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SHC, SAM4S

# User Guide

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## ELLIXSet Ver 1.9



ShinHeung Precision Co.,Ltd.

JUN. 16. 2015

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## 1. INTRODUCTION

It is integrated software for POS Printer ELLIX 30/40/35/45 series and it includes the all of the necessary utility for our printer product. If you want to other resource for our printer example windows driver, OPOS driver and other interface driver, please visit our web site.

## 2. SUPPORT DEVICE & INTERFACE

### DEVICES

- ELLIX30 / ELLIX40 / ELLIX35 / ELLIX45
- ELLIX30II / ELLIX40II / ELLIX35II / ELLIX45II

### FUNCTIONS

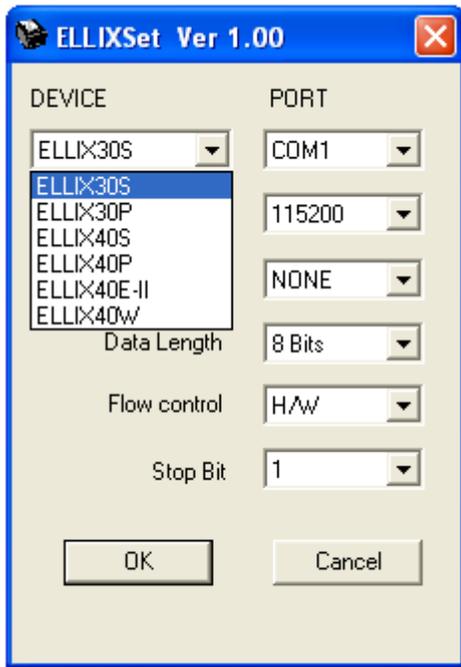
- NV Logo download
- User Setup
- Firmware download

### INTERFACES

- RS-232c (Serial)
- IEEE1284 (Parallel)
- USB (Virtual COM , USB)
- Ethernet (TCP/IP)
- Wi-Fi (TCP/IP)

### 3. User Interface

#### 1) Device Configuration Dialog



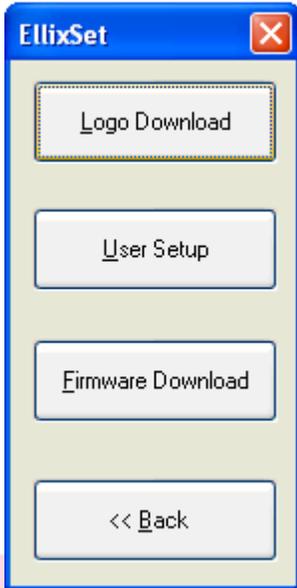
#### Device Configuration Dialog

You can select the device which you want to use comfortable, on the ELLIXSet.

#### <DEVICE LIST>

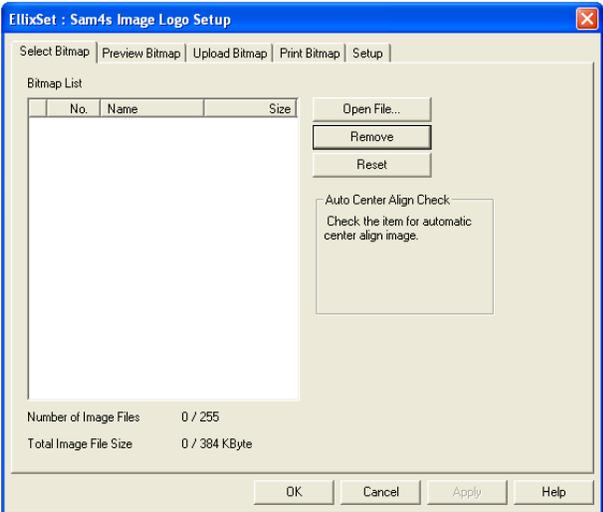
- ELLIX30/35S : ELLIX30/35 with Serial Interface
- ELLIX30/35U-I : ELLIX30/35 with Virtual COM Interface
- ELLIX30/35P : ELLIX30/35 with Parallel Interface
- ELLIX30/35U-II : ELLIX30/35 with USB Interface
- ELLIX30/35W : ELLIX30/35 with Wi-Fi Interface  
(TCP/IP type)
- ELLIX30/35-EII : ELLIX30/35 with Ethernet-II Interface  
(TCP/IP type)
- ELLIX40/45S : ELLIX40/45 with Serial Interface
- ELLIX40/45U-I : ELLIX40/45 with Virtual COM Interface
- ELLIX40/45P : ELLIX40/45 with Parallel Interface
- ELLIX40/45U-II : ELLIX40/45 with USB Interface
- ELLIX40/45-EII : ELLIX40/45 with Ethernet-II Interface  
(TCP/IP type)
- ELLIX40/45W : ELLIX40/45 with Wi-Fi Interface  
(TCP/IP type)

## 2) Function Select Dialog



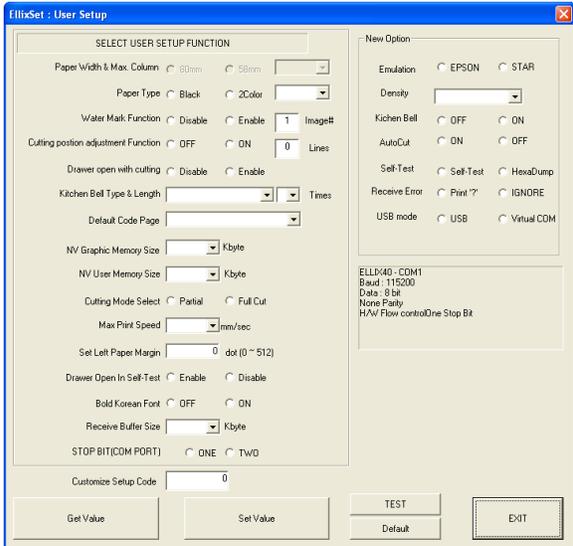
**Function Select Dialog**  
You can select a function button as you want to use.

## 3) NV Logo Download Dialog



**NV Image Logo Download Dialog**  
It is consisted with five property pages which are Select, Preview, Upload, Print and Setup Bitmap tab.

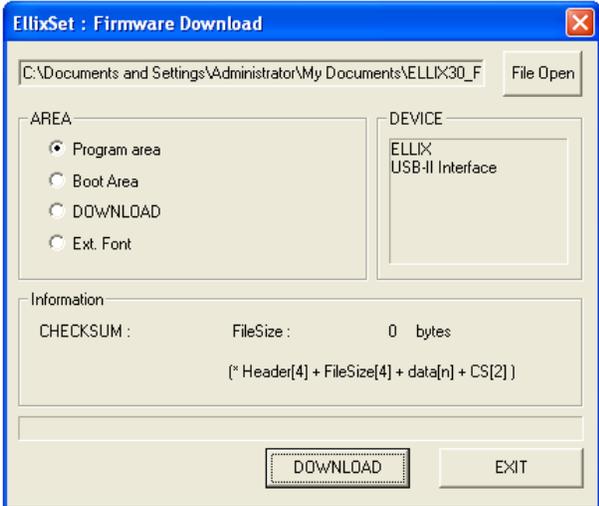
### 4) User Setup Dialog



**User Setup Dialog**

You can change variable custom settings only for ELLIX 30 / 40 series.

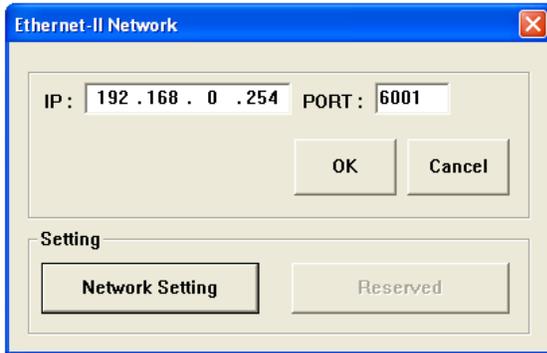
### 5) Firmware Download Dialog



**Firmware Download Dialog**

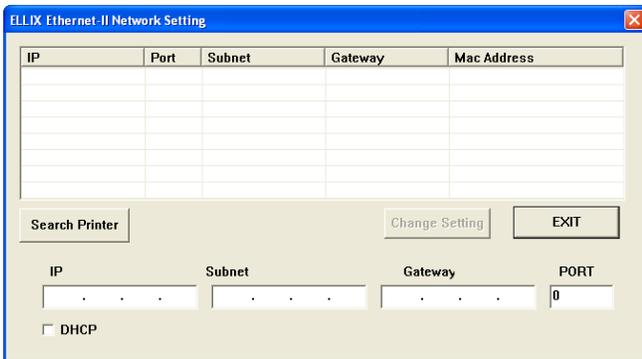
You can update printer's firmware.

## 6) Network Setting Dialog (Ethernet-II Interface)



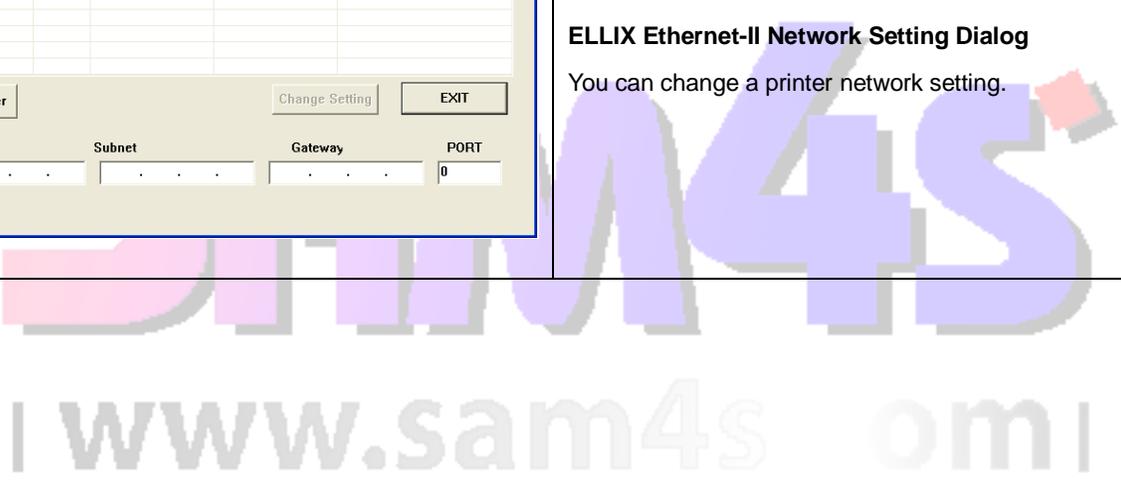
### Ethernet-II Network Dialog

If you enter IP and Port number, You can access Ethernet-II interface.



### ELLIX Ethernet-II Network Setting Dialog

You can change a printer network setting.



## 7) Wi-Fi Network Setting Dialog (Wi-Fi Interface)

	<p><b>Wi-Fi Network Dialog</b></p> <p>If you enter IP and Port number, You can access Wi-Fi interface.</p>
	<p><b>Infrastructure Dialog</b></p> <p>You can change a printer Wi-Fi network setting for Infrastructure.</p>
	<p><b>Limited AP Dialog</b></p> <p>You can change a printer Wi-Fi network setting for Limited AP.</p>

### 3. Description of each functions

#### 1) Logo download

Logo download function can be used for image downloading to NV (Non-Volatile) memory of ELLIX or for image printing from it.

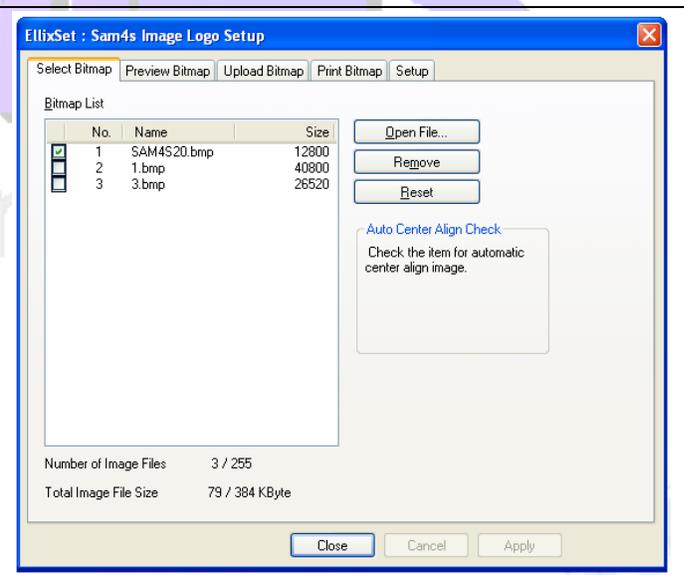
##### (1) General feature

1. Maximum memory capacity: 384Kbyte  
(It depends on NV graphics memory size of User Setup. ELLIX30/35 is fixed 128Kbyte.)
2. Total logo count : Maximum 255
3. Automatic center align
4. Black/White diverging point
5. Image data format : Changeable to a file
6. Gray Scale Image printing support.

