SC601

User Guide V5.

2016.09.09

EARLY VERSION 0.99

JMC
Systems Engineering

# Index

SC601　Overview

Item	Description
Input Interfaces	- Video 1x BNC for 3G / HD / SD-SDI 1x HDMI, 1x DVI-I for DVI-D/HDMI and DVI-A/ VGA 3xBNC for YPbPr/CVBS/S-Video - Audio 1xStereo audio through 1xRCA for Analog L/R audio - SDI/HDMI/DVI-D embedded audio 1x3.5 mm phone jack
Video Feature	- H.264/AVC ,　Main / High Profile - Configurable bit rate up to 10Mbps - Supported input /output resolutions 1080@50p / 60p (1080p25 / 30p output) 1080@50i / 59.94i / 60i 720p@50p / 59.94p / 60p 576@50p / 480@59.94p 576@50i /480@59.94i
Audio Feature	- AAC-LC - Configurable bit rate range from 32Kbps to 384Kbps - Sample rate : 48KHz, 16bit
Network Feature	1x RJ45 for 10/100Mbps Ethernet - DHCP client
Supported Streaming Protocol	- TS over TCP/UDP (unicast & multicast) - RTSP over HTTP/TCP/UDP (RTSP Elementary Stream) - RTMP(Local & Publish) - HLS
Misc. Features	- RS-485 1x USB 2.0 Host for USB storage - Web UI for system configuration - Firmware upgradable - LED indicator - Auto Signal Detection
Record Format	- MP4 - TS

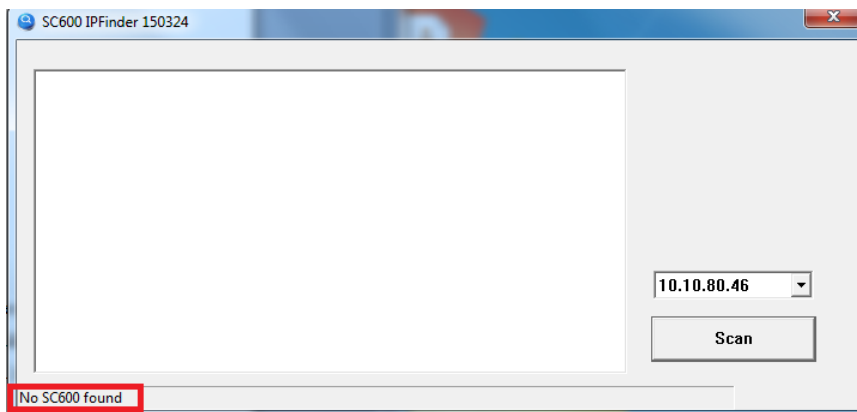| Power Supply	DC 12V (With DV Adapter)

1. IP Finder

    a.   Make sure your computer and SC601 are in the *same Local Area Network.***(Make sure SC601 is connected to a Router not a Hub!!)**

    b.   Execute SC601 IP Finder.exe .
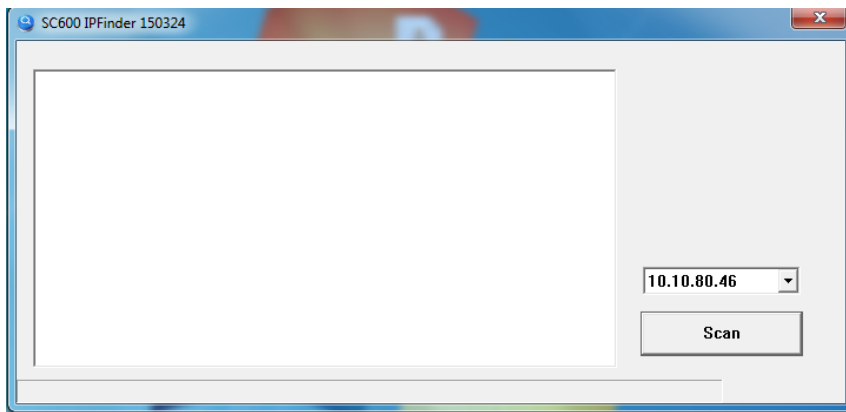
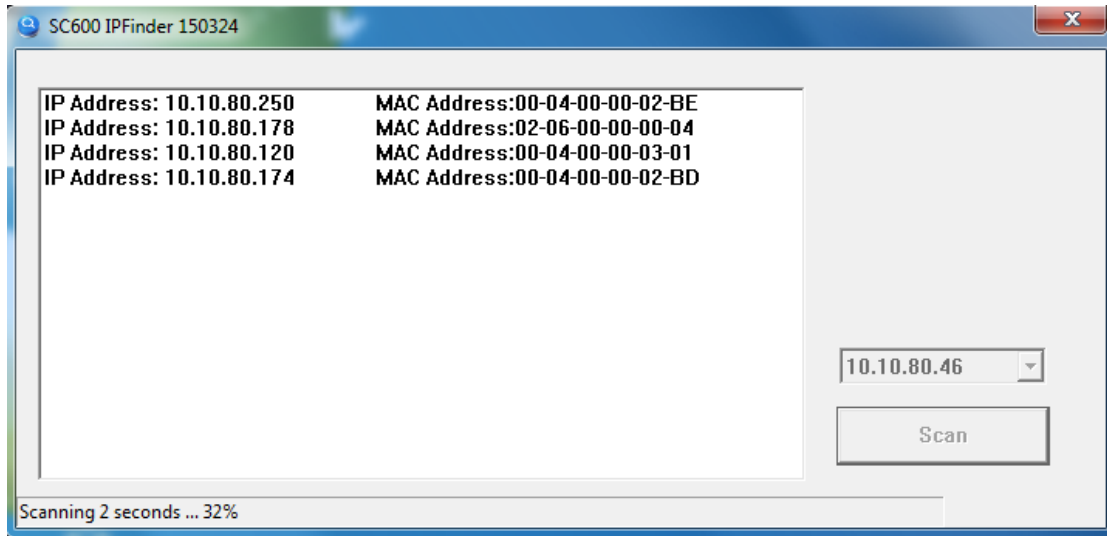 **i.**   If the network is available, local IP Address shows on (Pic 1.).

(Pic 1.)

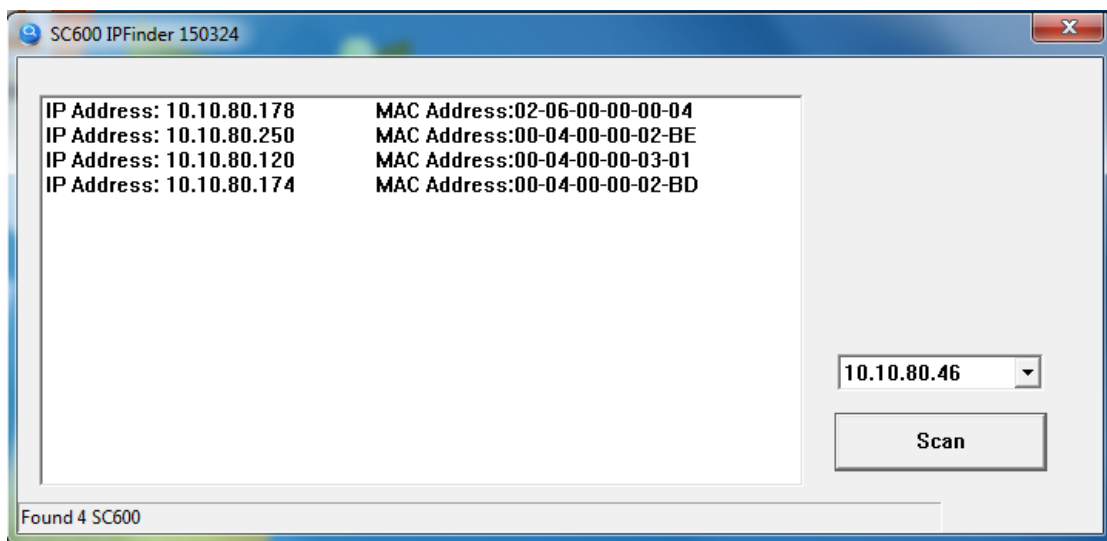 **ii.**   If the network is NOT available, shows on (Pic 2.).

(Pic 2.)

c. Click "Scan"

i. In scanning

(Pic 3.)
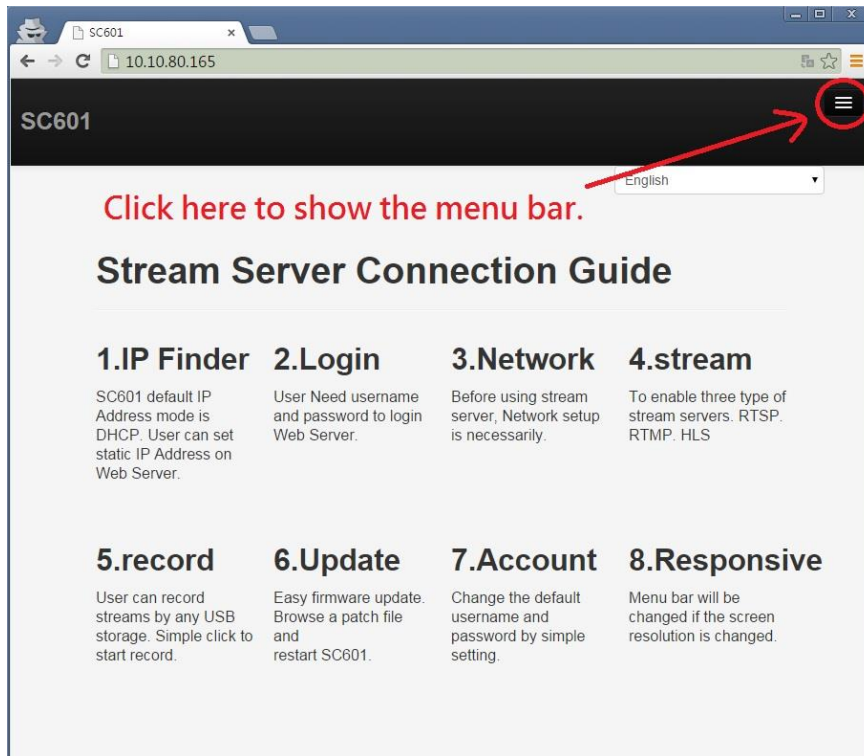
ii. Scan completed.

