	SRP-350	
	SRP-350Plus	

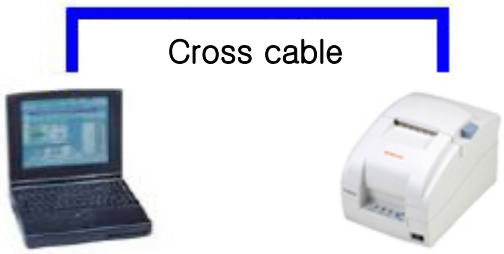
3) Set the baud rate (Serial speed)
(Refer to [Appendix 3])

4) Connect LAN cable to the interface card and turn on the printer.

(1) Use **direct cable** to connect to HUB (Switch).



(2) Use **cross cable** to connect to LAN card of computer.



[Note]
You can use IFA/C-E TYPE (after V5.0.0) or IFA-EP TYPE regardless of cable type.

5. Specifications

5-1. Hardware version

Hardware version is marked on the label on the interface card bracket.
IFA-E TYPE (V3.X.X) doesn't have Function key.

Interface Card	Picture
IFC-E TYPE	
IFA-E TYPE	
IFA-EP TYPE	

[Note]

- The DIP switch on the interface board should always be OFF.

5-2. Configuration Tool

BIXOLON provides 2 types of network and serial communication set up utilities as a below;

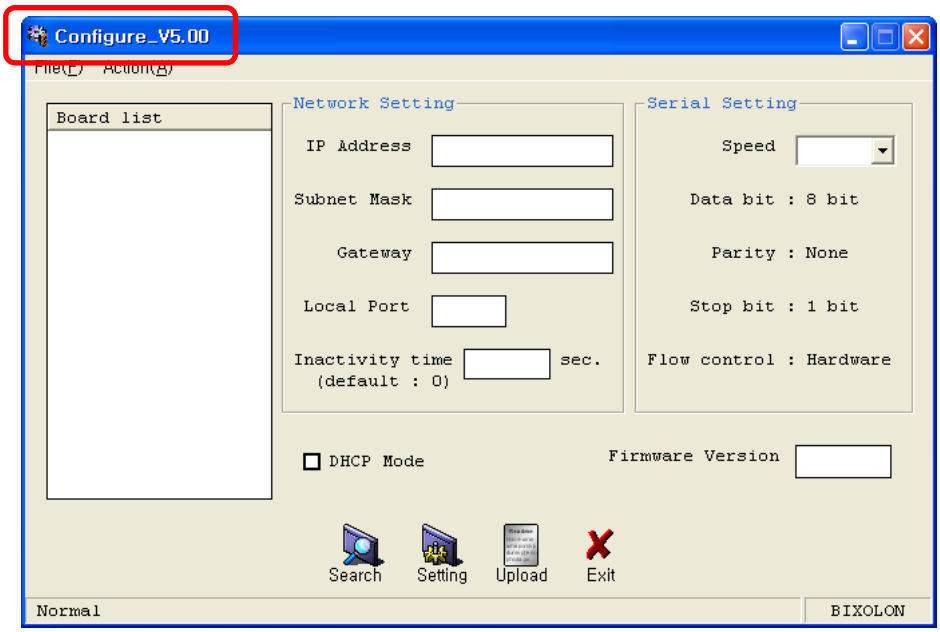
- Configure_Vx.x.x.exe
- Web Server

6. Configuration Tool

6-1. Static IP interface set up

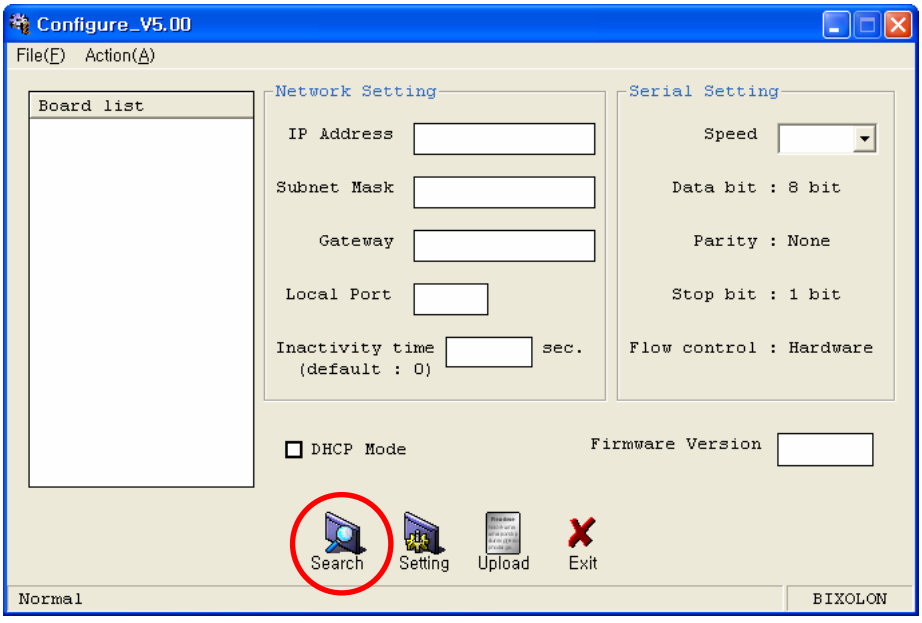
1) Turn on the printer.

2) Execute **Configure Tool**.



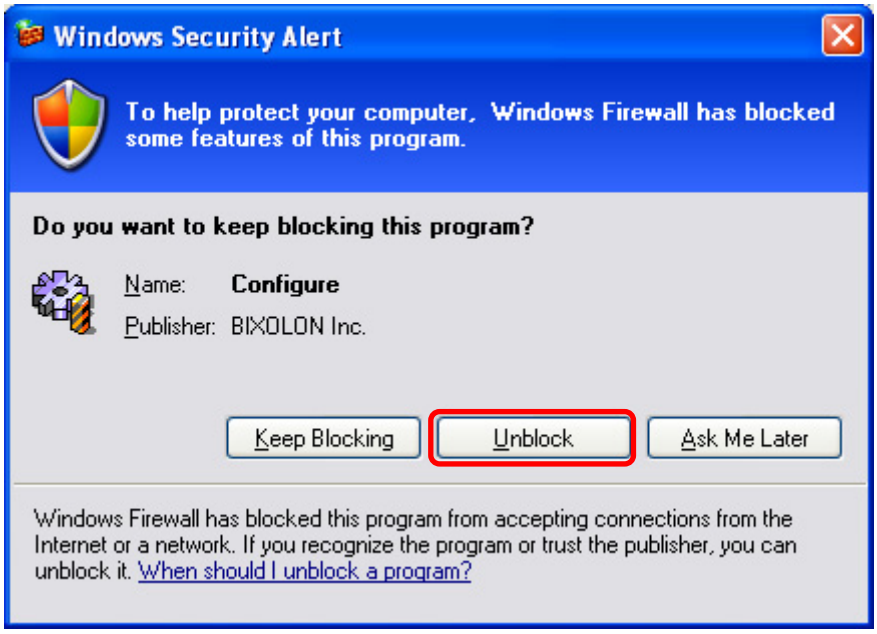
[Note]
- Use proper Configuration Tool dependent on hardware version

3) Click **Search**.

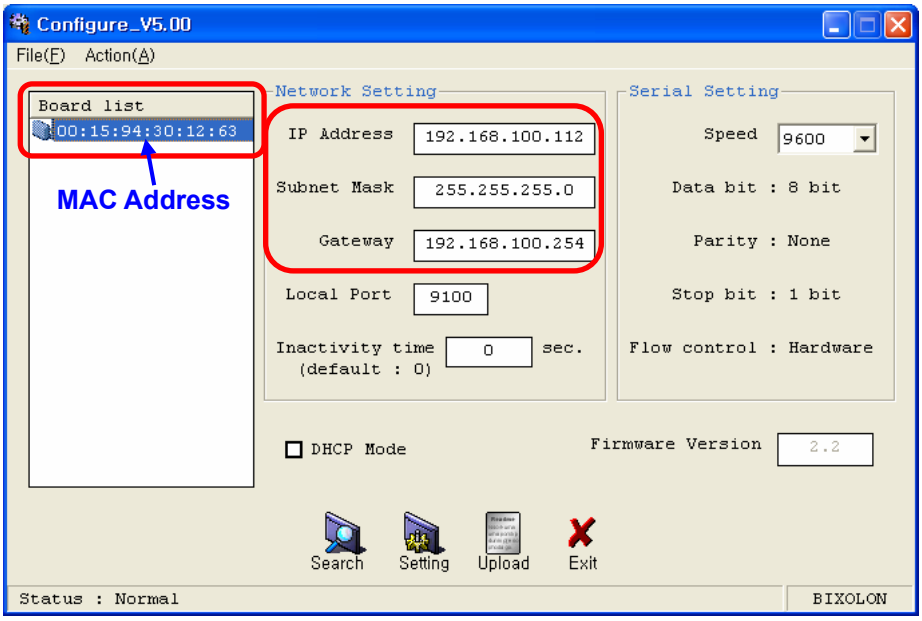


[Note]

- If Windows Security Alert pops up, please press Unblock.



4) Select MAC Address in **Board list** and **set up Network Setting**.



[Note]

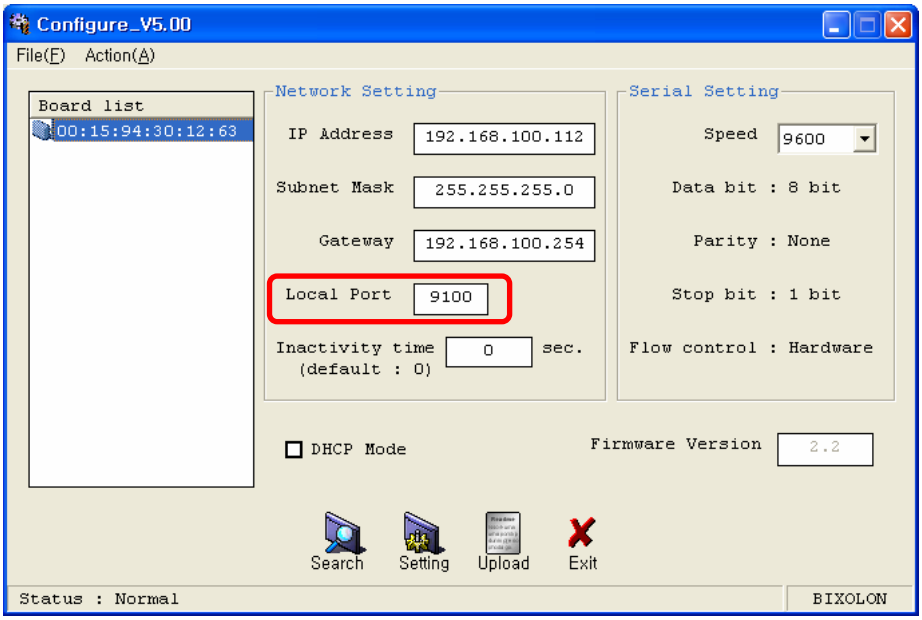
- If many MAC addresses appear, refer to the MAC address on the label of the interface card. Ask the Network administrator IP and its related information.