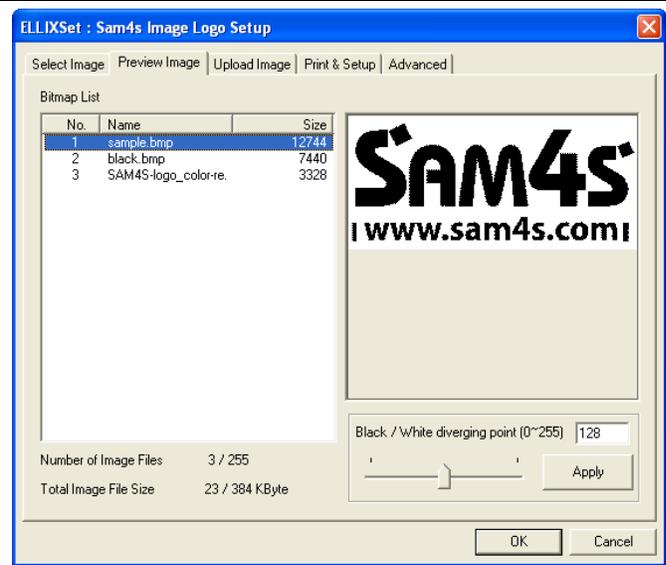
##### (2) Logo registration sequence

- ✓ Select the bitmap file stored in a printer.
- ✓ If you want to save with “Automatic center align” feature, check the checkbox located at the head of Bitmap No. like a red square.

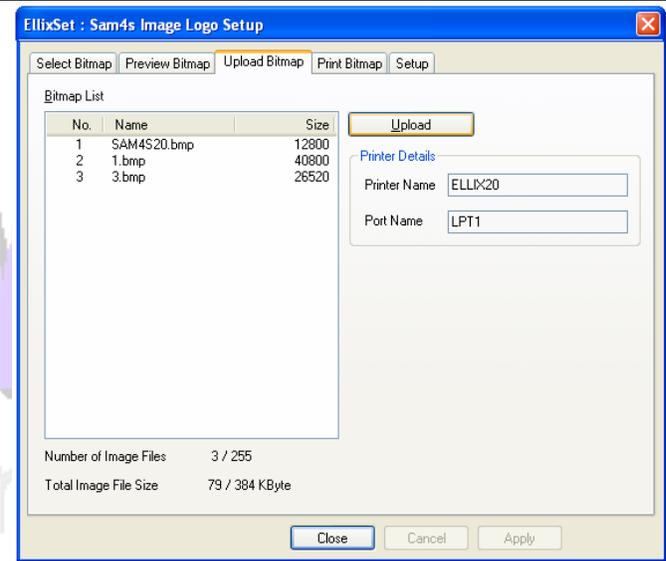
Note) It is very useful the case of printing a small logo image.



- ✓ At Preview Bitmap tab, you can see the logo file you selected.
- ✓ **Black/White diverging point:** If an image output is too dark or too light, you can adjust the diverging point to suitable value for output which you want to get.



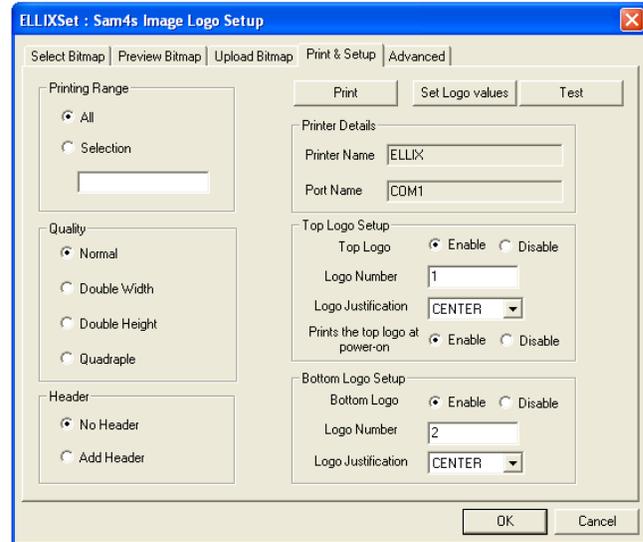
- ✓ If you press the Upload button, the Bitmap image data will be downloaded in the NV graphics memory area of the connected printer. If uploading process finishes successfully, the printer feeds paper a little.



- ✓ You can specify the Printing Range for the logos uploaded in the printer's NV graphics memory area. Selectable choices are below :
  - All** : Prints all logo images saved in the printer connected currently.
  - Selection** : Prints the selected logo image saved in the printer connected currently. Selection range can be from 1 to 255. But you can select multiple logo-images by using ',' or '-' in the edit box.  
(e.g. "1,5,10" or "1-5,8,20-22")

- ✓ You can specify Quality.
  - Normal** : Print in single height and width
  - D/Width** : Print in double width
  - D/Height** : Print in double height
  - Quadruple** : Print in double height and width

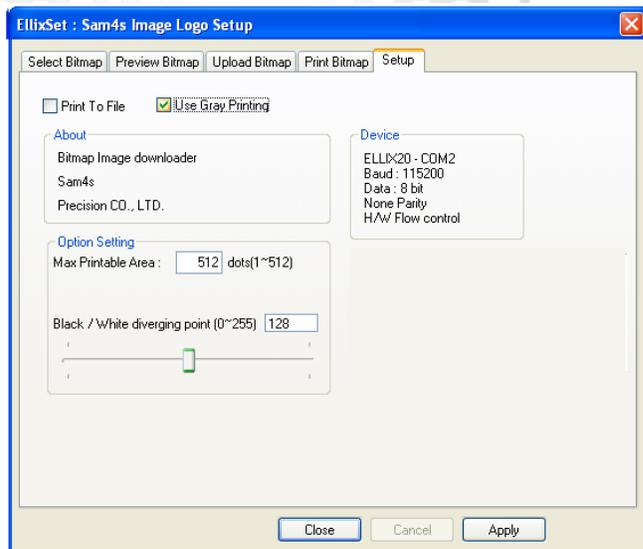
- ✓ You can select option with/without Header as a numbering value of the logo. It is printed on top of logo image.



At Setup tab, you can select some options about the logo downloader.

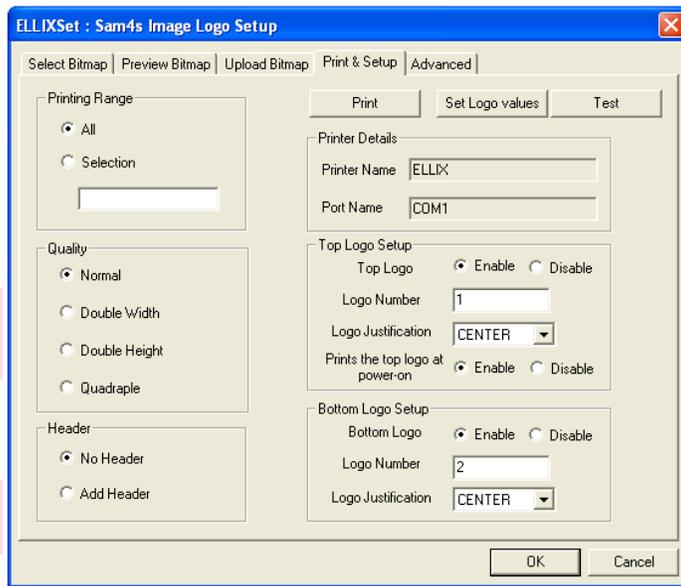
- ✓ **'Print to File' check box:** Image data format can be changed to a file. This file can be copied to printer directly by Upload button at "Upload Bitmap" tab.

- ✓ **Option Setting:**
  - Max Printable Area:** If your machine is set smaller value than a maximum value (512), it should be set as the same with your machine's setting value.
  - Black/White diverging point:** If an image output is too dark or too light, you can adjust the diverging point to suitable value for output which you want to get.
  - Use Gray Printing:** It can make a better result than the original print when printing the true color bitmap images.(notes : It needs more large space to store data than the normal print.)



### (3) Top/bottom logo printing

You can specify the top/bottom logo printing in "Print Bitmap" tab. When use this function, you should use cutting command (ex : GS V m n ).



Hideaway #2  
16040 Cedar Ave S  
Rosemount, MN 5568  
(952)

04/15/11      Order # 51  
8:28 pm      Customer # 0

Sales Person:  
=====

A1 Fakher 250g Cherry		
1 @ 13.99 each	13.99*	
Sub-Total:		13.99
Tax[7.125]:		1.00*
Total:		14.99
Total Paid:		0.00
Change:		0.00

Thank  
You



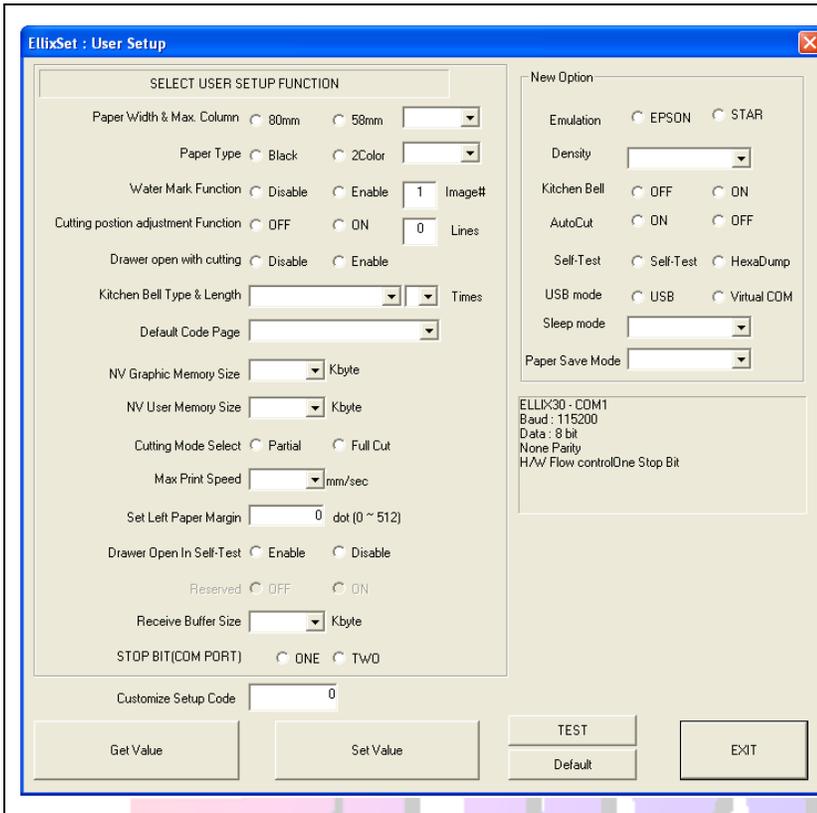
#### [Top logo Setup]

- Top Logo : Enable/disable top logo printing
- Logo number : Sets top logo number.
- Logo Justification : Specifies left/ center/ right justification.
- Prints the top logo at power-on : Makes extended settings for top logo printing.

#### [Bottom logo Setup]

- Bottom Logo : Enable/disable bottom logo printing
- Logo number : Sets top logo number.
- Logo Justification : Specifies left/ center/ right justification.

## 2) User setup



### ✓ About Buttons

#### [TEST]

You can test the printer and check the printer's setting. If you press this button, ELLIX prints out some characters and cuts the paper.

#### [Default]

Can reset to default values all of them.

#### [Get Value]

It queries the current setting values to the printer and shows those values on the dialog.

#### [Set Value]

It sets values with displayed on the dialog or selected of the printer.

#### [EXIT]

Quits this application and returns to Function Select Dialog.

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## (1) Description of User Setup Options

### A. Paper Width & Max Column (Default : 80mm / 30 column In 58mm)

This is an option of the paper width for printing. It can be set the paper 58mm or 80mm width.

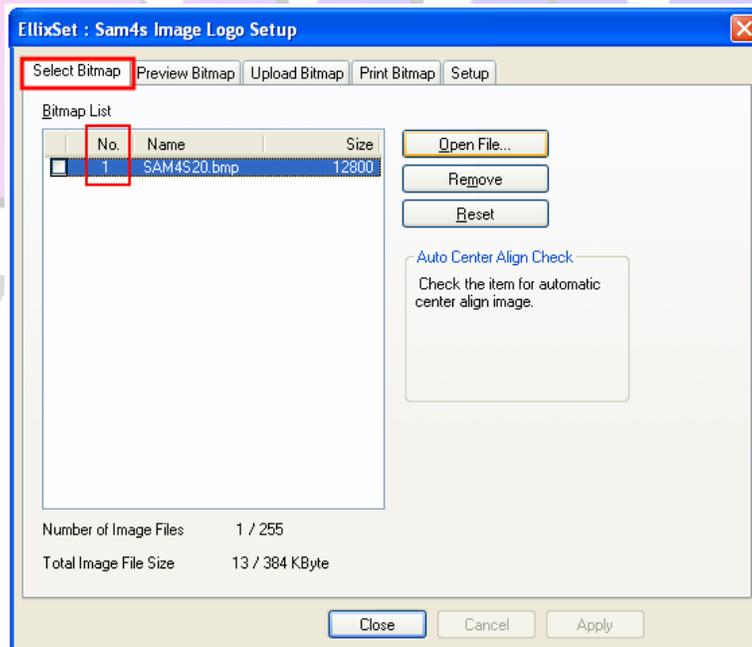
### B. Paper Type and Black Density (Default : Black / Medium)

This is an option of the paper type. It can be set Black or 2Color. The second color can be red or blue by 2 color thermal paper type.