(Pic 4.)

SC601 default IP Address mode is dynamic by **DHCP**, you can set as static IP Address on Web Server.
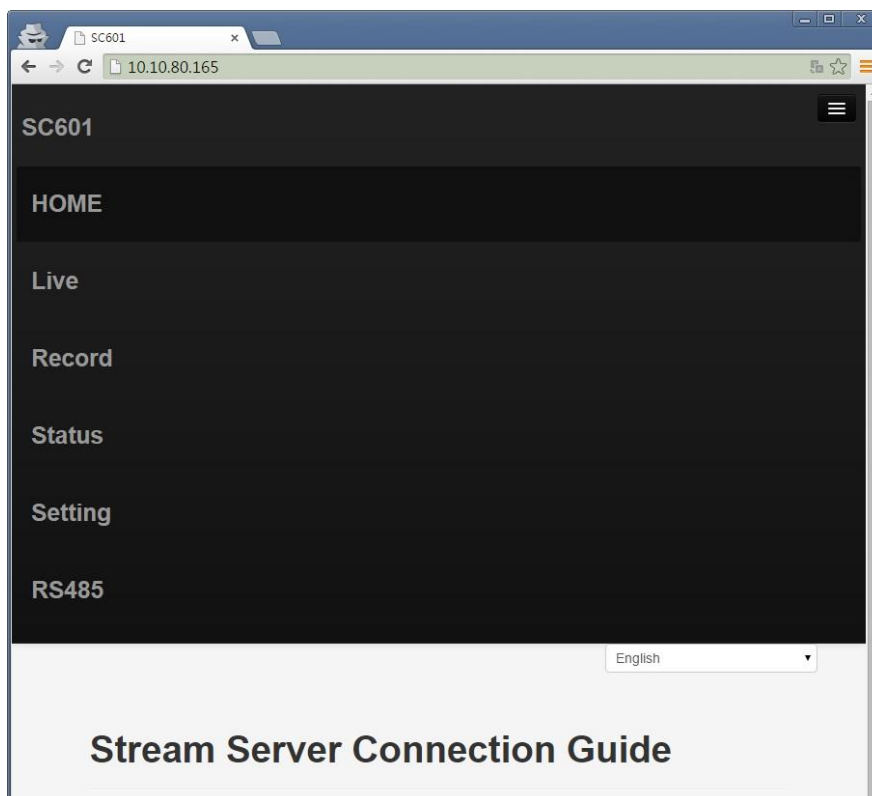
(Tips:User can double click the column of IP address or MAC address, and the home page of stream server will be pop out on the default server.)

2. Responsive Bootstrap

If the screen resolution of the browser is less than **1024x768**, the menu bar would be automatically hide to an icon in the upper of the right corner.

(Pic 5.)

User can click the button to show the full menu bar.
in the upper of the right corner .

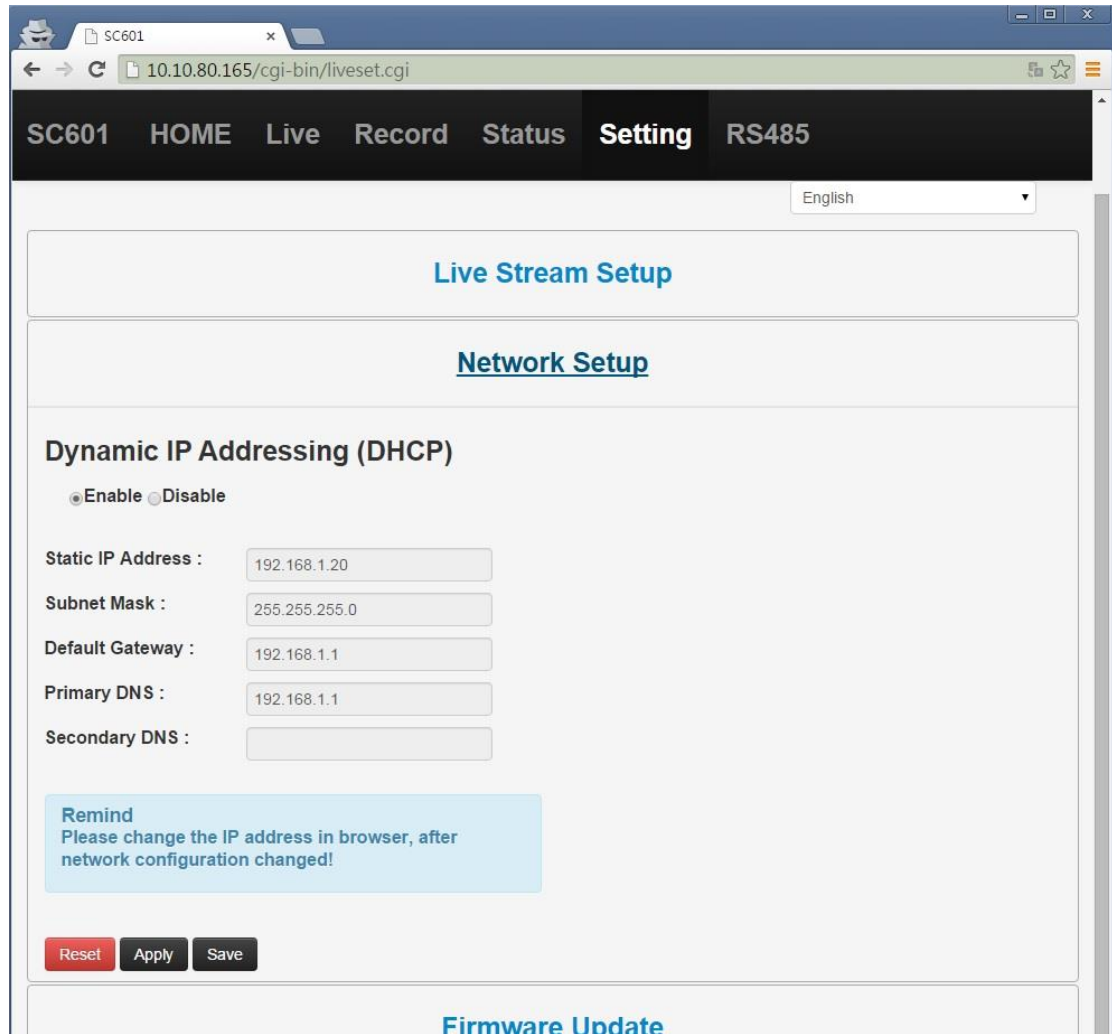**(Pic 6.)**

3. Login SC601 Web Server

(Pic 7.)

Before login to SC601 web server, user has to input Username and Password.

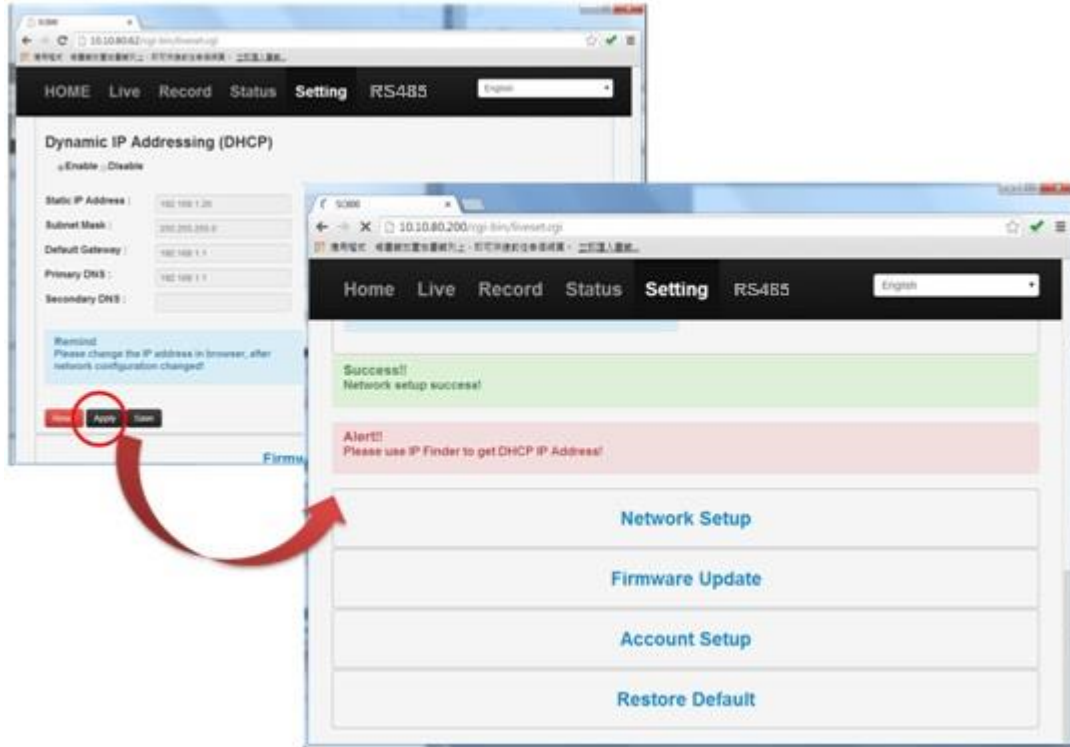**Username: admin   Password:000000.**

4. Network Setup

(Pic 8.)

Login Web Server and select **Setting → Network Setup**, as above.