- If you are not aware of Subnet Mask, refer to the below.
  When the IP address is
  (1) 1~126.xxx.xxx.xxx: Subnet Mask: 255.0.0.0
  (2) 128~191.xxx.xxx.xxx: Subnet Mask: 255.255.0.0
  (3) 192~223.xxx.xxx.xxx: Subnet Mask: 255.255.255.0

For example, when the IP address is 192.168.192.321,
Subnet mask is 255.255.255.0.

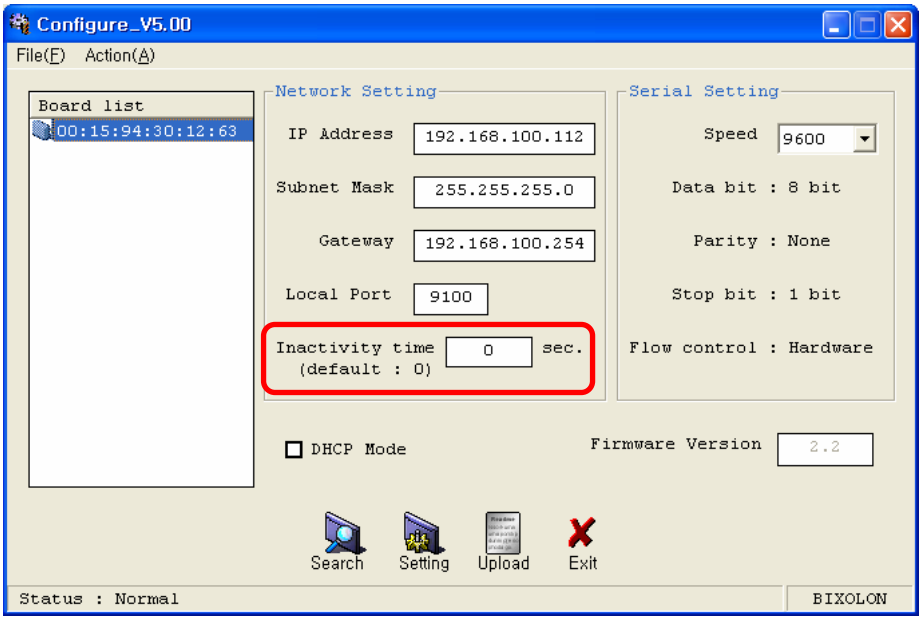
- If you are not aware of Gateway,
  (1) When the Network is connected to Internet (Router or Server computer), refer to the Network setting of other computers on the Network.
  (2) When the Network is connected to Internet (Router or Server computer), enter 0.0.0.0 for Gateway.

5) Enter value at **Local Port**.



[Note]
- Default value is **9100**. Choose from 0 to 32767.

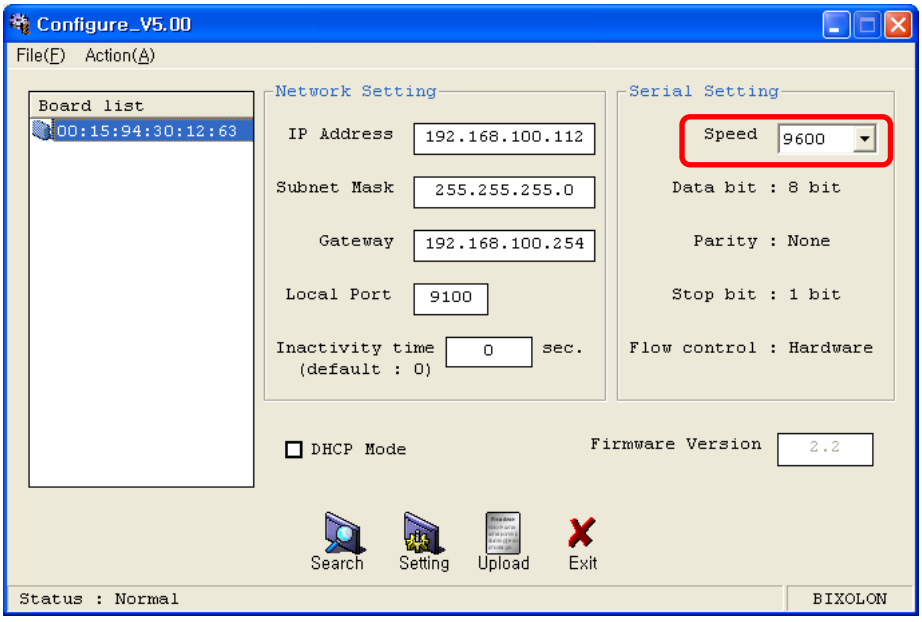
6) Set **Inactivity Time** as **'0'.**



[Note]

- Default value is 0. Choose from 0 to 32767.
- When you set Inactivity time, Ethernet interface will disconnect by force after designated time. When you set 0, Forced disconnection function is not available.

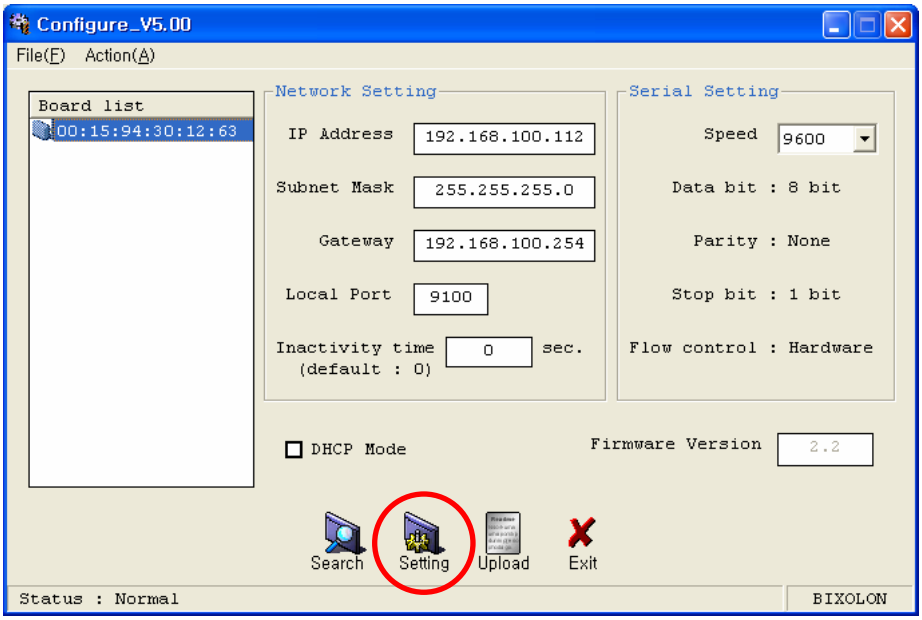
7) Set baud rate (Speed) at **Serial Setting**



[Note]

- The baud rate (Speed) should be same as the baud rate of the printer. (Refer to [Appendix 1])
- Highest baud rate (Speed) can be used.
- The baud rate (Speed) of IFA-EP don't need to setting.

8) When setting finishes, click **Setting**.



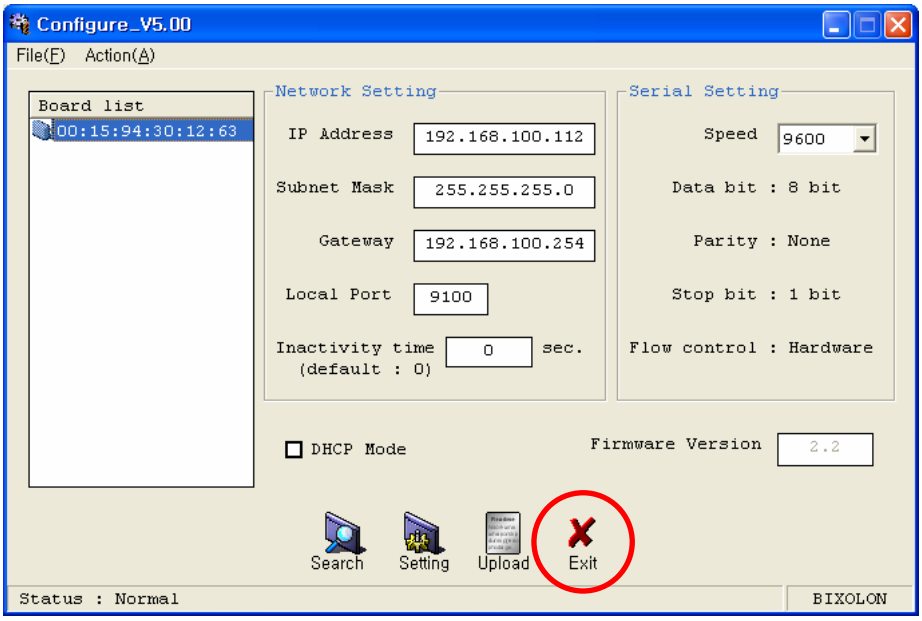
[Note]

Successfully finished set up

Unsuccessfully finished set up

- When setting doesn't finish correctly, try again.

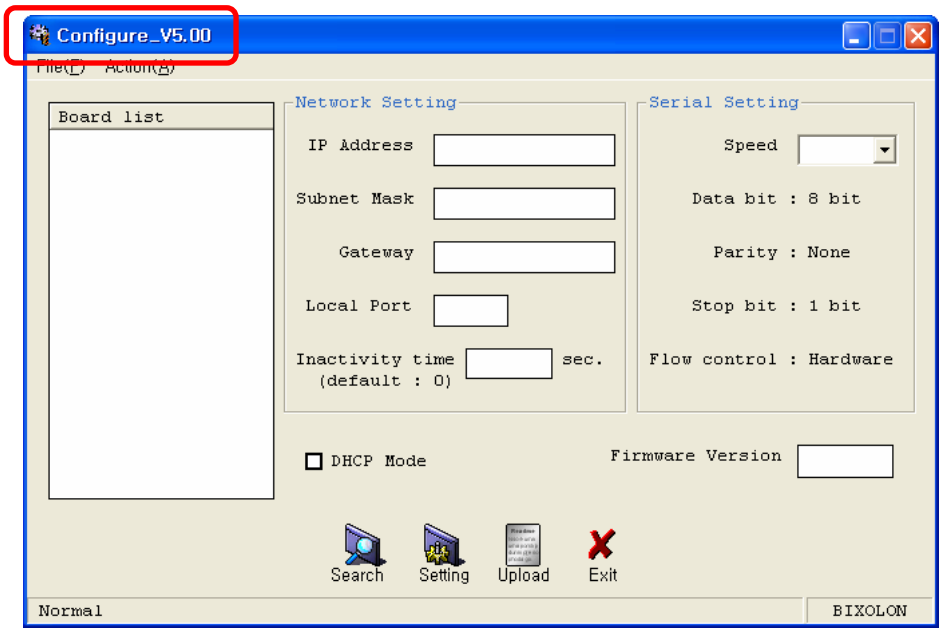
9) Click **Exit** to finish set up.