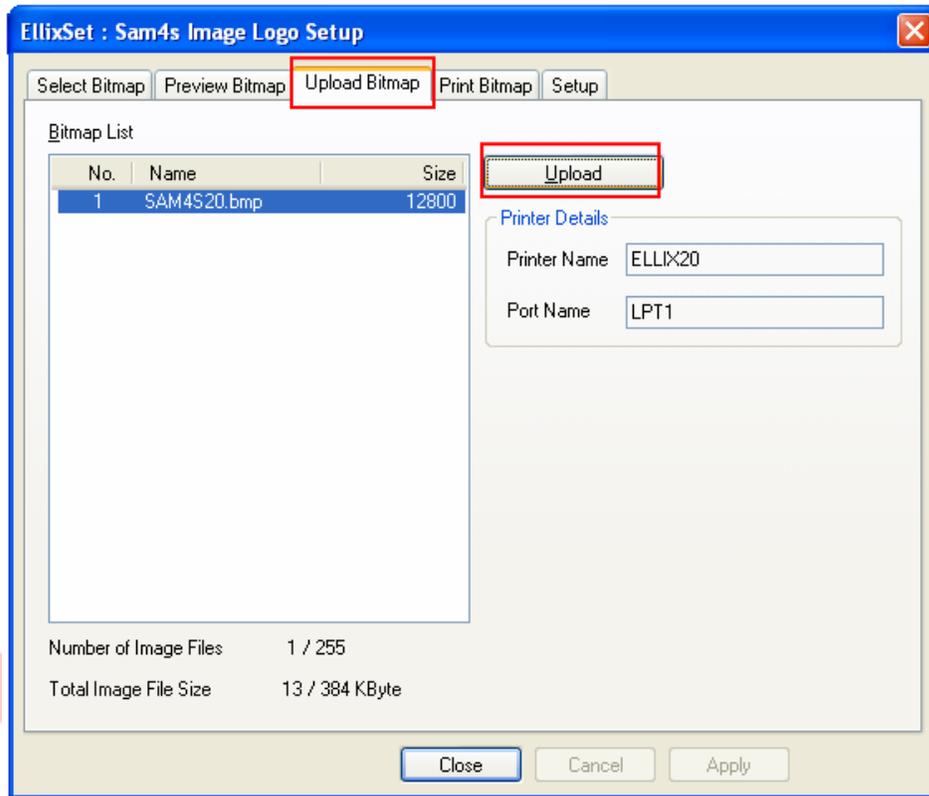
### C. Water Mark Function (Default : Disable)

It is ELLIX that prints background image on your receipt without any additional commands. You can use Watermark with Sam4s Image Logo Downloader in ELLIXSet. If you want to print background image, prepare the bitmap image which will be background. And then follow steps as below.

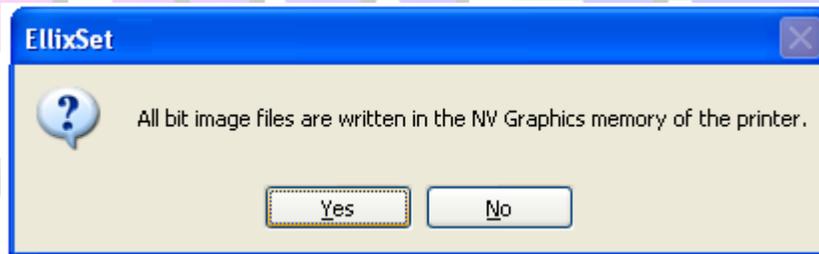
- ① Run Sam4s Image Logo Downloader and select the prepared bitmap image. And check the image number.



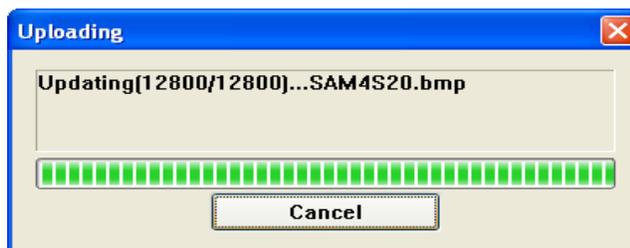
- ② Go to the "Upload Bitmap" tab and click the "Upload" button.



③ It will show the message box like below, click the “YES” button.

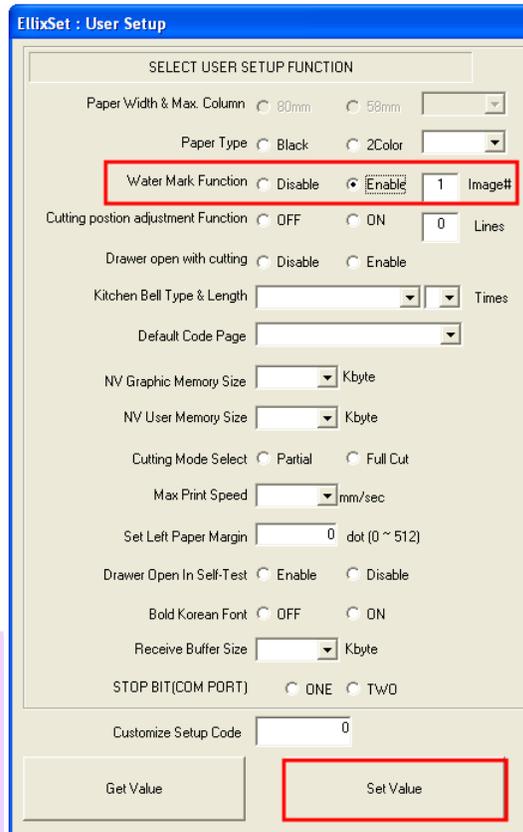


④ All of images saved before on the printer will be deleted and new image data will be downloaded on your printer.



- ⑤ Printer feeds some paper when the logo upload is completed successfully.
- ⑥ Close Sam4s Image Logo Downloader and run User Setup from Function Select Dialog.
- ⑦ Set Enable of the Water Mark Function and input the number of logo image that you want to print as a

background. (Refer step ①) And then click the “Set Value” button. The printer will be set values newly and Water Mark Function setting is finished.



⑧ Try to click the “TEST” button and you will see the fantastic receipt with background image.

Left picture is the sample receipt that is applied the Water Mark Function. Right one is bitmap image that is used as a background image.



**D. Cutting position adjustment Function (Default : Disable / 0 Line)**

If your receipt is cut wrong, this option will be very useful with you, it makes the application not change.  
When this option set to enable, printer will feed amount (line number input) of paper before cutting.

**E. Drawer open with cutting (Default : Disable)**

This option will make drawer take an open-signal when printer is received the paper cutting command.

**F. Kitchen Bell Type & Length (Default : Sam4s Bell / 3 times)**

ELLIX offers one bell and three melodies for using on kitchen. It is possible to adjust ringing time or length of melody.

The offered bell types are below.

**Sam4s Bell:** Default sam4s bell

**Melody 1 ~ 3:** Three different melodies

**Other Bell:** Blend bell (Internal oscillation type)

**G. Default Code Page (Default : PC437-USA, Standard Europe)**

If you want to fix the specified codepage as default, select one of codepages in the list and then click the "Set Value" button.

**H. NV Graphic Memory Size (Default : 384Kbytes)**

ELLIX has NV (Non-volatile) memory area for saving graphics and user data. The NV Graphic memory size is 384Kbytes maximum and is 0byte minimum. You can take this size freely with this option. But it must be set in a range from 0 to 384Kbytes.

Note) Total size of NV memory (NV graphic and NV user memory) is 448Kbytes. Even if you will set the amount over 448Kbytes, it will be automatically set to possible size.

(ELLIX30/35 is fixed 128 Kbytes)

**I. NV User Memory Size (Default : 64 Kbytes)**

ELLIX has NV (Non-volatile) memory area for saving graphics and user data. The NV Graphic memory size is 320Kbytes maximum and is 64Kbytes minimum. You can take this size freely with this option. But it must be set in a range from 64 to 320Kbytes.

Note) Total size of NV memory (NV graphic and NV user memory) is 448Kbytes. Even if you will set the amount over 448Kbytes, it will be automatically set to possible size. (ELLIX30/35 is fixed 64 Kbytes)

**J. Cutting Mode Select (Default : Partial Cut)**

You can choose one type of cutting between partial cut (with un-cut point in a center of paper) and full cut.

**K. Max Print Speed (Default : 270 mm/sec)**

If printer, especially machine is fast and data transfer-speed is low, that is, two of them have speed mismatched. This case may be cause of an intermittent printing. You can control print speed from this option for better printing, e.g. smooth printing.

- ELLIX30/35 Max Speed : 180mm/sec, ELLIX30/35II Max Speed : 220mm/sec,
- ELLIX40/45 Max Speed : 220mm/sec, ELLIX40/45II Max Speed : 270mm/sec,

**L. Set Left Paper Margin (Default : 0 dot)**

Left margin of paper is changeable for better receipt (printed) shape. For example, if you are using 40-column-format receipt on ELLIX, you may be seen a print-result tended to left side. In this case you can take much better result, if you set 24-dots which is the value of left margin.

**M. Drawer Open In Self-Test (Default : Disable)**

Check the drawer operation at print self-test mode.

**N. Received Buffer Size (Default : 4Kbytes)**

ELLIX's received buffer can be 64Kbytes maximum. You can change buffer size with this option.

**O. Stop Bits (COM) (Default : ONE)**

Stop bits used during serial communication can be changed.

**P. Customize Setup Code (Default : 0)**

You can enter a Customize Setup Code .

## (2) New Option

Some New Option is designed for ELLIX printer that does not have dip switches. (Only ELLIX40/45 LCD type : \*)

**A. Emulation (Default : EPSON) \***

Select a printer's emulation mode.

**B. Density (Default : Level 2) \***

Select a Printer's paper density level.

**C. Kitchen Bell (Default : OFF) \***

Select whether to use Kitchen Bell.

**D. Auto Cut (Default : ON) \***

Select whether to use Auto Cut.

**E. Self-Test (Default : Self-Test) \***

Turn on the power while holding down the FEED button. The self-test begins.

This option selects a self-test mode. (HEXADECIMAL DUMP MODE, Self Test mode)

**F. USB mode (Default : USB) \***

Select whether to use a USB mode.

(When this option changed, please restart ELLIXSet).

**G. Sleep mode (Default : OFF)**

Set a sleep mode. Default value is OFF.

**H. Paper save mode (Default: OFF)**

Set a Paper save mode. This mode saves paper.

**I. LCD Password (Default: Don't touch) \***

Reset LCD password value. (Only use LCD model)

**J. Wifi Auto Keep-Connection (Default: Disable)**

When abnormal disconnect is occurred, this option will be reduced re-connection time.

**K. Bell (Default: External)**

Set a kitchen bell to output the melody.

**L. Bluetooth PWR form USB (Default : OFF)**

Set the function of applying power to the Bluetooth module.

**M. Upside-down (Default : Disable)**

Set the function of upside-down print per page. (Max : 30cm page length)

If WaterMark/Two Color/Top & bottom logo function is on, this function is impossible to use.



### 3) Firmware download (Using ELLIXSet)

#### (1) ELLIX30 / 40 / 35 / 45, ELLIX30II / 40 II / 35 II / 45 II

Firmware update sequences are below.

1. Remember folder directory with downloaded firmware file.
2. Turn the ELLIX off.
3. Check the cable connection between ELLIX and your PC .

If a printer have dip Switches, please turn off all dip switches.

**When printer interface is WLAN, please connect USB cable for f/w update.**

4. Open the printer cover.
5. Turn on ELLIX with FEED button; hold the feed button until the PAPER LED is ON. LCD model printer displays a message as shown.



6. Now, ELLIX is ready to update firmware. (\*Download mode)
7. Run the “Firmware Update Dialog” on ELLIXSet and open the downloaded firmware file.
8. And then, select the download area which you want to update. (generally select the “Program area”)
9. Select the connected port on your PC. (Already selected on ELLIXSet)

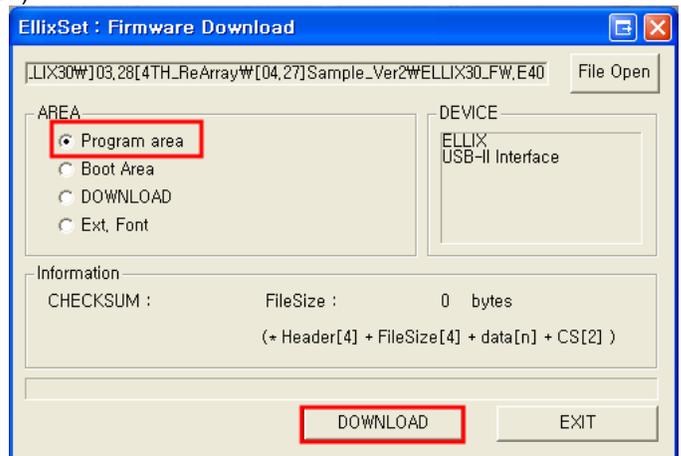


10. If you click the download button, the firmware update will be started and this application will show the status with progress-bar on dialog bottom side.  
(If progress-bar does not proceeding well, when you click download button, you should check ‘Port Select’ or cable connection whether settings are correct or not.)