There are two IP Address modes, **Dynamic (DHCP)** and **Static (fixed).**

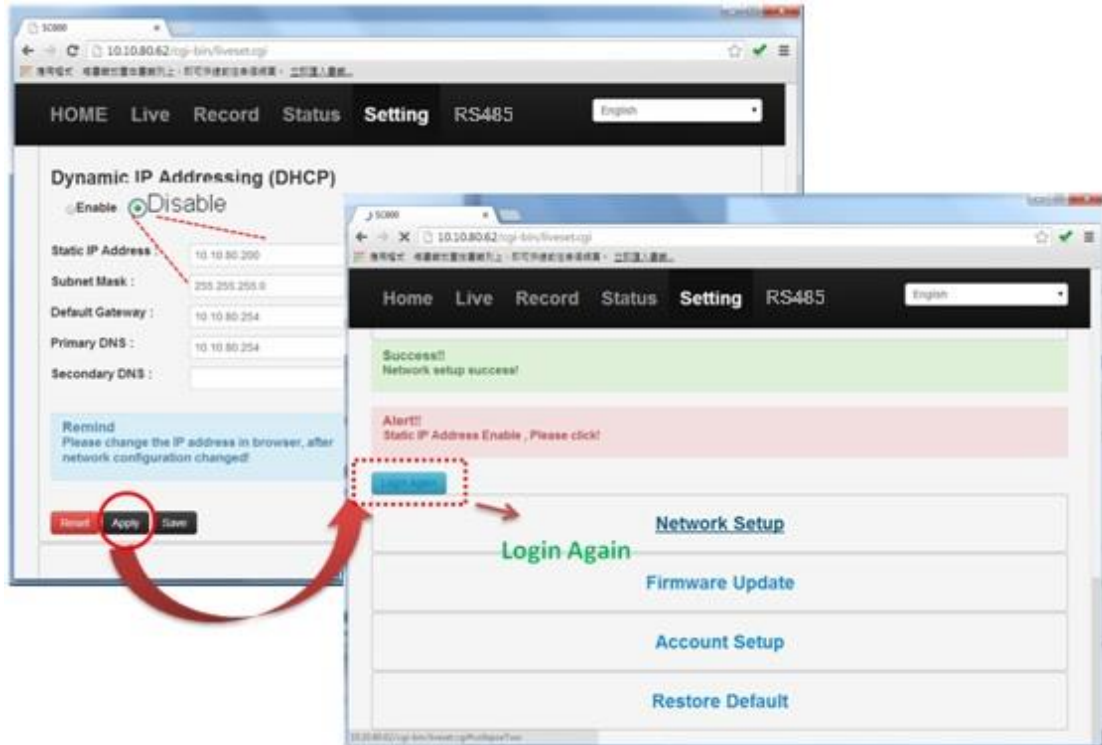Save   The button can save the network configuration.

Apply   Click the button to show the configuration changed immediately but will not be saved.

Reset   Clear all values of current input.

(Pic 9.)

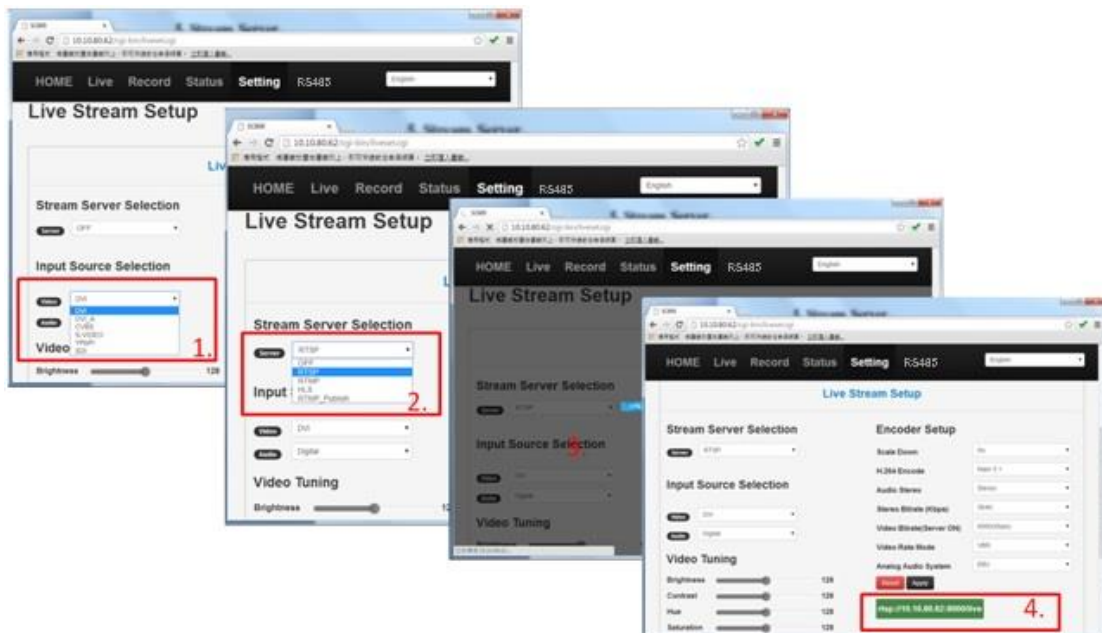After Enabling DHCP, please use IP Finder to get the dynamic IP address and login again.

(Pic 10.)

After DHCP Disable, please click the button "**Login Again**" to login again.

5. Stream Server

General setting

(Pic 11.)

1. Select source first. (HDMI, DVI, DVI_A, CVBS, S-Video, YPbPr, SDI)

2. Then select server and apply setting. (RTSP, RTMP, HLS, RTMP_Publish, RTSP_ES and Raw UDP)

3. Press the button of [Apply] nd Loading.

4. The RTSP URL will be showed.

（Tips:HLS can only be streamed on the devices which are produced by Apple co.(EX: ipad , iphone)）

（Tips: Press button of [Reset] to initial the status of Live Stream Setup.）
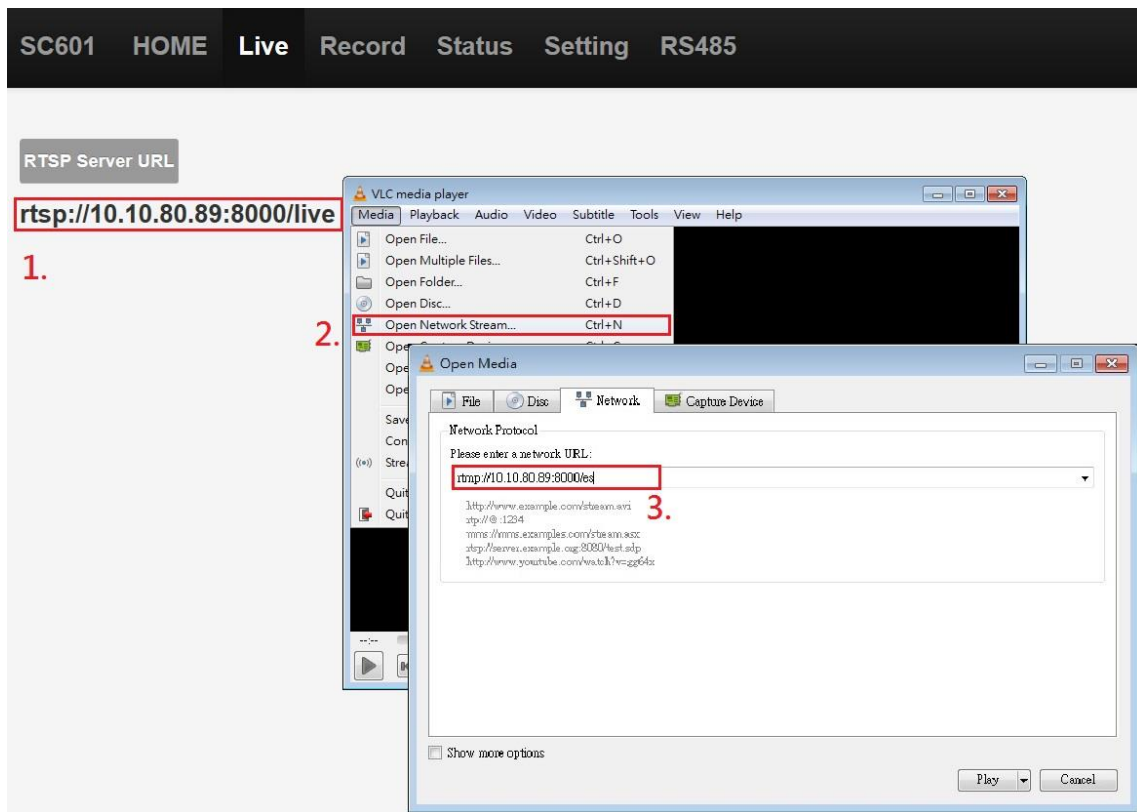
RTSP

(Pic 12.)