6-2. DHCP interface set up

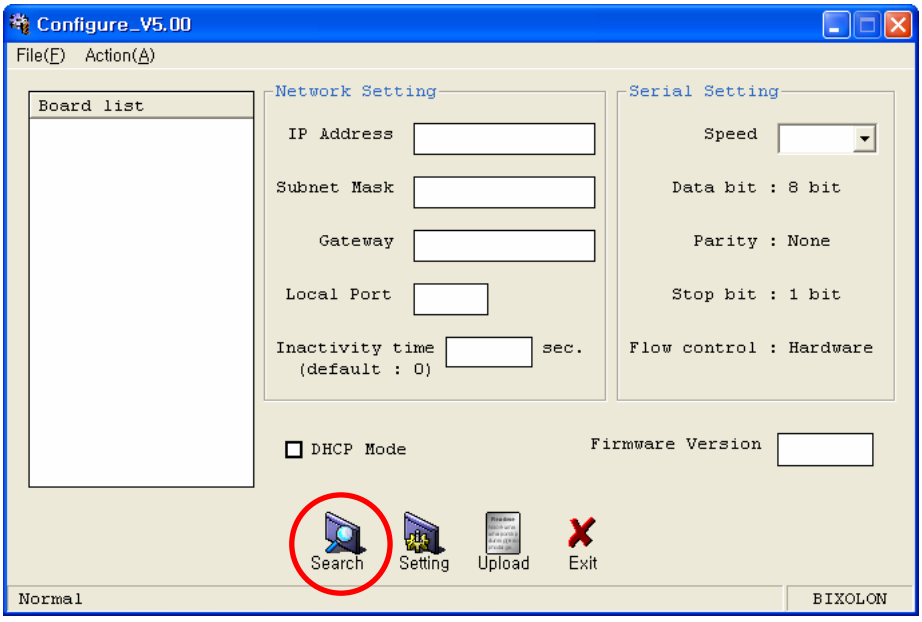
1) Turn on the printer.

2) Execute **Configure Tool**.

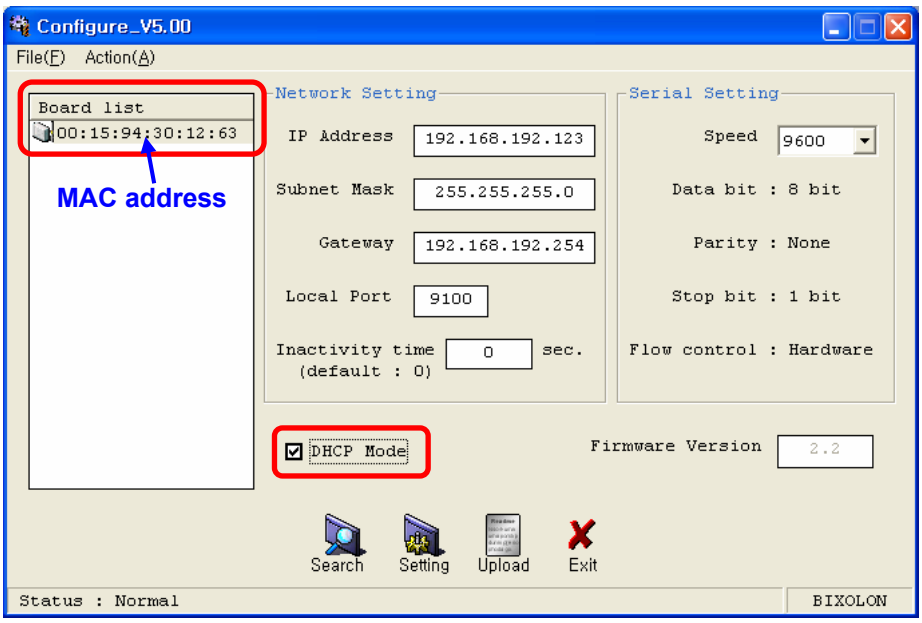


[Note]
- Use proper Configuration Tool dependent on hardware version

3) Click **Search**.



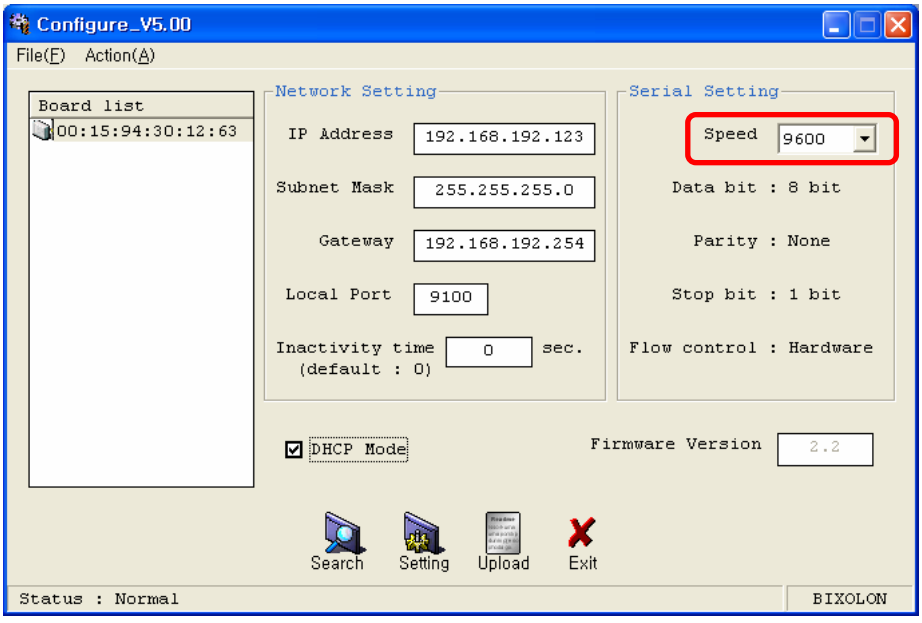
4) Select MAC Address in **Board list and check at DHCP Mode**.



[Note]

- If many MAC addresses appear, refer to the MAC address on the label of the interface card.
- Ask the Network administrator IP and its related information.

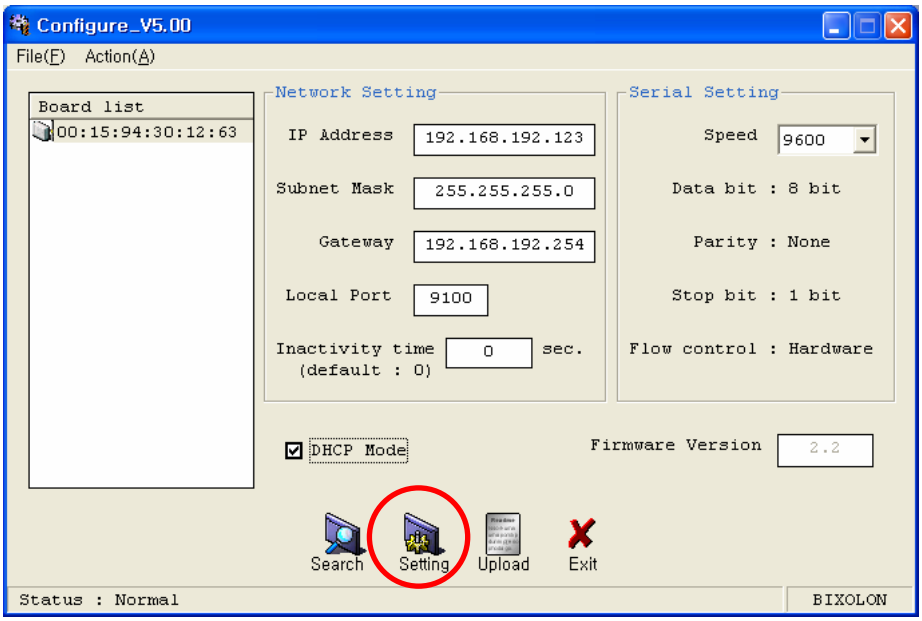
5) Set baud rate at "**Speed.**



[Note]

- The baud rate (Speed) should be same as the baud rate of the printer. (Refer to [Appendix 3])
- Highest baud rate (Speed) can be used.
- The baud rate (Speed) of IFA-EP TYPE don't need to setting.

6) When setting finishes, click **Setting**.



[Note]

