CCD Box PoE Internet Camera

ICA-700

User's Manual

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Revision
User's Manual for PLANET CCD Box PoE Internet Camera
Model: ICA-700
Rev: 1.0

Part No.: EM-ICA700

Table of Contents

1. Introduction

With the feature, simultaneously provides MPEG-4 and M-JPEG video streaming, the PLANET ICA-700 is a CCD Box PoE Internet Camera which uses high resolution 1/3-inch CCD sensor for capturing color images and CS-Mount optical lens. Compliant with IEEE 802.3af PoE (Power over Ethernet), it offers the benefit of easy deployment for users to install the camera without concerning for located power outlet that provides the most flexibility of IP surveillance.

2-Way audio feature can directly makes audio communication between local and remote sides by adding external microphones and speakers. Besides web browsers, the ICA-700 also provides 3GPP capability that can remotely view the live video via a 3G mobile phone.

The ICA-700 supports the professional management software, PLANET Cam Viewer which is a multi-camera video surveillance application, it can handle the ICA-700 to provide monitoring, recording and event management functions. The Cam Viewer offers users to setup a comprehensive and effective surveillance system quickly and easily. The PLANET ICA-700 is the most cost efficient IP camera for multiplex occasions that could express video and audio from everywhere at anytime over the Internet, and it can also provide a professional security environment to protect people's property and life.

1.1 Package Contents

Please inspect your package. The following items should be included in the package:

- 1 x ICA-700
- 1 x Power Adapter
- 1 x Camera Stand
- 1 x CD
- 1 x Quick Installation Guide

1.2 System Requirements

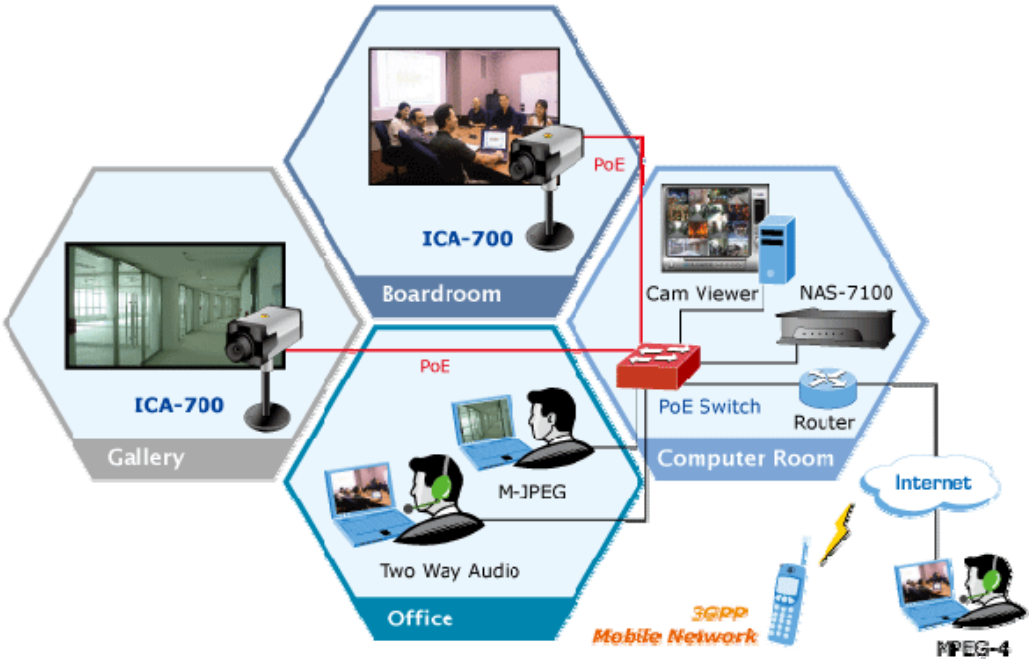
Network Interface	10/100Base-TX Ethernet
Monitoring System	Recommended for Internet Explorer 6.0 or above
System Hardware	· CPU: Pentium 4, 1.5GHz or above · Memory Size : 512 MB or above · VGA card resolution : 1024 x 768 or above Optional: · Sound Card (for PC) · Microphone (for PC and ICA-700) · Speaker (for PC and ICA-700)

1.3 Features

- Simultaneous MPEG-4 and M-JPEG dual codec
- Supports 2-Way audio
- 3GPP for 3G mobile remote application
- Provides 3 motion detection area
- FTP / SMTP alarm by motion detection
- Up to 30 fps in Full D1 resolution
- Supports CS mount lens
- IEEE 802.3af Power over Ethernet compliant
- UPnP for fast and easy installation
- Cam Viewer - Central management software supported

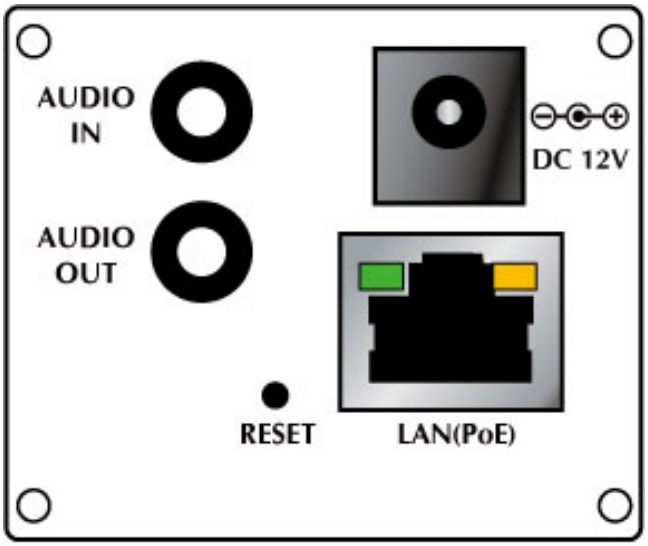
1.4 Application

Remote Monitoring Applications



1.5 Outlook

1.5.1 Rear Panel



Port	Description
AUDIO IN	An external microphone can be plugged in.
AUDIO OUT	An external speaker can be plugged in.
RESET	Reset to manufacturer default valued and reboot. When pressed and held over 10 seconds, the settings of IP Camera will be set to the default values.
DC 12V	Connect the supplied power adapter. When this device is obtained power from PoE, you don't have to attach the power adapter.
LAN (PoE)	Connect your Camera to a 10/100Base-TX hub or switch. It is compliant with IEEE 802.3af PoE. Either mid-span PSE or end-span PSE supported.

1.6 Technical Specifications

Video	
Image Sensor	1/3” SHARP CCD
Horizontal Resolution	420 TVL
Lens	6 mm, F1.8 fixed iris lens CS Mount type
View Angle	Horizontal: 43 degree Vertical: 33 degree
Illuminator	0.1 Lux
Video Codec	MPEG-4 / M-JPEG
Video Resolution	Up to 30 fps @ 704x480 ; 352x240 ; 176x120
Image Control	AWB, AEC, AGC
Audio	
Audio Codec	G.726 ADPCM, 64Kbps
Interfaces	
LAN	1 x RJ-45, 10/100Base-TX, IEEE 802.3af
AUDIO	1 x Audio In 1 x Audio Out
Network	
Protocols	TCP/IP, DHCP, PPPoE, ARP, ICMP, FTP, SMTP, DNS, DDNS, NTP, UPnP, RTSP, RTP, HTTP, TCP, UDP
Management	
Client	Web browser / Cam Viewer software
Security	Username and password authentication
Alarm and Event	Motion detection (3 areas definable) Triggered and scheduled events Pre and post alarm buffer
Environment	
Power Requirement	12VDC, 1.0A
Dimensions (W x D x H)	55.8 x 123 x 49.8 mm
Weight	370 g
Operating Temperature	0 ~ 50 Degree C
Emission	CE, FCC

2. Installation

The followings are instructions for setting up the IP camera. Refer to the illustration and follow the simple steps to quickly install.

2.1 Physical Installation

1. Connect an Ethernet cable

Connect one end of an Ethernet cable to the LAN port located on the IP camera's rear panel and connect the other end to the network device (hub or switch).

2. Attach the external power supply

Attach the provided power adapter to the IP camera's connector labeled "DC 12V" on the rear panel. If this camera is obtained power from PoE, you don't have to attach the power adapter.

Note:

Please use the power adapter that is bundled in package. Using a power supply with a different voltage rating will damage and void the warranty for this product.

3. Connect Microphone and Speaker

If you will use the 2-Way audio function, please connect microphone to Audio In and speaker to Audio Out.

2.2 Software Installation

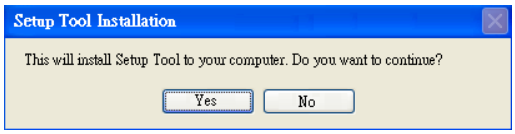
1. Insert the bundled product CD into CD-ROM drive to launch the autorun program.

2. When the web page displayed, select and click the **"Setup Tool"** hyperlink on the menu to start the installation process.

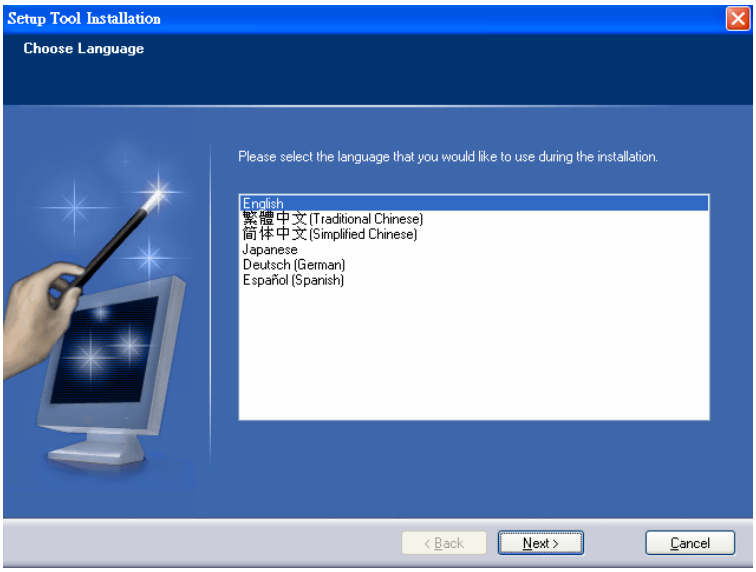
Note:

If the CD's menu does not appear, click "Start" on the task bar and select "Run" to type **"X:\Utility\SetupTool.exe"**, assume X is your CD-ROM drive.

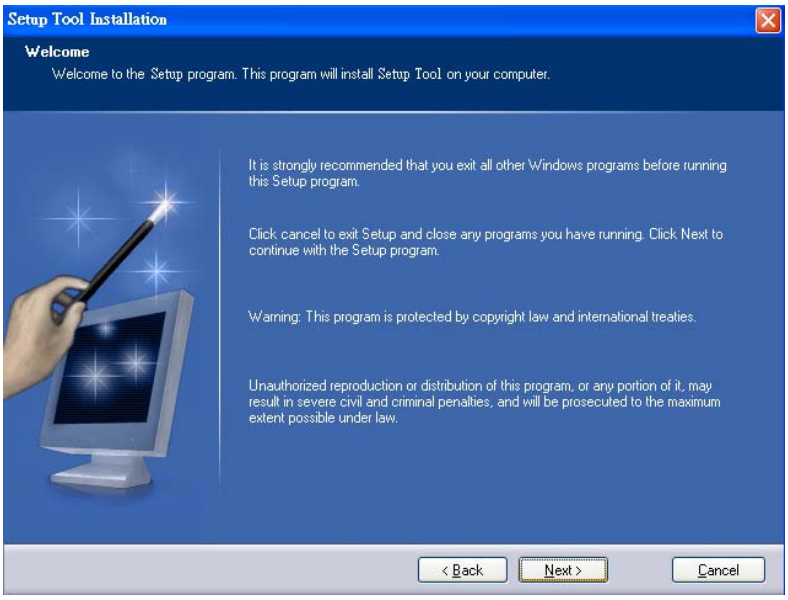
3. Click **"Yes"** to start the Setup Tool Installation.



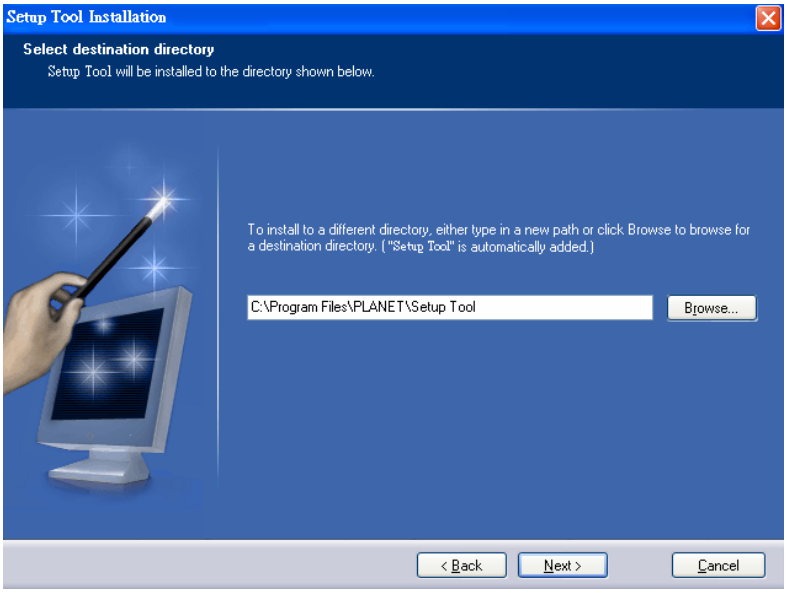
4. Choose the language you need, and click **"Next"** to continue.



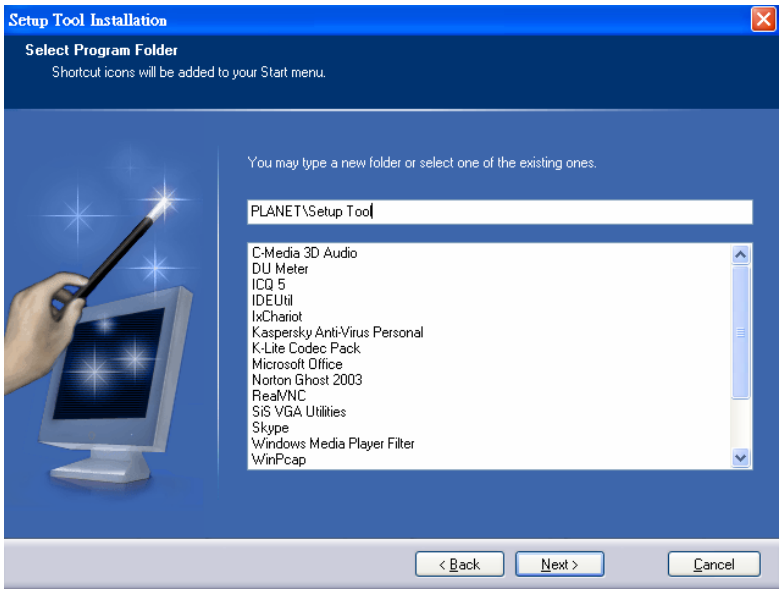
5. Follow the step for configuring the Setup Tool, and click **"Next"** to continue.



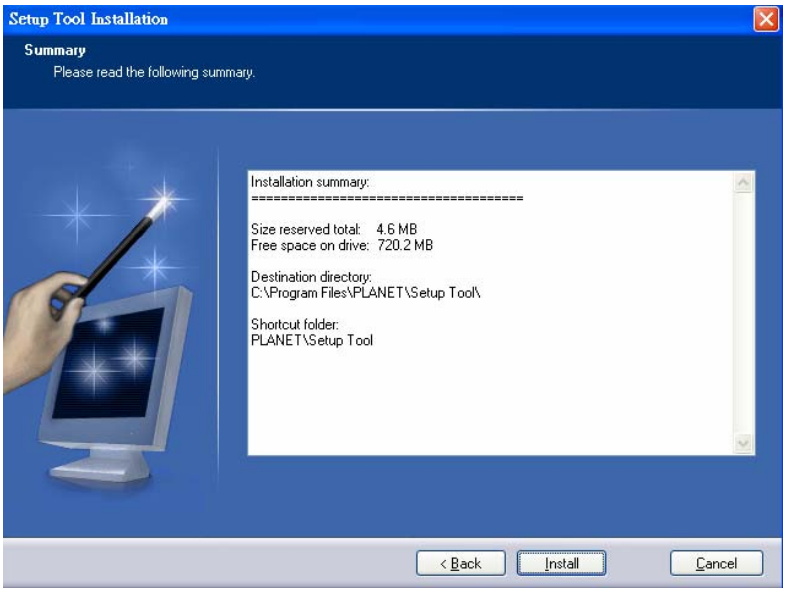
6. If you wish to install the Setup Tool in an alternative location, click **"Browse"**; otherwise click **"Next"** to continue.



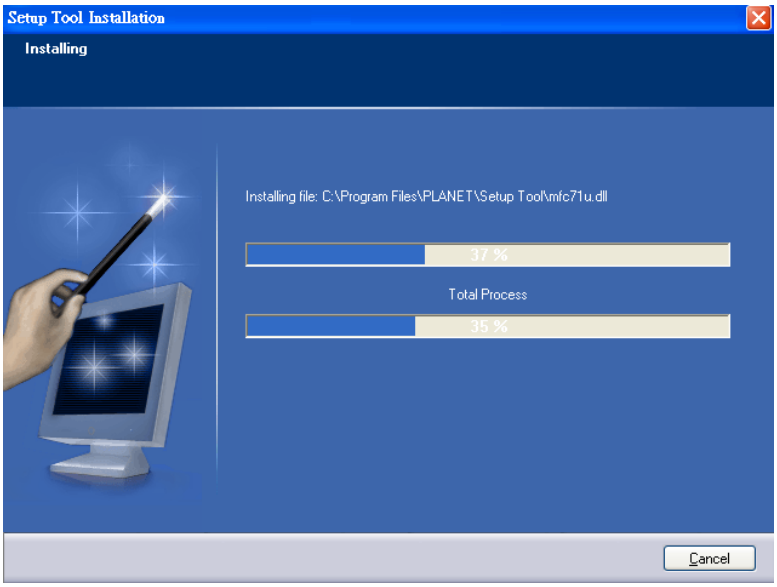
7. If you wish to install the Setup Tool in an alternative folder of star menu, type a new folder or select one of the exiting ones; otherwise click **"Next"** to continue.



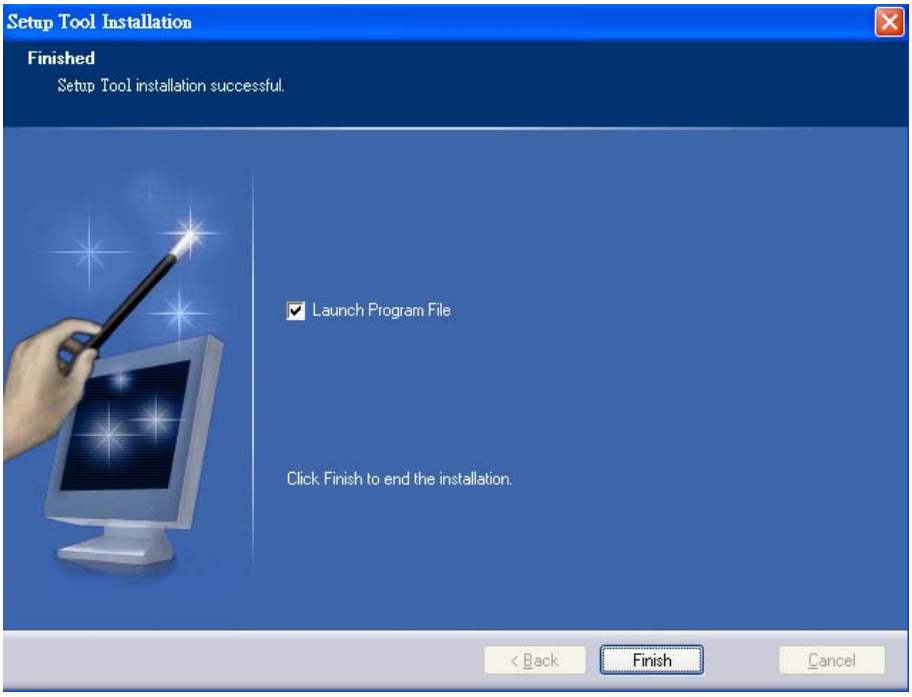
8. Check the installation summary, and click **"Install"** to install the Setup Tool.