1. After the server of RTSP has started, user can go to the RTSP address first.(Pic 12.)

2. Open VLC media player and follow the instruction.

3. Copy the RTSP URL to the column.
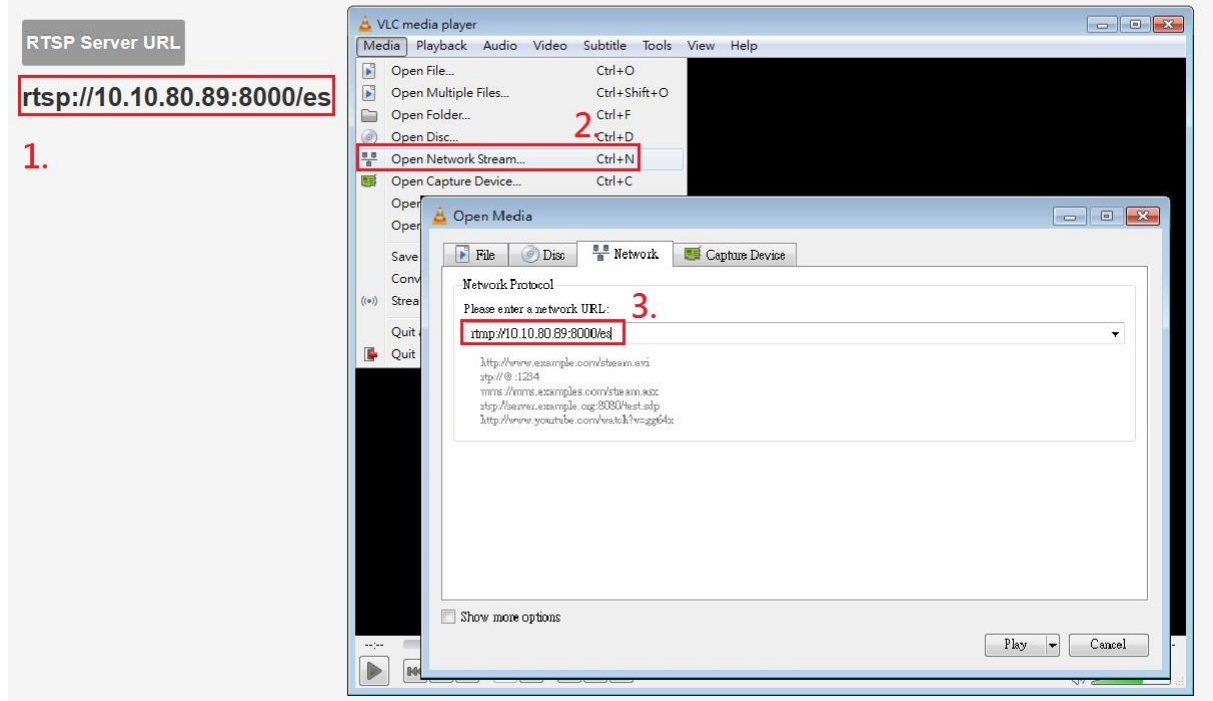
4. Play.

RTSP_ES

(Pic 12-1.)

1. After the server of RTSP_ES has started, user can go to the RTSP address first.(Pic 12-1.)

2. Open VLC media player and follow the instruction.

3. Copy the RTSP URL to the column.

4. Play.

RTMP

(Pic 13.)

1. The setting of RTMP is the same as"general setting".(Pic 11.)

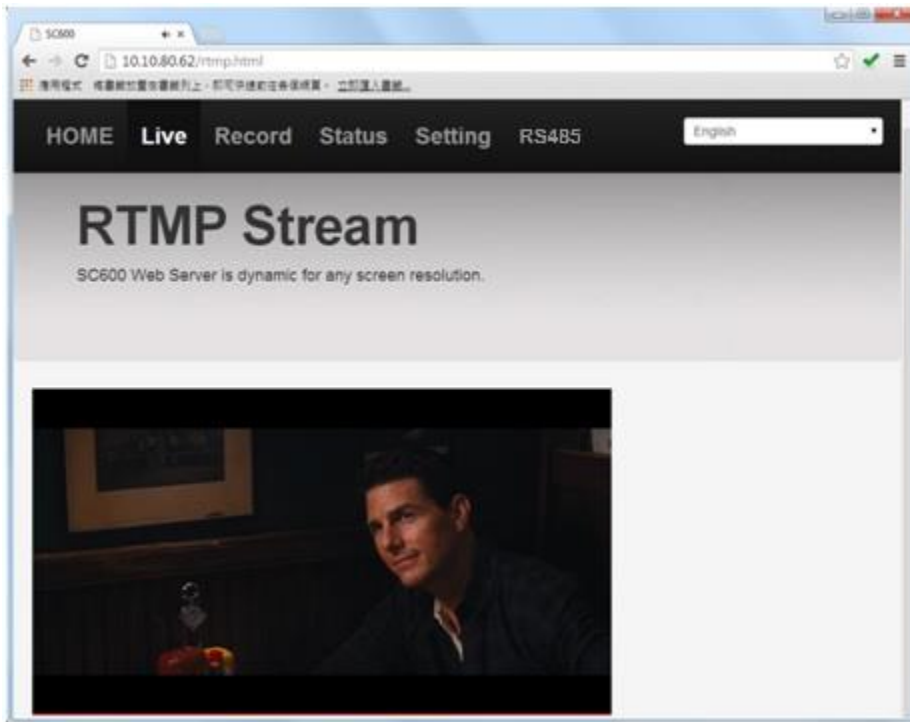2. After stream server and source are running, go to the live page to watch the RTMP streaming.

RTMP Publish
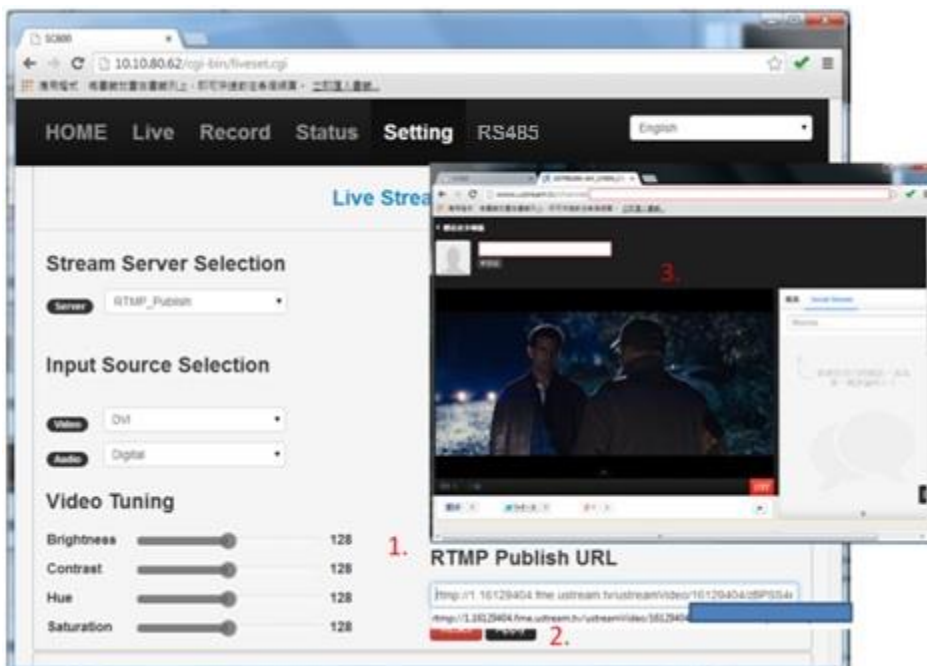
(Pic 14.)

1. If there is a RTMP Publish URL, the RTMP URL could be pasted into the correspond column.

2. Apply setting.

3. Go to Your channel and watch the live streaming.

RTMP Publish Authentication

(Pic 15.)

RTMP authentication is only valid on publishing to **Adobe Flash Media Server & Wowza Server.** User can set multiple sets of account information on Adobe Flash Media Server.

HLS
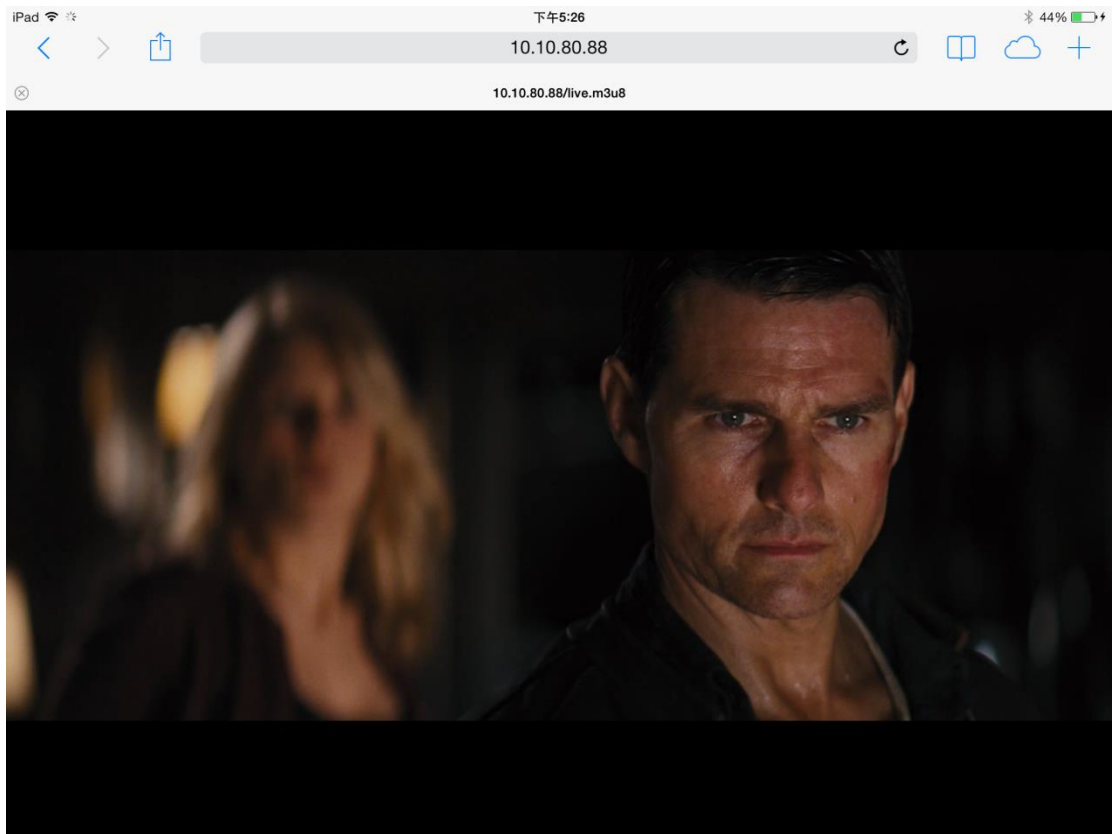
(Pic 16.)

For Apple devices, such as iPad or iPhone, login SC601 Web Server by Safari browser.