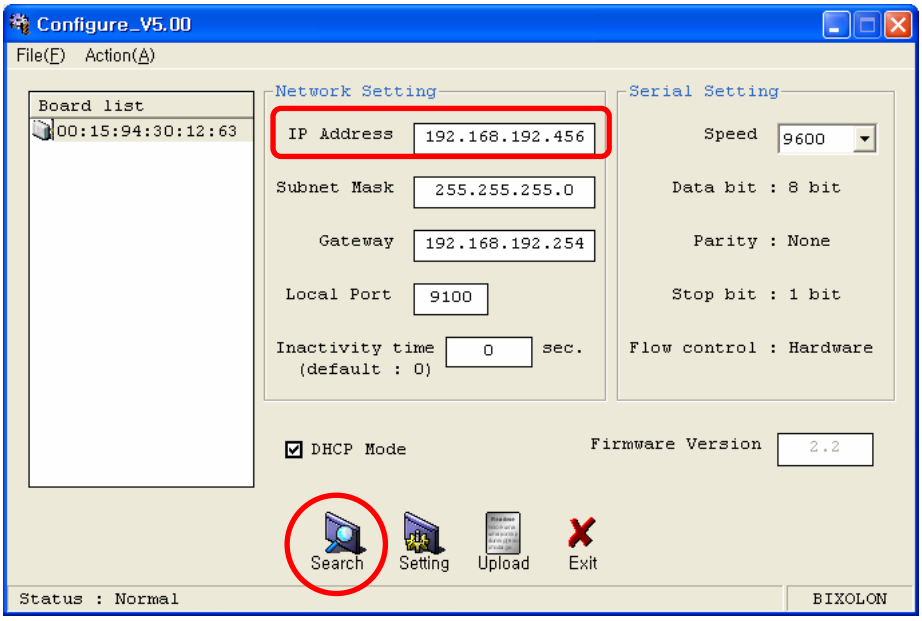
Successfully finished set up

Unsuccessfully finished set up

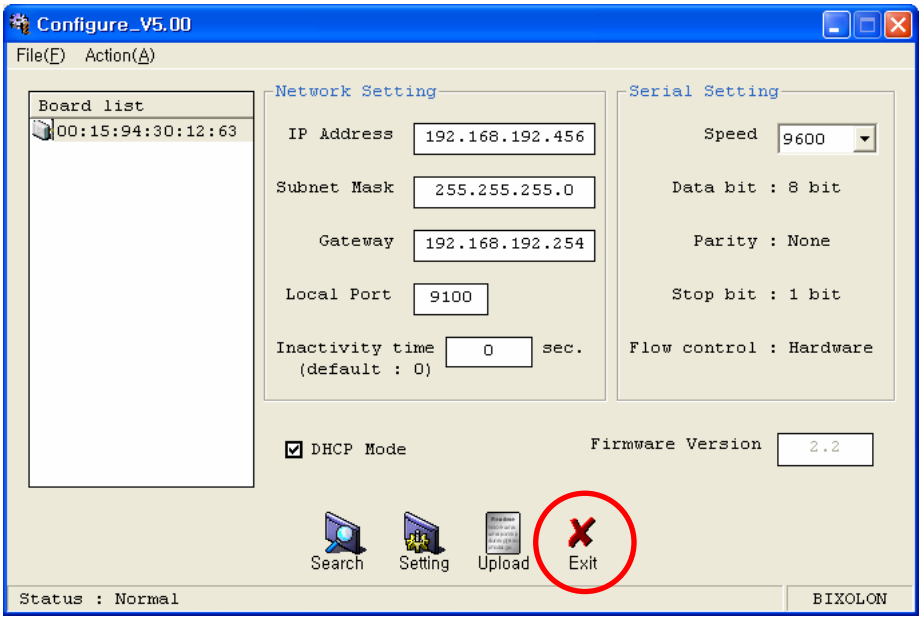
- When setting doesn't finish correctly, try again.

7) Wait approximately 10 or more seconds until the printer receives IP from the server.

8) Click **Search** to check given IP.



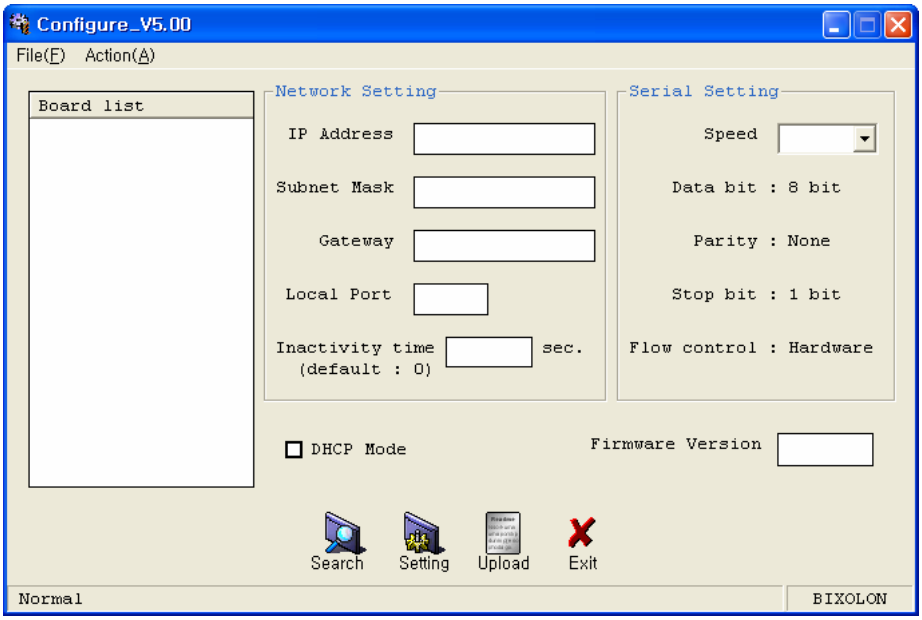
9) If the given IP is OK, click **Exit**.



6-3. Firmware update

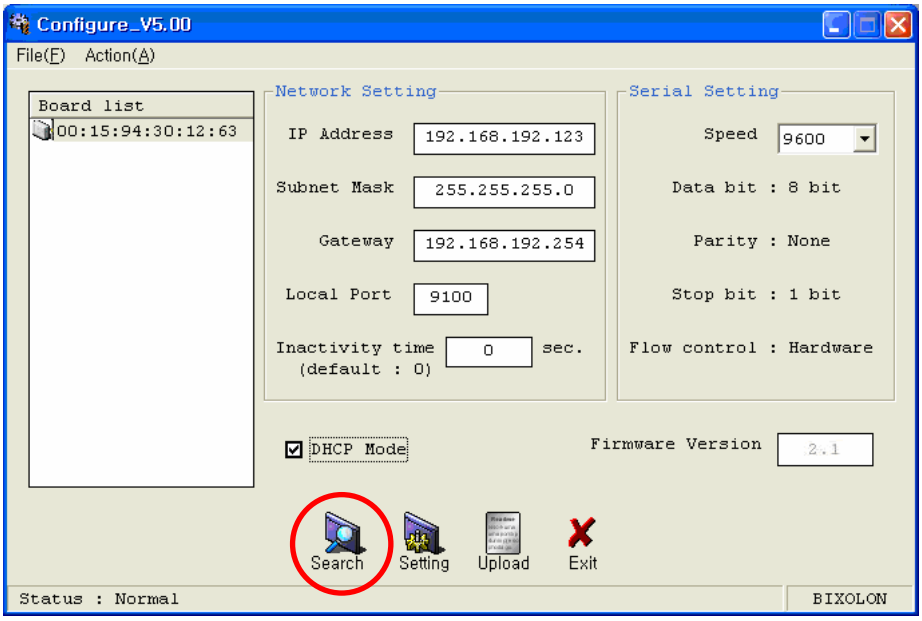
1) Turn on the printer

2) Execute **Configure Tool**.

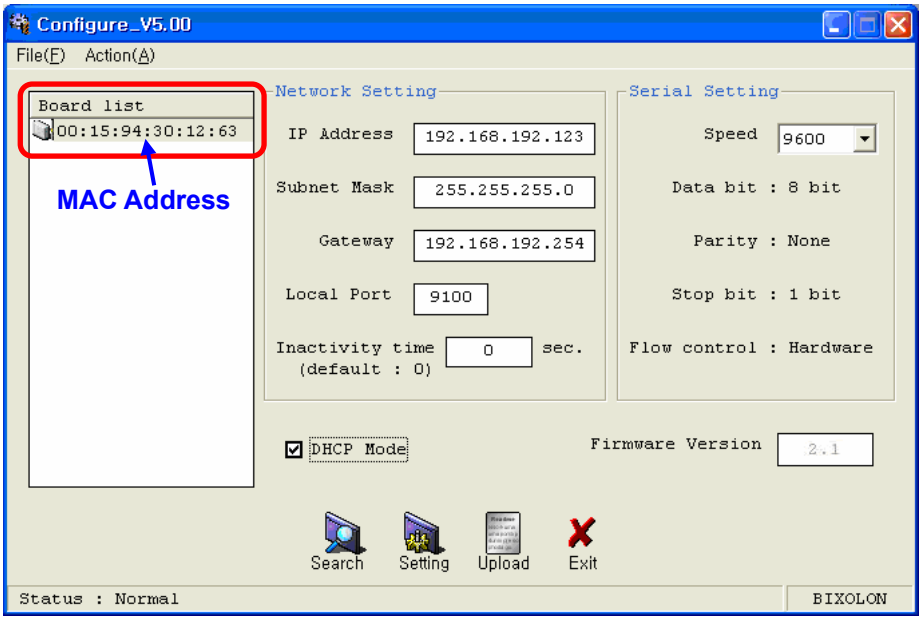


[Note]
- Use proper Configuration Tool dependent on hardware version

3) Click **Search**.



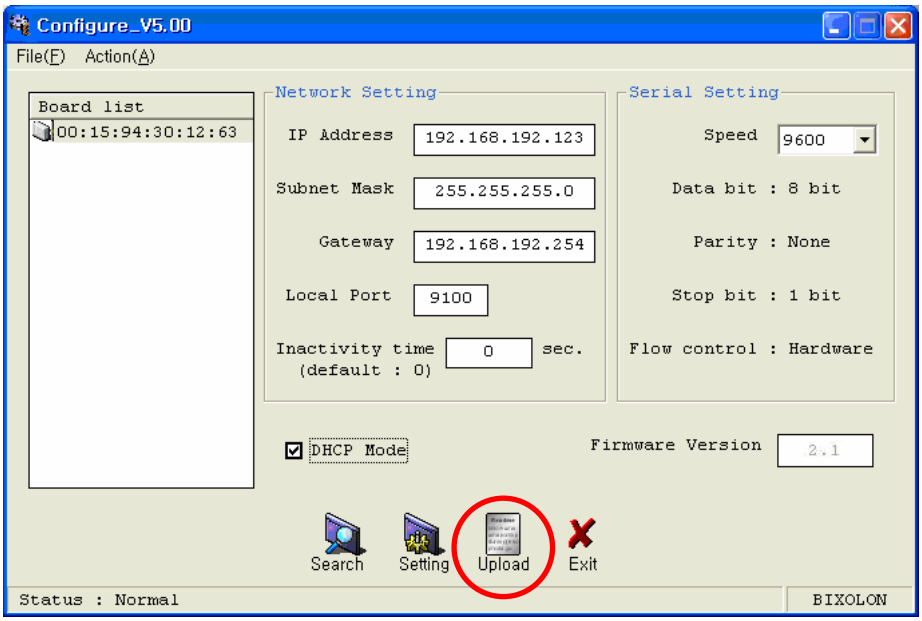
4) Select **MAC Address** in **Board**.



[Note]

- If many MAC addresses appear, refer to the MAC address on the label of the interface card.

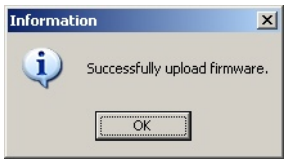
5) Click **Upload** and select file to download.



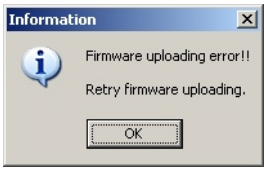
[Note]

- Check the extension of the file, which should be “bin”.