9. The program starts to install the Setup Tool in your computer.



10. The Setup Tool installation successful. Click **"Finish"** to complete the installation.



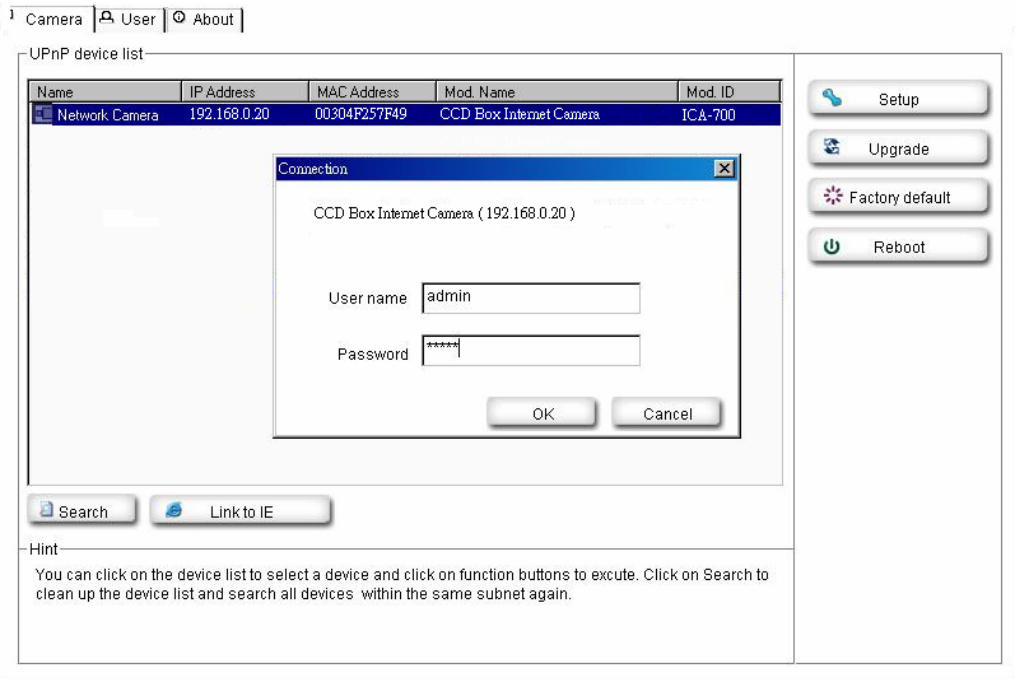
2.3 Software Quick Configuration

This section shows how to perform basic communication functions by Setup Tool.

1. Double click the icon of Setup Tool on the desktop.

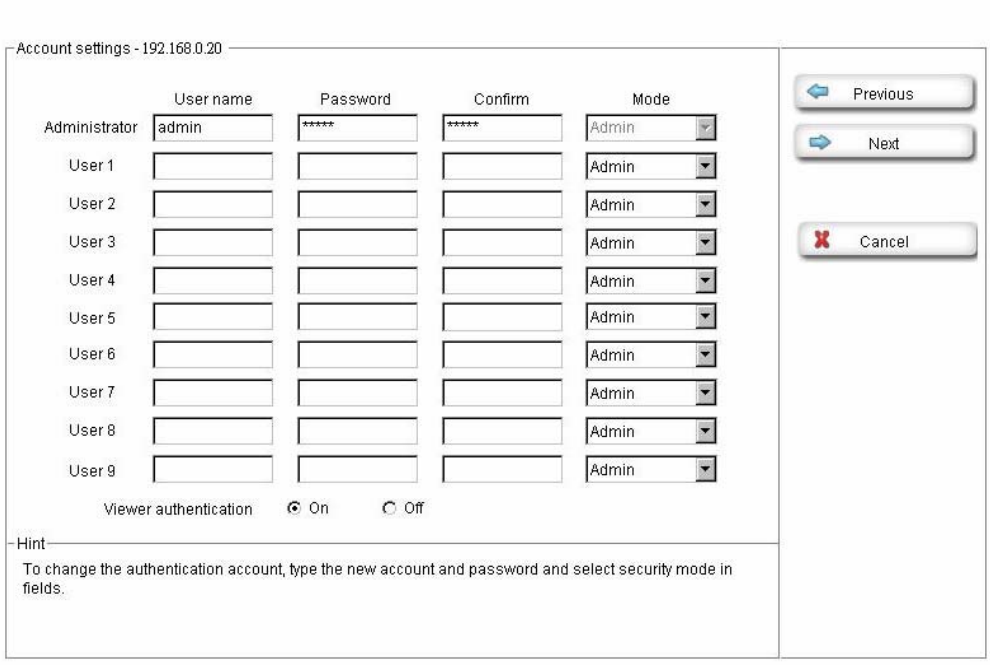
2. The Setup Tool screen will show up as below. It will automatically search and list the IP cameras on your network.

3. Select the IP camera you want, and then click the **"Setup"** button on the right side. The login window will pop up. If the Administrator User Name and Password have been changed, you will need to enter the new settings. In default values, please enter **"admin"** for both User Name and Password. Then click **"OK"**.

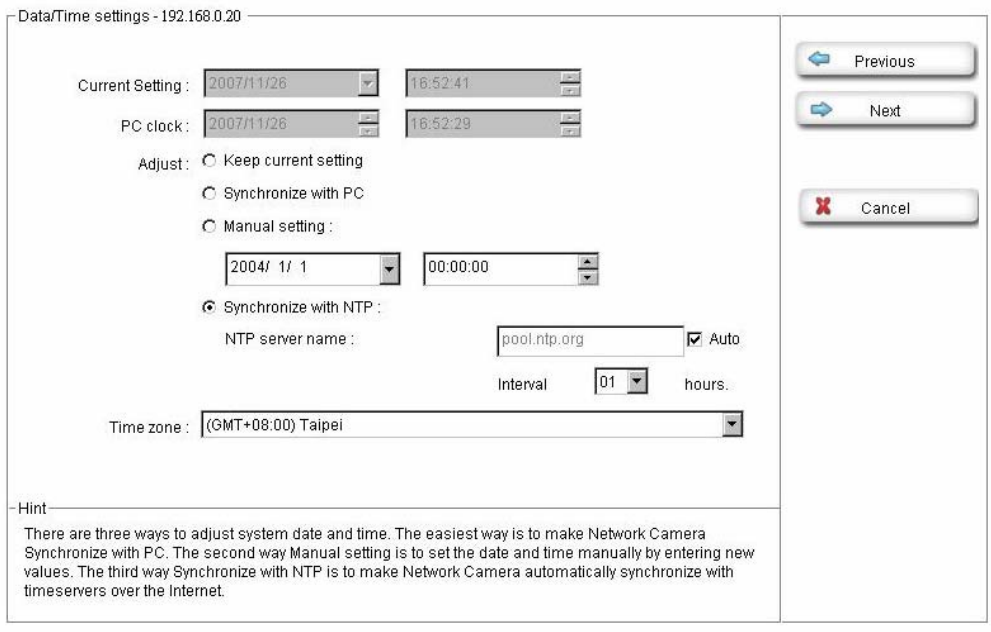


4. On the following System information screen, it displays the Product Name, Firmware Version and Hardware Version. Click on **"Next"** to continue.

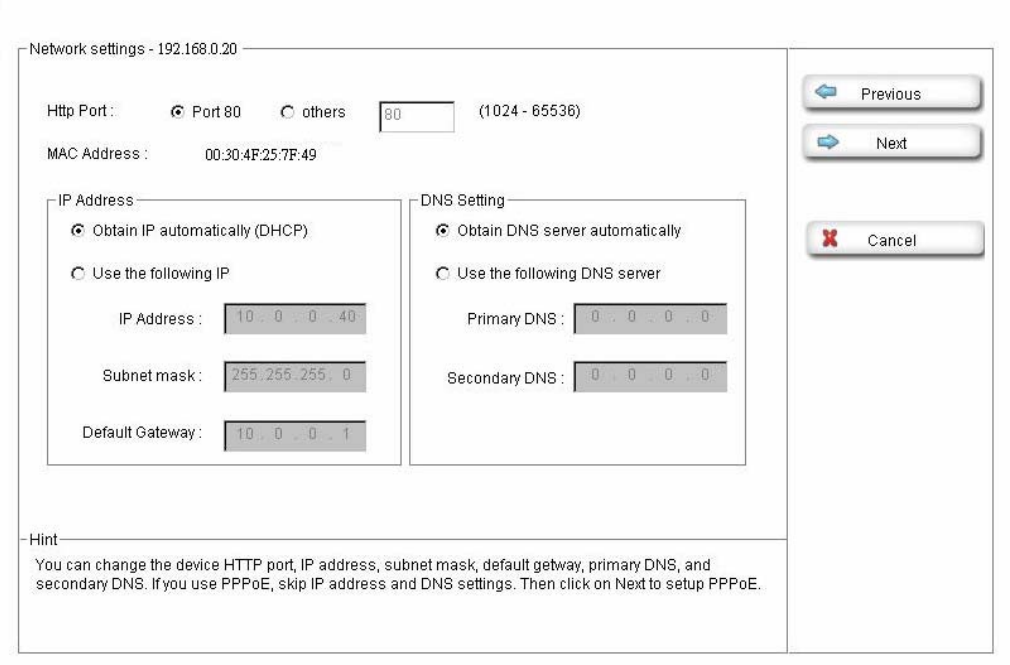
5. On the following Account settings screen, you can modify the Administrator login user name and password. And you can add some user accounts as Admin, Operator or Viewer. Please click **"Next"** to continue.



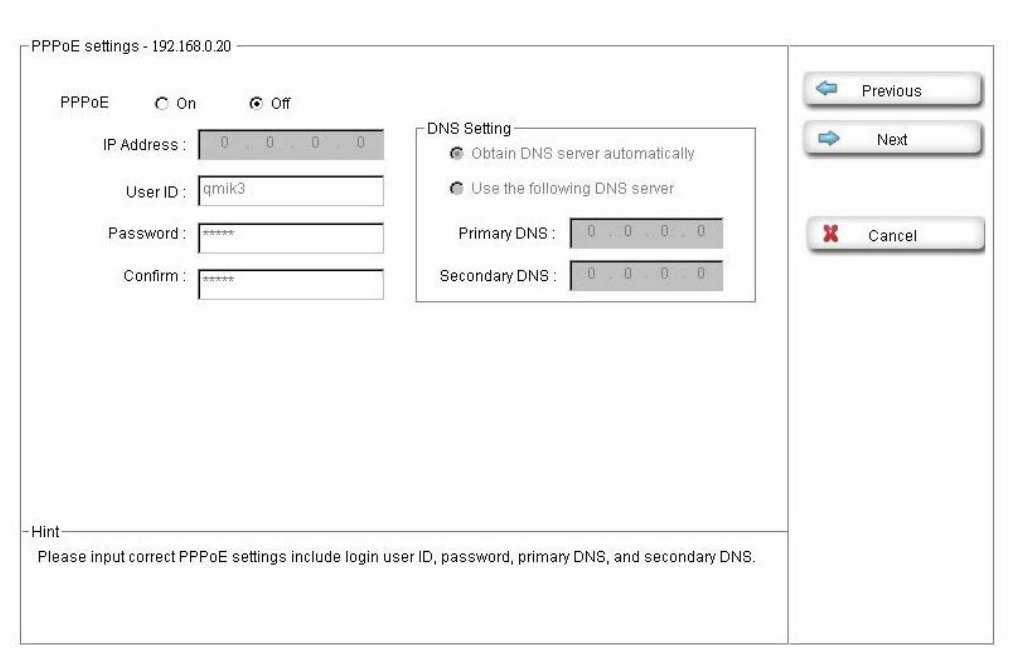
6. On the following Date/Time settings screen, you can adjust the date and time to synchronize with PC, manual setting or synchronize with NTP server. Select the correct Time Zone, then click **"Next"** to continue.



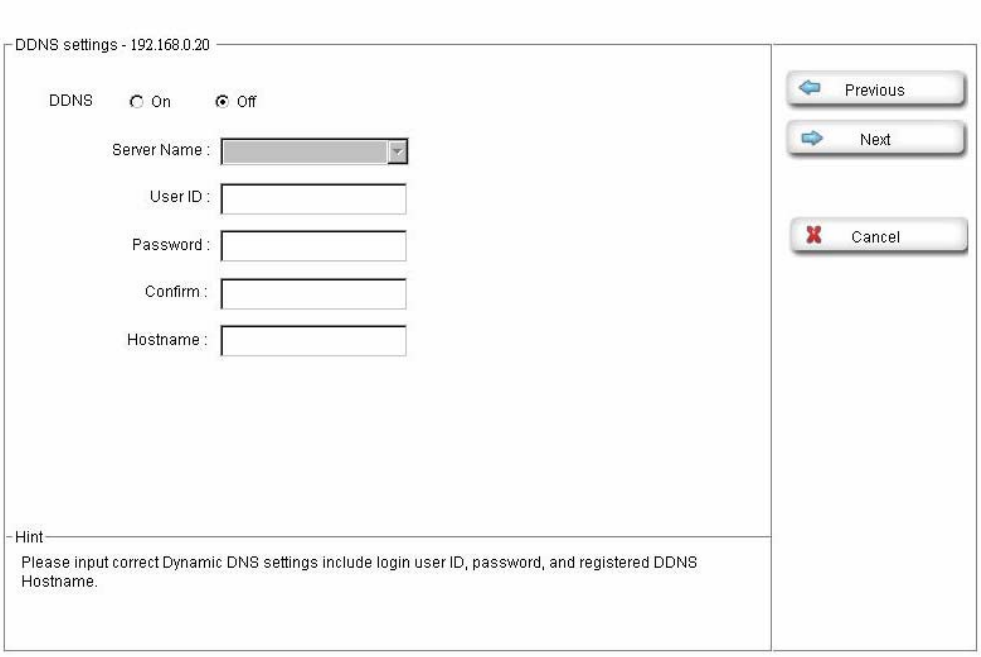
7. On the following Network settings screen, you can configure the device HTTP port number, IP address, subnet mask, default gateway and DNS. If you are use PPPoE, please select obtain automatically for IP address and DNS settings. Click **"Next"** to continue.



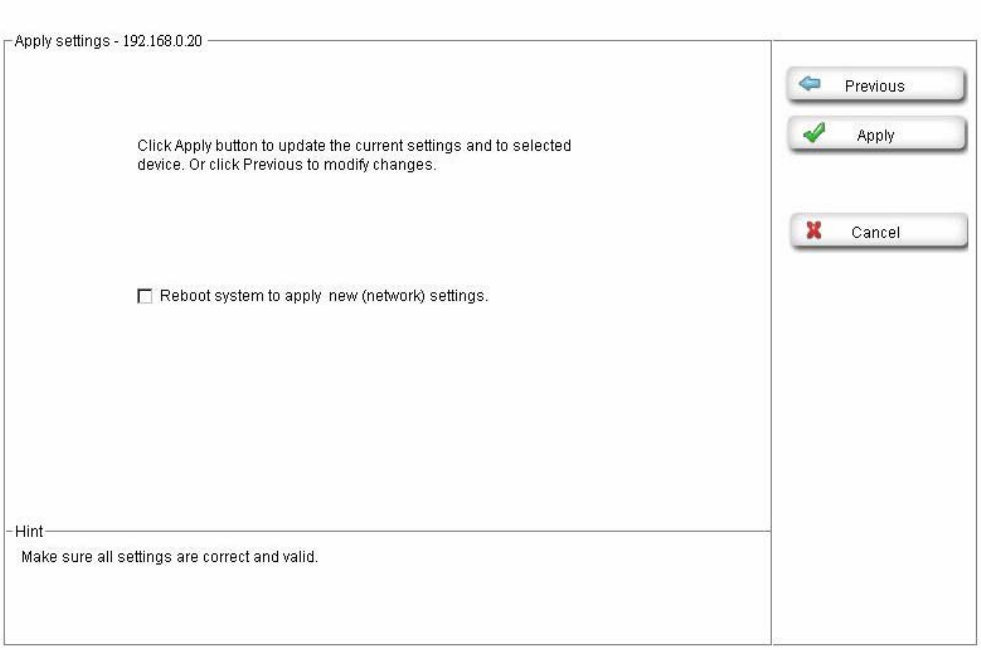
8. On the following PPPoE settings screen, if you are use PPPoE connection, please select **"On"** and fill the correct User ID and Password for dialling. Click **"Next"** to continue.



9. On the following DDNS settings screen, if you have registered the account from the DDNS provider and want to use DDNS function, please select **“On”** to fill the correct User ID, Password and Hostname for connecting. Click **“Next”** to continue.



10. In Apply settings screen. Please click **“Apply”** to finish the configuration, we will suggest you check the “Reboot system to apply new settings” to let the camera work with new settings. Or click **“Previous”** to check your settings.



After modifications, you may now connect the camera with new settings via web browser.

3. Viewing Live Video

This chapter introduces how to monitor the image from the IP camera by using Microsoft web browser. The recommended browser for Windows is Internet Explorer 6.0.

3.1 Connecting ICA-700 via Ethernet

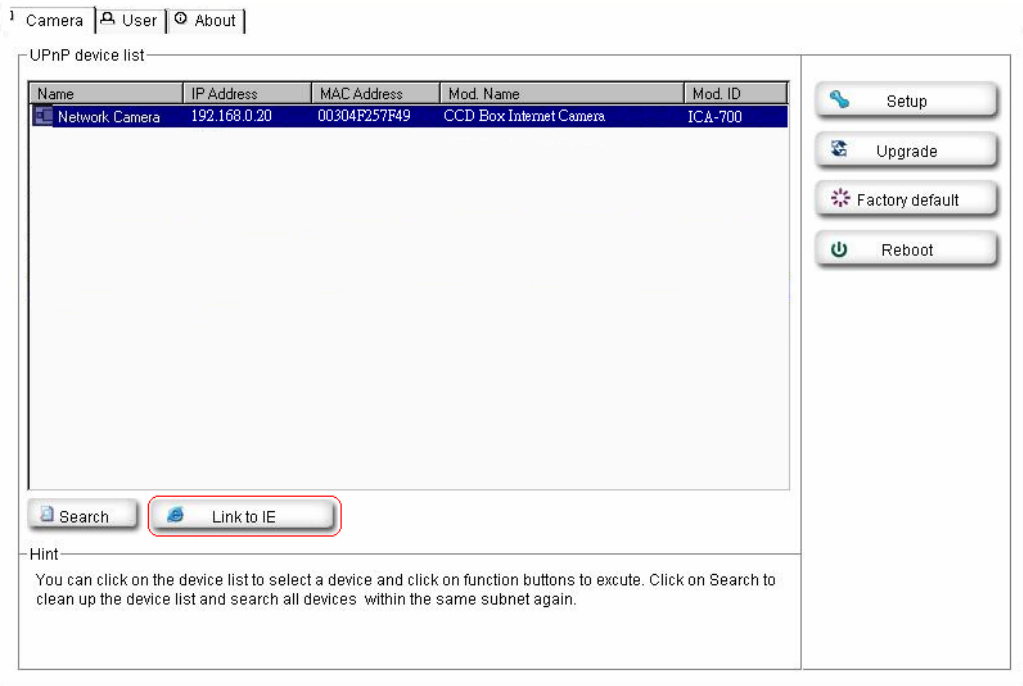
After finishing the Setup Tool, you can access the IP camera by using the browser.

1. Start the Web browser.

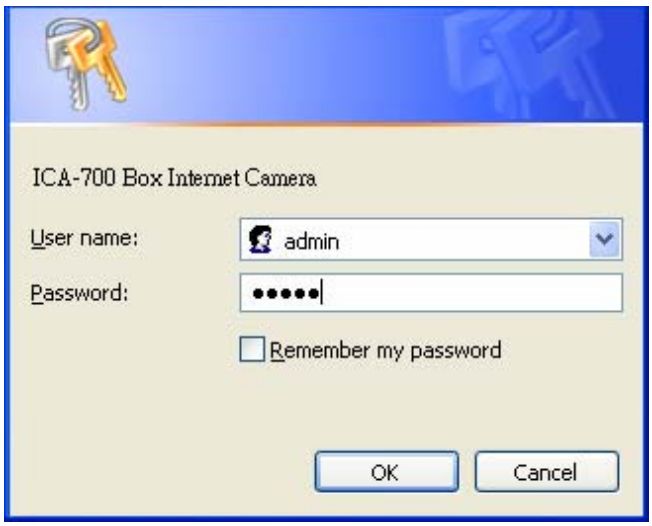
2. In the Address box, please enter "http://address". The "address" is the LAN IP address which up to your new configuration from Setup Tool.

Note:
The factory default setting of IP address will automatically obtain an IP address from DHCP server. After obtaining, if there is no DHCP server on your network, the IP address will be **"192.168.0.20"**.

3. You can also use the Setup Tool to select a camera on device list, and click **"Link to IE"** button to directly link to IE.



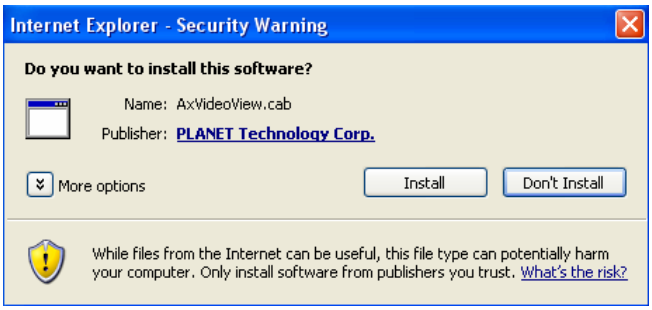
4. When you connect, the login page will be displayed as below.