(Tips: SC601 support live streaming to the internet via "Wowza Server","Adobe FMS","Ustream","Twhich", and"Youtube".The way of obtain steaming key can be found on the related website.。)

Raw UDP
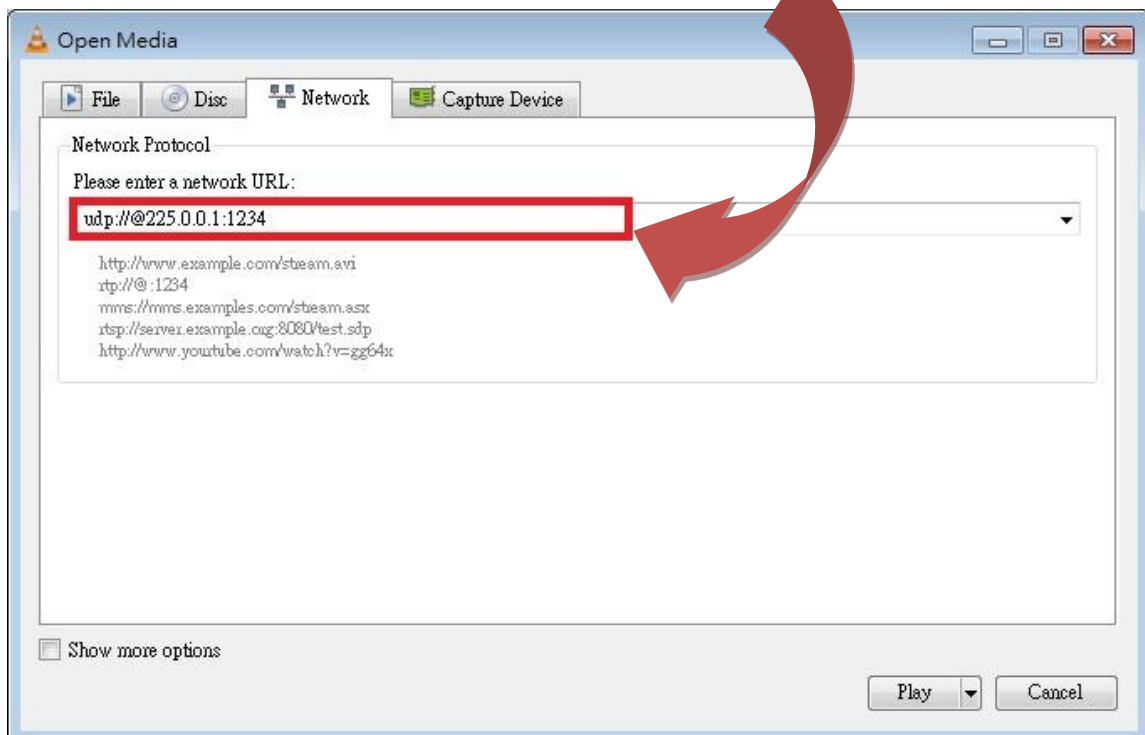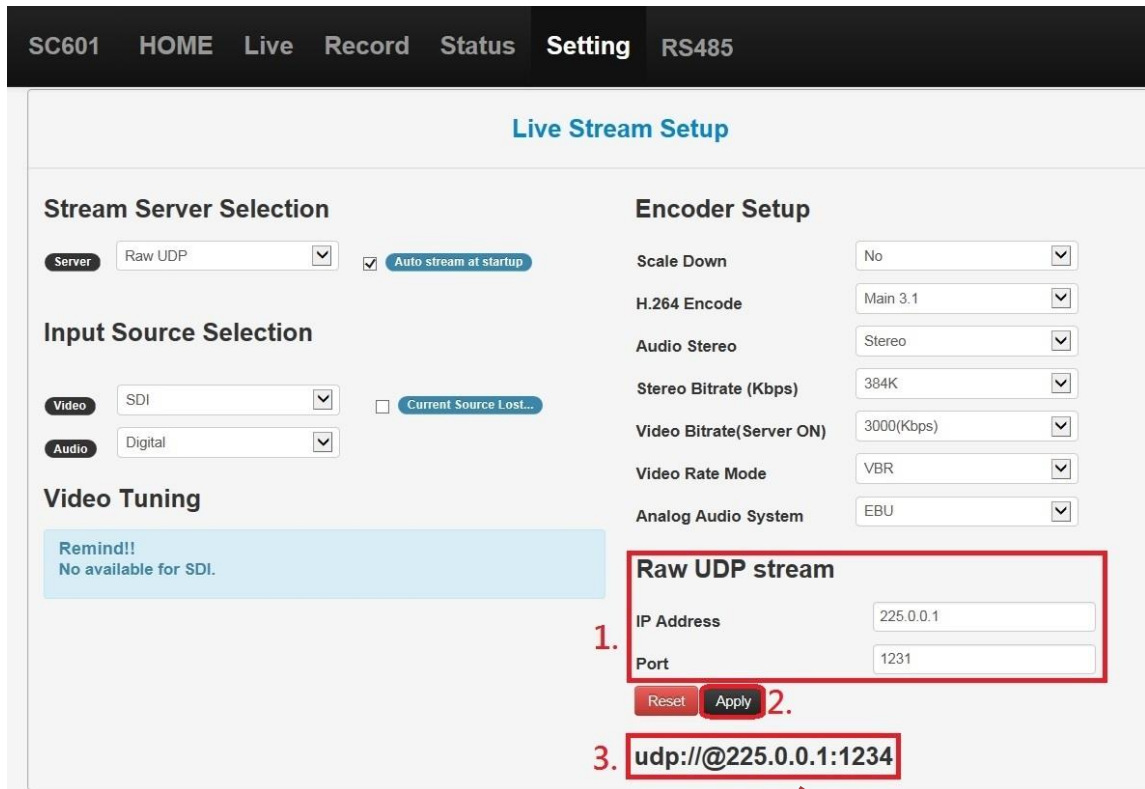
(Pic 16-1.)

1. Enter the IP address (in the range of   224.0.0.0 to 239.255.255.255) and Port number

2. Click   [Apply]

3. Open VLC and follow the instruction

6. Video Tuning
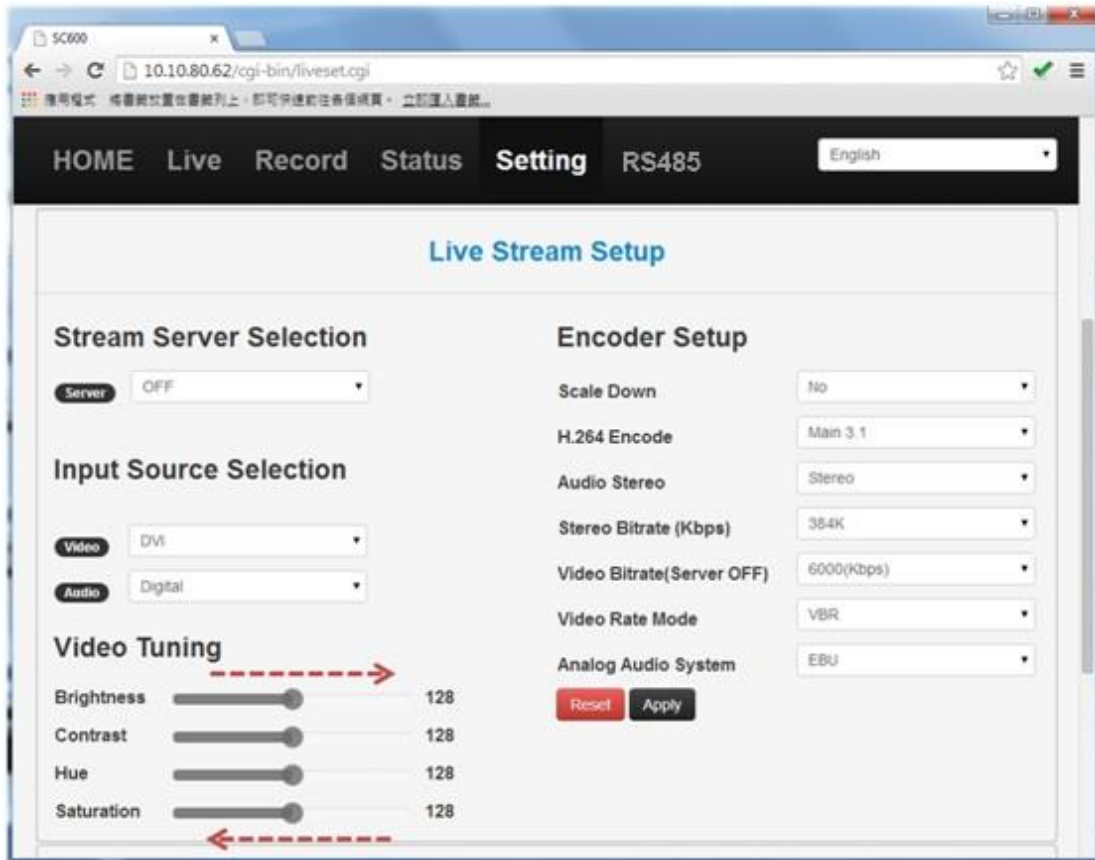
(Pic 17.)

User can adjust these parameters during watching live stream. The extra function of CVBS and S-Video is Sharpness. When user watch live stream and doing video tuning, the stream server would not be terminated or restart.