11. If download is done, printer will notify download completion with 5 times buzzer. (in surely case that download is succeeded). And then turn off a printer.

- If buzzer does not ring that means communication ERROR is occurred during download. In this case, please check Cable connection status (It should be fasten – Normal).

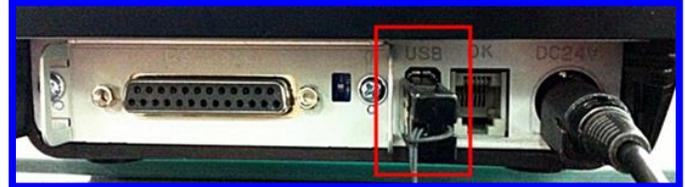
12. Please try to operate ‘SELF TEST’ and check the updated firmware version.



#### 4) Firmware download (Using USB memory stick)

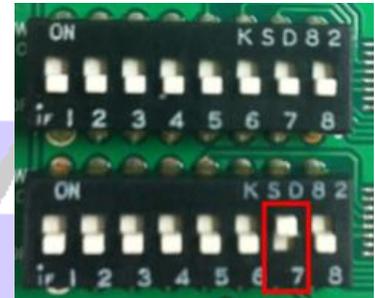
Firmware update sequences for ELLIX30 / 40 series are below.

1. Format a USB memory stick to FAT file system.
2. Copy the firmware file to USB memory stick.(No folder)
3. Turn off a printer. And then connect a USB memory stick to printer USB port.



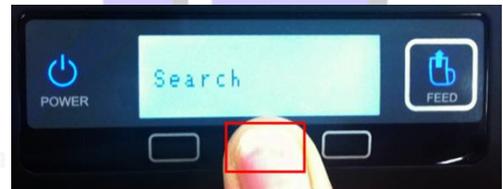
#### 4. ELLIX30/40 with dip switch:

Turn on the switch 7<sup>th</sup> of dip switch 2<sup>nd</sup>. Open the printer cover. Turn on a printer with holding the FEED Button. After 2 seconds, Release the FEED button.



#### ELLIX40 with LCD display:

Open the printer cover. Turn on a printer with holding the Button 2 of LCD display. After 2 seconds, Release the FEED button.



5. If firmware update is done, printer will notify update completion with 3 times buzzer. (in surely case that download is succeeded). And then turn off a printer.
6. Do self-test for confirming the updated firmware version.

- **Does not support this feature, the printer firmware version less than 1.10.**
- Boot loader(1.14 or less) : Updatable range is max 2.09 printer firmware version.
- Boot loader(1.15 or more) : Updatable range is from 2.10 printer firmware version.

## 5) Firmware download (BOOT, Downloader)

Many features has been added from firmware version 2.10. So you want to update to firmware 2.10 or higher than 2.09, you must follow the following steps (this procedure is that once you upgrade from older versions).

1. Proceed to 1 to 6 procedures of " 3) Firmware download (Using ELLIXSet) ".
2. Run the ELLIXSet utility (Ver 1.214 or higher) and set to the interface and the press the OK button.
3. Hold down the CTRL button on the left side of the keyboard, press the "Firmware Download" button.



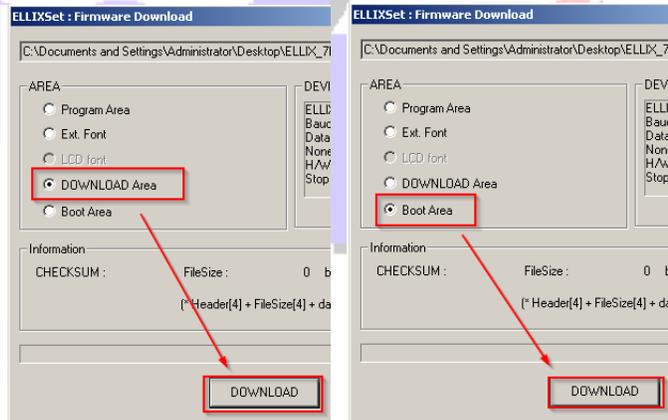
4. When the Firmware Update dialog, click the "Open" button to select the latest firmware version 2.10 or more.

5. Select "Download Area" and click the "Download" button. When the update is complete, the buzzer will beep five times.

**Do not turn off the power during the update.**

6. When the "Download Area" update is complete, turn off the printer.

7. Open the cover and turn on the power while pressing the paper feed button. In other words, run the download mode.



8. Select the "BOOT Area" in the Firmware Update dialog, and then click on the "Download" button. **Do not turn off the power during the update.**

9. When you have completed the update to the "BOOT Area", update the "Program Area" for complete with all updates.

**Note: Updated the boot loader and downloader cannot be downgraded. If this is the first update from the previous version(2.09 or less) to the new version(2.10 or more), please re-set the user setup.**

## 6) Network Setting Dialog (Ethernet-II Interface)

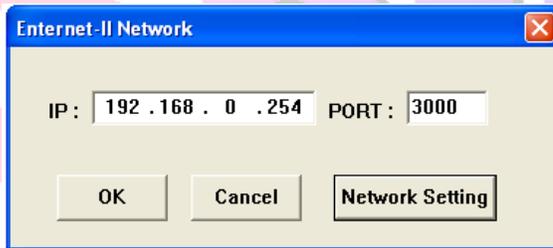
### (1) Ethernet-II Network Dialog

When you selected a Ellix40 Ethernet-II (ELLIX40-EII) In the "Device Configuration Dialog" and pressed OK button, Ethernet-II Network Dialog is appears. Enter the IP address and port number to connect. Press the OK button. Function Select Dialog will be executed.

In addition, you can select the "ELLIX Ethernet-II Network Setting dialogue" It can change the network settings for the printer. Do you want to check ELLIX IP and Port number? Please run the Self-Test. You can confirm all the settings of the printer.

SAM4S ELLIX 20 II

VERSION STD 1.12  
PGM CHECKSUM : 627B



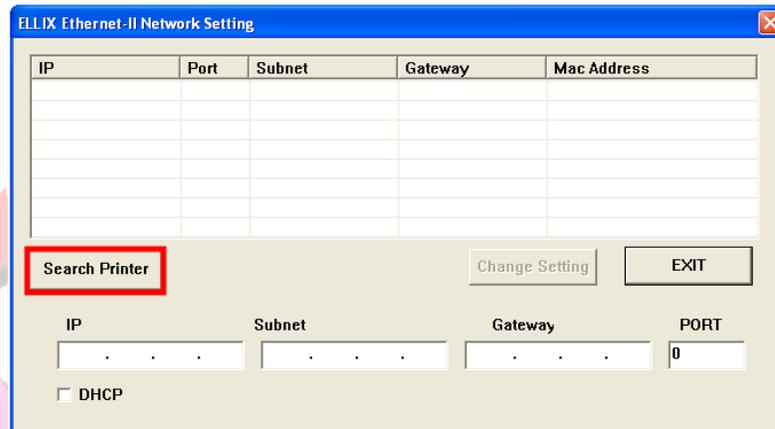
Ethernet-II INTERFACE	
STATIC IP	: 192.168.0.254
PORT	: 3000
SUBNET MASK	: 255.255.255.0
GATEWAY IP	: 192.168.0.1
MAC ADDRESS	: 00:13:62:01:02:03
RECEIVE ERROR	: IGNORE
RECEIVE BUF SIZE	: 640 Kbytes
EMULATION	: EPSON
USE KP BELL	: NO
AUTO-CUTTER	: Enable

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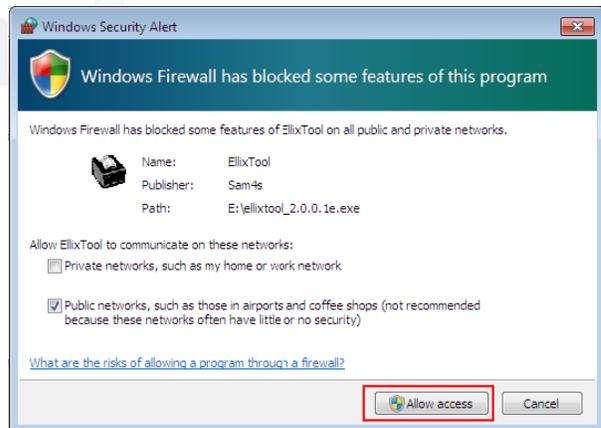
## (2) ELLIX Ethernet-II Network Setting Dialog

Here you can change the network settings for the printer. If you would like to change the network settings, please follow these steps.

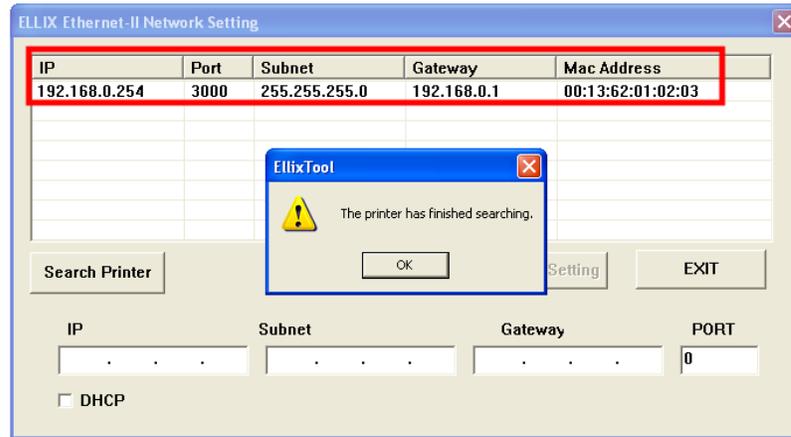
1. The printer is connected to the router. PC must be connected to the same router.
2. Turn on ELLIX40 normally.
3. Run the "ELLIX Ethernet-II Network Setting Dialog." Press the "Search Printer" button.



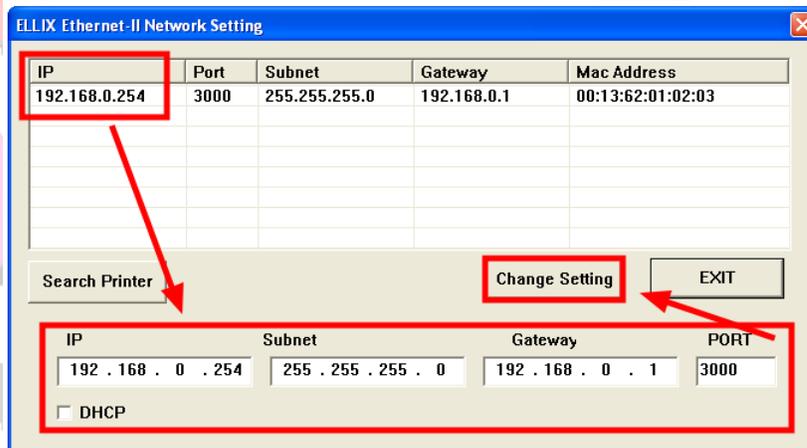
4. If you can see the "Windows Security Alert" message, Click a "Unblock" button (Windows XP) or "Allow access" button (Windows 7). And retry the 3 Step.



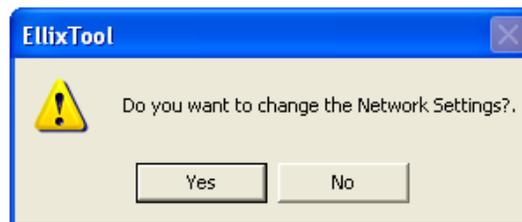
- If you can see the "The Printer has finished searching." message, detected the printer's network settings appear. (If you can not see any list, Please check cable and network.)



- Choose one to change the IP. Enter the network settings you want (as shown). Finally, press the "Change setting" button.



- You can see the "Do you want to change the Network Setting?" message. Press the "Yes" button.



- Printer will notify update completion with buzzer, and then printer will be restart.



9. Do self-test for confirming the updated network setting.
  
10. If it is not progress as expected above procedure, please use USB communication for TCP / IP settings.  
Turn off the power to the printer, please connect the USB cable to the PC and printer. Then, after you turn on the printer, please try again from 3 step.  
(This feature will support F/W version 2.05 and ELLIXSet version 1.2.00 or higher.)



### (3) Web Server

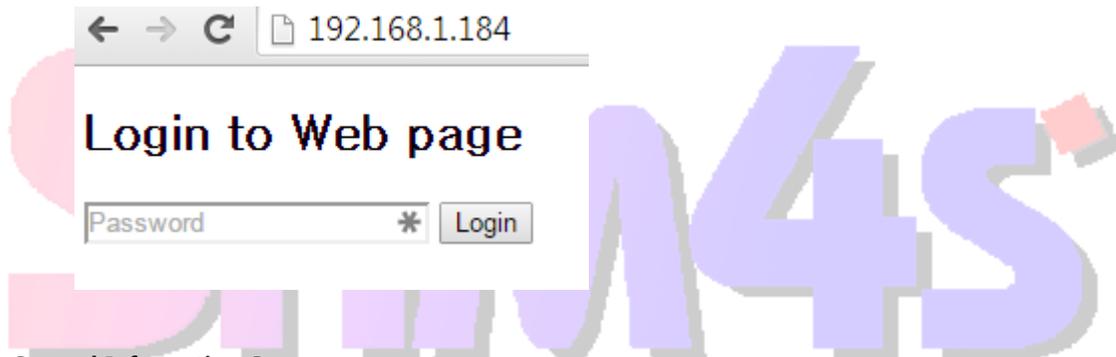
Only firmware version 2.10 or later ELLIX30 / 40 / 35 / 45II Ethernet interface supports the Web server. Function provided by the Web server are as follows. (Function that supports every version of firmware, may be different.)