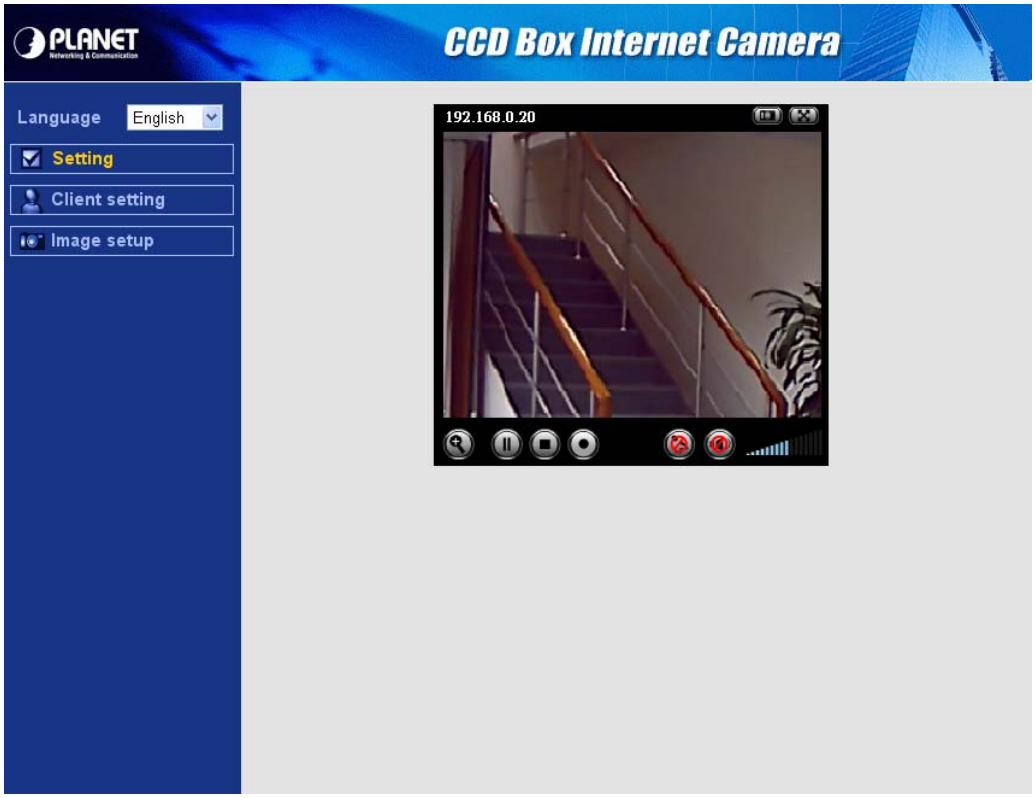
Note:

1. The default user name and password both are **"admin"**.
2. The Administrator's ID / Password can be configured on the **"Account"** of Security menu.

5. The first time you view the camera, you will be prompted to install an ActiveX component as below. **You must install this ActiveX component in order to view the video stream in Internet Explorer.** Click on **"Install"** to install.



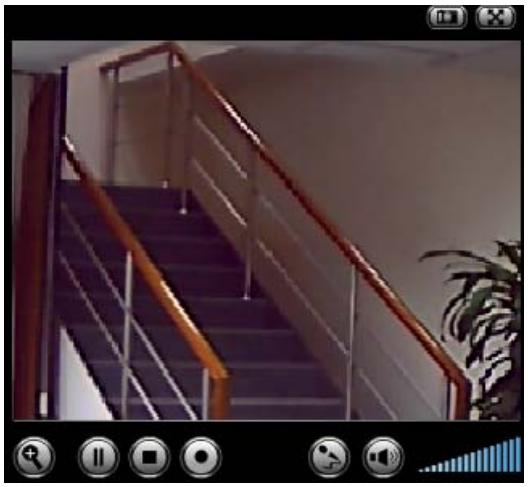
6. After installing, you will be able to view the live video stream in its own window as below.



Note:

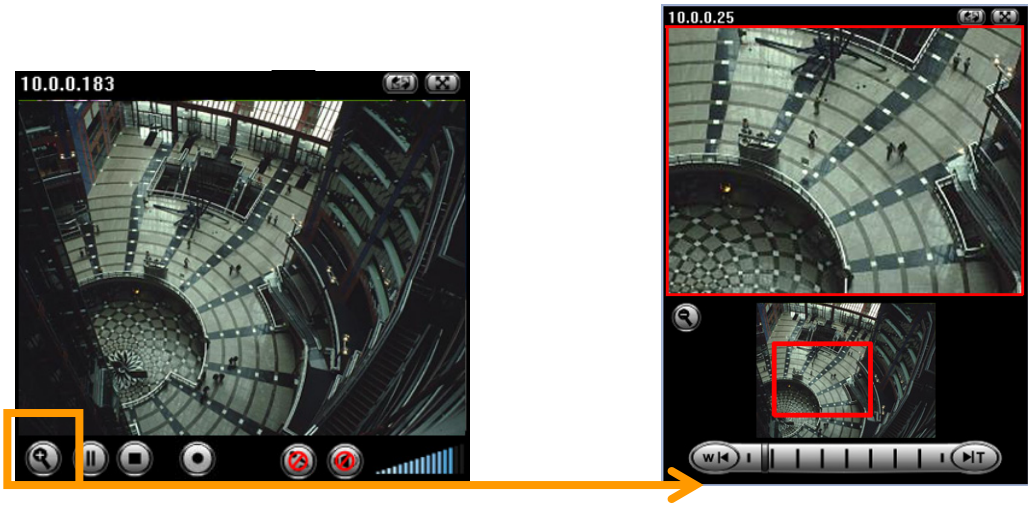
1. Video will start playing automatically. There might be a delay of a few seconds while the video stream is buffered.
2. There are a number of options available on homepage, accessed by select list, button or icon. The details are described in **Chapter 3.2 – General Options**.

3.2 General Options



	**Snapshot** Click to capture live image shot and store the picture in your computer.
	**Full Screen** Click to view the live video for full screen on your monitor.
	**Zoom** Click to display / close the zoom window.
	**Pause / Play** Click to pause / play the current video.
	**Stop** Click to stop the current video.
	**Record** Click to record the current video to the location you want.
	**Microphone turned On / Off** Click to turn on / off the microphone.
	**Speaker turned On / Off** Click to turn on / off the speaker.
	**Volume** If audio is enabled, use this slider to adjust the volume.

3.2.1 Directly zoom in / out the image



1. Click  to display the zoom window.

2. Pull the  to adjust the zoom range, and it will be showed on the above window.

3. You can use the right click of your mouse to move the  to anywhere on the window.

3.2.2 Language

You can click the pulldown box to select system language, including English, Traditional Chinese, Simplified Chinese, Deutsch, Japanese and Spanish.

3.2.3 Setting

Administrator can click this Setting bar to go to the setting page. The details are described in **Chapter 4 – Basic Setting & Chapter 5 – Advance Setting.**

3.2.4 Client setting

In client setting option, you can select the Mode, View size, Protocol, Video buffer.

Client setting	
Mode	Click the pulldown box to choose between MPEG4 and MJPEG video compression mode.
View Size	Select the desired display image resolution to 320X240 or 640X480.
Protocol	Select the transferring protocol from TCP, UDP and HTTP.
Video buffer	Turn the Video Buffer function On/Off. The Video Buffer function makes the streaming more smoothly in unsteady network environment, but might cause a little delay in live viewing.

Note:

1. MJPEG streaming is unavailable if RTSP mode is **ON**.
2. The RTSP function can be configured on the **"General"** of Camera menu.

3.2.5 Image setup

You can use the tool bar to optimize the Brightness, Contrast, Saturation and Hue here.

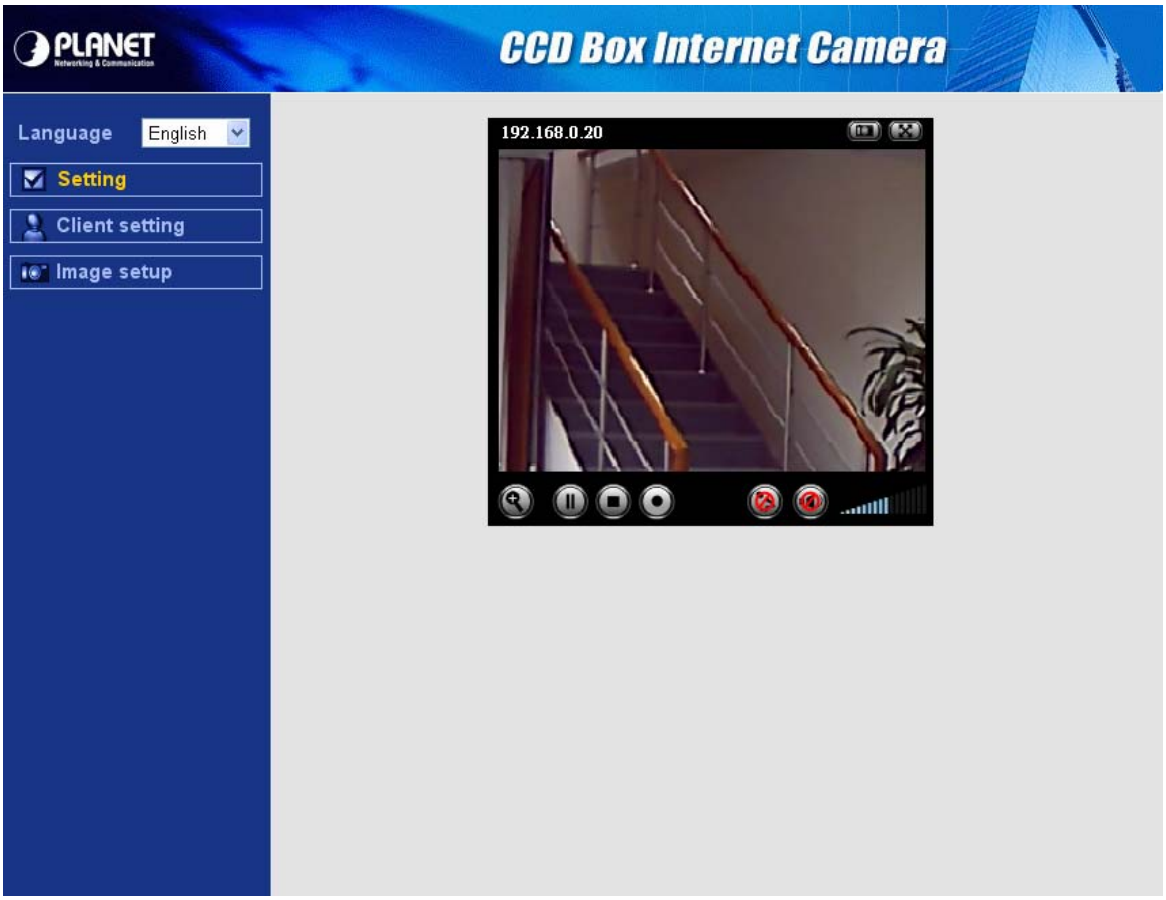
4. Basic Setting

This Chapter provides basic setting details of the camera's web-based management. The camera can be configured via your web browser. That must have an IP address which is compatible with your network.

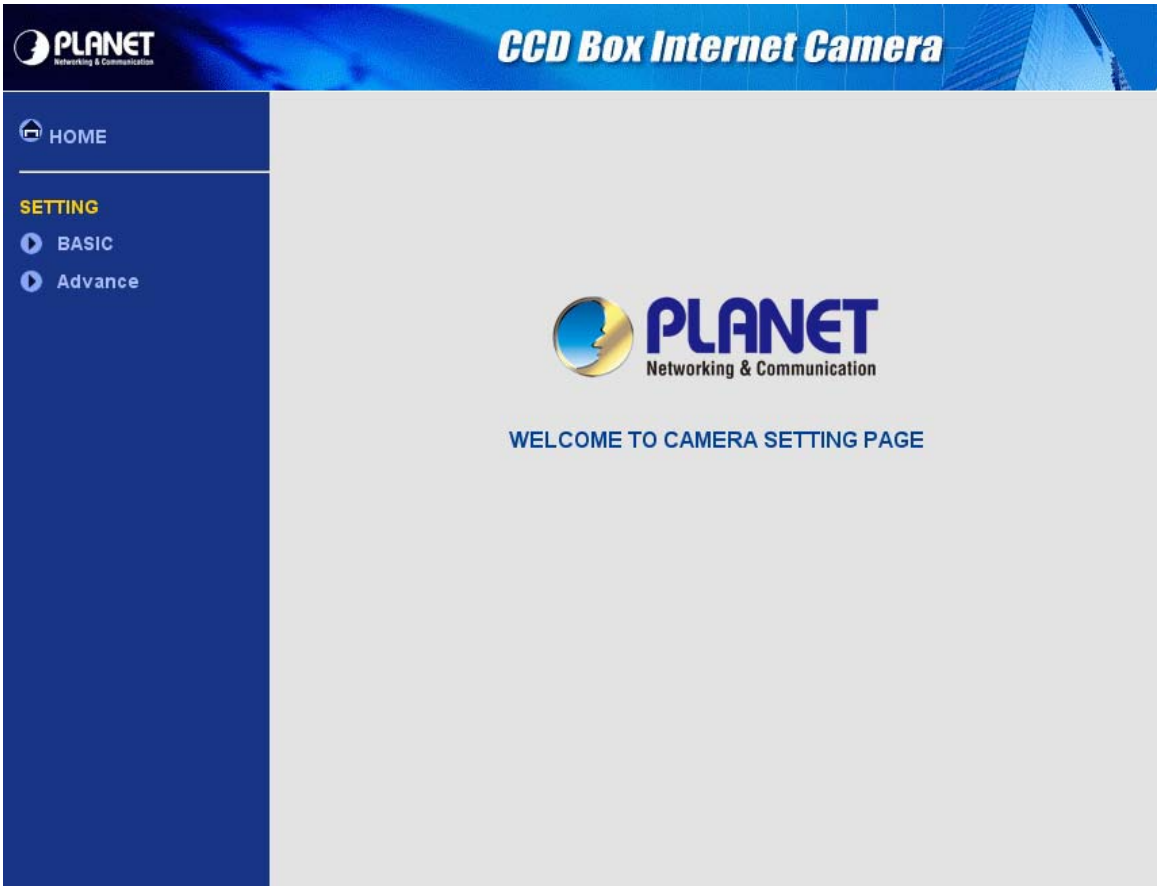
Note:

The recommended method to ensure this to use the supplied windows-based Setup Tool is described in **Chapter 2.3 – Software Quick Configuration**.

1. Click **"Setting"** on the left side of home page.



2. The welcome of setting page will be displayed as below.



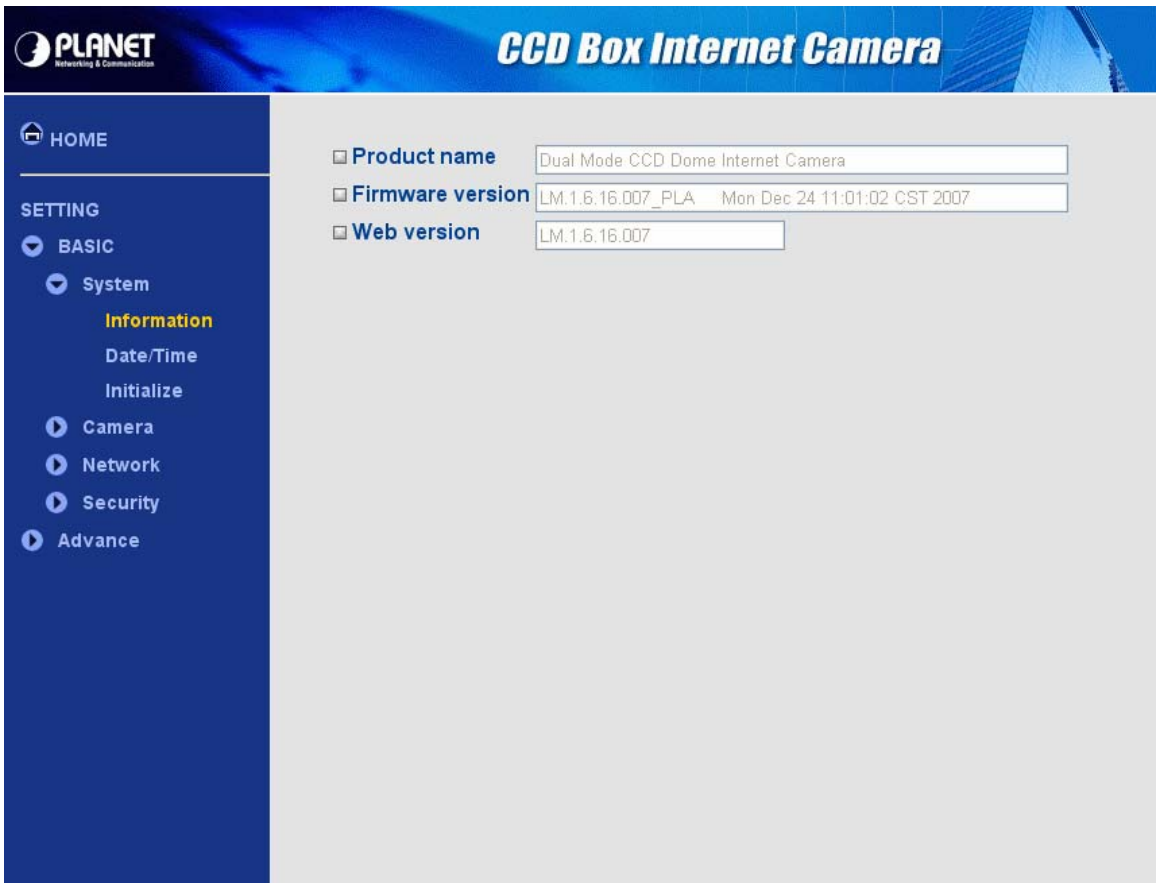
3. The basic setting menu contains following options.

Setting	**Basic**	System	Information Data/Time Initialize
		Camera	General MPEG4 > Computer view > Mobile view MJPEG
		Network	Information PPPoE DDNS UPnP IP Notification
		Security	Account HTTPS

4.1 System

4.1.1 Information

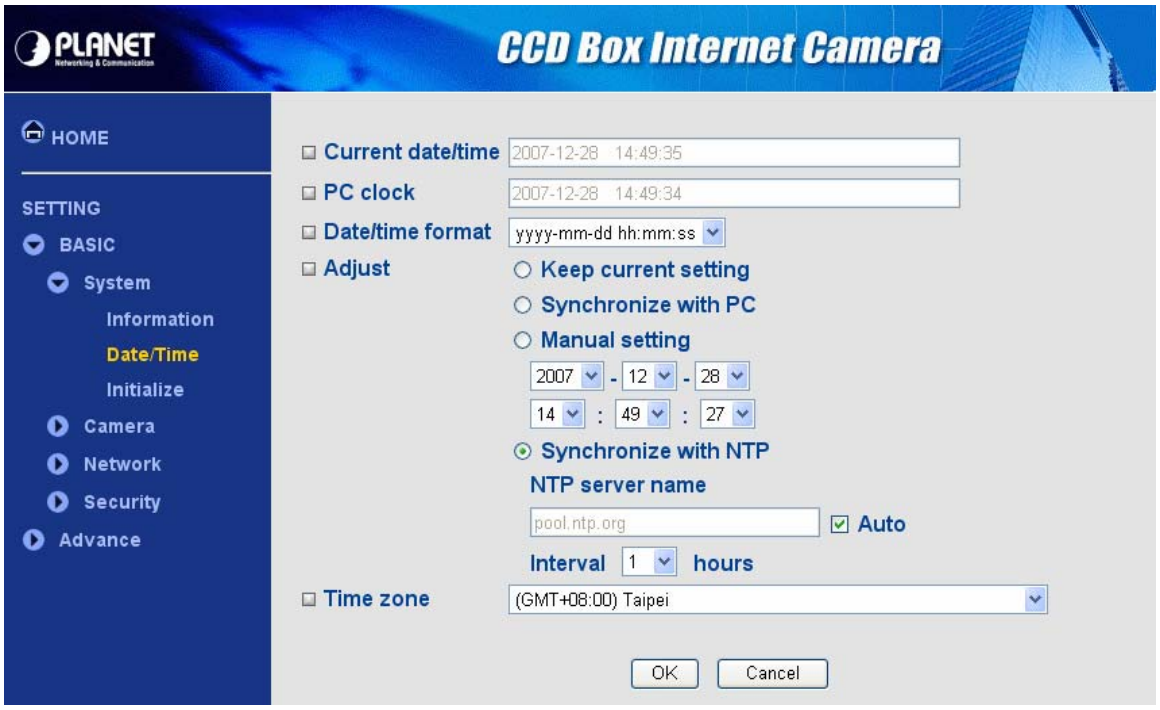
This page will be displayed after clicking **"Basic > System > Information"** of the setting menu. It displays the system information of this camera.



Information	
Product name	This displays the name of this product.
Firmware version	This displays the current firmware version.
Web version	This displays the current web version.

4.1.2 Date/Time

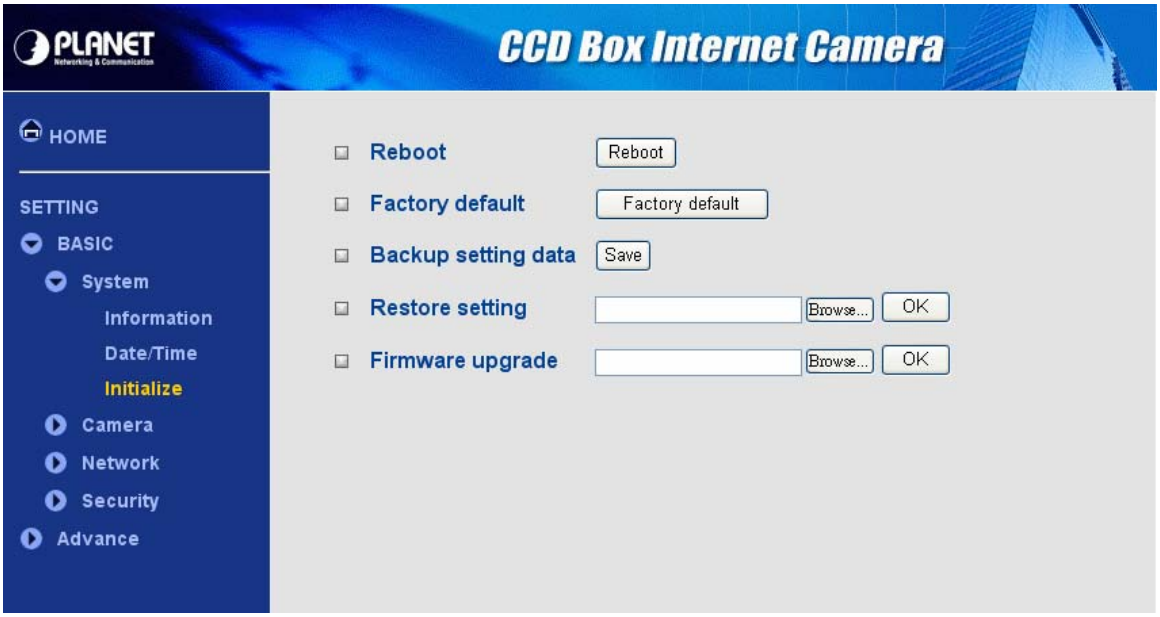
This page will be displayed after clicking **"Basic > System > Date/Time"** of the setting menu. It allows you to adjust the date and time of this IP camera.