Successfully finished F/W update



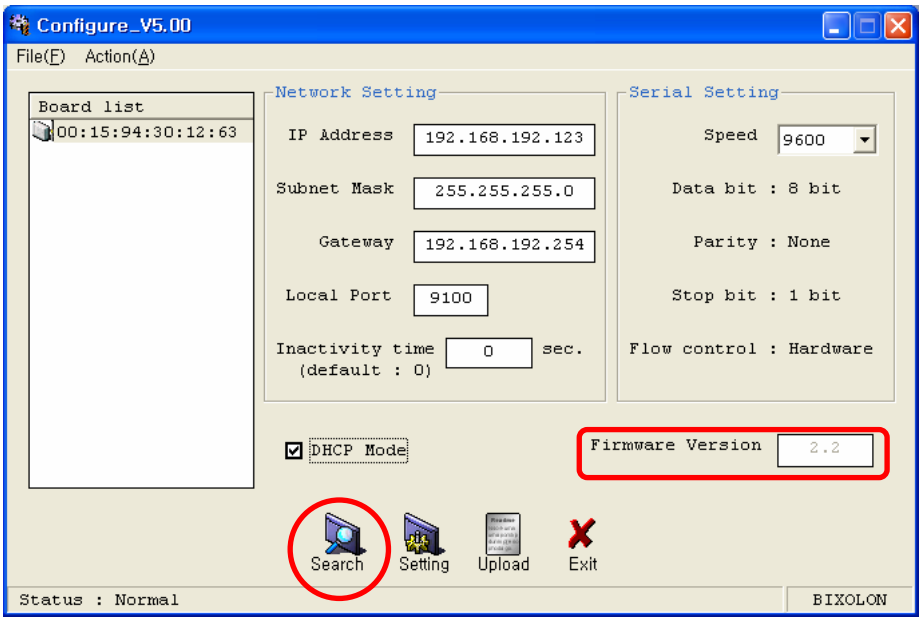
Unsuccessfully finished F/W update



- Printer and available firmware

Interface Card	Hardware Version	Firmware
IFA-E TYPE	V3.x.x	ETS_TCP_V1X.bin
IFC-E TYPE		
IFA-EO TYPE		
IFA-E TYPE	V5.x.x	ETS_TCP_V2X.bin
IFC-E TYPE		
SRP-770II (ON Board)	ON Board	ETS_TCP_V5X.bin
IFA-EP TYPE	V1.x.x	ETP_TCP_V1X.bin

6) When firmware update finishes, click **Search** to check if Firmware is updated successfully**.**



[Note]

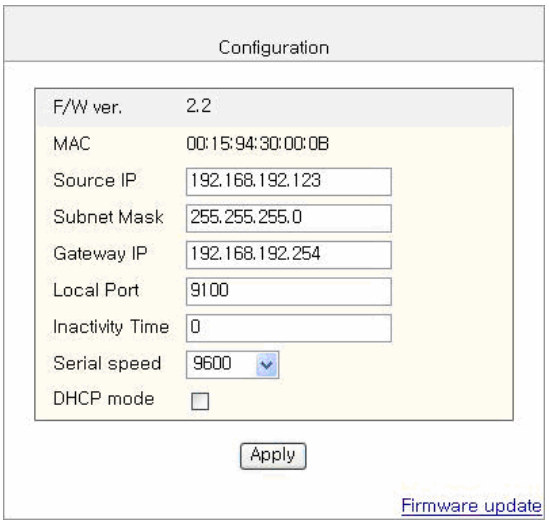
- Don’t turn off the printer while the firmware is updated. It causes fatal harm to interface card

7. Web Server

7-1. Static IP interface set up

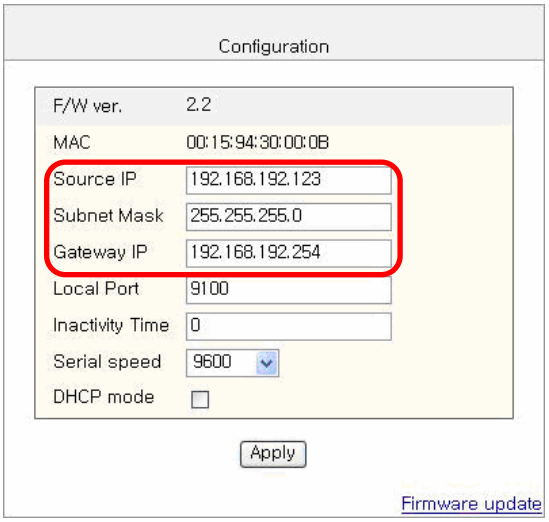
1) Execute Internet Explorer.

2) Enter IP address of the printer at **Address** of Internet Explorer and click **go**.



[Note]
- If you are not aware of IP address, check IP address by pushing Function key. (Refer to 35Page])
- Ask Network administrator IP Address and its related information.

3) When **Configuration** Window appears, enter new **Network Setting**.



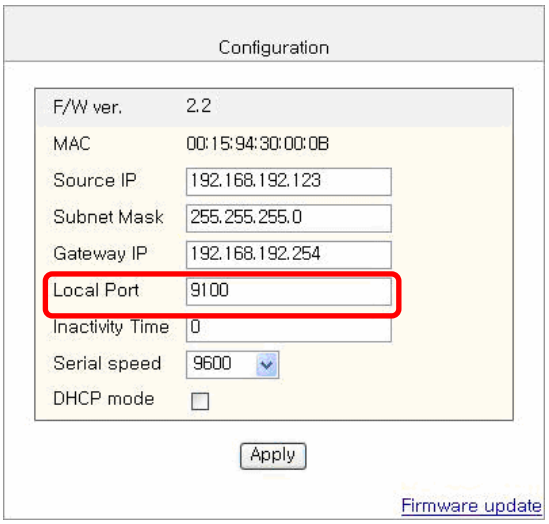
[Note]

- If you are not aware of Subnet Mask, refer to the below.
- When the IP address is
  - (1) 1~126.xxx.xxx.xxx: Subnet Mask: 255.0.0.0
  - (2) 128~191.xxx.xxx.xxx: Subnet Mask: 255.255.0.0
  - (3) 192~223.xxx.xxx.xxx: Subnet Mask: 255.255.255.0

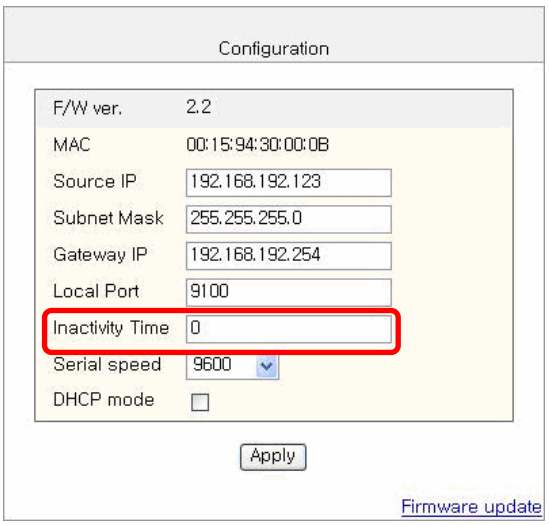
  For example, when the IP address is 192.168.192.321,
  Subnet mask is 255.255.255.0.

- If you are not aware of Gateway,
  - (1) When the Network is connected to Internet (Router or Server computer), refer to the Network setting of other computers on the Network.
  - (2) When the Network is connected to Internet (Router or Server computer), enter 0.0.0.0 for Gateway.

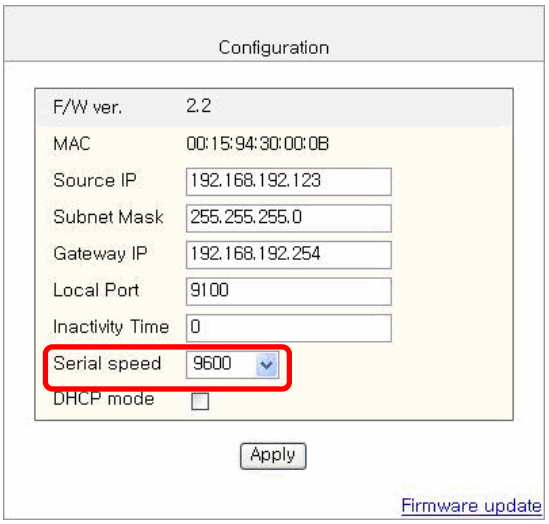
4) Enter value of **Local Port**.



5) Set **Inactivity Time**.

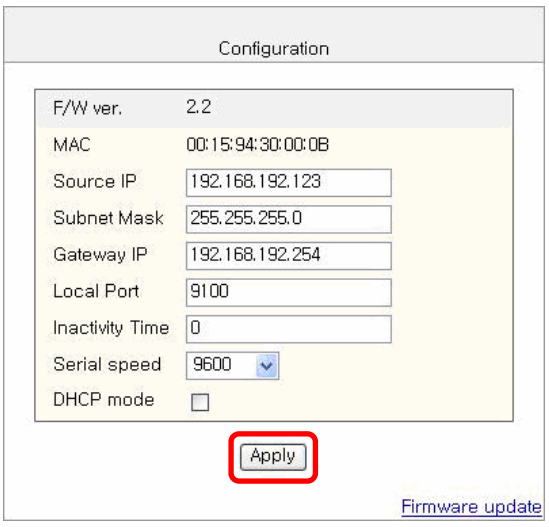


6) Set baud rate (**Serial speed**).



[Note]
- The baud rate (Speed) should be same as the baud rate of the printer.
- The baud rate (Speed) of IFA-EP don't need to setting.

7) When setting finishes, click **Apply**.



[Note]
- When the setting finishes successfully, the following message appears.

Please press here if you would like to back to the configuration

8) If you click the message, you can check your configuration setting.

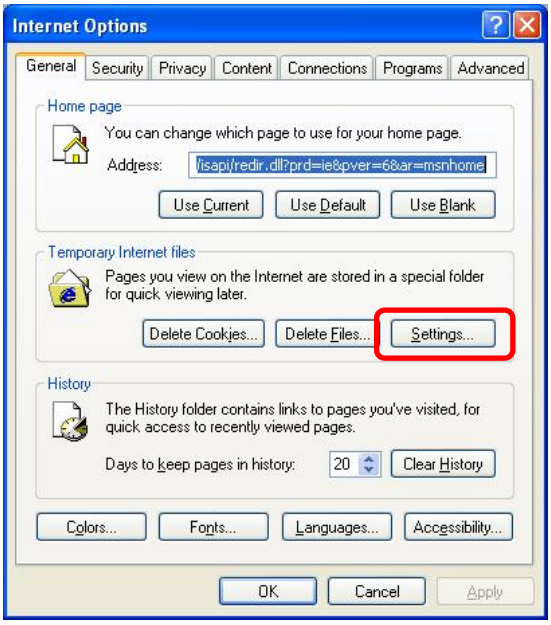
[Note]

- If any change was not found after setting on Web Server, check the bellows;

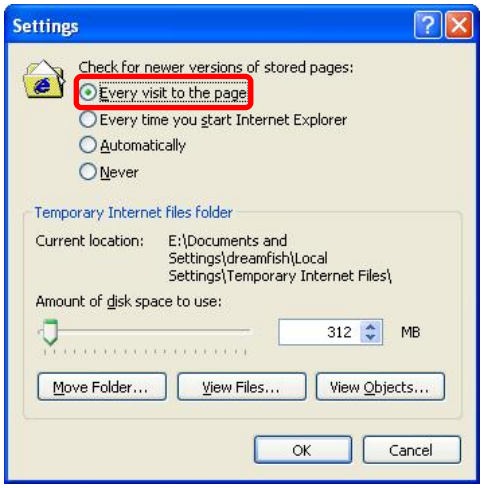
(1) Execute Internet Explorer.