(Tips: There is no video tuning option in SDI input source。)

7. Encoder Setup
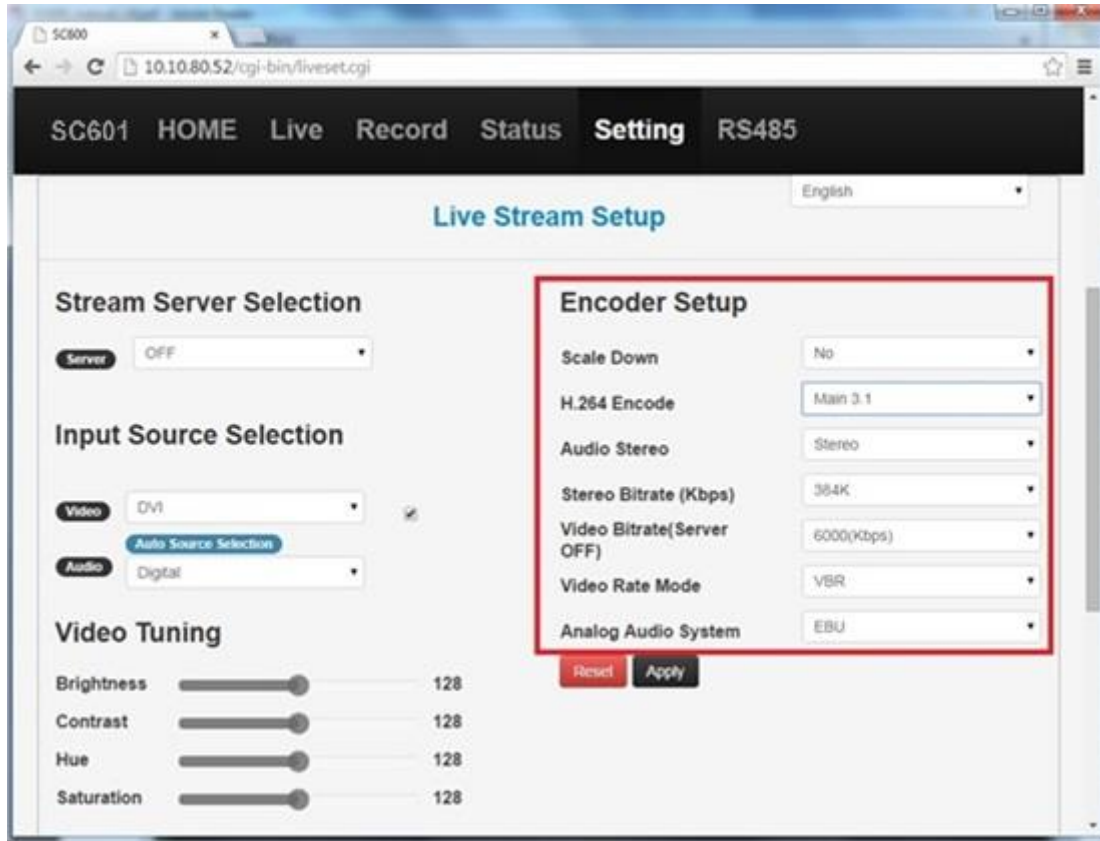
(Pic 18.)

1. Scale Down	(Table 2.)
2. H.264 Encoder:	Support Main3.0,Main3.1 and High4.0。
3. Audio Stereo:	Proviide (Stereo) & (Mono)。
4. Stereo Bitrate:	From 32(Kbps) to 384(Kbps)。
5. Video Bitrate(Server OFF):	Record Only(bear). Up to 16000(Kbps)
Video Bitrate(Server ON):	Stream Only(bear). Up to 12000(Kbps)。 Record+stream: Up to 6000(Kbps)。
6. Video Rate Mode:	VBR & CBR。
7. Audio Source:	Only HDMI and DVI and SDI Support Digital

8. Analog Audio System:	EBU & SMPTE。

(Table 1.)

(Tips: When video bitrates is higher than 6000kbps and doing recording at the same time, SC601 does not guarantee the quality in the status.)

*Scale Down

Output \ Input	Output							
	1920x1080	1440x1080	1440x900	1280x720	960x540	720x576	720x480	320x240
1080p60 (to p30)	O	Down	Down	Down	Down	Down	Down	Down
1080i60	O	Down	Down	Down	Down	Down	Down	Down
1080p50 (to p25)	O	Down	Down	Down	Down	Down	Down	Down
1080i50	O	Down	Down	Down	Down	Down	Down	Down
720p60	N/A	N/A	N/A	O	Down	Down	Down	Down
720p50	N/A	N/A	N/A	O	Down	Down	Down	Down
576p60	N/A	N/A	N/A	N/A	N/A	O	Down	Down
480p60	N/A	N/A	N/A	N/A	N/A	N/A	O	Down

PAL (digital)	N/A	N/A	N/A	N/A	N/A	O	Down	Down
NTSC (ditital)	N/A	N/A	N/A	N/A	N/A	N/A	O	Down
PAL (analog)	N/A	N/A	N/A	N/A	N/A	O	Down	Down
NTSC (analog)	N/A	N/A	N/A	N/A	N/A	N/A	O	Down
		Original						
		Scaling down						
		N/A	(Not Allow)					

(Table 2.)

8. Volume Tuning
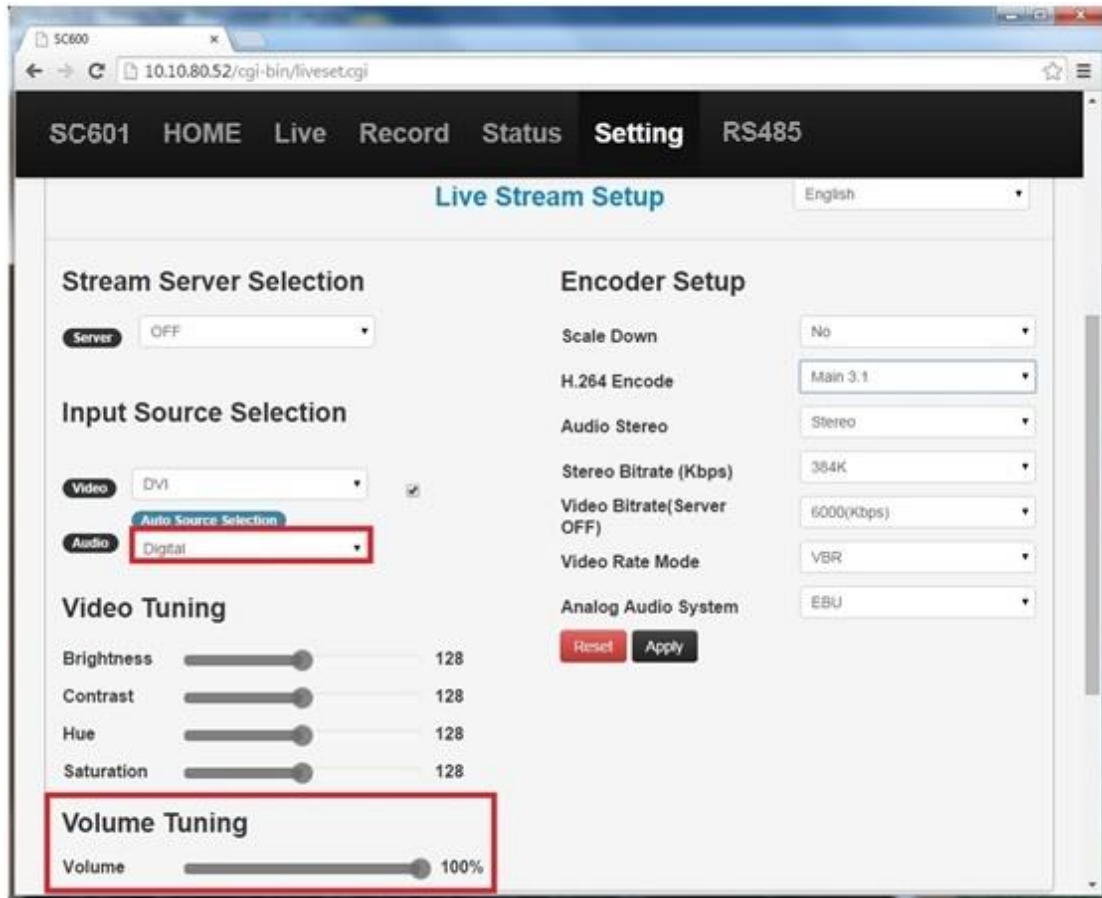
(Pic 19.)

User can adjust HDMI and DVI volume when audio source input is digital. The Volume can be down or up. Only digital source input is worked.