**<Notice>**

- Web server, has been optimized to Chrome browser. In addition, in accordance with the state of the other browsers and network, screen display may be different.
- For reliable management, as far as possible, please be used in situations where you do not have printing.

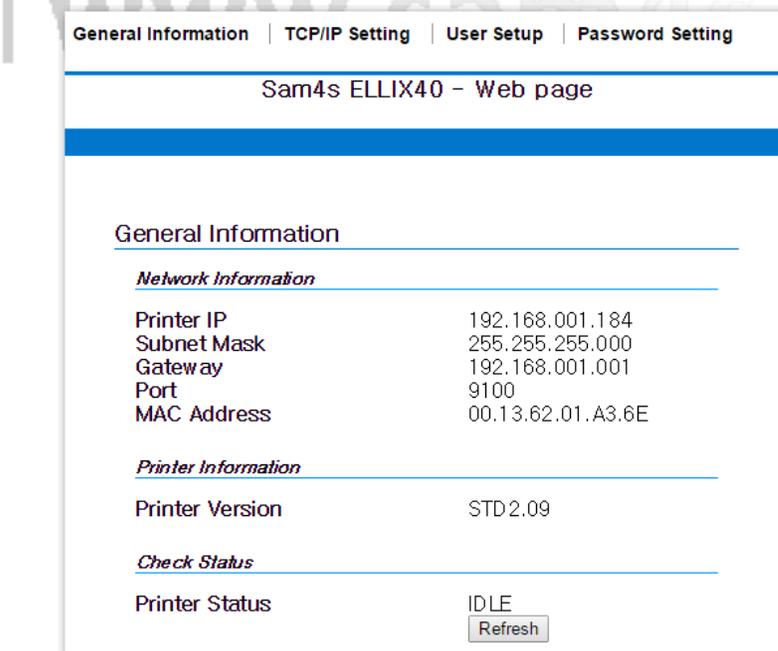
**<Login Screen >**

- In the address bar of your web browser: When "http // printer's ip" to enter, you will be able to connect to the printer. Master password is 0821.



**<General Information Screen >**

- Network information of the printer, the version of the firmware, you will be able to check the status.



<TCP/IP Setting Screen >

- You can change the network settings, such as the printer of IP. The changed setting is not apply till when you restart.

General Information   TCP/IP Setting   User Setup   Password Setting	
Sam4s ELLIX40 - Web page	
<hr/>	
<b>TCP/IP Setting</b>	
Printer IP	192.168.001.184
Subnet Mask	255.255.255.000
Gateway	192.168.001.001
Port	9100
Network Config	

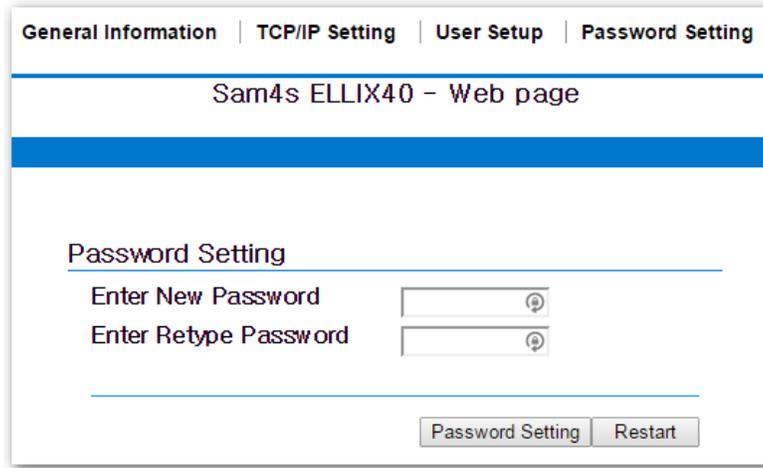
<User Setup Screen >

- You can change the basic code page, Kitchen Bell settings and receive buffer of the printer.
- After the setting, the printer will be restarted.

General Information   TCP/IP Setting   User Setup   Password Setting	
Sam4s ELLIX40 - Web page	
<hr/>	
<b>User Setup</b>	
<i>Kitchen Bell</i>	
Kitchen Bell Type	<input checked="" type="radio"/> Bell <input type="radio"/> Melody 1 <input type="radio"/> Melody 2 <input type="radio"/> Melody 3
Kitchen Bell Times	3 times ▼
Kitchen Bell Output	<input type="radio"/> Board Buzzer <input checked="" type="radio"/> Internal Bell
<i>Communication</i>	
Received Buffer Size	<input checked="" type="radio"/> 4 Kbyte <input type="radio"/> 20 Kbyte <input type="radio"/> 32 Kbyte <input type="radio"/> 64 Kbyte
<i>Printing</i>	
Default Code Page	PC437 (USA, Std Europe) ▼
Set Values	

<Password Setting Screen >

- You can re-configure the printer password. (Master password will not be changed.)
- When you press the Restart button, you can manually re-start of the printer.



The screenshot shows the 'Password Setting' screen of the SAM4S ELLIX40 web page. At the top, there are navigation tabs: 'General Information', 'TCP/IP Setting', 'User Setup', and 'Password Setting'. Below the tabs, the page title is 'Sam4s ELLIX40 - Web page'. The main content area is titled 'Password Setting' and contains two input fields: 'Enter New Password' and 'Enter Retype Password'. Each field has a small circular icon with a key symbol to its right. At the bottom of the form, there are two buttons: 'Password Setting' and 'Restart'.

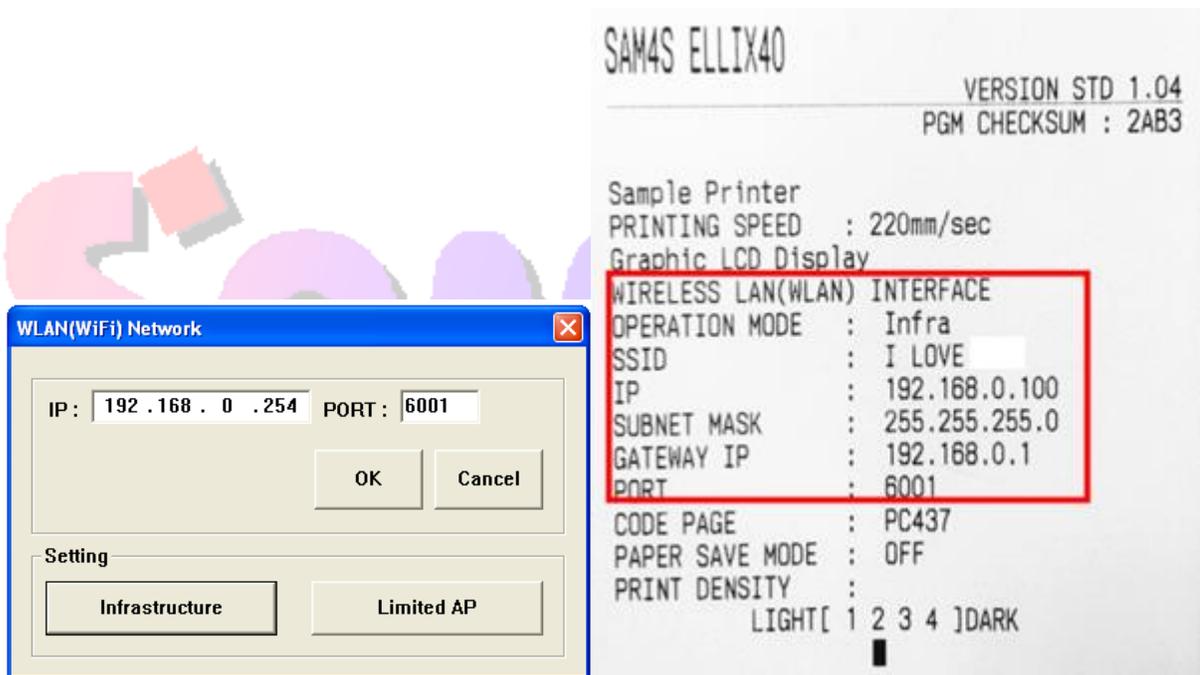


## 7) Network Setting Dialog (Wi-Fi Interface)

### (1) Wi-Fi Network Dialog

When you selected a Ellix40 Wi-fi (ELLIX40WI) In the “Device Configuration Dialog” and pressed OK button, Wi-Fi Network Dialog is appears. Enter the IP address and port number to connect. Press the OK button. Function Select Dialog will be executed.

In addition, you can select the "Infrastructure Dialog" and "Limited AP Dialog". It can change the network settings for the printer. Do you want to check ELLIX IP and Port number? Please run the Self-Test. You can confirm all the settings of the printer.



**(2) Glossary of Terms**

**AP (Access Point)**

AP, actually as a device is a hotspot that is like an Ethernet hub. It can be possible to communicate, which is binding one network with wireless clients (devices) nearby located in AP. And it can be possible to connect to WAN, backbone or another AP (hotspot) through the Ethernet line connected with one AP.

**Infrastructure**

If several terminals (PC, PCPOS etc.) or clients connect to one AP and they are composed to the same network, this is called 'infrastructure'. In other words, infrastructure is a structure that ELLIX WLAN interface connects with PC or terminals through AP.



**Limited AP**

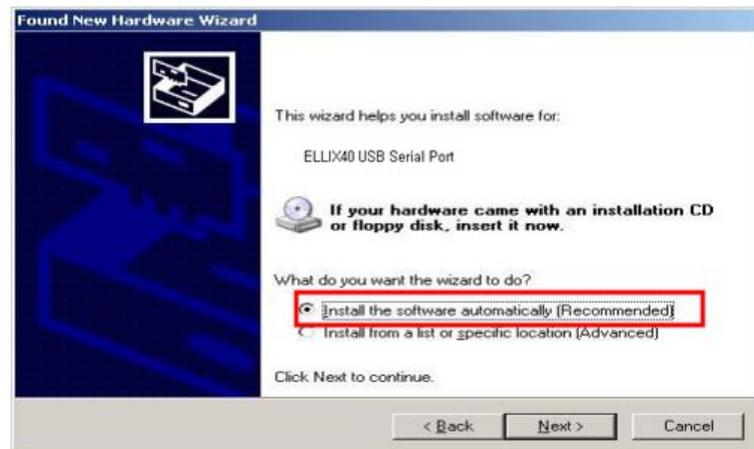
Limited AP, which ELLIX WLAN interface is become AP by itself, can be possible to communicate directly with other terminals (PC, PCPOS etc.) or clients without any other APs.



### (3) Install a Virtual COM Driver (Windows XP, POSReady 2009)

Virtual COM port driver must be installed when WLAN Interface sets up. During installation, Please do these steps are following.

1. Turn a printer off.
2. Install SAM4S Printer Driver for installing virtual COM driver automatically.  
(SAM4SPrinterDriverInstallerV1.4.1.exe 2012/05/10).  
Please refer to the manual of SAM4S Printer Driver Installer.  
(Select a connection type of the printer: ETHERNET CONNECTION  
Create a TCP/IP Printer Port : The value for use later)
3. Connect a USB cable to printer and PC.
4. Turn a printer on.
5. When "Found New Hardware Wizard" is appeared, select a "Install the software automatically(Recommended)"



6. Select a "Continue Anyway" Button.



7. When the installation is completed, run the "Device Manager" for checking a New Virtual COM port number.



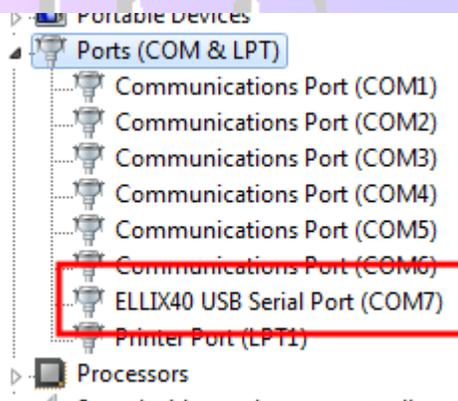
#### (4) Install a Virtual COM Driver (Windows 7, POSReady 7)

Virtual COM port driver must be installed when WLAN Interface to set up. During installation, Please proceed as follows, depending.

1. Turn a printer off.
2. Install SAM4S Printer Driver for installing virtual COM driver automatically.  
(SAM4SPrinterDriverInstallerV1.4.1.exe) Please refer to the manual of SAM4S Printer Driver Installer.  
(Select a connection type of the printer: ETHERNET CONNECTION  
Create a TCP/IP Printer Port: The value for use later)
3. Connect a USB cable to printer and PC.
4. Turn a printer on.
5. When Virtual COM port is installed properly in Windows, this balloon appears as shown.