Date/Time	
Current date/time	This displays the current date and time of the device.
PC clock	This displays the date and time of the monitoring PC clock.
Date/time format	Click the pulldown box to select among different time display formats: yyyy-mm-dd hh:mm:ss (year-month-day hour:minute:second), mm-dd-yyyy hh:mm:ss (month-day-year hour:minute:second), dd-mm-yyyy hh:mm:ss (day-month-year hour:minute:second).
Adjust	Select one of four time adjusting modes: **Keep current setting:** Select this mode to keep the current date & time of the device. **Synchronize with PC:** Select this mode to make the date & time the same as the PC. **Manual setting:** Select this mode to manually adjust the date & time of the device. **Synchronize with NTP:** Specify the **NTP server name** and the **Interval** to synchronize the date & time with the time server.
Time zone	Select the time zone and time difference from Greenwich Mean Time in the area where the device is installed from the pulldown box.

4.1.3 Initialize

This page will be displayed after clicking **"Basic > System > Initialize"** of the setting menu. It allows you to maintain the system of this IP camera.

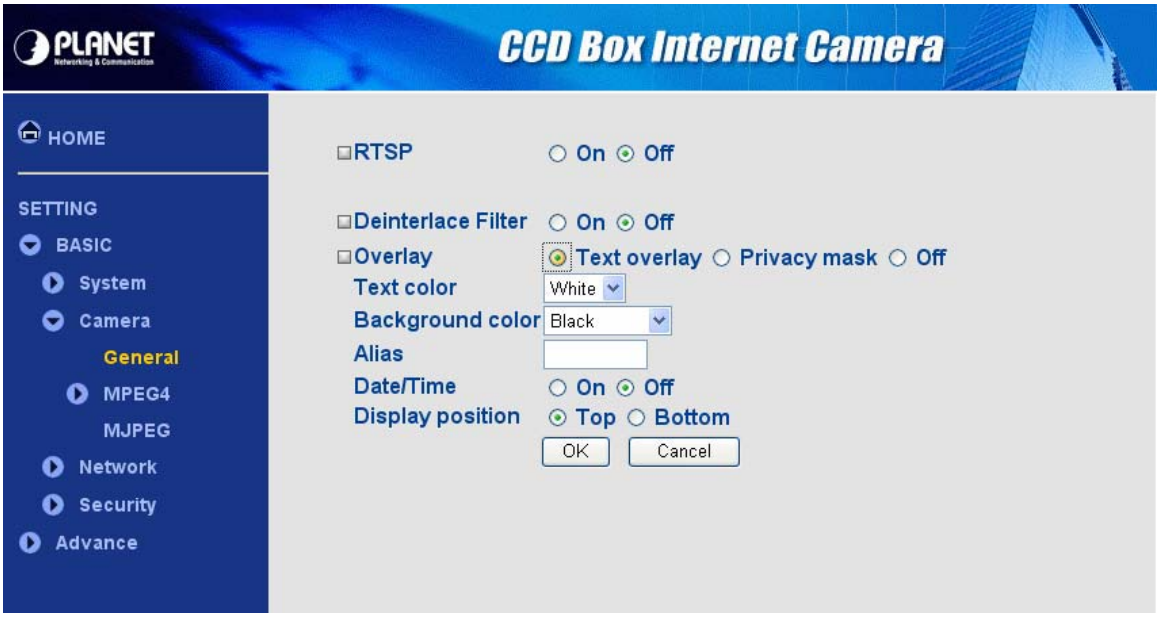


Initialize	
Reboot	Click this button to reboot the device. A confirmation dialogue will appear. Click **OK** to proceed.
Factory default	Click this button to reset the device to the factory default settings. A confirmation dialogue will appear. Click **OK** to proceed. After completing adjustments to the default settings, the device will reboot automatically. Do not turn off the device until the device reboots.
Backup setting data	Save the setting data of the device to a file. Click **Save** and follow the instructions on the browser to save the setting data file to your specified location.
Restore setting	Load the saved setting data of the device. Click **Browse** and select the file in which the setting data is stored. Click **OK**, and the device is adjusted according to the loaded data and restarted.
Firmware upgrade	Upgrade the device software. Click **Browse** and select the file for upgrading. A confirmation dialogue will appear. Click **OK** to start upgrading. The device will reboot upon completion.

4.2 Camera

4.2.1 General

This page will be displayed after clicking **"Basic > Camera > General"** of the setting menu.

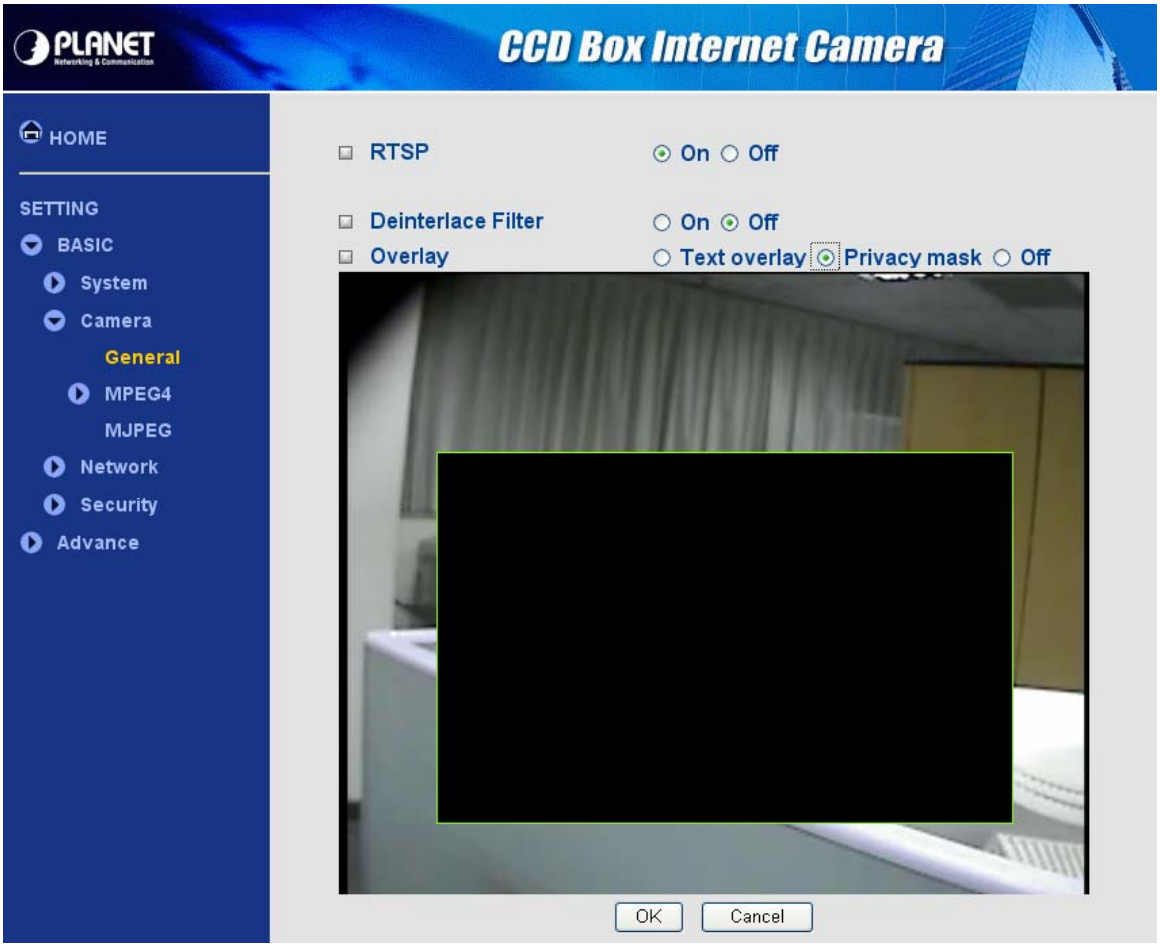


RTSP	
On / Off	Enable / disable the RTSP function.
Deinterlace Filter	
On / Off	Enable / disable the Deinterlace filter function.
Overlay	
Text overlay	Enables users to see Date/Time on the screen. **Text color:** Choose test color as White or Black. **Background color:** Choose background color as White, Black or Transparent. **Alias:** Fill the alias here. **Date/Time:** Enable or disable the Date/Time display. **Display position:** Choose display position as Top or Bottom.
Primacy mask	Enables users to conceal an area of the video image.
Off	Disable Overlay function.

Note:

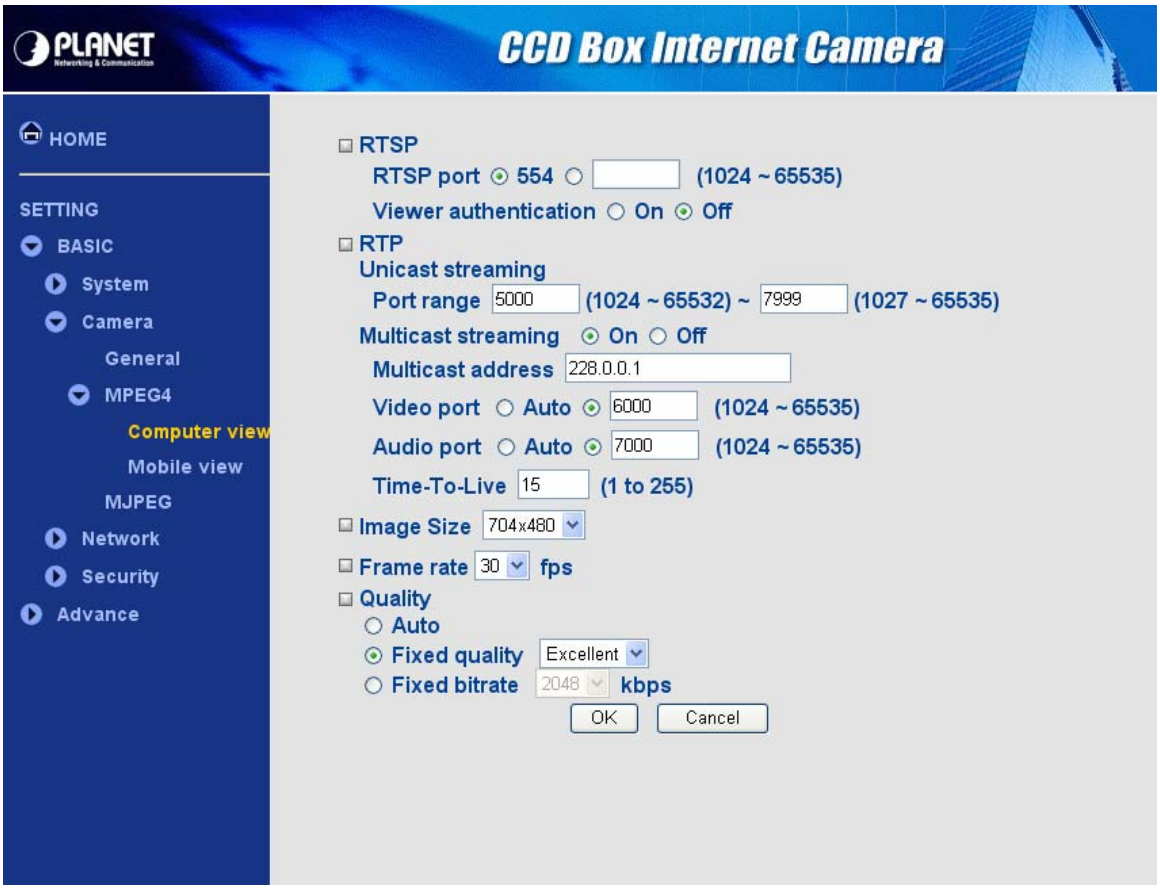
Real Time Streaming Protocol. RTSP is supported by most of the media clients . (RealPlayer, Media Player, QuickTime, etc…).

The primacy mask page is as below. You can adjust the mask size and position to a specified area.



4.2.2 MPEG4 – Computer view

This page will be displayed after clicking **"Basic > Camera > MPEG4 > Computer view"** of the setting menu.



RTSP	
RTSP port	The RTSP (Real Time Streaming Protocol) is a standard for connected clients to control streaming data (MPEG4) over the World Wide Web. The default RTSP Port is 554. You can fill the RTSP Port number (1024~65535) in the field provided.
Viewer authentication	Enable /disable the viewer authentication. If the viewer authentication is ON, users viewing through RTSP will be requested to key-in username and password.
RTP Unicast streaming	
Port range	The RTP (Real Time Transport Protocol) is an Internet protocol for transmitting real-time data such as audio and video. The default port range is 5000 ~ 7999. You can fill the numbers (1024~65535) in the field provided.
RTP Multicast streaming	
On / Off	Enable / disable multicast streaming function.
Multicast address	Specify the multicast server address.

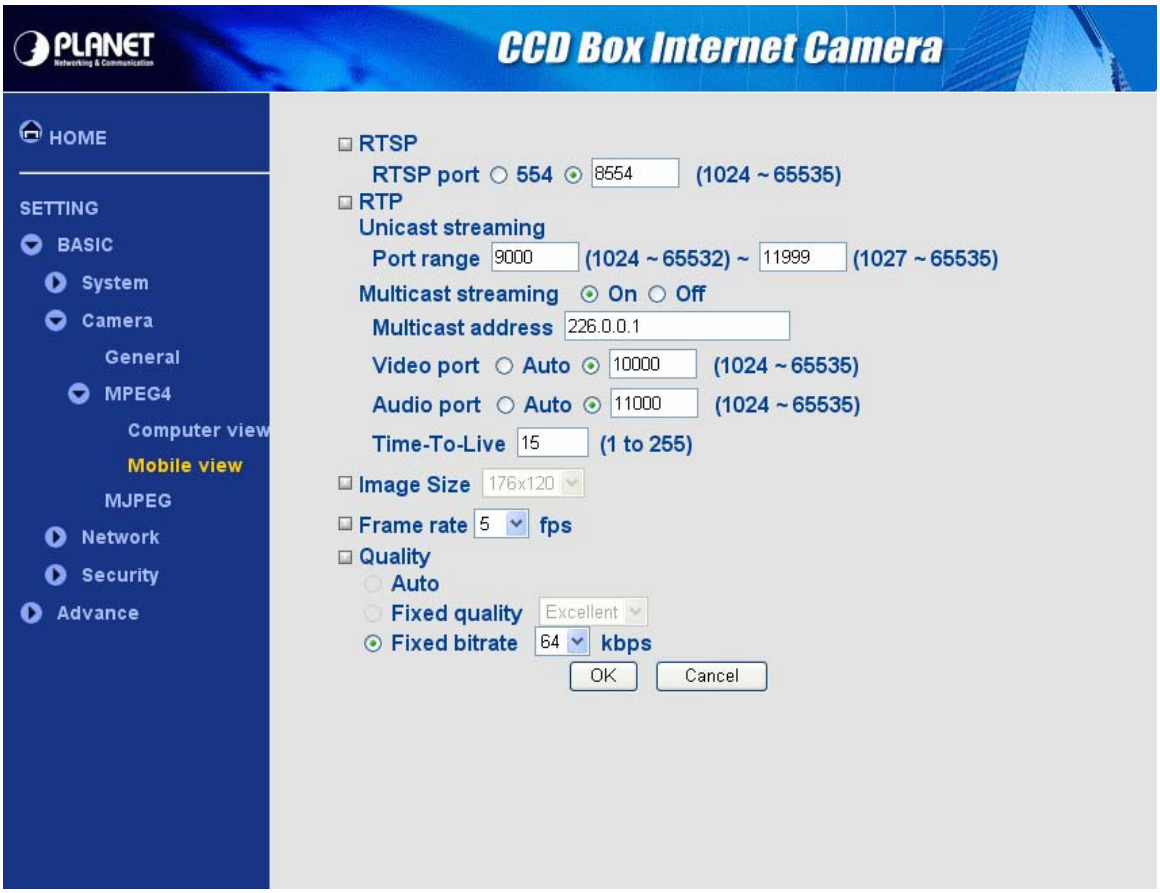
Video port	Specify the transmission port number of the video data. You can fill the numbers (1024~65535) in the field provided.
Audio port	Specify the transmission port number of the audio data. You can fill the numbers (1024~65535) in the field provided.
Time-To-Live	Set the maximum TTL that multicast can pass through.
Computer View	
Image size	Specify the image size the network camera transmits. You can choose among 704 × 480, 352 × 240 and 176 × 120 for **NTSC** and 704 × 576, 352 × 288 and 176 × 144 for **PAL**.
Frame rate	Set the frame rate of the MPEG4 image. Selectable values are 5, 10, 15, 20, 25, 30 fps. The unit “fps” stands for “frames sent per second”.
Quality	**Auto:** The quality and bitrate will be automatically decided according to the frame rate. **Fixed Quality:** The selectable values are Medium, Standard, Good, Detailed and Excellent. **Fixed Bitrate:** Set the bit rate of MPEG4 image transmission for a line. Selectable values are 64, 128, 256, 384, 512, 768, 1024, 1536 and 2048 kbps.

Note:

The selected frame rate and bit rate are a tentative value. The actual frame rate and bit rate may be different according to the image size, the shooting scene or the network condition.

4.2.3 MPEG4 – Mobile view

This page will be displayed after clicking **"Basic > Camera > MPEG4 > Mobile view"** of the setting menu.

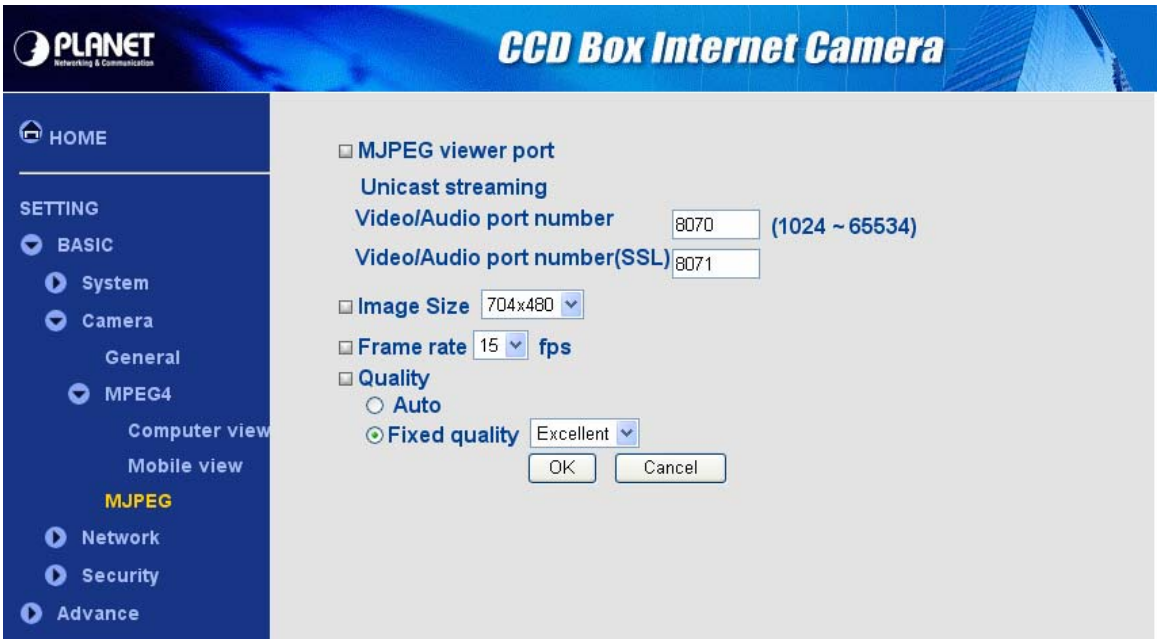


RTSP	
RTSP port	The RTSP (Real Time Streaming Protocol) is a standard for connected clients to control streaming data (MPEG4) over the World Wide Web. The default RTSP Port is 554. You can fill the RTSP Port number (1024~65535) in the field provided.
RTP Unicast streaming	
Port range	The RTP (Real Time Transport Protocol) is an Internet protocol for transmitting real-time data such as audio and video. The default port range is 9000 ~ 11999. You can fill the numbers (1024~65535) in the field provided.
RTP Multicast streaming	
On / Off	Enable / disable multicast streaming function.
Multicast address	Specify the multicast server address.
Video port	Specify the transmission port number of the video data. You can fill the numbers (1024~65535) in the field provided.