(2) Internet Explorer **Menu → Tools → Internet options**.

(3) **General tab → Temporary internet file → Settings**



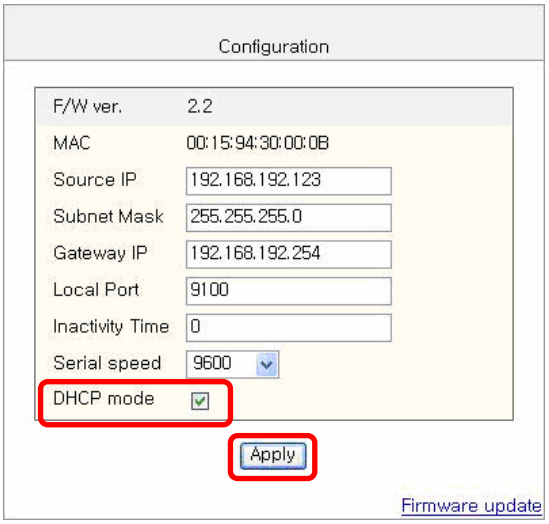
(4) **Check for newer version of stored pages** → Click **Every visit to the page.**



(5) Click **Refresh** in Internet Explorer.

7-2. DHCP interface set up

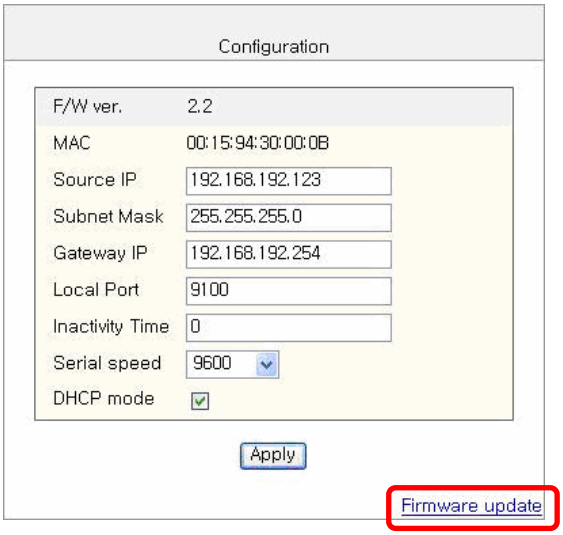
1) Check at **DHCP mode** and click **Apply**.



2) Push the Function Key on the interface 10 or more seconds from finishing set up.
Enter given IP address at address of Internet Explorer to enter web server.

7-3. Firmware update

1) Click **Firmware update**.

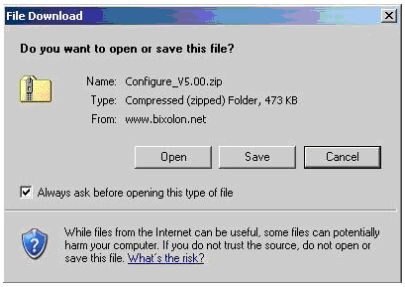


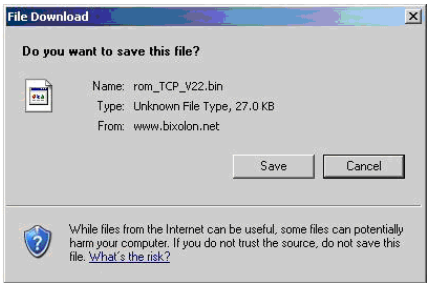
2) Internet Explorer is executed and it moves to download site automatically.

[Note] Printer and available firmware

Interface Card	Hardware Version	Firmware
IFA-E TYPE	V3.x.x	ETS_TCP_V1X.bin
IFC-E TYPE		
IFA-EO TYPE		
IFA-E TYPE	V5.x.x	ETS_TCP_V2X.bin
IFC-E TYPE		
SRP-770II (ON Board)	ON Board	ETS_TCP_V5X.bin
IFA-EP TYPE	V1.x.x	ETP_TCP_V1X.bin

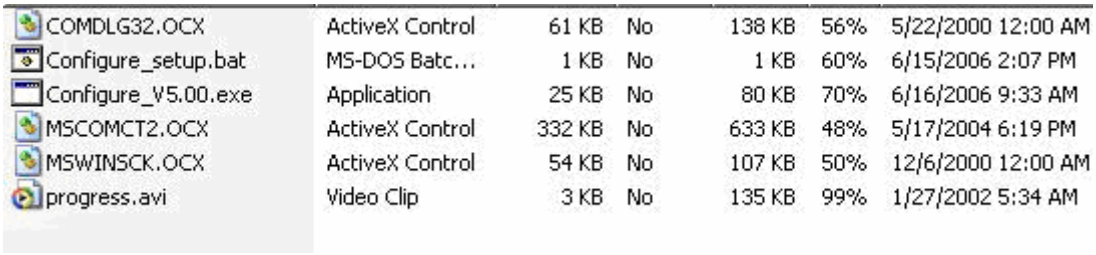
3) Download **Configure_Vx.xx.zip** file and ***.bin** file.





[Note]
- You can download it by double-clicking icons or copy and paste.

4) Unzip **Configure_Vx.xx.zip and** execute **Configure_Vx.xx.exe at** Configure_Vx.xx folder.



[Note]
- In case **Configure_Vx.xx.exe** can't be executed, run **configure_setup.bat** first and retry it.

5) Click **Upload** at Configuration Tool and *.bin to update Ethernet firmware.

8. Ethernet test by using Windows test page

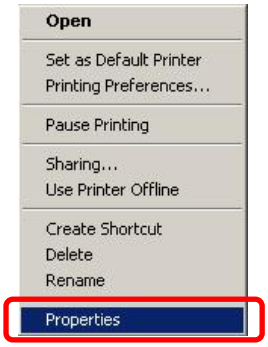
If you don't have any test program to check printer's performance, you can use Windows driver. It is available for Windows 2000, XP, 2003 server (32bit), Vista (32bit).

1) Install Windows driver of the printer. When the driver installation finishes, reboot the computer.

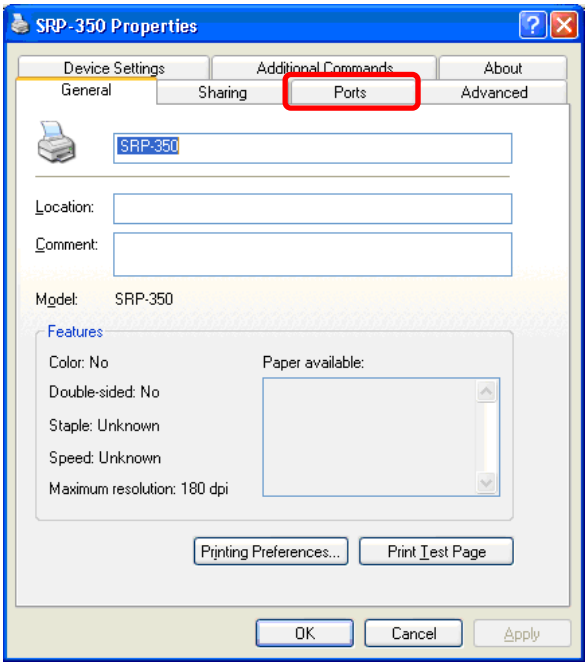
[Note]
- Latest file versions can find drivers at http://www.bixolon.com

2) **Start** > Control panel > **Printers and Faxes**

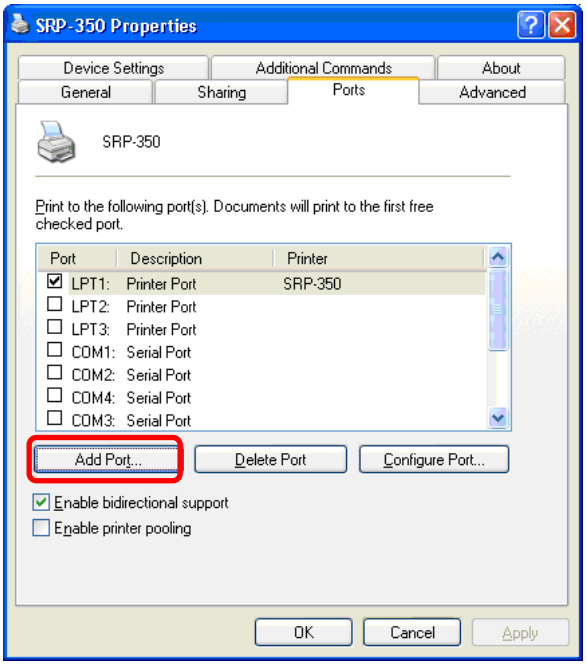
3) Select the printer icon and click it with the right button to select **properties**.



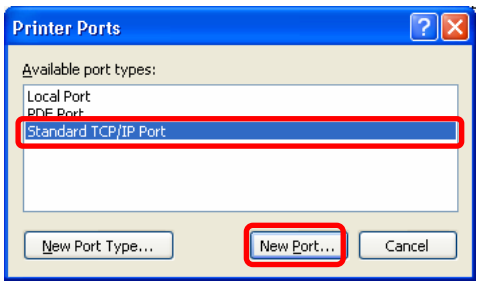
4) Select **Ports** tab.