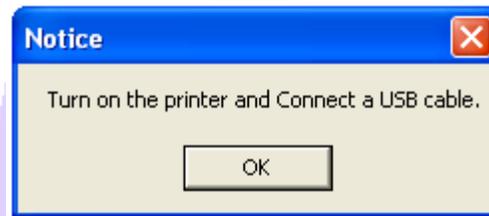
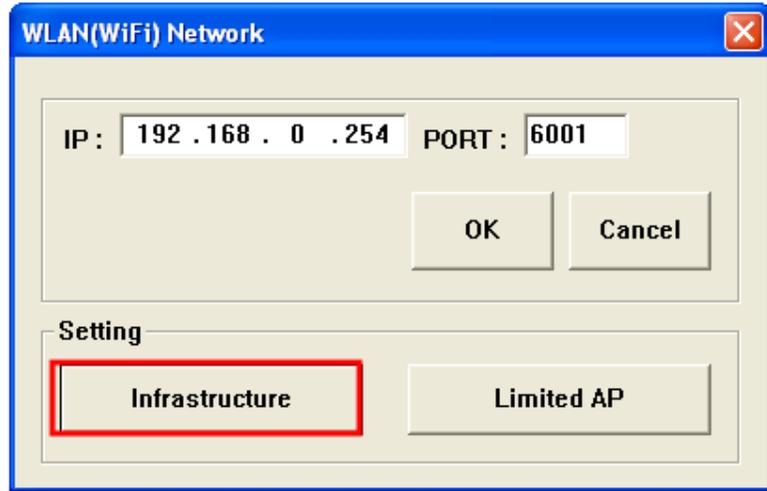
6. When the installation is completed, run the "Device Manager" for checking a New Virtual COM port number.



(5) Infrastructure mode setting

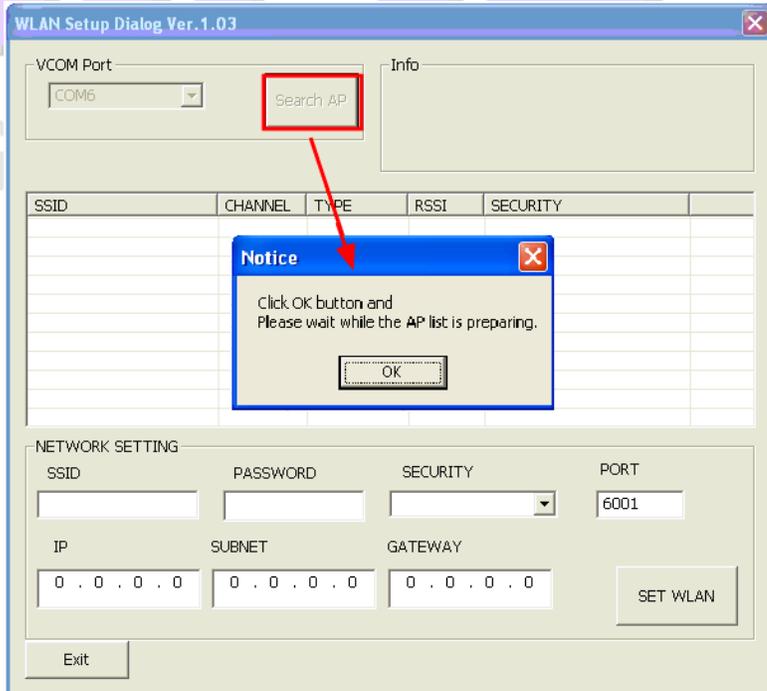
Click **"Infrastructure"** Button in Wi-Fi Network dialog.

When message box is appeared, turn a printer on and then connect USB cable PC and printer. And then wait 10 seconds.



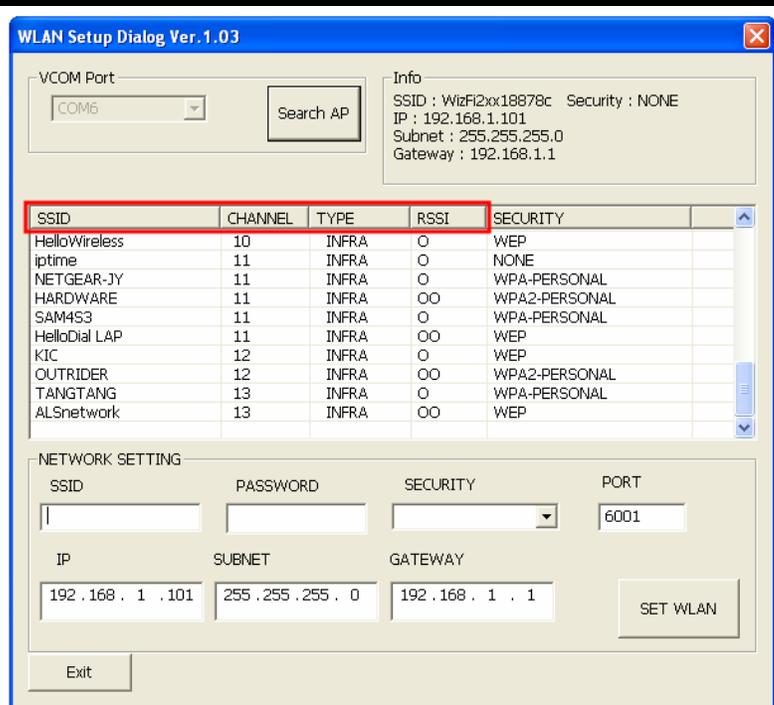
Click **"Search AP"** button to search AP list.

When message box is appeared, click "OK" button.



When "Search AP" is completed, WLAN interface information and list of around the AP devices appear .

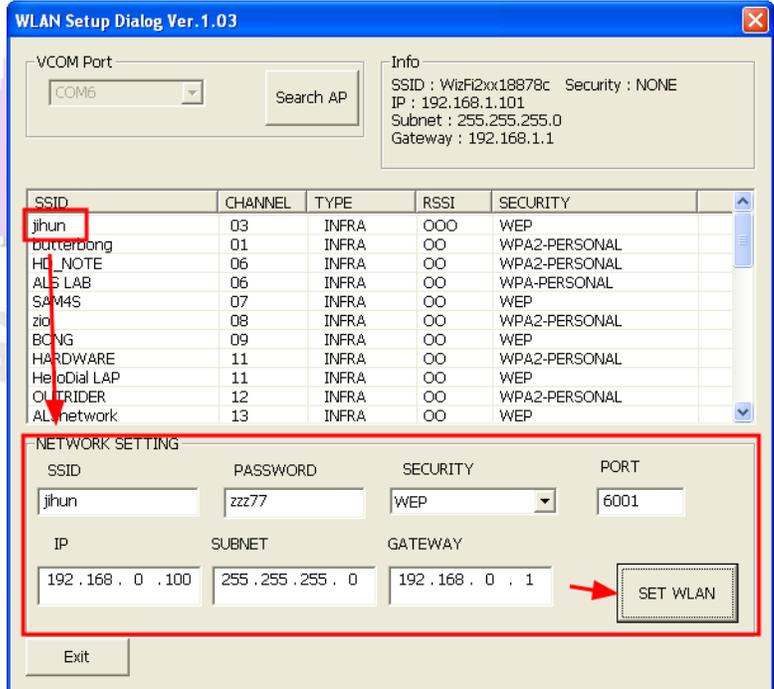
- SSID : AP Name
  - CHANNEL: Communication channel
  - TYPE : Operation mode
  - RSSI : Received signal strength indication
- O: Weak signal  
OO : Normal signal  
OOO : Strong signal



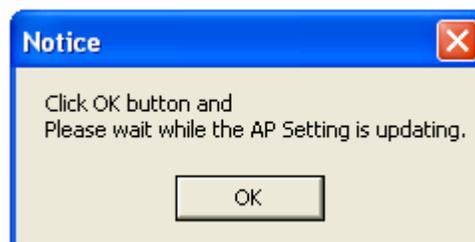
Select the SSID of AP which you want to connect. **(You must select Normal or Strong signal SSID for a safety communication.)**

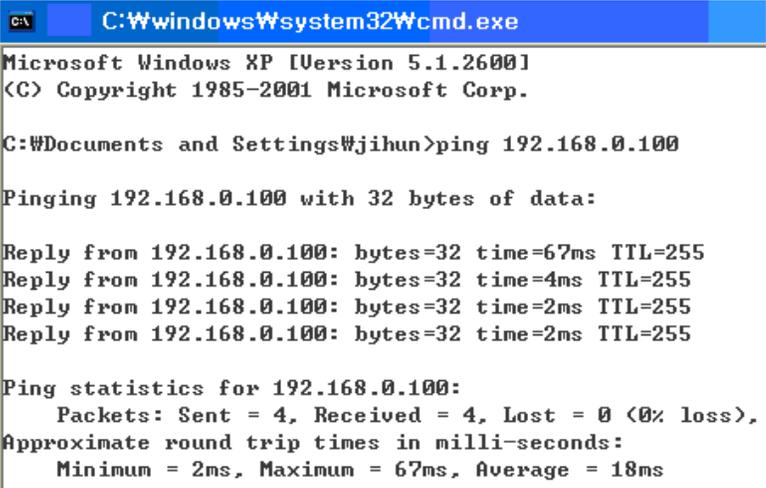
If you need a password for connection, enter a PASSWORD.

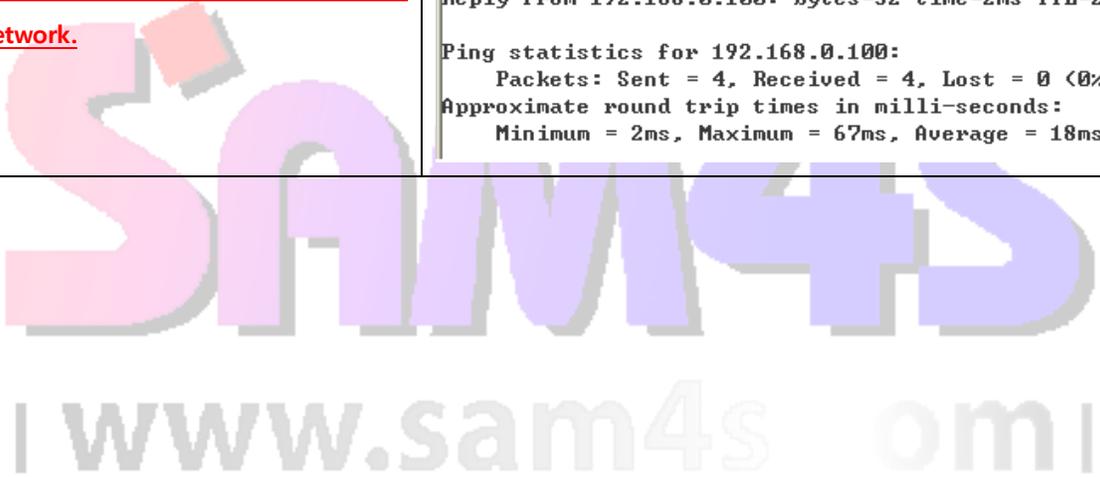
Enter the Network setting values (IP, SUBNET, and GATEWAY) that are assigned from the **network administrator**. And then click "SET WLAN" button.



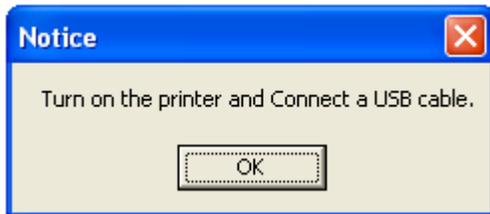
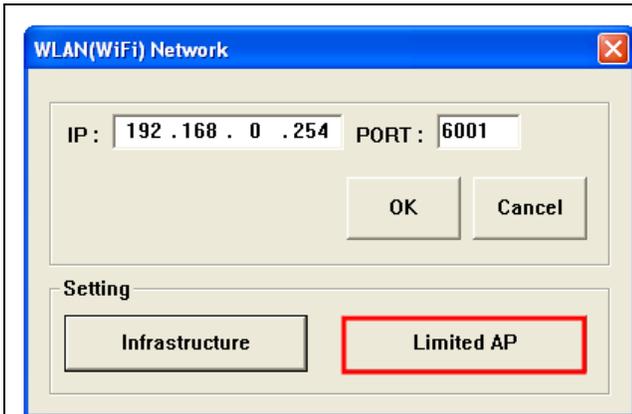
Click the "OK" button; please wait for the completion of setting.



<p>When the setting is completed, this message appears as shown in the figure.</p> <p>Then disconnect the USB cable from the printer, the printer off and turn it on.</p>	
<p>Run the ping test at the command prompt.</p> <p>Ex) ping 192.168.0.100</p> <p><b><u>Note: PC and the printer must be on the same network.</u></b></p>	 <pre> C:\&gt; C:\Windows\system32\cmd.exe Microsoft Windows XP [Version 5.1.2600] (C) Copyright 1985-2001 Microsoft Corp.  C:\Documents and Settings\jihun&gt;ping 192.168.0.100  Pinging 192.168.0.100 with 32 bytes of data:  Reply from 192.168.0.100: bytes=32 time=67ms TTL=255 Reply from 192.168.0.100: bytes=32 time=4ms TTL=255 Reply from 192.168.0.100: bytes=32 time=2ms TTL=255 Reply from 192.168.0.100: bytes=32 time=2ms TTL=255  Ping statistics for 192.168.0.100:     Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),     Approximate round trip times in milli-seconds:         Minimum = 2ms, Maximum = 67ms, Average = 18ms         </pre>



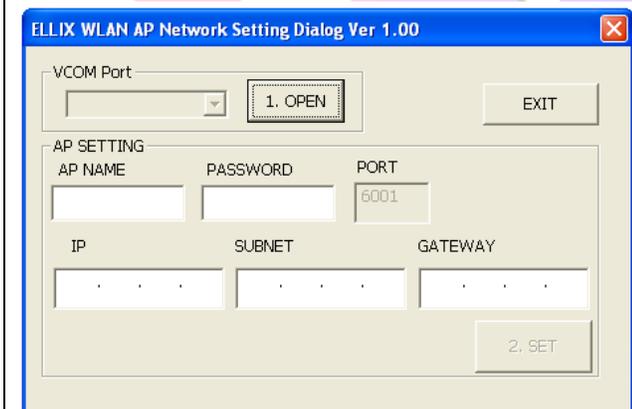
### (6) Limited AP setting



Click "**Limited AP**" Button to in Wi-Fi Network dialog.