Audio port	Specify the transmission port number of the audio data. You can fill the numbers (1024~65535) in the field provided.
Time-To-Live	Set the maximum TTL that multicast can pass through.
Mobile View	
Image size	176 × 120 for mobile.
Frame rate	Set the frame rate of the MPEG4 image. Selectable values are 5, 10, 15, 20 fps. The unit “fps” stands for “frames sent per second”.
Quality	**Fixed Bitrate:** Set the bit rate of MPEG4 image transmission for a line. Selectable values are 16, 32, and 64 kbps.

4.2.4 MJPEG

This page will be displayed after clicking **"Basic > Camera > MJPEG"** of the setting menu.



MJPEG viewer port – Unicast streaming	
Video/Audio port number	Specify the transmission port number of the video data. Specify an even number from 1024 to 65534.
Video/Audio port number (SSL)	Specify the SSL transmission port number of the video data. Specify an even number from 1024 to 65534.
Image Size	Specify the image size the network camera transmits. You can choose among 704 × 480, 352 × 240 and 176 × 120 for **NTSC** and 704 × 576, 352 × 288 and 176 × 144 for **PAL**.
Frame rate	Set the frame rate of the MJPEG image. Selectable values are 5, 10, 15 fps. The unit "fps" stands for "frames sent per second".
Quality	**Auto:** The quality will be automatically decided. **Fixed quality**: The selectable values are Medium, Standard, Good, Detailed and Excellent.

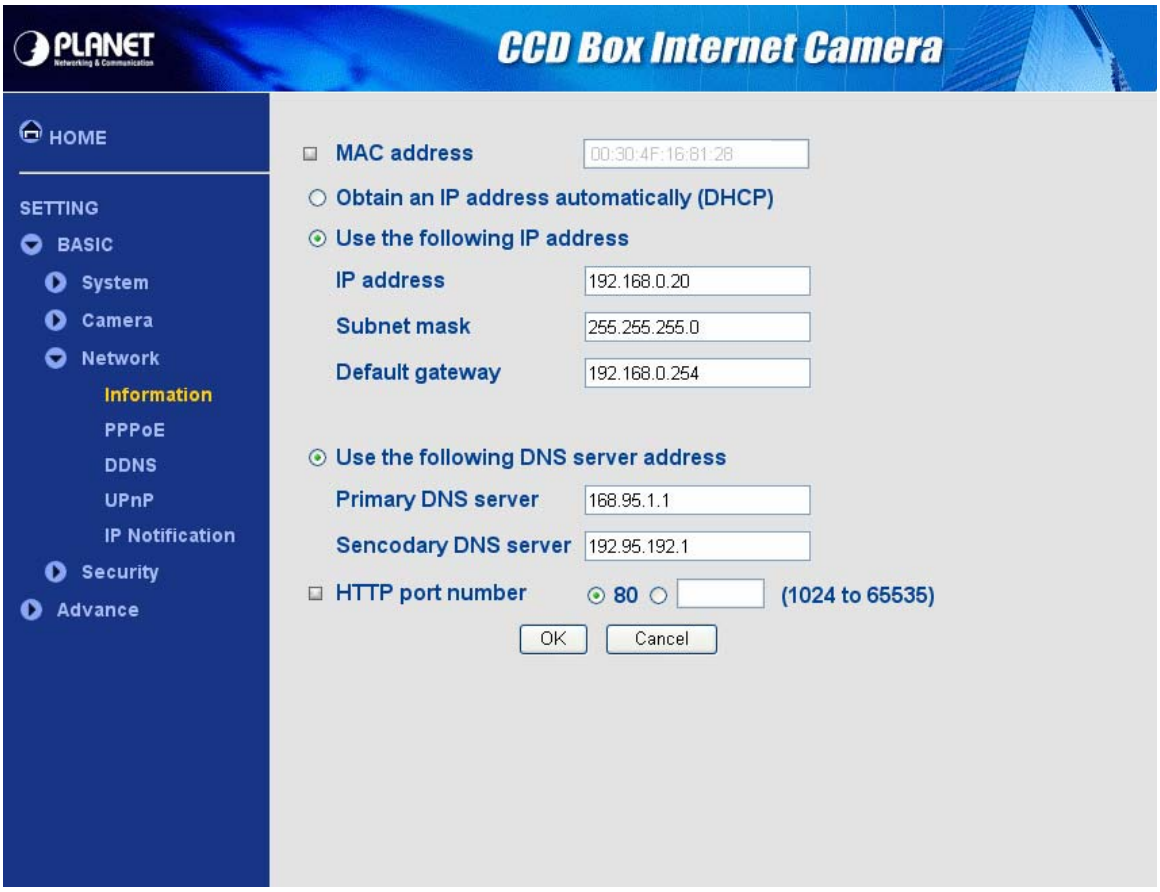
Note:

Unicast streaming: Specify the transmission port number of the video data and audio data used when **UDP (Unicast)** is selected with the TCP/UDP transmission switching icon in the main viewer.

4.3 Network

4.3.1 Information

This page will be displayed after clicking **“Basic > Network > Information”** of the setting menu. It displays the network information of this camera.



Information	
MAC address	Display the MAC address of the device.
Obtain an IP address automatically (DHCP)	If a DHCP server is installed on the network, to select this while the IP address is assigned by the DHCP server.
Use the following IP address	Select this when a fixed IP address is set. **IP address:** Enter the IP address of the device. **Subnet mask:** Enter the subnet mask. **Default gateway:** Enter the default gateway.
Obtain DNS address automatically	Select this to obtain the address of DNS server automatically.

Use the following DNS address	Select this when you set the fixed DNS address. **Primary DNS server:** Enter the IP address of the primary DNS server. **Secondary DNS server:** Enter the IP address of the secondary DNS server, if necessary.
HTTP port number	Select **80** in general situations. If you want to use a port number other than **80**, select the text box and enter a port number between 1024 and 65535.

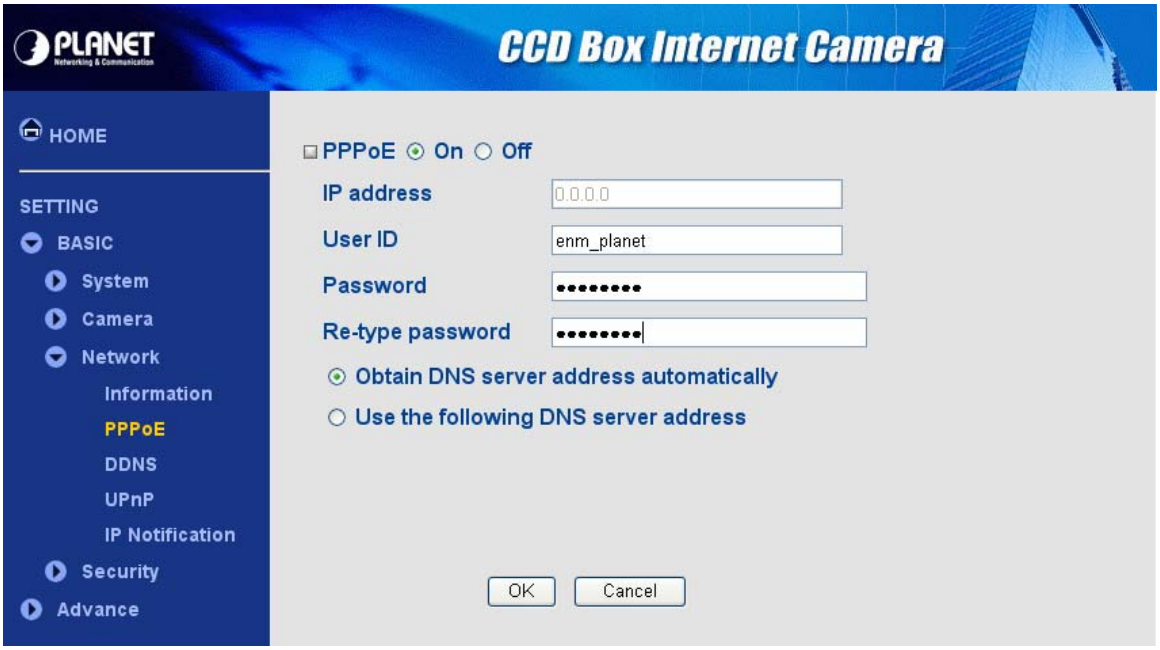
Note:

When you have set the HTTP port number to a number other than 80 on the Network setting page or in the Setup Program, access the device by typing the IP address of the device on the web browser as follows:

Example: when HTTP port number is set to 2000 → http://192.168.0.20**:2000**

4.3.2 PPPoE

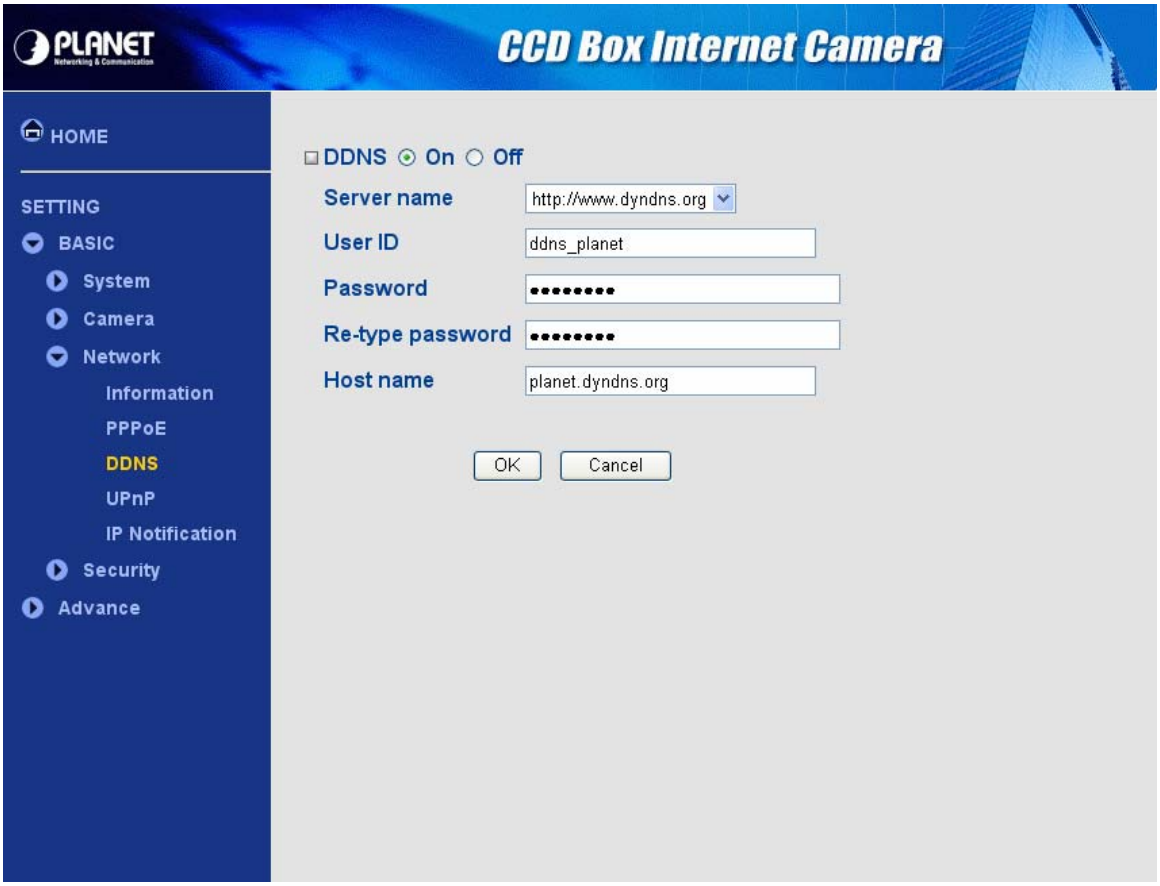
This page will be displayed after clicking **"Basic > Network > PPPoE"** of the setting menu. It allows you to configure the dial-up connection.



PPPoE	
On / Off	Enable/disable the PPPoE function.
IP address	The IP address obtained at the PPPoE connecting with network.
User ID	Enter the user ID for authentication necessary for PPPoE connections. Type it up to 64 characters.
Password	Enter the password for authentication necessary for PPPoE connections. Type it up to 32 characters.
Re-type password	Re-type the password to confirm.
Obtain DNS server address automatically	Select this to obtain the address of DNS server automatically.
Use the following DNS server address	Select this when you set the fixed address as the IP address of DNS server. **Primary DNS server:** Enter the IP address of the primary DNS server. **Secondary DNS server:** Enter the IP address of the secondary DNS server.

4.3.3 DDNS

This page will be displayed after clicking **"Basic > Network > DDNS"** of the setting menu. It allows you to configure the dynamic DNS connection.



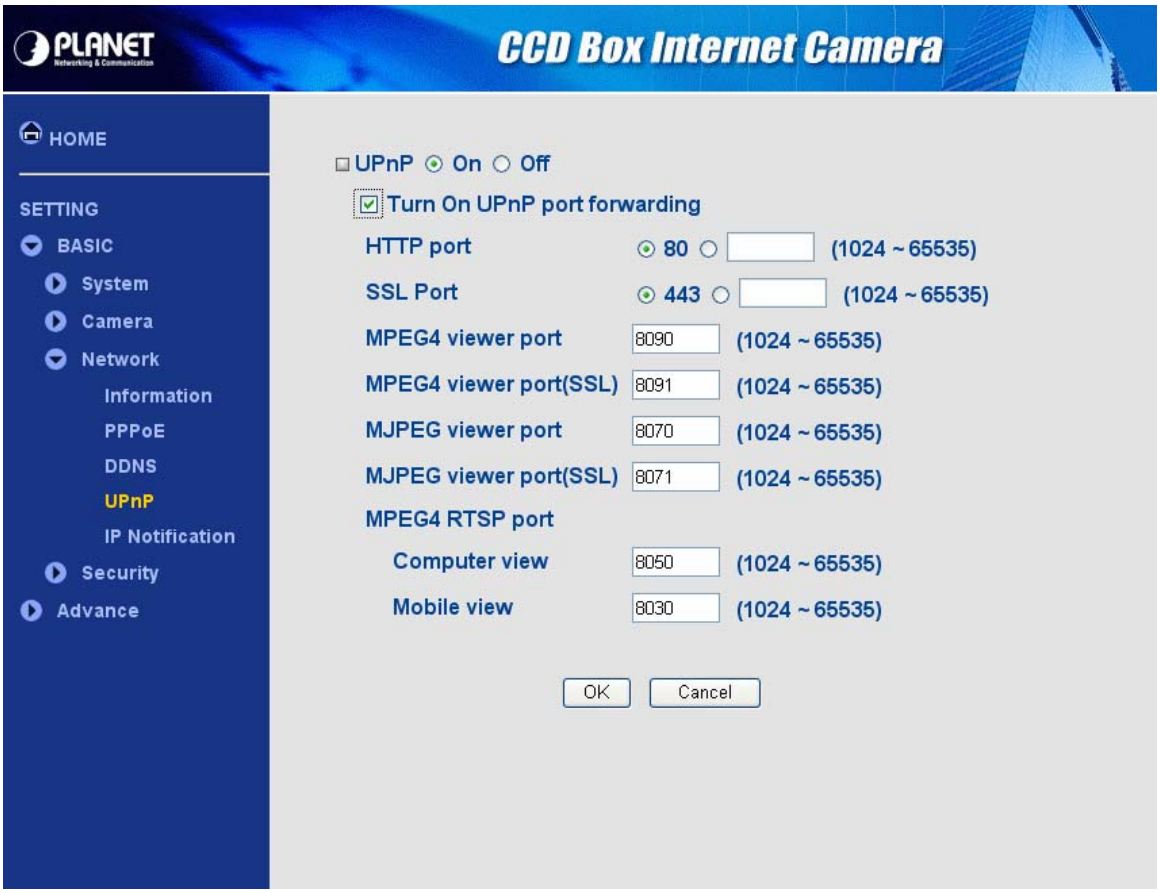
DDNS	
On / Off	Enable/disable the DDNS function.
Server name	Enter the name of the DDNS Server.
User ID	Enter the user ID for authentication necessary for DDNS connections. Type it up to 64 characters.
Password	Enter the password for authentication necessary for DDNS connections. Type it up to 32 characters.
Re-type password	Re-type the password to confirm.
Host name	Enter the host name that is registered to the DDNS server.

Note:

When you want to use DDNS function, you need to register an account in DDNS server first.

4.3.4 UPnP

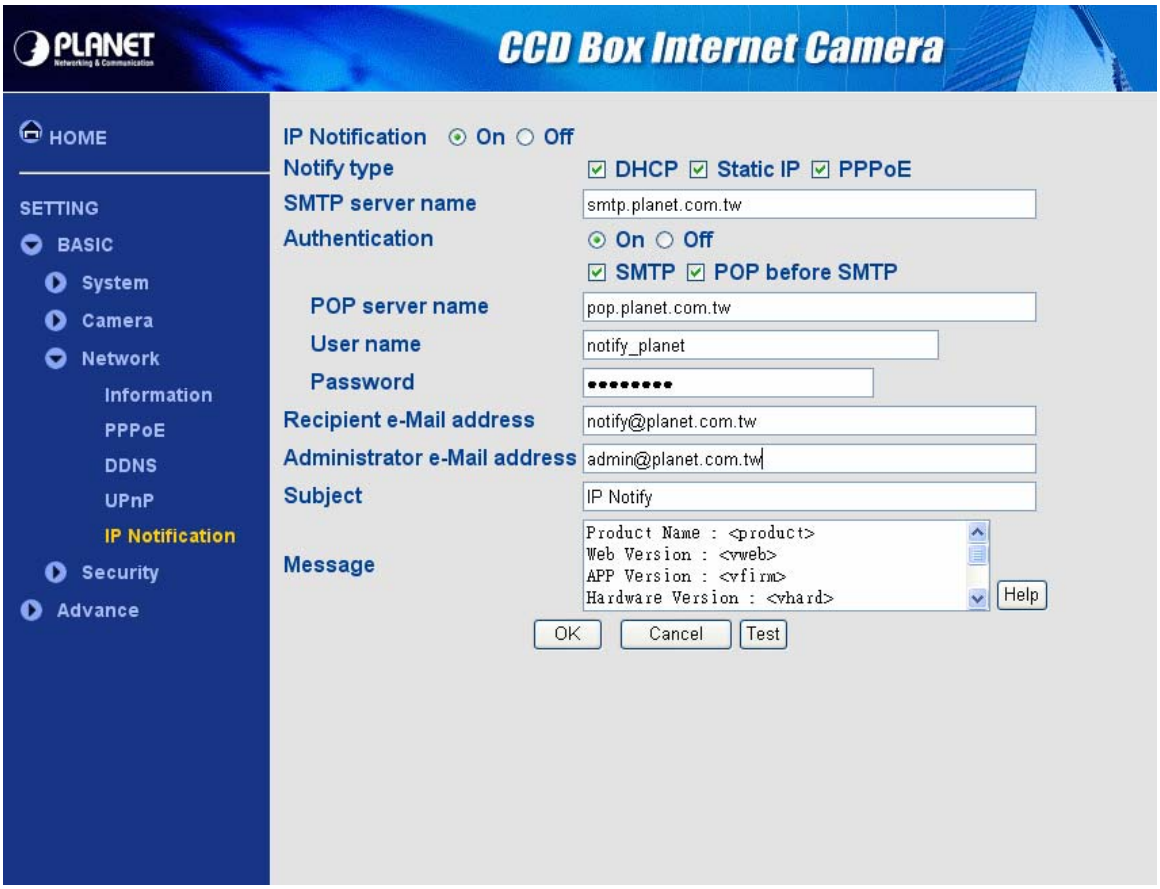
This page will be displayed after clicking **"Basic > Network > UPnP"** of the setting menu. It allows you to enable or disable the UPnP function.



UPnP	
Turn On UPnP port forwarding	For opening a port in a router or firewall in a private network in order to let a party from the outside world contact a user inside.
HTTP port	Enter the HTTP port number and default HTTP port is 80. You can fill the numbers (1024~65535) in the field provided.
SSL port	Enter the SSL port number and default SSL port is 443. You can fill the numbers (1024~65535) in the field provided.
MPEG4 viewer port	Enter the MPEG4 viewer port number and default MPEG4 viewer port is 8090.
MPEG4 viewer port (SSL)	Enter the MPEG4 SSL viewer port and default is 8091.
MJPEG viewer port	Enter the MJPEG viewer port number and default MJPEG viewer port is 8070.
MJPEG viewer port (SSL)	Enter the MPEG4 SSL viewer port and default is 8071.

4.3.5 IP Notification

This page will be displayed after clicking **"Basic > Network > IP Notification"** of the setting menu. It allows you to configure the IP Notification via SMTP.



IP Notification	
On / Off	Enable/disable the IP Notification function.
Notify type	Select type of DHCP, Static IP and PPPoE will notify.
SMTP server name	Type the SMTP server name up to 64 characters, or the IP address of the SMTP server.
Authentication	Select the authentication required when you send an email. **On:** When authentication is necessary an e-mail is sent, select one of the authentication methods from the followings. **Off:** Select if no authentication is necessary when an email is sent. **SMTP:** Select if SMTP authentication is necessary when an e-mail is sent. **POP before SMTP:** Select if POP before SMTP authentication is necessary when an e-mail is sent.