9. Record Stream
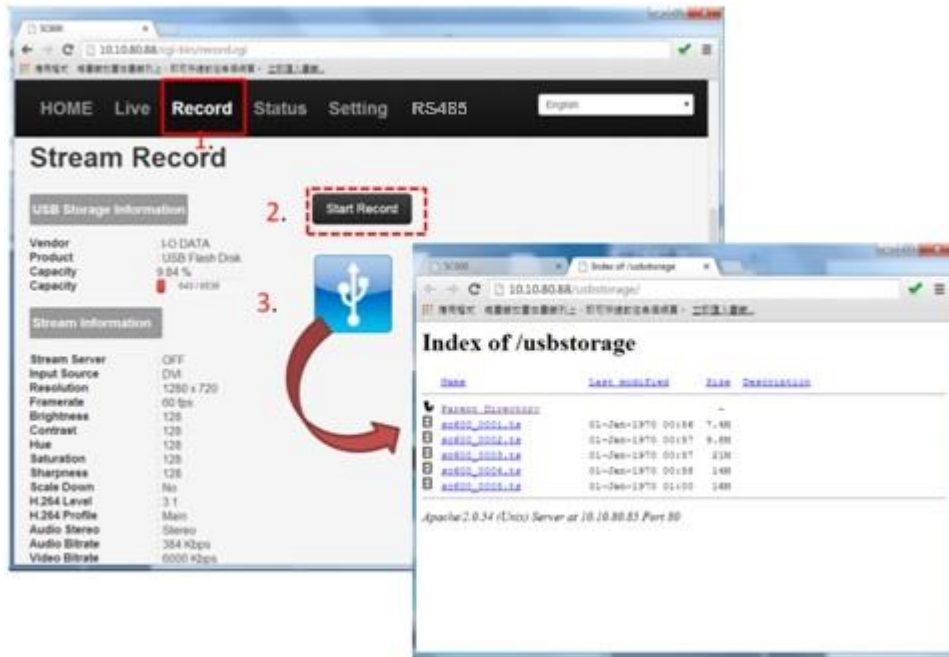
(Pic 22.)

1. Click Record button on the menu bar.

2. Start Record.

3. Click the picture of USB to see recording files in the USB storage.
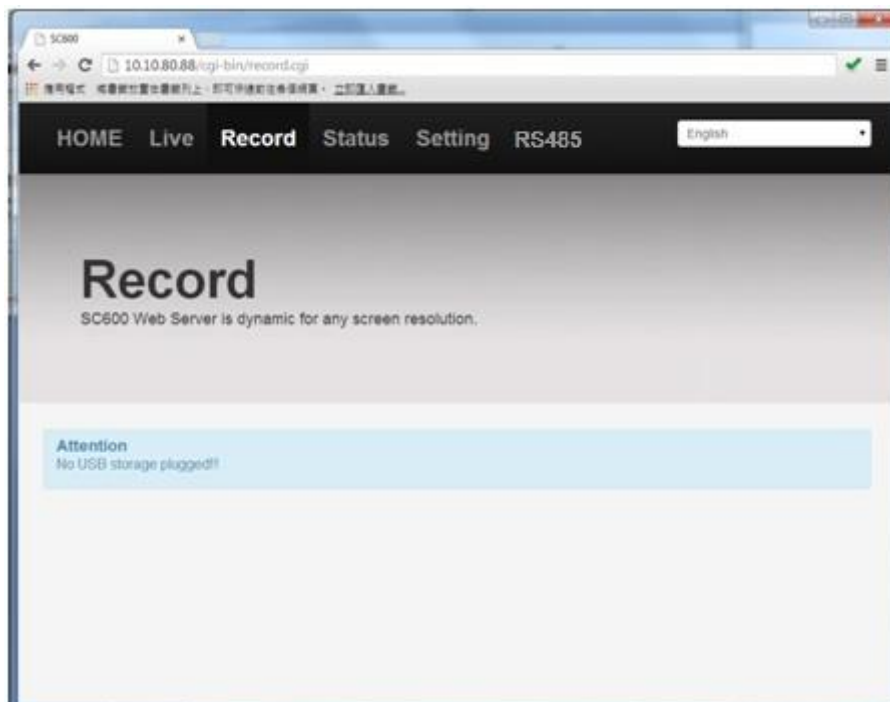
(Pic 23.)

If there is no USB Storage plugged-in, shows as above.

10. Firmware Update
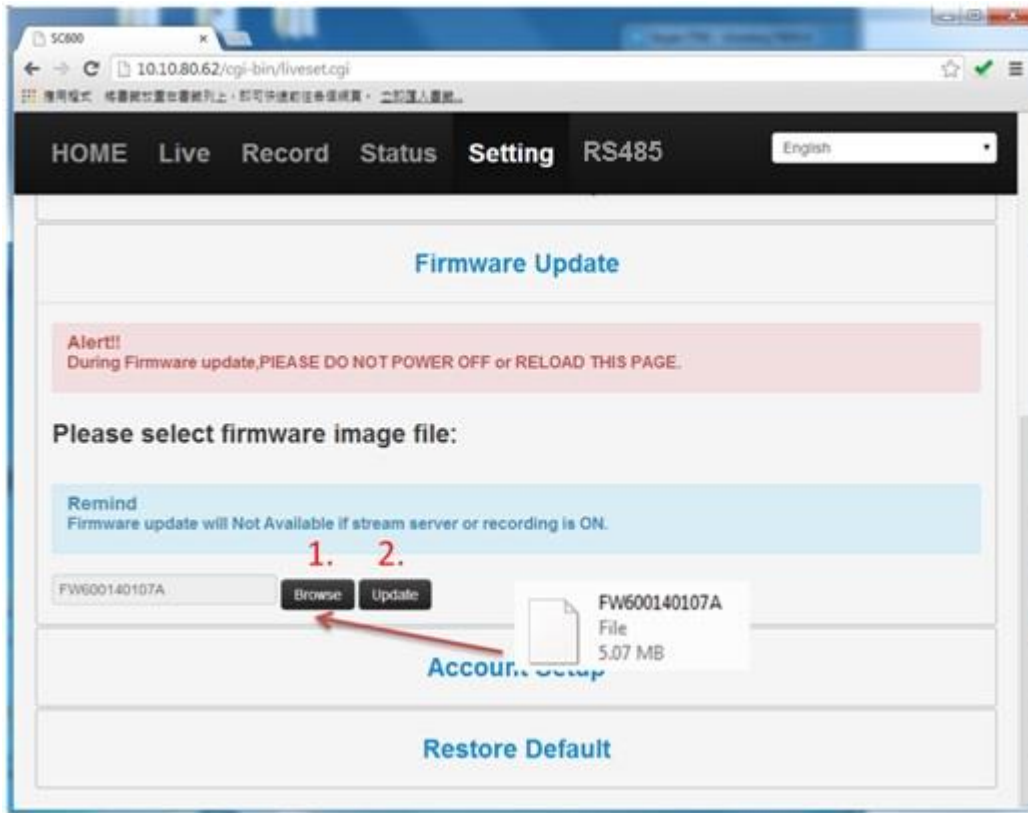
(Pic 24.)

1. Click Browse Button to find the newest SC601 firmware in your computer.

2. Update the Pack A and wait for the words of "update successful".

3. Then update the Pack B and wait for the words of "Please reboot"

4. After the firmware update is successful, **reboot SC601.**

(Tips: If there is no words of "**update successful**", it is not allowed to update another pack or reboot machine。)

11. Account Setup
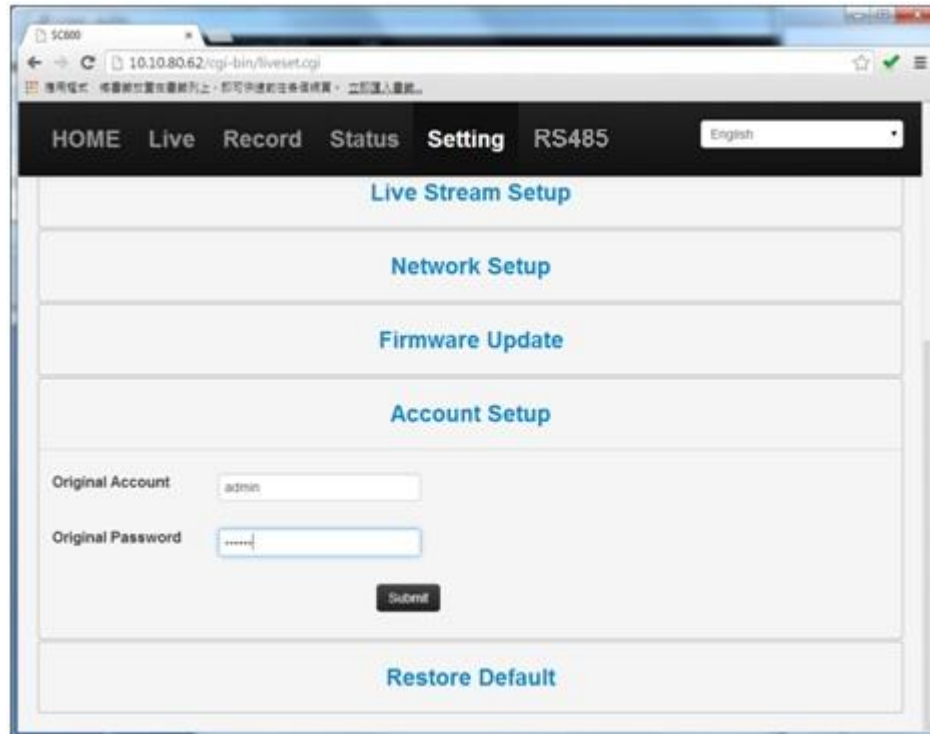
(Pic 25.)

Before setting a new username and password, user has to input the "original"username and

password. If user never changes the account, user just types the **default** username and password. If user changed before, user has to type the last username and password setting to pass the verification.
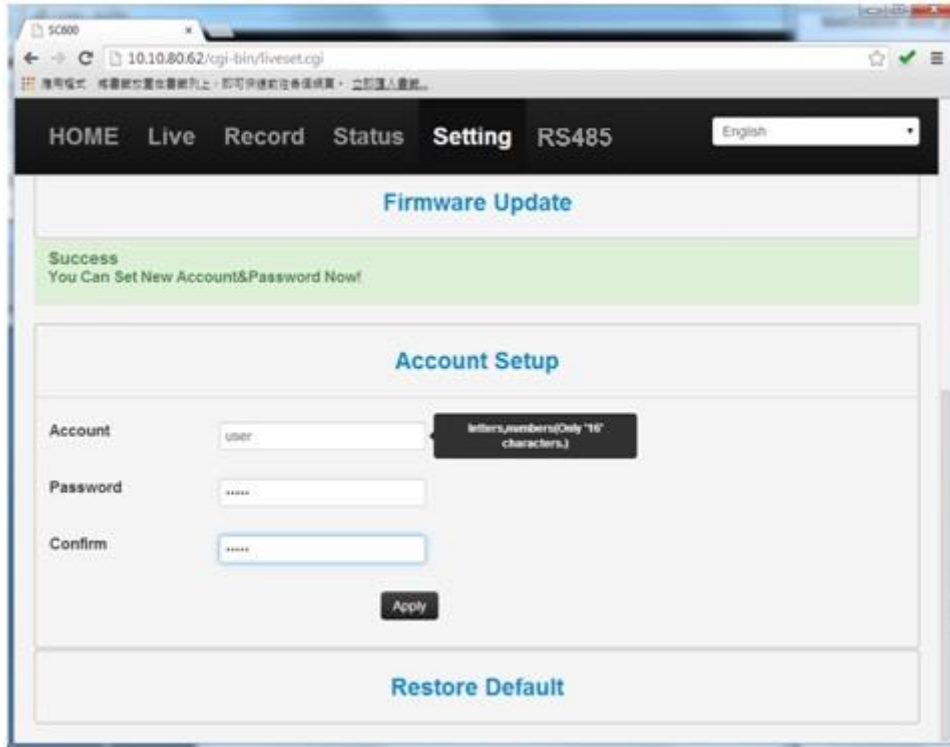
(Pic 26.)