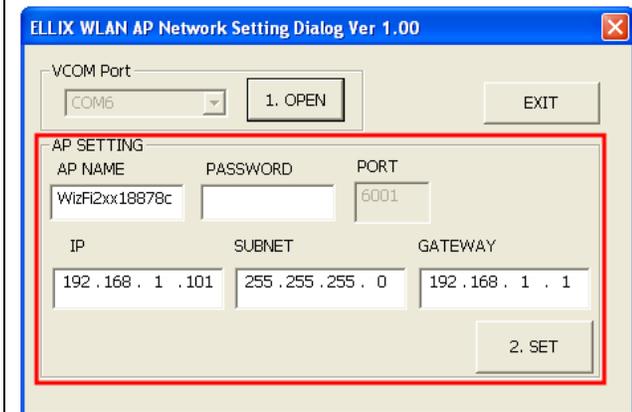
When a message box is appeared, turn a printer on and then connect USB cable between PC and printer.

And then wait 10 secends.



Click "**1.OPEN**" button to start WLAN interface setting.

After a few seconds you can see the value of setting WLAN Interface as following image.

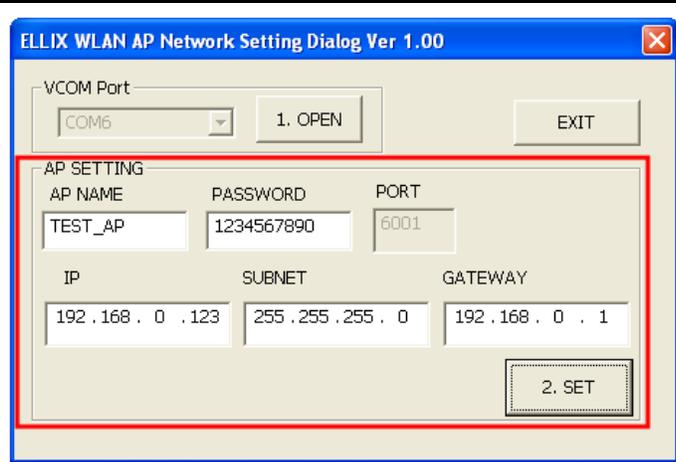


- AP NAME: WLAN Interface SSID
- PASSWORD: Password to connect WLAN Interface (Enter a password with 10 number digit or alphabetic value.)
- MAC ADDRESS : MAC address of WLAN Interface
- IP : WLAN Interface IP
- SUBNET : WLAN Interface Subnet
- GATEWAY : WLAN Interface Gateway
- PORT : WLAN Interface Port number (6001,only)

Enter unique AP name and 10-digit password and then set a network values (IP, SUBNET and GATEWAY).

**Ex) AP NAME : TEST\_AP**  
**PASSWORD : 1234567890**  
**IP : 192.168.0.123**  
**SUBNET : 255.255.255.0**  
**GATEWAY : 192.168.0.1**

Click the "2.SET" button; please wait for the completion of setting.



When the setting is complete, a message appears as shown in the figure.

Disconnect the USB cable from the printer, then turn the printer off and turn it on.



To make sure it is set up properly, try searching WLAN interface.

This figure shows result of connection to WLAN interface on iPhone.

**Please refer to the manual for how to set up a wireless network of wireless LAN equipment you are using.**

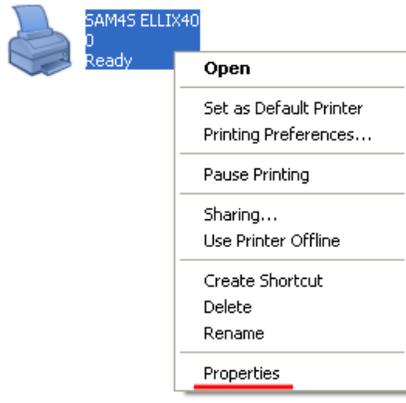


### (7) Print Test page (Windows XP, POSReady 2009)

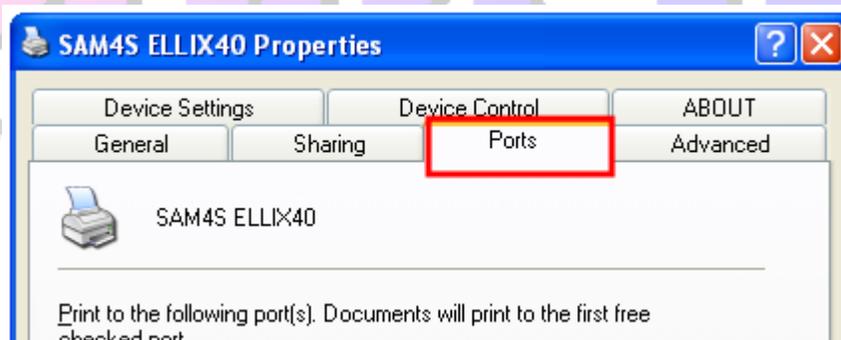
Install SAM4S Printer Driver Installer (SAM4SPrinterDriverInstallerV1.4.1.exe, 2012/05/10). Please refer to the manual of SAM4S Printer Driver Installer.

(Select a connection type of the printer: ETHERNET CONNECTION Input a Create a TCP/IP Printer Port: any value)

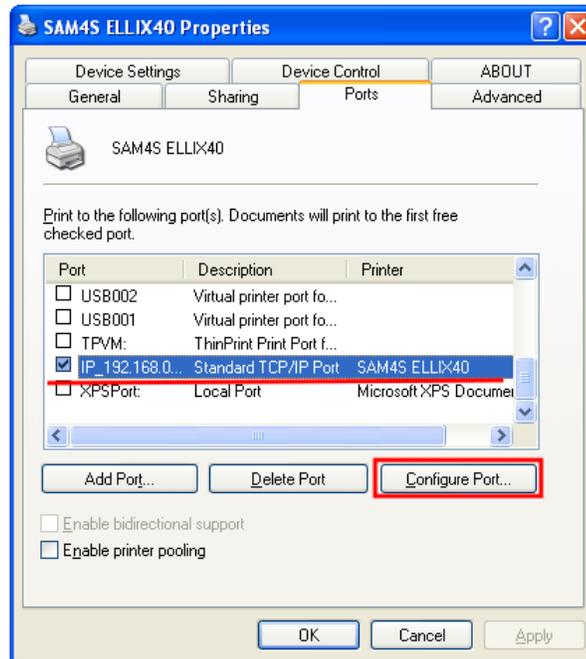
1. Turn a print off.
2. Disconnect a USB cable from printer.
3. Turn a print on again.
4. Select "SAM4S ELLIX40" in "Printers and Faxes" folder. Click a right mouse button and select "Properties".



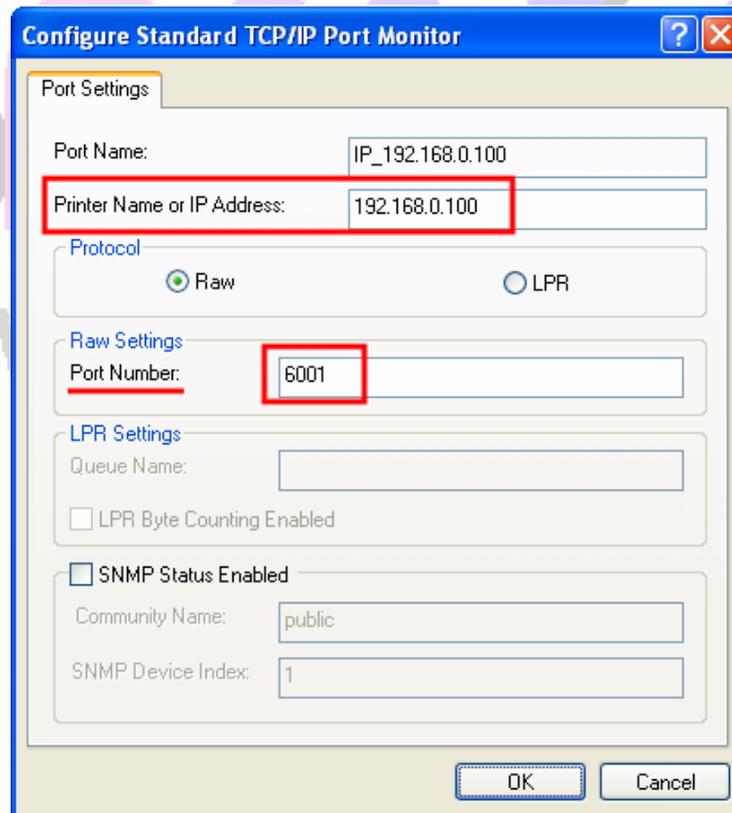
5. Move "Ports" tab.



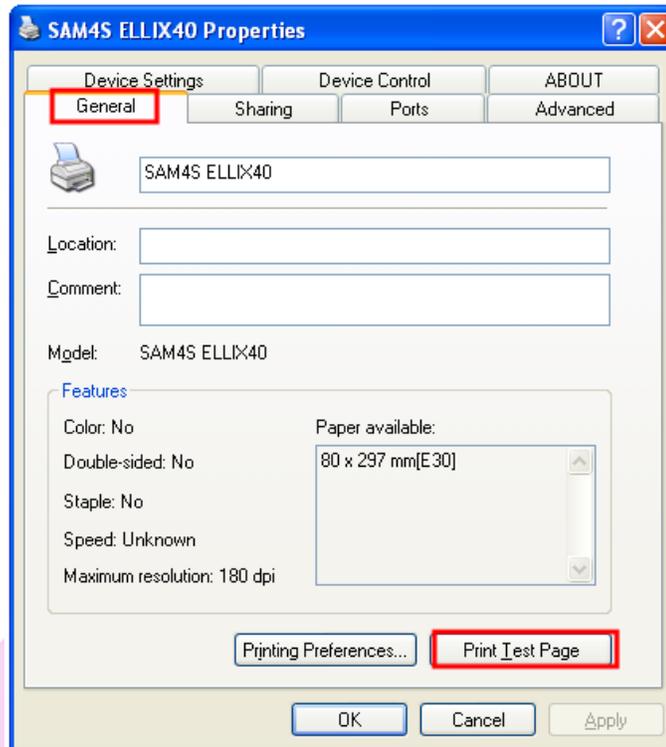
6. Select Standard TCP/IP Port and click "Configure Port" button.



7. Enter a WLAN IP and Port number (6001 only).



8. Move "General" tab; click "Print Test Page". If a printer doesn't print any page, check network setting and run ping test.



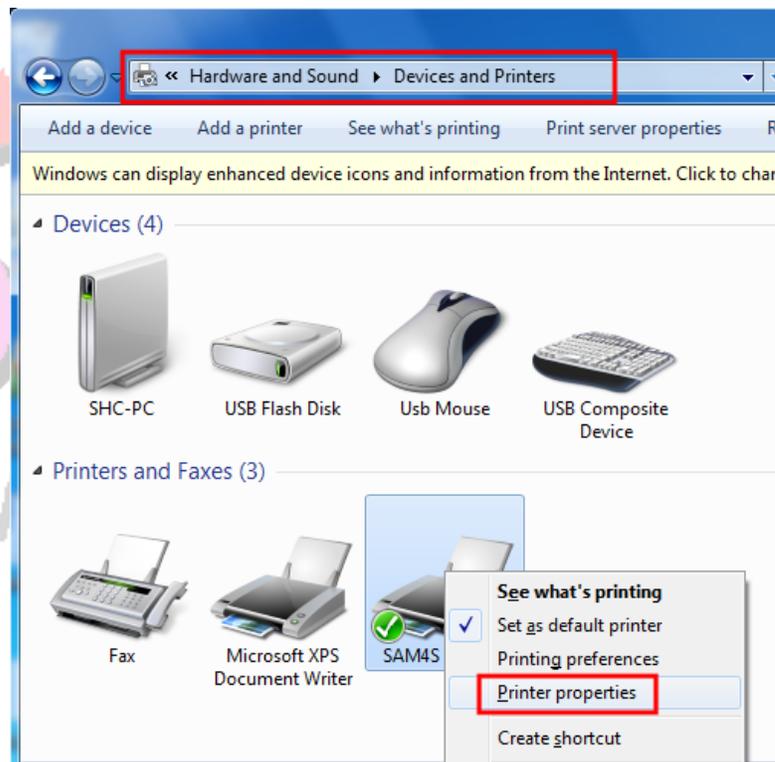
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### (8) Print Test page (Windows 7, POSReady 7)

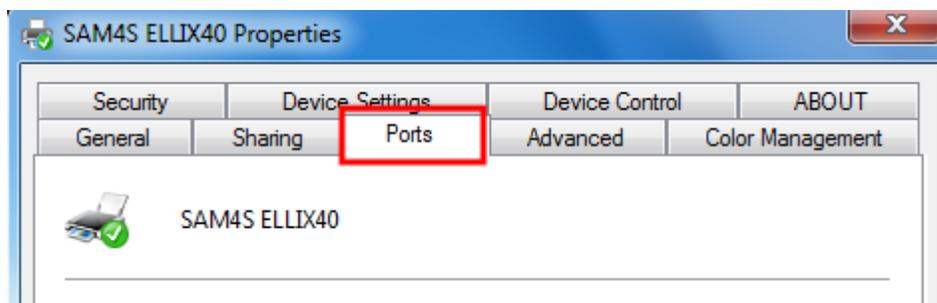
Install SAM4S Printer Driver Installer (SAM4SPrinterDriverInstallerV1.4.1.exe, 2012/05/10). Please refer to the manual of SAM4S Printer Driver Installer.