	POP server name: It is necessary when the **POP before SMTP** is selected in **Authentication**. Type the POP (receiving mail) server name up to 64 characters, or type the IP address of the POP server. This setting is necessary when the SMTP server which sends e-mails performs authentication using the POP user account. **User name & Password:** Type the user name and Password of the user who has the mail account. This setting is necessary when the SMTP server which sends e-mails performs authentication.
Recipient e-mail address	Type the recipient e-Mail address up to 64 characters. You can specify up to three recipient E-mail addresses.
Administrator e-mail address	Type the Administrator e-Mail address up to 64 characters. This address is used for reply mail and sending system messages from the SMTP server.
Subject	Type the subject/title of the e-Mail up to 64 characters. With respect to mail which is sent according to the IP notification.
Message	Type the text of the E-mail up to 384 characters. Default value provide network information including IP, Port, MAC, Model and Serial..

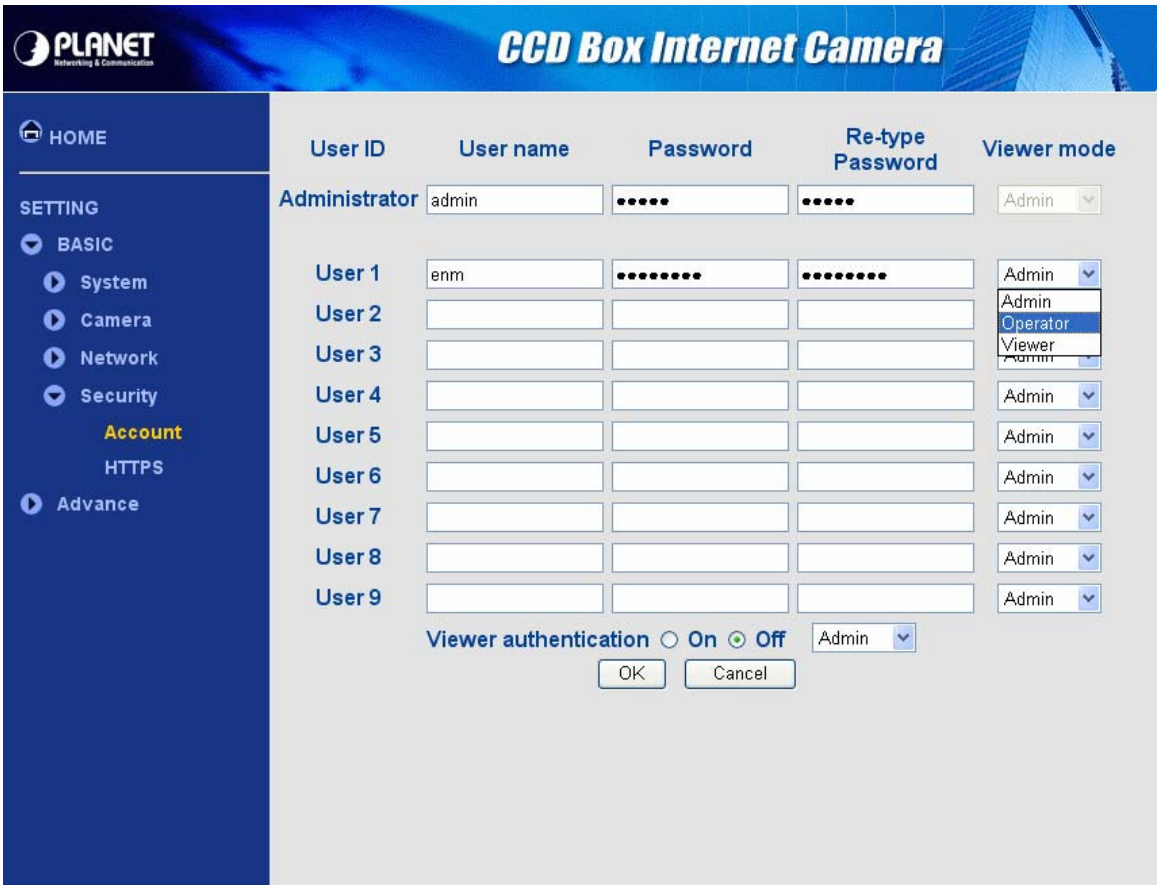
Note:

When you set Authentication to **On**, be sure to select either or both **SMTP** or/and **POP before SMTP**.

4.4 Security

4.4.1 Account

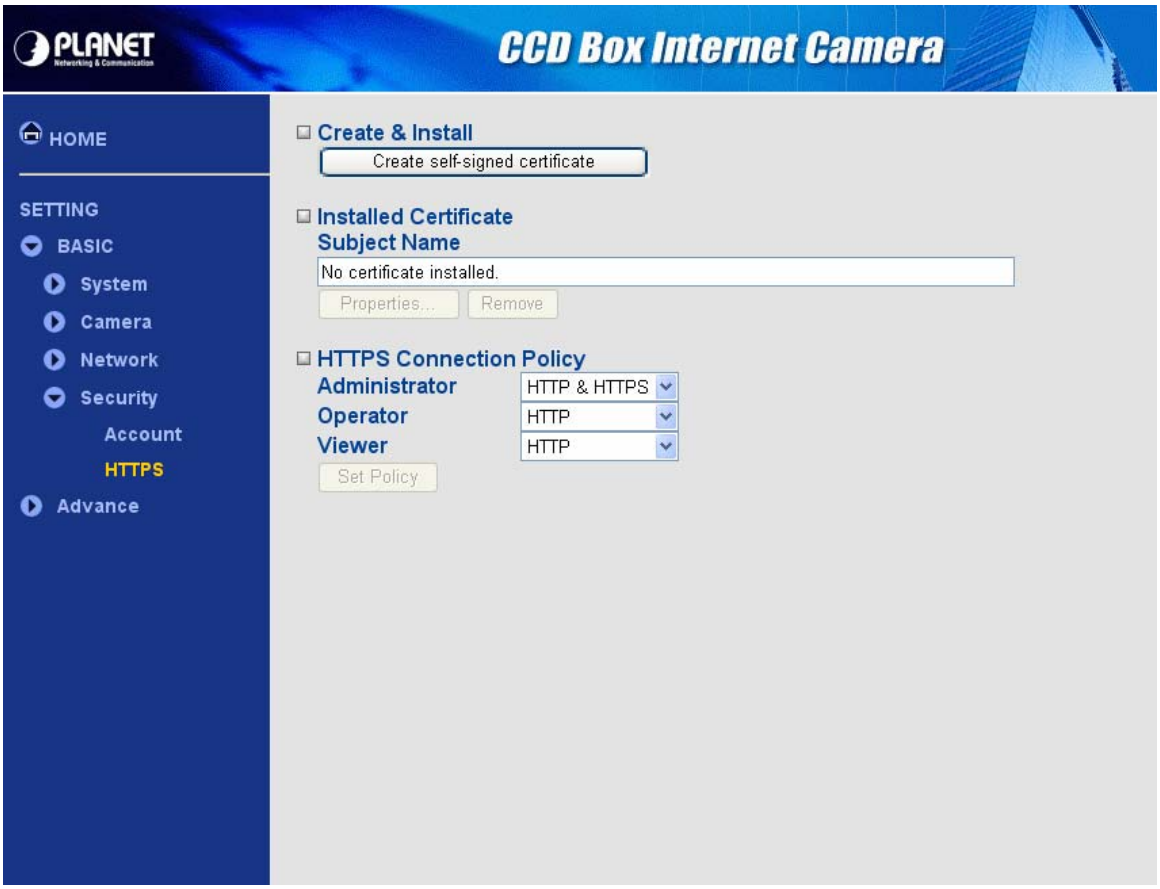
This page will be displayed after clicking **"Basic > Security > Account"** of the setting menu. It allows you to modify and add users for accessing.



Account	
User name	Set a user name between 5 and 16 characters.
Password	Set a password between 5 and 16 characters.
Re-type password	Re-type the password to confirm.
Viewer Mode	Set a user to **Admin, Operator** or **Viewer** mode.
Viewer authentication	Allows any viewer direct access to Live View.

4.4.2 HTTPS

This page will be displayed after clicking **"Basic > Security > HTTPS"** of the setting menu. It allows you to access the IP camera via HTTPS.



HTTPS	
Create & Install	Create a self-signed certificate for HTTPS to recognize.
Installed Certificate	Display or remove the properties of the installed certificate.
HTTPS Connection Policy	Set HTTPS connection policy for different level of users.

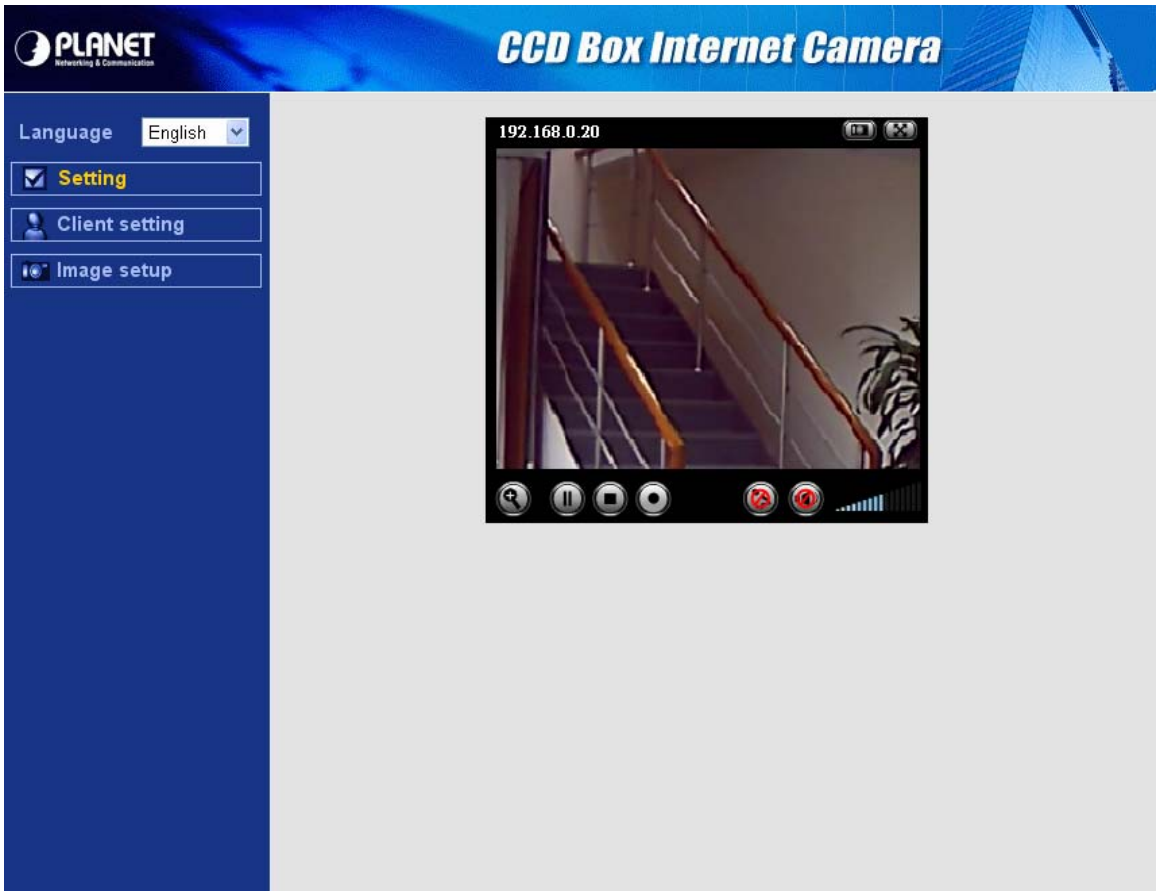
5. Advance Setting

This Chapter provides advance setting details of the camera's web-based management. The camera can be configured via your web browser. That must have an IP address which is compatible with your network.

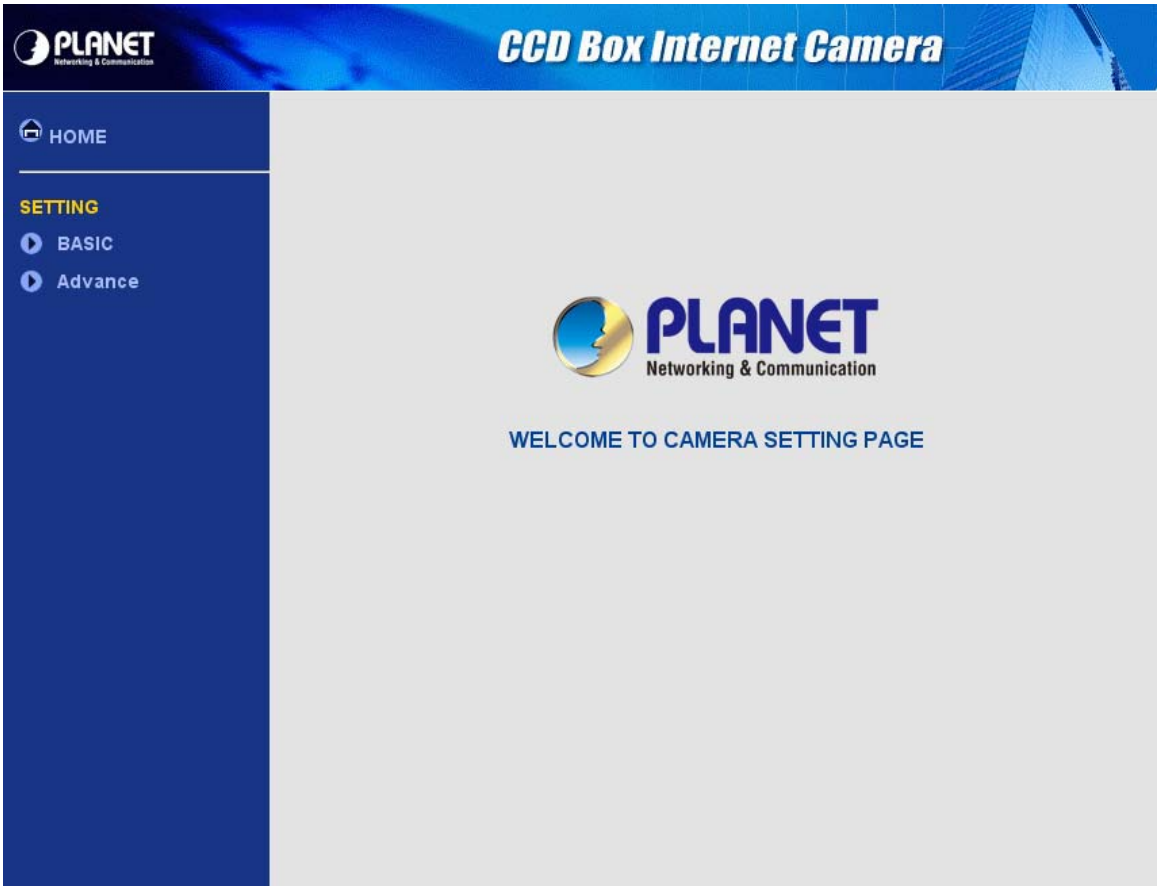
Note:

The recommended method to ensure this to use the supplied windows-based Setup Tool is described in **Chapter 2.3 – Software Quick Configuration**.

1. Click **"Setting"** on the left side of home page.



2. The welcome of setting page will be displayed as below.



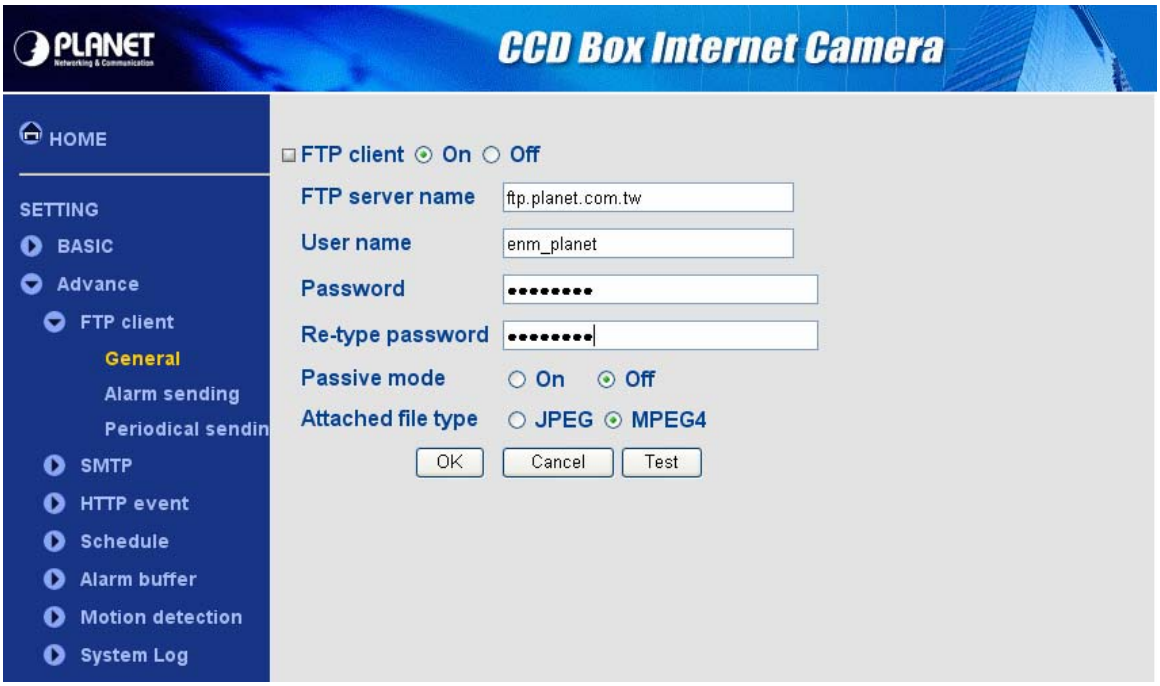
3. The advance setting menu contains following options.

Setting	**Advance**	FTP client	General Alarm sending Periodical sending
		SMTP	General Alarm sending Periodical sending
		HTTP event	General Alarm sending
		Schedule	Setting
		Alarm buffer	Setting
		Motion detection	Setting
		System Log	Setting

5.1 FTP client

5.1.1 General

This page will be displayed after clicking **"Advance > FTP client > General"** of the setting menu. It allows you to send the image or video to FTP server.



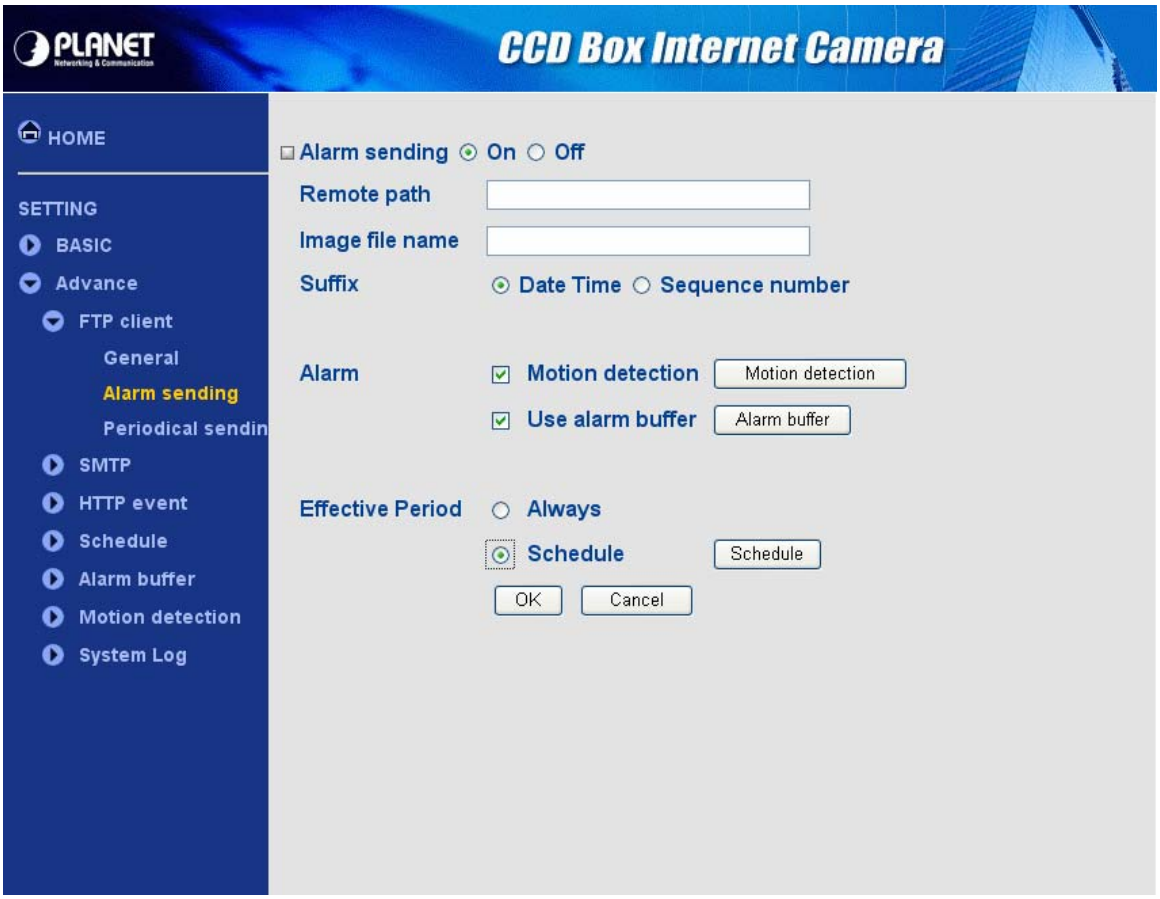
FTP client	
On / Off	Enable/disable the FTP client function.
FTP server name	Type the FTP server name to upload still images up to 64 characters, or the IP address of the FTP server.
User name	Type the user name for the FTP server.
Password	Type the password for the FTP server.
Re-type password	To confirm the password.
Passive mode	Set whether you use the passive mode of FTP server or not when connecting to FTP server. Select **On** to connect to FTP server using the passive mode.
Attached file type	Set attached file type to MPEG or MJPEG.