Reset a newer username and password. Then apply change.

● **If newer account information was forgot, we can use USB disk to do restoring.**

● **USB disk must be FAT32 format.**

12. Reset to Default

   I. Using Web Page
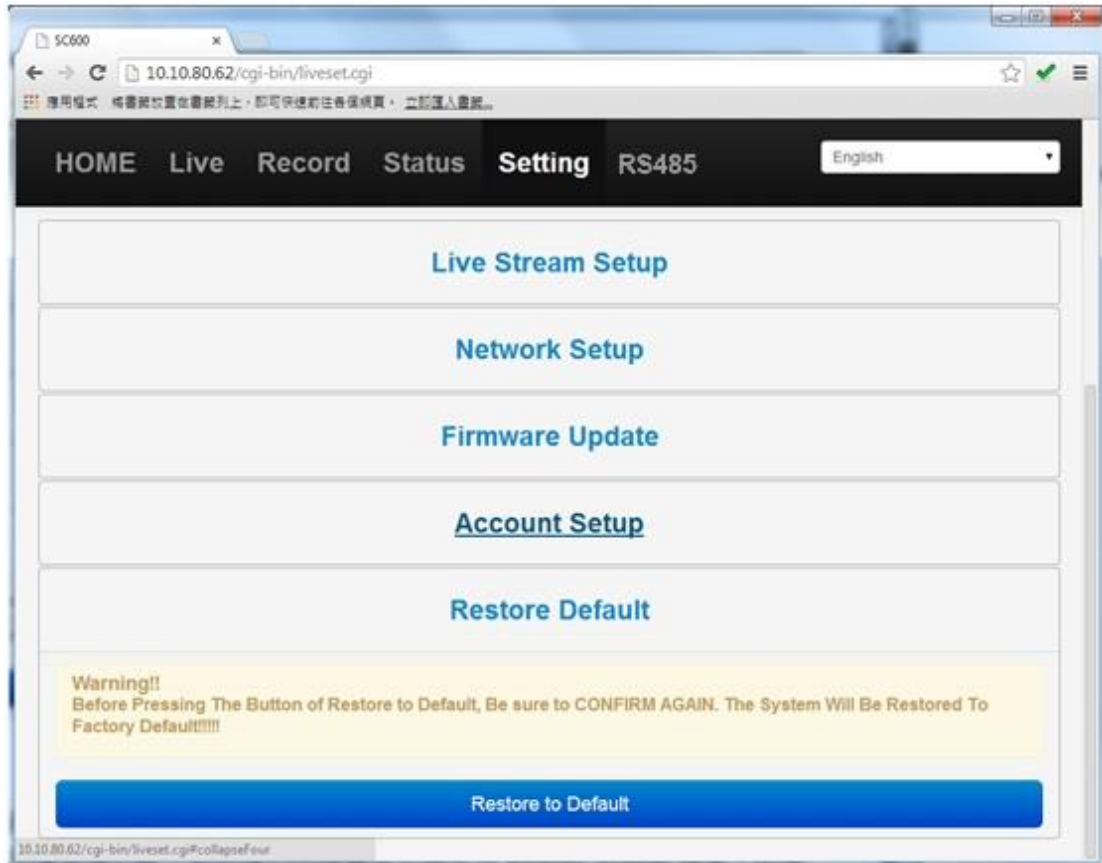
(Pic 27.)

If system is broken or boot fail, the function of ″Restore to default″can help

SC601 reset to the ″Factory Default″. If the function is also not work, user can try to use the File

of″SC601_FACTORY_RESTORE″to restore SC601 by USB disk.

  II. Using USB disk

     1. Turn off SC601.

2. Connect USB disc which contain the File of"SC601_FACTORY_RESTORE".

(Note: USB disk must be FAT32 format.)

3. Turn on SC601.

13.RS485

I. Configure Serial Lines

Configure BAUDRATE, DATA BIT,STOP BITS and PARITY to correspond with serial lines.

The BAUDRATE can be set as following values: **50, 75, 110, 134, 150, 200, 300, 600, 1200, 1800, 2400, 4800, 9600, 19200, 38400, 115200**

II. Save Configuration Files

1. Input Parametres.

NOTE: Each parameter must be within the range of **0~255** and separated by

Commas(**,**).

2. Choose which columns you want to save.

3. Click to save. If saving is successful, it will be showed below.

III. Apply Parameters
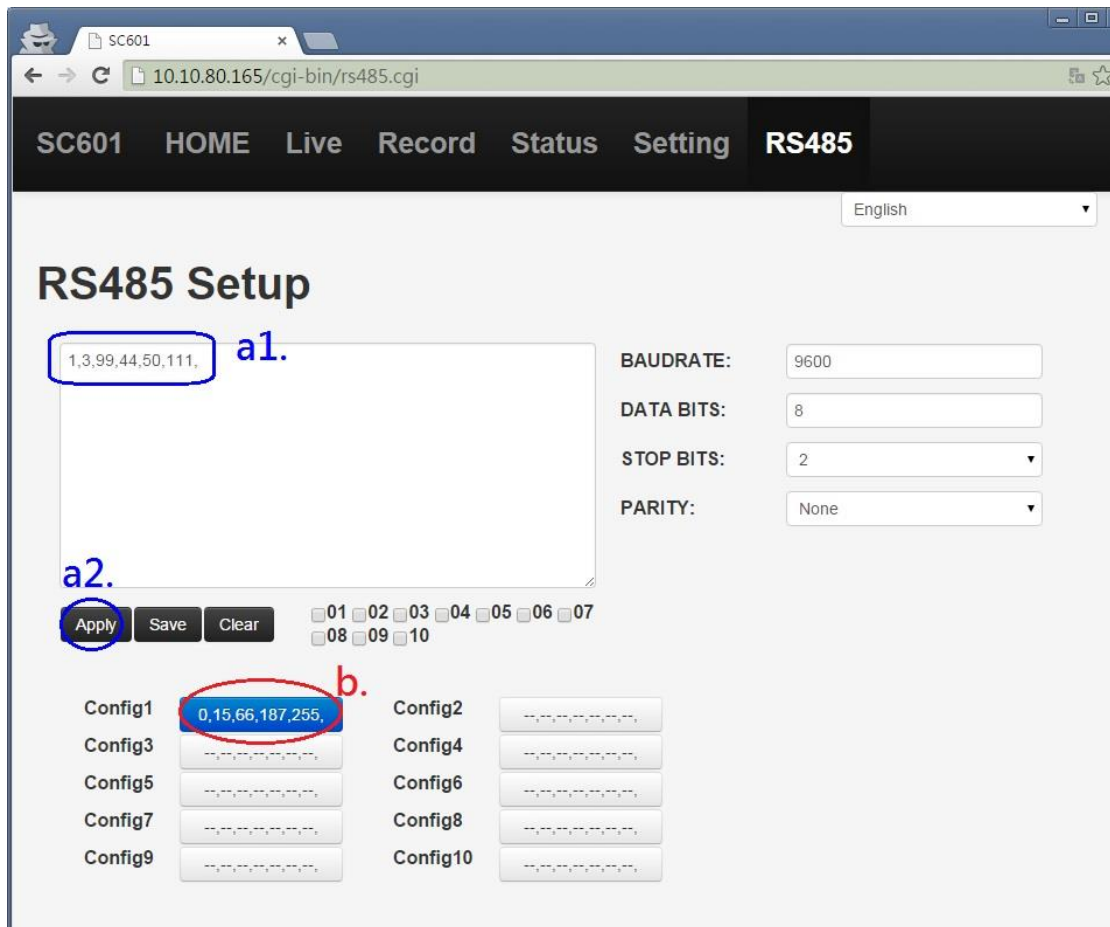
method a:

1. Input Parameters.

2. Click

method b:

If you already save configuration files, you can click the blue button.(ex.

)

Appendix

1. Video Tuning

a. Value: 0 to 255

b. Video Tuning is available during streaming and recording.

	Brightness	Contrast	Hue	Saturation	Sharpness
HDMI	O	O	O	O	X
DVI	O	O	O	O	X
DVI_A	O	O	O	O	X
CVBS	O	O	O	O	O
S-VIDEO	O	O	O	O	O
YPbPr	O	O	O	O	X
SDI	X	X	X	X	X

2. Encoder setup

a. H.264 Encode	Up to Level 4.0
b. Audio Stereo	1. Stereo
	2. Mono
c. Stereo Bitrate	Up to 384kbps
d. Mono Bitrate	Up to 192kbps
e. Video Bitrate	Record Only :Up to 16000Kbps.
	Stream Only :Up to 12000Kbps.
	Stream On + Recording :
	Up to 6000Kbps. (Over 6000Kbps Will not be Smooth!!)
f. Video Rate Mode	1. VBR(Variable Bit Rate)
	2. CBR(Constant Bit Rate)
g. Analog Audio	i. HDMI
	1. No
	2. RCA
	3. External RCA
	ii. DVI
	1. No
	2. RCA
	3. External RCA
	iii. DVI_A
	1. RCA
	2. External RCA
	iv. CVBS
	1. RCA
	2. External RCA
	v. S-VIDEO
	1. RCA
	2. External RCA
	vi. YPbPr
	1. RCA
	2. External RCA
	vii. SDI
	1. No
	2. RCA
	3. External RCA

3. LED Behavior

Source	Flash Red Light(HDMI): Booting Green Light: Signal Locked(Green/Red: S-Video, Green: CVBS) Red Light: No Signal Input
Record	Green Light: Video Recording
Streaming	Green Light: Video Streaming

3. LED Behavior