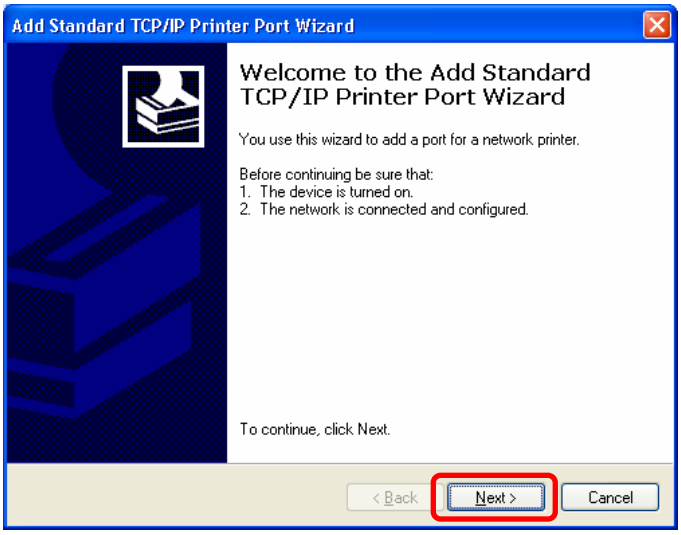
5) Click **Add Port.**



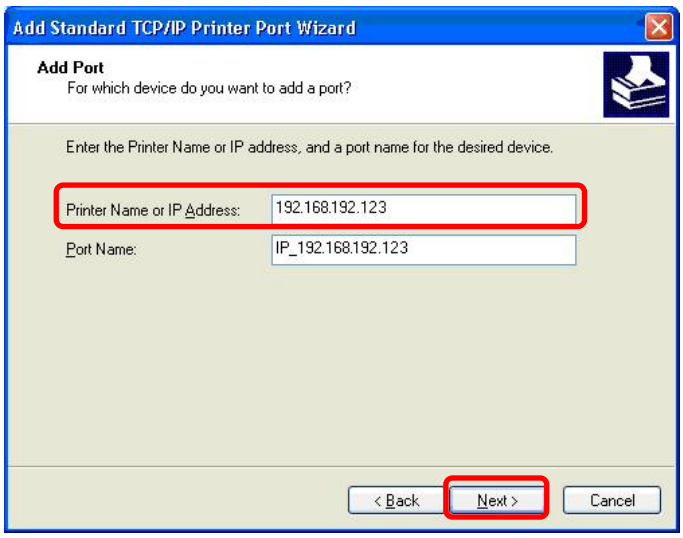
6) Select **Standard TCP/IP Port** and click **New port**.



7) When standard TCP/IP printer add wizard window pops up, click **Next**.



8) Enter printer IP at **Printer Name or IP Address** and click **Next**.



[Note]

- Enter same IP address as the Ethernet interface card. Enter only at **Printer Name or IP Address**.

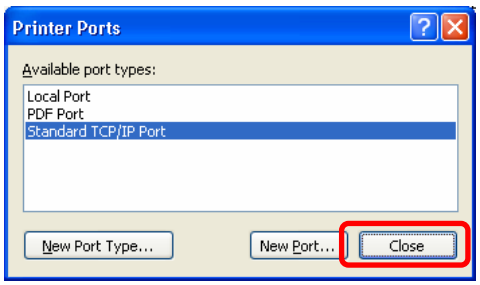
9) Click **Next**.

[Note]

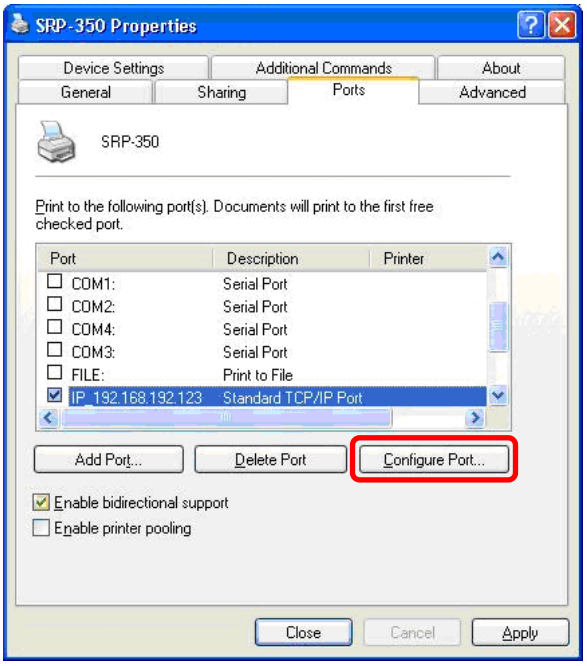
- Click **Next** without any selection nor change.

10) Click **Finish**.

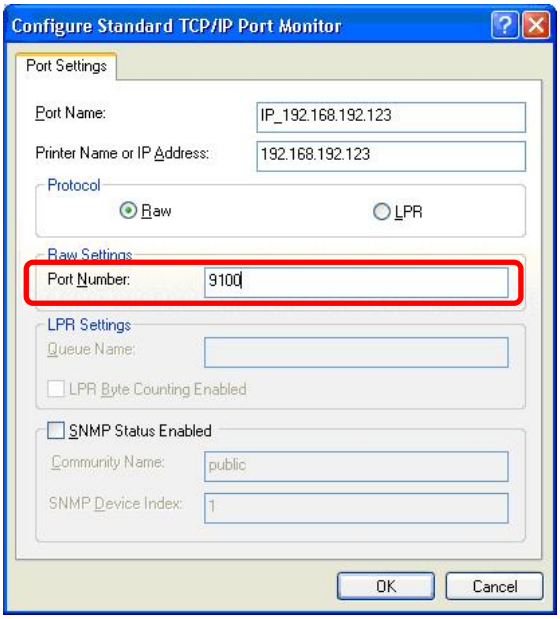
11) Click **Close** to close Printer port window



12) Click **Configure Port**.



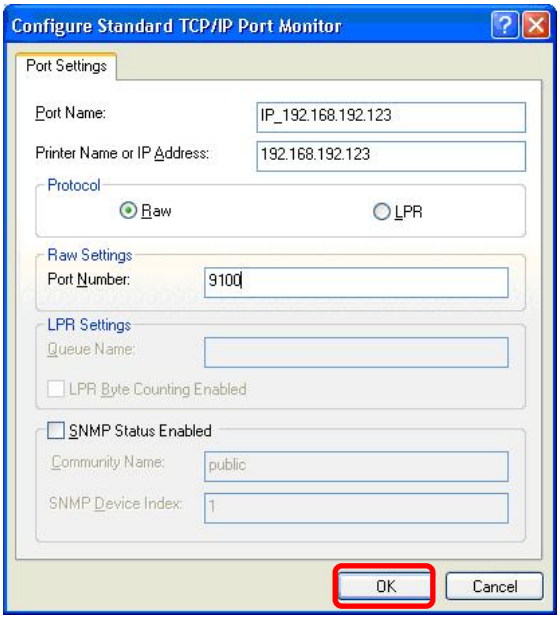
13) Enter same port number as the value of Local Port of the Ethernet interface at **Raw Setting**.



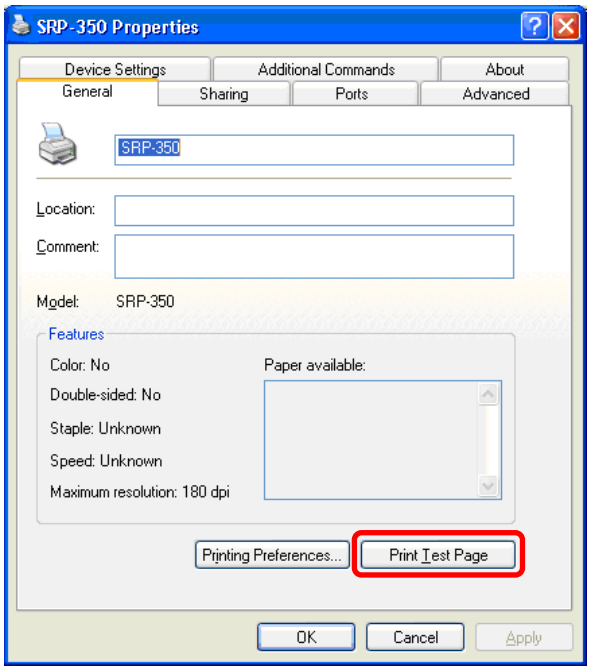
[Note]

- There is no change except **Raw Setting**.

14) Click **OK**.

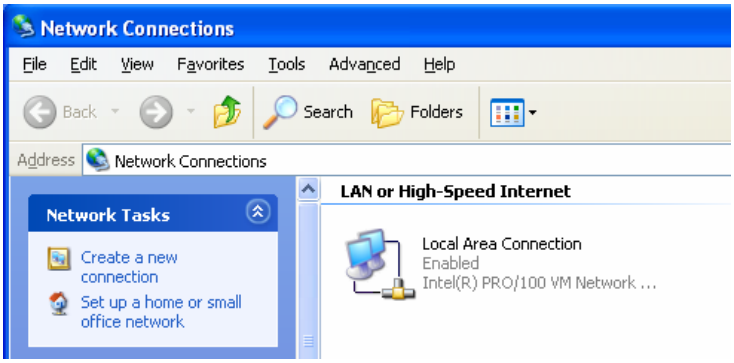


15) Select General tab and click **Print Test Page** to check if the printer works properly.

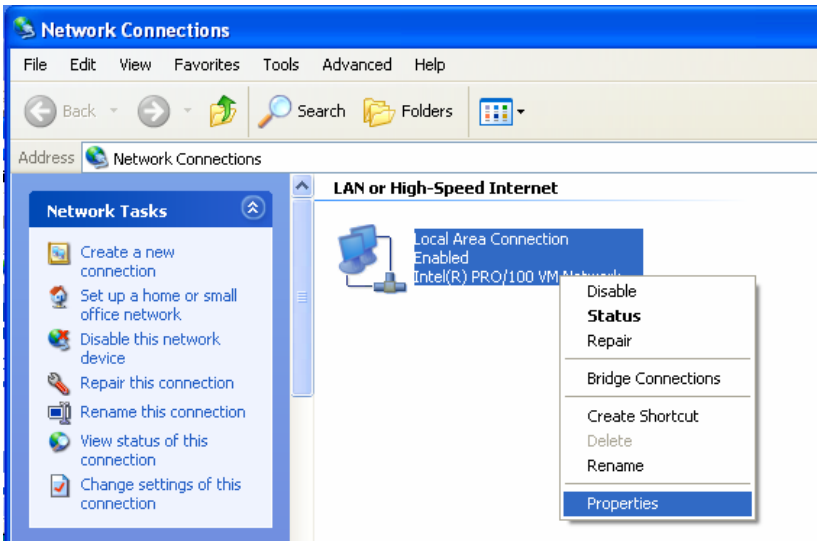


9. How to check Static IP or DHCP

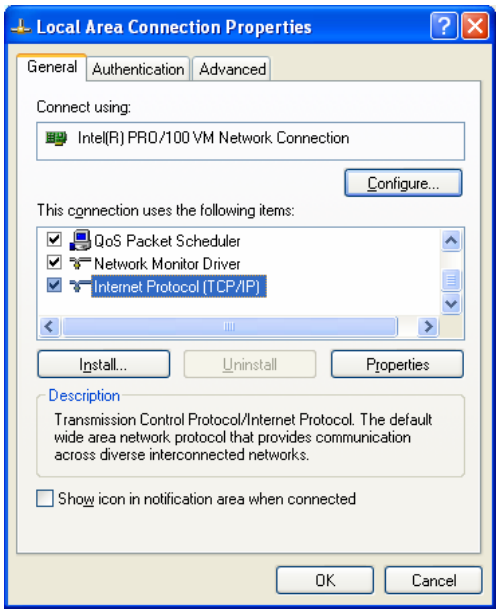
1) Start > Control panel > Network Connections