(Select a connection type of the printer: ETHERNET CONNECTION / Input a Create a TCP/IP Printer Port: The value for use later)

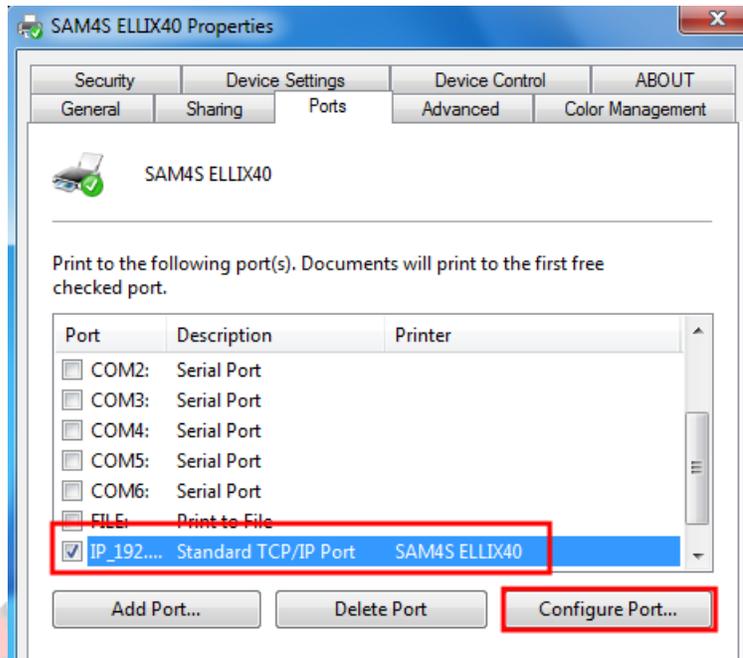
1. Turn a print off.
2. Disconnect a USB cable from printer.
3. Turn a print on again.
4. Click "SAM4S ELLIX40" in "start → Control Panel → Hardware and Sound → Devices and Printers". Click a right mouse button and click "Printer properties".



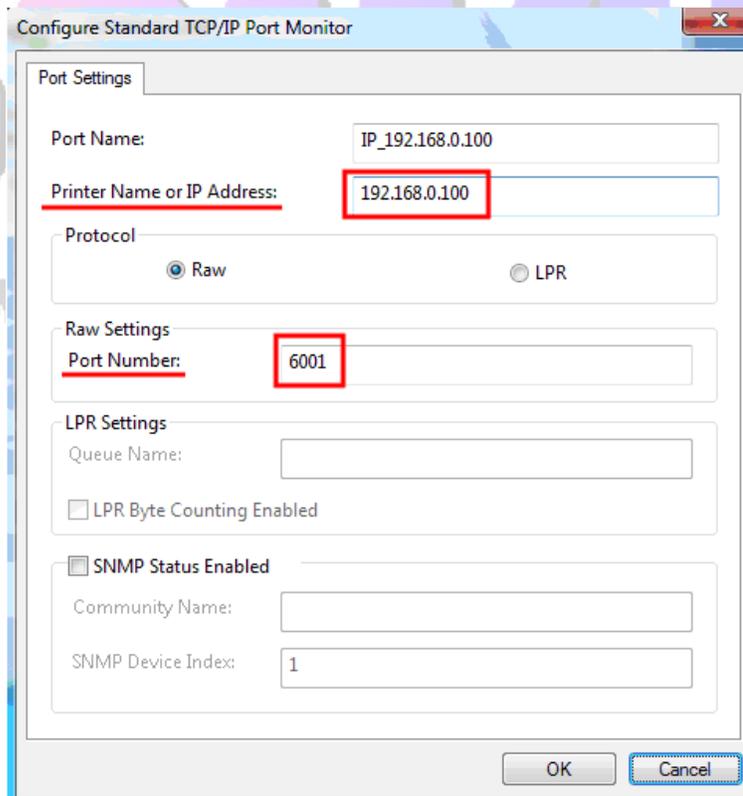
5. Move "Ports" tab.



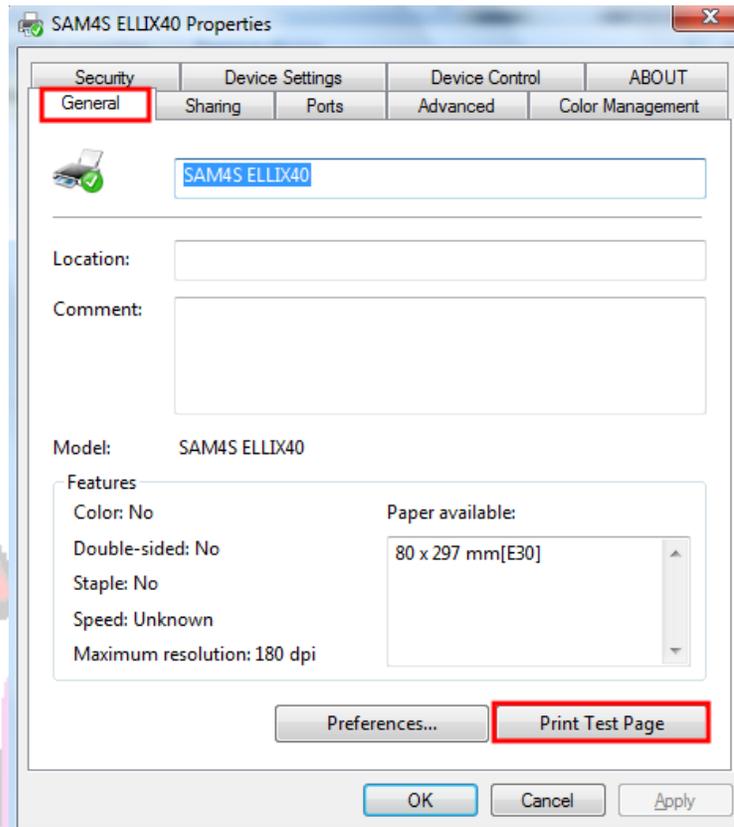
6. Select "Standard TCP/IP Port". Click "Configure Port" button



7. Input a WLAN IP address and Port number (6001 only).



8. Move "General" tab; click "Print Test Page". If a printer doesn't print any page, check network setting and do ping test.



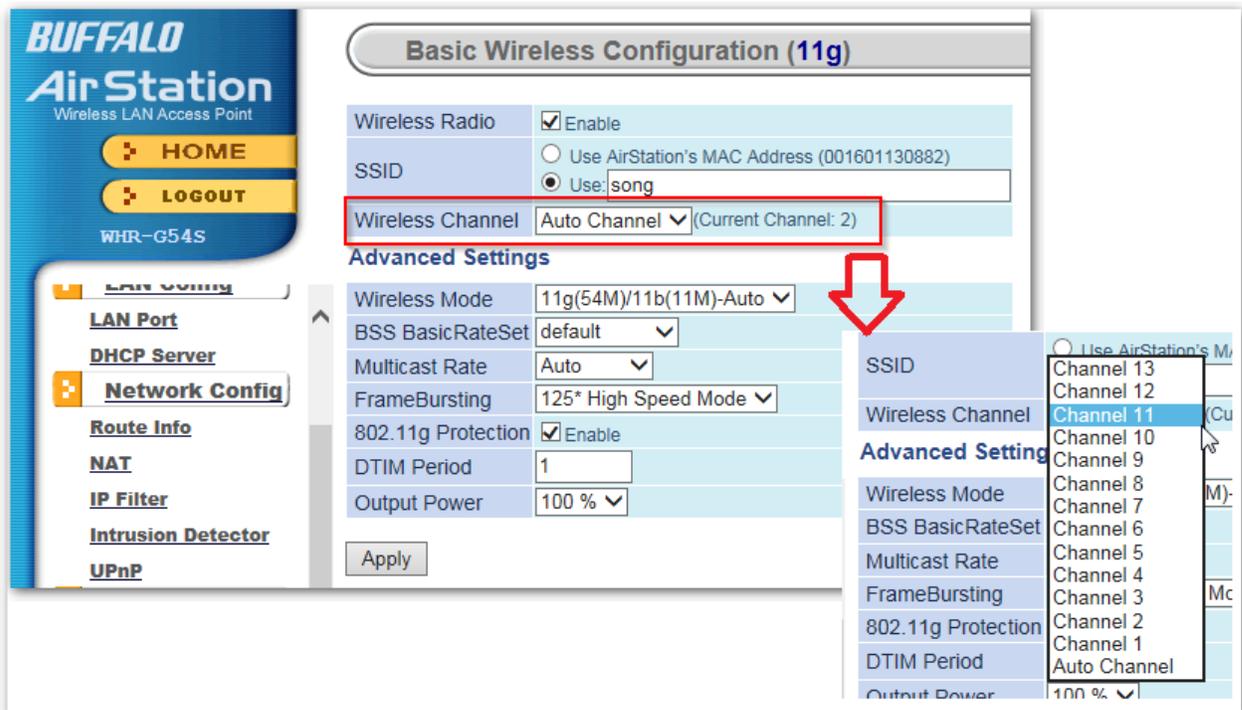
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## (9) WLAN Tips

The following content is the WLAN tips. Please reference.

**Q** : Printer reaction is too slow, or ping time value is too large.

**A** : Please try to move closer the physical distance to the WLAN interface and AP router. If there is no improvement, Please try to change the current channel of the wireless LAN channel (Wireless Channel) to another channel in the router settings. The following is an example of the router settings.



**Q** : WLAN settings are not saved in Infrastructure mode. The self-test sheet is not display before saved network settings.

**A** : Is encryption method of router that you are trying to connect is WEP? WEP is an older encryption scheme is vulnerable to security. Also, the router operating in abnormal mixed mode, there is a possibility that WLAN configuration is not performed. The recommended encryption method is WPA system. Even as it's inconvenient, please change the router settings to WPA for security.

**Q** : My AP is not detected in Infrastructure mode.

**A** : Please try to move close to the distance of the AP and the printer. Also, please make sure that radio frequency band of the AP is 2.4GHz. WLAN interface, does not support the AP frequency of 5GHz.

**Q** : WLAN communication error occurs intermittently.

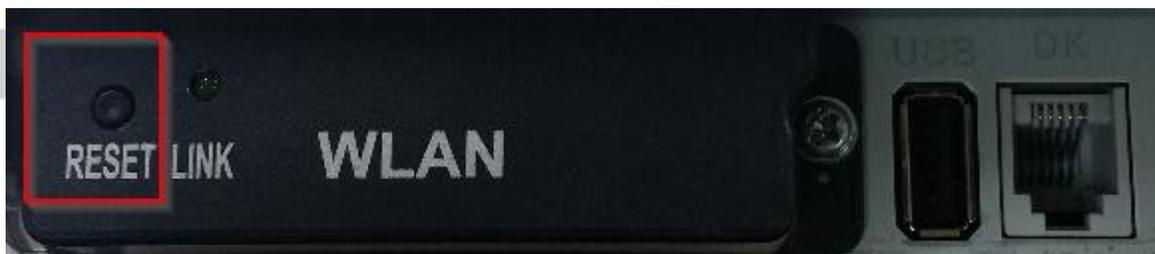
**A** : Cause of the problem is there are many. Connection of the AP and WLAN is the most major cause. In USER SETUP in order to solve such a problem, it offers a "WiFi Auto Keep Connection" function. (Supports firmware 2.00 or higher)



**(10) WLAN factory reset**

To initialize the WLAN interface, please proceed as follows.

- ① Turn on the printer. And, wait for 10 seconds.
- ② Press 3 times per second the RESET button on the back of the printer.



- ③ Then, LINK LED will blink 3 times.
- ④ Turn off the printer



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**REV 1.9**

Revision History	
Rev 1.0	Oct, 24, 2012
Rev 1.1	Feb,05, 2013
Rev 1.2	April,24, 2013
Rev 1.3	August,02, 2013
Rev 1.4	August,06, 2014
Rev 1.5	October,06, 2014
Rev 1.6	December,15, 2014
Rev 1.7	December,22, 2014
Rev 1.8	JAN,20, 2015
Rev 1.9	JUN,18, 2015