Note:

The frame rate and operability on the main viewer may decrease while a file is being transmitted by the FTP client function.

5.1.2 Alarm sending

This page will be displayed after clicking **"Advance > FTP client > Alarm sending"** of the setting menu. It allows you to send the image or video to FTP server with the alarm detection.



Alarm sending	
On / Off	Enable/disable the Alarm sending function.
Remote path	Type the path to the destination in FTP server up to 64 characters.
Image file name	Type the file name you want to assign to the images when sending to the FTP server. You can use up to 10 alphanumeric characters, - (hyphen) and _ (underscore) for naming.
Suffix	Select a suffix to add to the file name: **Date & time:** The date & time suffix is added to the Image file name. The date/time suffix consists of lower two-digits of year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits), second (2 digits), and consecutive number (2 digits), thus 14-digit number is added to the file name. **Sequence number:** A consecutive number of 10 digits between 0000000001 and 4294967295 and two fixed digits 00 is added to the Image file name.

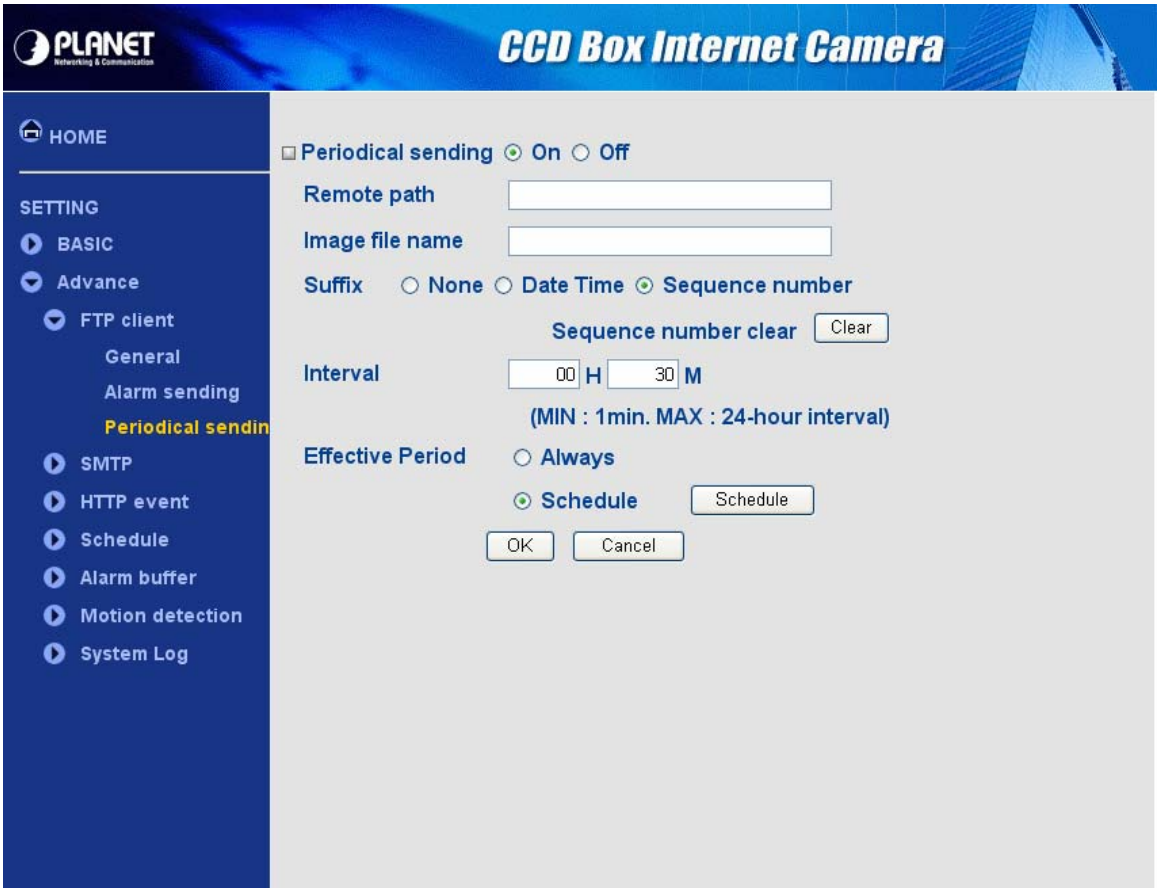
Alarm	
Motion Detection	Click it on for using **Motion Detection** function as a sensor. You can set the motion detection function page.
Use alarm buffer	Select **Use alarm buffer** when you forward the image/audio of before and after the alarm detection (pre-alarm, post-alarm). If you do not select it, only the image of the moment of the alarm detection is forwarded. Click **Alarm buffer** to display the Alarm buffer setting menu.
Effective Period	
Always	The periodical sending is always effective.
Schedule	You can specify the period when the periodical sending is effective in the schedule setting in the other section. Click **Schedule** and the setting menu for the effective period is displayed.

Note:

Motion Detection works only when the Video mode is set to **MPEG4** and the **Cropping** is set to **Off**.

5.1.3 Periodical sending

This page will be displayed after clicking **"Advance > FTP client > Periodical sending"** of the setting menu. It allows you to send the image or video to FTP server with the setting period.



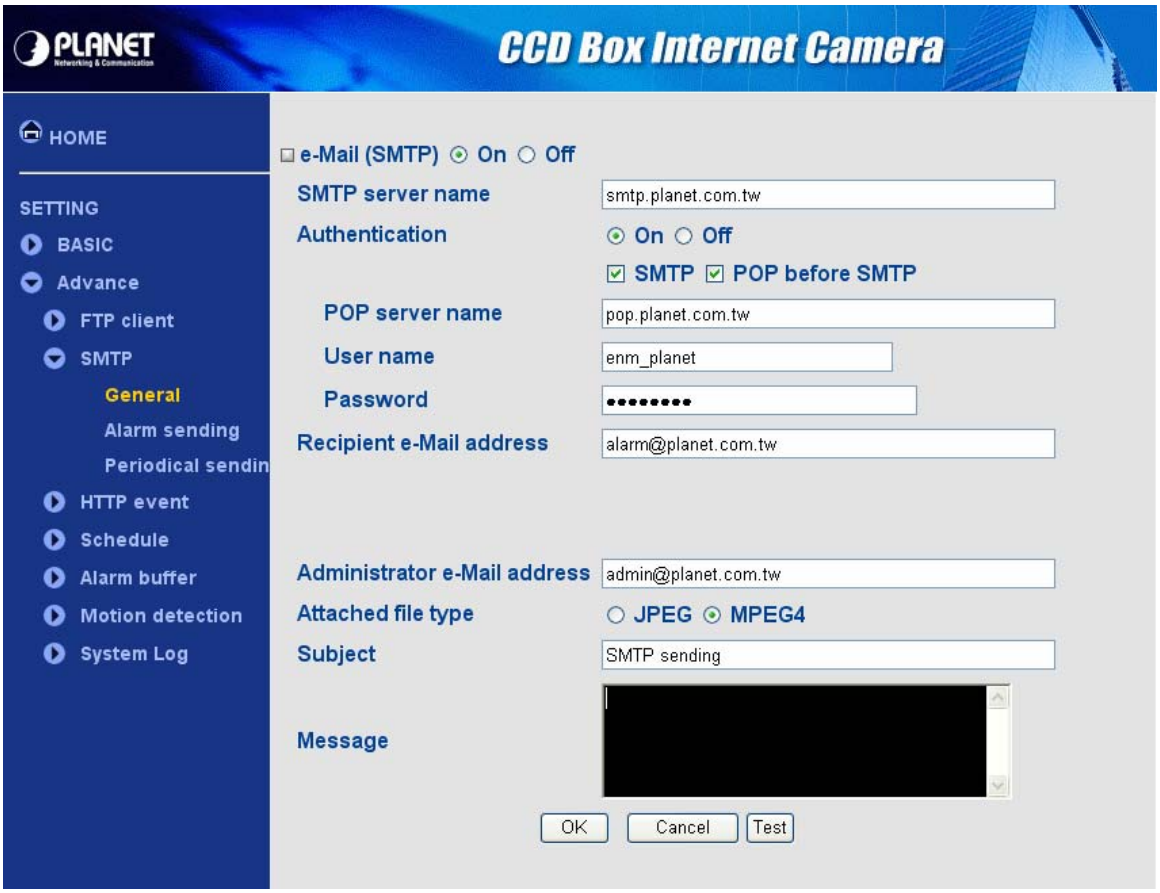
Periodical sending	
On / Off	Enable/disable the Periodical sending function.
Remote path	Type the path to the destination in FTP server up to 64 characters.
Image file name	Type the file name you want to assign to the images when sending to the FTP server. You can use up to 10 alphanumeric characters, - (hyphen) and _ (underscore) for naming.
Suffix	Select a suffix to add to the file name: **None:** The name of the sent file will be the Image file name. **Date & time:** The date & time suffix is added to the Image file name. The date & time suffix consists of lower two-digits of year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits) and second (2 digits), and consecutive number (2 digits), thus 14-digit number is added to the file name.

	Sequence number: A **consecutive** number is added to the Image file name. **Sequence number clear:** Click **Clear** and the suffix of the sequence number returns to 1.
Interval	Set the periodical sending is effective interval. Min value is 1 min and Max value is 24 hour.
Effective Period	
Always	The periodical sending is always effective.
Schedule	You can specify the period when the periodical sending is effective in the schedule setting in the other section. Click **Schedule** and the setting menu for the effective period is displayed.

5.2 SMTP

5.2.1 General

This page will be displayed after clicking **"Advance > SMTP > General"** of the setting menu. It allows you to send the image via SMTP.



e-Mail (SMTP)	
On / Off	Enable/disable the SMTP function.
SMTP server name	Type the SMTP server name up to 64 characters, or the IP address of the SMTP server.
Authentication	Select the authentication required when you send an email. **On:** When authentication is necessary an e-mail is sent, select one of the authentication methods from the followings. **Off:** Select if no authentication is necessary when an email is sent. **SMTP:** Select if SMTP authentication is necessary when an e-mail is sent.

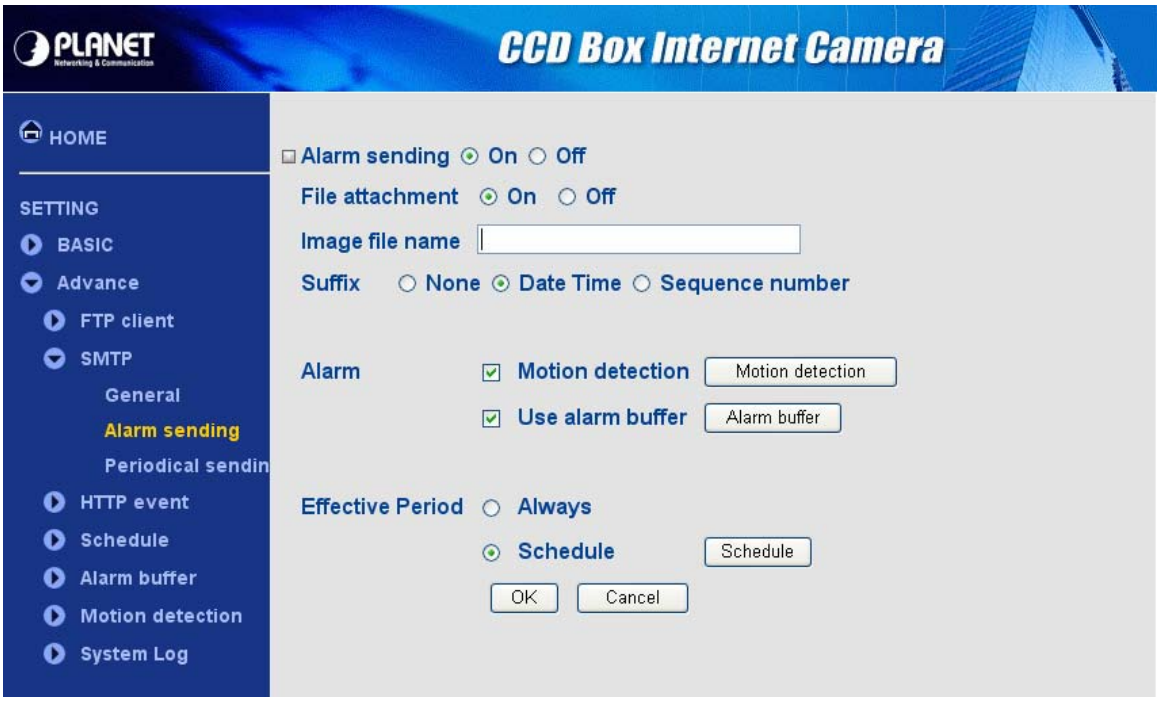
	POP before SMTP: Select if POP before SMTP authentication is necessary when an e-mail is sent. **POP server name:** It is necessary when the **POP before SMTP** is selected in **Authentication**. Type the POP (receiving mail) server name up to 64 characters, or type the IP address of the POP server. This setting is necessary when the SMTP server which sends e-mails performs authentication using the POP user account. **User name, Password:** Type the user name and Password of the user who has the mail account. This setting is necessary when the SMTP server which sends e-mails performs authentication.
Recipient e-mail address	Type the recipient e-Mail address up to 64 characters. You can specify up to three recipient E-mail addresses.
Administrator e-mail address	Type the Administrator e-Mail address up to 64 characters. This address is used for reply mail and sending system messages from the SMTP server.
Subject	Type the subject/title of the e-Mail up to 64 characters. With respect to mail which is sent according to the alarm detection when **Alarm sending** of the alarm tab is set to **On**, the characters standing for the sensor type added to the subject.
Message	Type the text of the E-mail up to 384 characters. (A line break is equivalent to 2 characters.)

Note:

When you set Authentication to **On**, be sure to select either or both **SMTP** or/and **POP before SMTP**.

5.2.2 Alarm sending

This page will be displayed after clicking **"Advance > SMTP > Alarm sending"** of the setting menu. It allows you to send the image via SMTP with the alarm detection.



Alarm sending	
On / Off	Enable/disable the Alarm sending function.
File attachment	Set whether an image file is attached to the mail sent or not. When **On** is selected, the image file made by the settings below is attached. When **Off** is selected, only the message is sent.
Image file name	Type the file name you want to assign to the images when sending to the FTP server. You can use up to 10 alphanumeric characters, - (hyphen) and _ (underscore) for naming.
Suffix	Select a suffix to add to the file name: **None:** No suffix is added. The Image file name is assigned to the image to be sent via an e-Mail. **Date & time:** The date & time suffix is added to the Image file name. The date/time suffix consists of lower two-digits of year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits), second (2 digits), and consecutive number (2 digits), thus 14-digit number is added to the file name. **Sequence number:** A consecutive number of 10 digits between 0000000001 and 4294967295 and two fixed digits 00 is added to the Image file name.

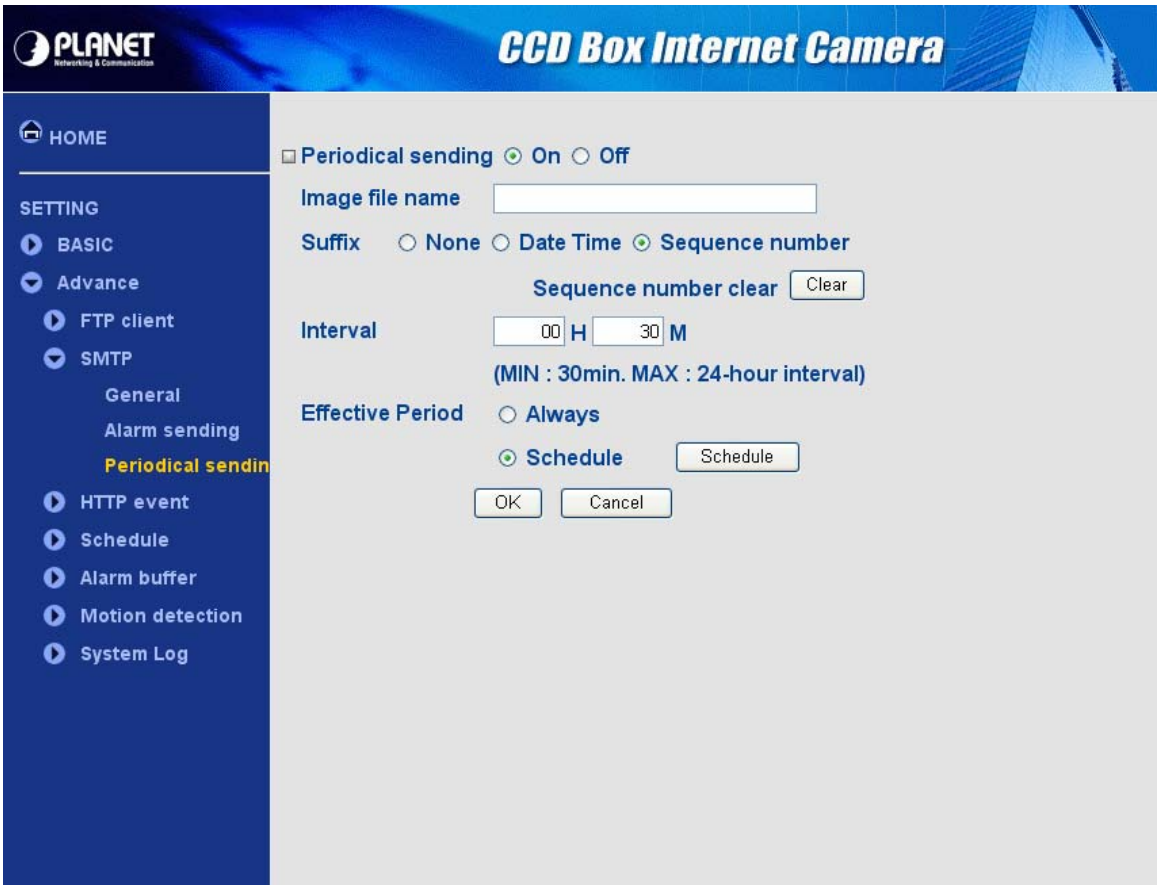
Alarm	
Motion Detection	Click it on for using **Motion Detection** function as a sensor. You can set the motion detection function page.
Use alarm buffer	Select **Use alarm buffer** when you forward the image/audio of before and after the alarm detection (pre-alarm, post-alarm). If you do not select it, only the image of the moment of the alarm detection is forwarded. Click **Alarm buffer** to display the Alarm buffer setting menu.
Effective Period	
Always	The periodical sending is always effective.
Schedule	You can specify the period when the periodical sending is effective in the schedule setting in the other section. Click **Schedule** and the setting menu for the effective period is displayed.

Note:

Motion Detection works only when the Video mode is set to **MPEG4** and the **Cropping** is set to **Off**.

5.2.3 Periodical sending

This page will be displayed after clicking **"Advance > SMTP > Periodical sending"** of the setting menu.



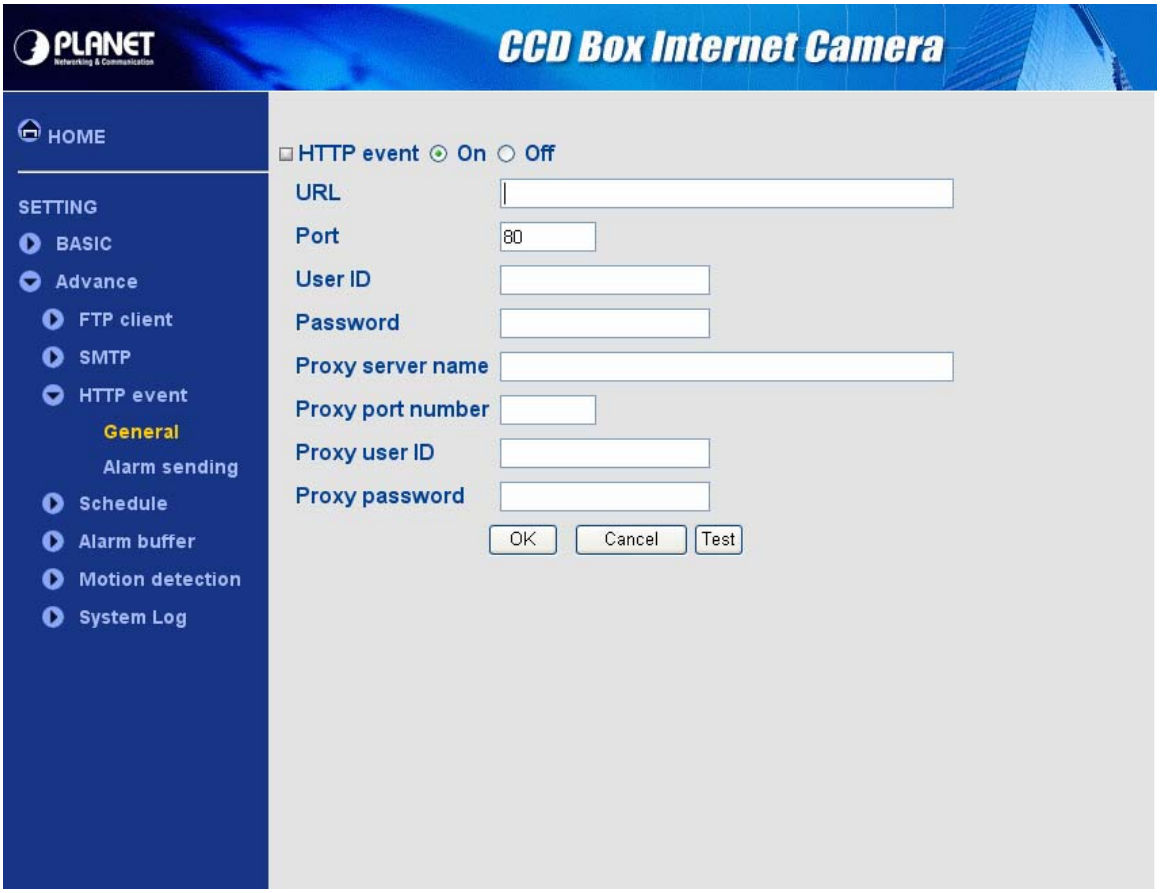
Periodical sending	
On / Off	Enable/disable the Periodical sending function.
Image file name	Type the file name you want to assign to the images when sending to the FTP server. You can use up to 10 alphanumeric characters, - (hyphen) and _ (underscore) for naming.
Suffix	Select a suffix to add to the file name: **None:** The name of the sent file will be the Image file name. **Date & time:** The date & time suffix is added to the Image file name. The date & time suffix consists of lower two-digits of year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits) and second (2 digits), and consecutive number (2 digits), thus 14-digit number is added to the file name. **Sequence number:** A **consecutive** number is added to the Image file name.