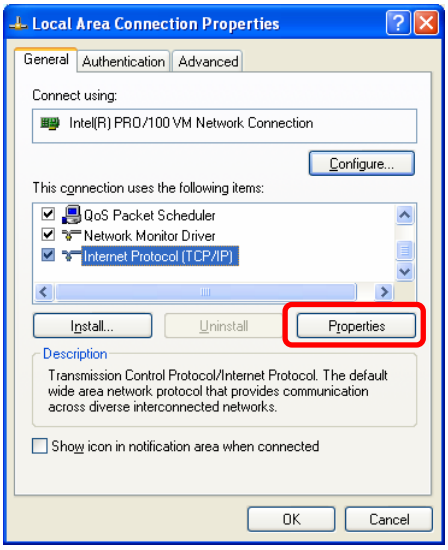
2) Select: **"Local Area Connection** and click it with the right button to select **properties**



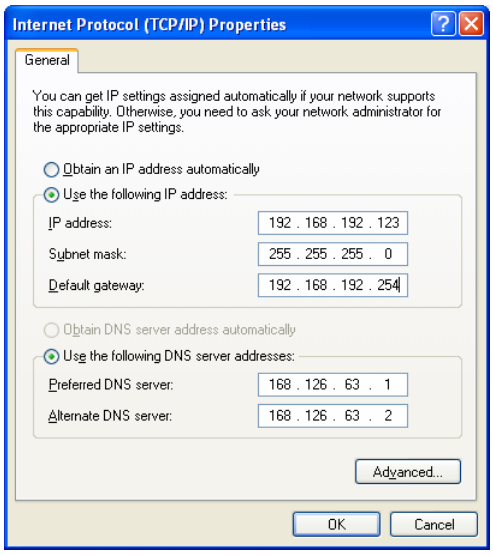
3) Select General tab and Select **"Internet Protocal(TCP/IP)"**.



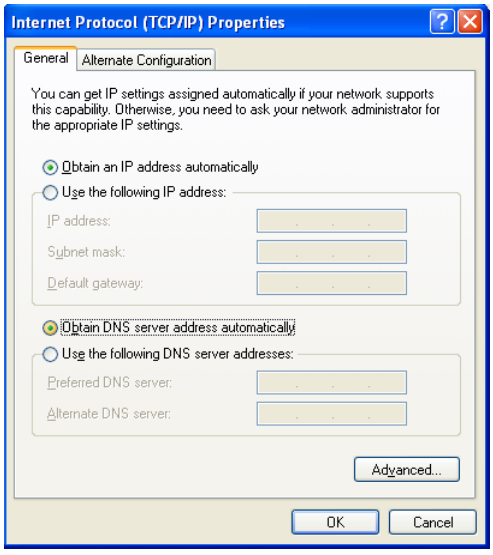
4) Click **“Properties”.**



5) Information of network registration with **Static IP**



6) Information of network registration with **DHCP**



10. Factory Reset

1) Default setting after factory reset
- Activate DHCP mode
- Local Port: 9100
- Inactivity Time: 0
- Speed
  SRP-770II, SLP-T400: 230400 bps
  SRP-270, SRP-275, SRP-280, SRP-350, SRP-350plus, SRP-370, SRP-372: 9600 bps

2) How to rest

(1) Turn off the printer
(2) Turn on the printer while pressing Function Key
[Note]
- Press Function key 3 more seconds after turning on the printer.

(3) Wait 10 seconds until new IP address is allocated to the printer.
- The IP address will be allocated automatically under DHCP mode.

[Note]
- DHCP Network environment
  Connect to web-server with newly allocated IP address.
  Check new IP address by pressing Function key

- Static IP Network environment
  The IP address will not be allocated automatically.
  Set up Static IP with Configuration utility.

(4) Print Network setting information by pressing Function key
  Connect web-server to change any network setting

[Note]
- Check if the baud rate of the printer is set same as below.
SRP-770II, SLP-T400: 230400 bps
SRP-270, SRP-275, SRP-280, SRP-350, SRP-350plus, SRP-370, SRP-372: 9600 bps

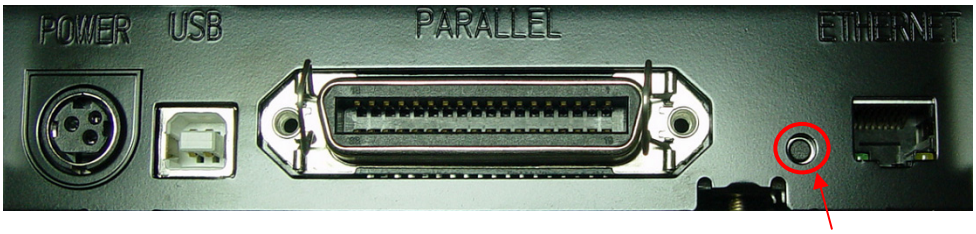
11. Function Key set up

1) How to use

(1) Turn on the printer

(2) Wait 10 or more seconds until the Ethernet interface boots up

(3) Push the Function key



SRP-770II **Function key**

(4) The settings will be printed only one time since the printer is turned on.

(5) Turn off and on the printer to print them again.

2) Printed settings

- MAC address
- IP address
- Subnet Mask
- Gateway
- Port
- Inactivity time
- Serial speed
- Firmware Version

[Appendix 1] Details of interface card

Item	Details
Network interface	10/100 Base-T All in one (Auto detection)
Protocol	TCP, UDP, IP, ICMP,IGMP, ARP, HTTP
IP mode	static IP, DHCP (Dynamic Host Configuration Protocol)
RX buffer	2K Byte
Flow control	Hardware (RTS/CTS)
Baud rate (Serial speed)	1200 ~ 230400 bps

[Appendix 2] Hardware version and Configuration Tool

Hardware version	Interface card	Printer	Configuration Tool file	Network interface
V5.x.x	IFA-E TYPE	SRP-270,280,350 SRP-370,372 SRP-350Plus	Configure_V5.x Web Server	10/100 Base-T All in one
	IFC-E TYPE	SRP-275		
	IFA-EP TYPE	SRP-350 SRP-350Plus		
	ON Board	SRP-770II		
V3.x.x	IFA-E TYPE	SRP-270,280,350 SRP-370,372 SRP-350Plus	Configure _V3.x	
	IFC-E TYPE	SRP-275		
	IFA-EO TYPE	SRP-770 SLP-T400		
V2.x.x	RIF-350E	SRP-270,280,350	Ethernet_V2.0	10 Base-T
V1.x.x	RIF-350E	SRP-270,280,350	Ethetnet_V1.3	10 Base-T

[Note]

-In case the hardware version is V5.X.X or higher, use Configure_V5.x or Web server. You can simply use Web Server on Internet Explorer.

[Appendix 3] Setting up serial communication

1) Printer DIP switch set up

Printer	Baud rate & DSW set up				Handshaking & Parity
SRP-350	**Baud rate**	DSW 1-7	DSW 1-8		DTR/DSR : SW 1-3 OFF 8 data bit : SW 1-4 OFF None parity : SW 1-5 OFF
	57600bps	OFF	ON		
	38400bps	ON	ON		
	19200bps	OFF	OFF		
	9600bps	ON	OFF		
SRP-350plus	**Baud rate**	DSW 1-6	DSW 1-7	DSW1-8	DTR/DSR: SW1-2 off 8 data bit: SW1-3 off none parity: SW1-4 off
	115200bps	ON	ON	ON	
	57600bps	OFF	OFF	ON	
	38400bps	OFF	ON	ON	
	19200bps	OFF	OFF	OFF	
	9600bps	OFF	ON	OFF	
	4800bps	ON	OFF	ON	
	2400bps	ON	OFF	OFF	
SRP-270 SRP-280	**Baud rate**	DSW 2-7	DSW 2-8		DTR/DSR : SW 2-3 OFF 8 data bit : SW 1-4 OFF None parity : SW 1-5 OFF
	19200bps	ON	ON		
	9600bps	OFF	OFF		
	4800bps	ON	OFF		
	2400bps	OFF	ON		
SRP-370 SRP-372	**Baud rate**	DSW 1-1	DSW 1-2		DTR/DSR : SW 1-3 OFF 8 data bit : MSW 9 None parity : MSW 9 ***[Note]*** - Use Memory SW to change
	115200bps	ON	ON		
	38400bps	OFF	ON		
	19200bps	ON	OFF		
	9600bps	OFF	OFF		
SRP-275	**Baud rate**	DSW 2-7	DSW 2-8		DTR/DSR : SW 2-3 OFF 8 data bit : SW 2-4 OFF None parity : SW 2-5 OFF
	19200bps	ON	OFF		
	9600bps	OFF	OFF		
	4800bps	OFF	ON		
	2400bps	ON	ON		
SRP-770	**Baud rate**	DSW 2-1	DSW 2-2		RTS/CTS: SW2-3 ON 8 data bit none parity
	115200bps	ON	ON		
	57600bps	OFF	ON		
	19200bps	ON	OFF		
	9600bps	OFF	OFF		
SRP-770 II	**Baud rate**	DSW 2-1	DSW 2-2		DTR/DSR 8 data bit None parity Fixed
	230400bps	OFF	ON		
	115200bps	ON	ON		
	19200bps	ON	OFF		
	9600bps	OFF	OFF		
SLP-T400	**Baud rate**	DSW 2-1	DSW 2-2		DTR/DSR 8 data bit None parity Fixed
	230400bps	OFF	ON		
	115200bps	ON	ON		
	19200bps	ON	OFF		
	9600bps	OFF	OFF		

2) Set the baud rate (Serial speed)

- SRP-270,275,280: Max. 19200 bps
- SRP-350: Max. 57600 bps
- SRP-350Plus: Max. 115200 bps
- SRP-370,372: Max. 115200 bps
- SRP-770: Max. 115200bps
- SRP-770 II : Max. 230400 bps
- SLP-T400: Max. 230400 bps

[Note]

- The baud rate (Serial speed) of the interface card is from 1200 ~ 230400 bps.
- The baud rate (Serial speed) of the printer can be set with DIP switch

3) Virtual Driver

It converts output of Serial (COM) port into output of Ethernet (TCP/IP) port.
It is available for Windows 2000, XP, 2003 server (32bit), Vista (32bit).