	Sequence number clear: Click **Clear** and the suffix of the sequence number returns to 1.
Interval	Set the periodical sending is effective interval. Min value is 1 min and Max value is 24 hour.
Effective Period	
Always	The periodical sending is always effective.
Schedule	You can specify the period when the periodical sending is effective in the schedule setting in the other section. Click **Schedule** and the setting menu for the effective period is displayed.

5.3 HTTP event

5.3.1 General

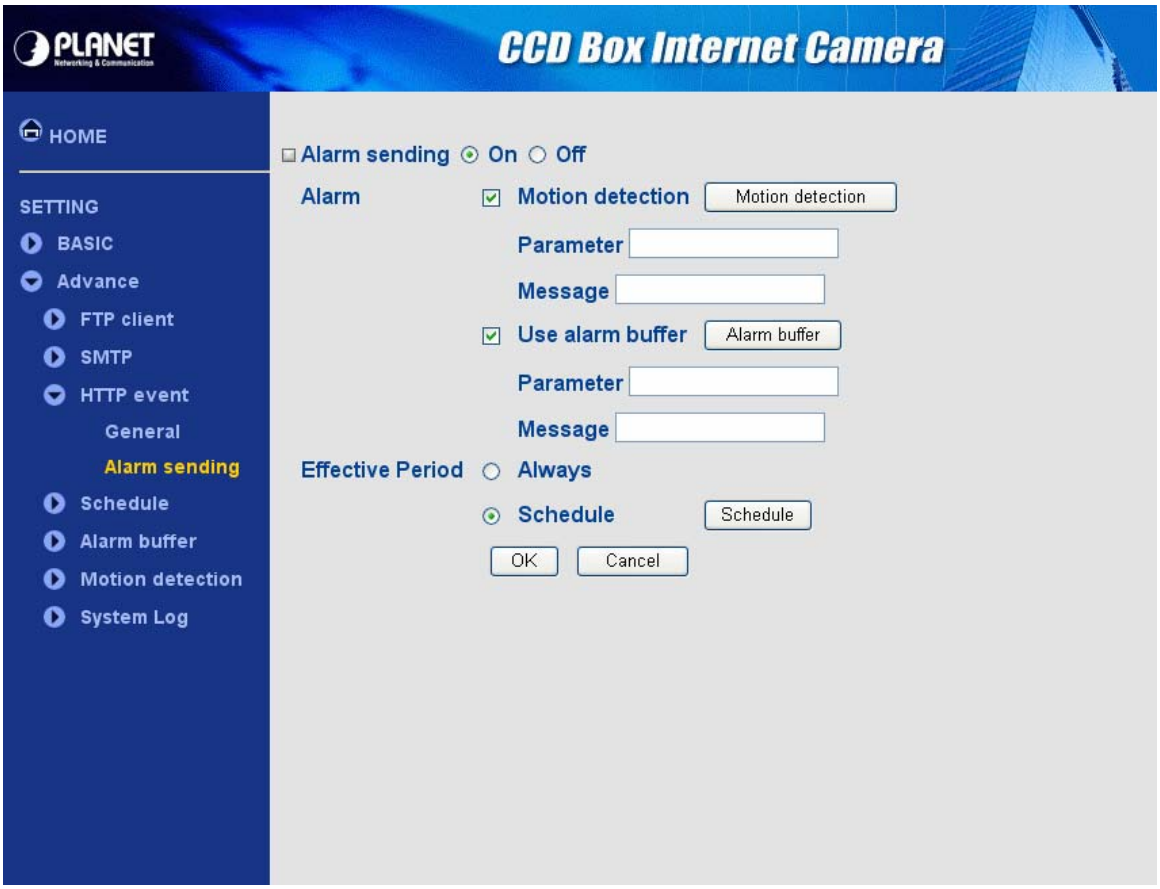
This page will be displayed after clicking **"Advance > HTTP event > General"** of the setting menu. It allows you to send the image or video to HTTP server.



HTTP event	
On / Off	Enable/disable the HTTP event function.
URL	Type the URL of the HTTP server.
Port	Type the port number of HTTP server.
User ID	Type the user name for the HTTP server.
Password	Type the password for the HTTP server.
Proxy server name	Type the proxy server name.
Proxy port number	Type the proxy server port number.
Proxy user ID	Type the user name for the proxy server.
Proxy password	Type the password for the proxy server.
Test Button	You can use this button to test the HTTP connection.

5.3.2 Alarm sending

This page will be displayed after clicking **"Advance > HTTP event > Alarm sending"** of the setting menu. It allows you to send the image or video to HTTP server with the alarm detection.



Alarm sending	
On / Off	Enable/disable the alarm sending function.
Alarm	
Motion detection	Click it on for using **Motion Detection** function as a sensor. You can set the motion detection function page.
Parameter	
Message	
User alarm buffer	Select **Use alarm buffer** when you forward the image/audio of before and after the alarm detection (pre-alarm, post-alarm). If you do not select it, only the image of the moment of the alarm detection is forwarded. Click **Alarm buffer** to display the Alarm buffer setting menu.
Parameter	
Message	

Effective Period	
Always	The periodical sending is always effective.
Schedule	You can specify the period when the periodical sending is effective in the schedule setting in the other section. Click **Schedule** and the setting menu for the effective period is displayed.

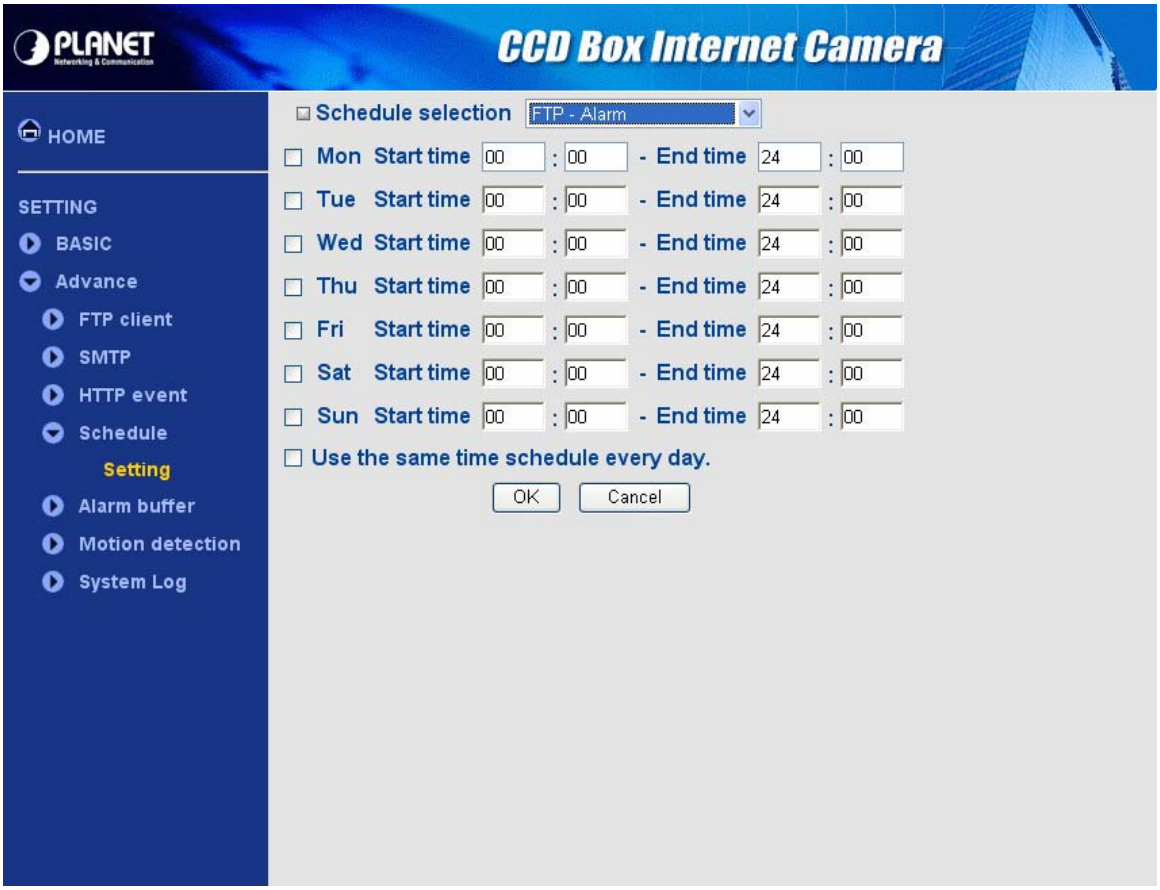
Note:

Motion Detection works only when the Video mode is set to **MPEG4** and the **Cropping** is set to **Off**.

5.4 Schedule

5.4.1 Setting

This page will be displayed after clicking **"Advance > schedule > Setting"** of the setting menu.

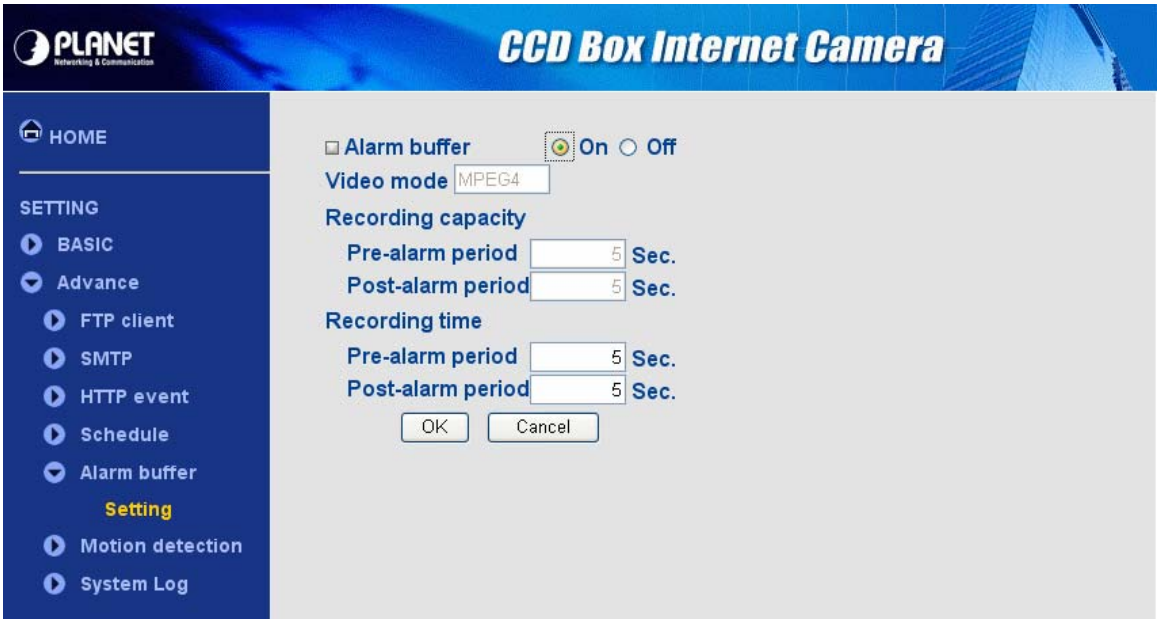


Schedule	
Schedule selection	Select the list box to specify the schedule you want to set. **e-Mail (SMTP) – Alarm**, **e-Mail (SMTP) – Periodical**, **FTP – Alarm**, **FTP – Periodical**, **Image memory – Alarm**, **Image memory – Periodical**, **Alarm output – Alarm** or **Alarm output – Timer.**
Mon to Sun	The time period on the right of the checked day is the effective period of the schedule.
Start time	Fill the desired start time using a 24 hr clock.
End time	Fill the desired end time using a 24 hr clock.
Use the same time schedule every day	When this is checked, the **Start time** and **End time** set to **Mon** (Monday) are applied to all days. In this case, the **Start time** and **End time** of the other days than **Mon** (Monday) cannot be input.

5.5 Alarm buffer

5.5.1 Setting

This page will be displayed after clicking **"Advance > Alarm buffer > Setting"** of the setting menu.



Alarm buffer	
On / Off	Enable/disable the Alarm buffer function.
Video mode	Display the video mode.
Recording Capacity	
Pre-alarm period	Display the maximum recording capacity of image/audio before the alarm detection.
Post-alarm period	Display the maximum recording capacity of image/audio after the alarm detection.
Recording time	
Pre-alarm period	Type it with recording time of the image/audio before the alarm detection.
Post-alarm period	Type it with recording time of the image/audio after the alarm detection.

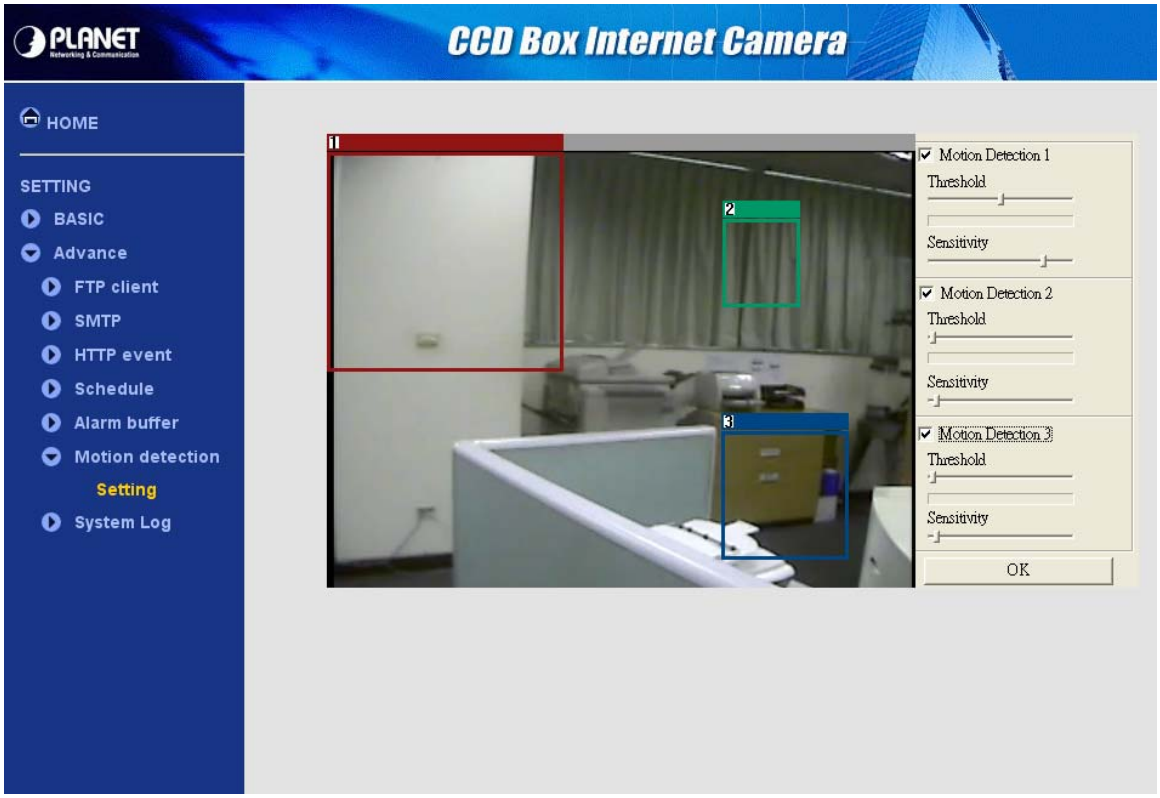
Note:

The value of Recording capacity differs depending on Image size, Bitrate (for MPEG4) and Image quality (for MPEG4 and MJPEG) in the camera setting menu.

5.6 Motion detection

5.6.1 Setting

This page will be displayed after clicking **"Advance > Motion detection > Setting"** of the setting menu. It allows you to set detection areas.



Motion Detection	
Area Screen	You can set the full screen or areas of the video image to be examined.
Threshold	You can use the tool bar to set up-limit value. When detecting zone signals are over setting value, it would carry on assigned work.
Sensitivity	You can use the tool bar to set down-limit value. When detecting zone signals are over setting value, it would carry on assigned work.

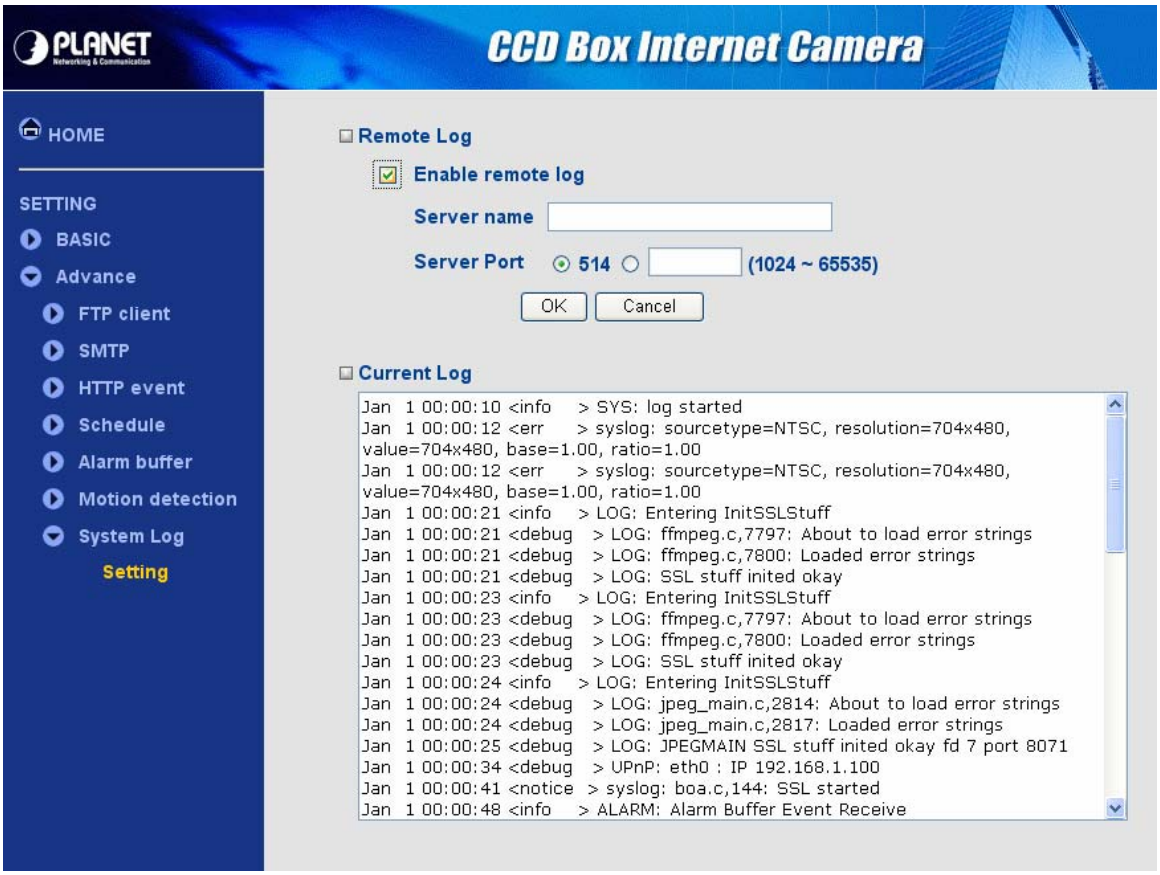
Note:

Be careful! Motion Detection function don't work with Patrol function at same time.

5.7 system Log

5.7.1 Setting

This page will be displayed after clicking **"Advance > System Log > Setting"** of the setting menu. It allows users to review any changes and events.



Remote Log	
Enable remote log	Check the box to enable the remote log function.
Server Name	Enter the address of the remote log server.
Server Port	This sets the port number for remote log. You can connect with default port 514 or enter the port number (1024~65535) in the field provided.
Current Log	
System log window	This is a log of system activity.

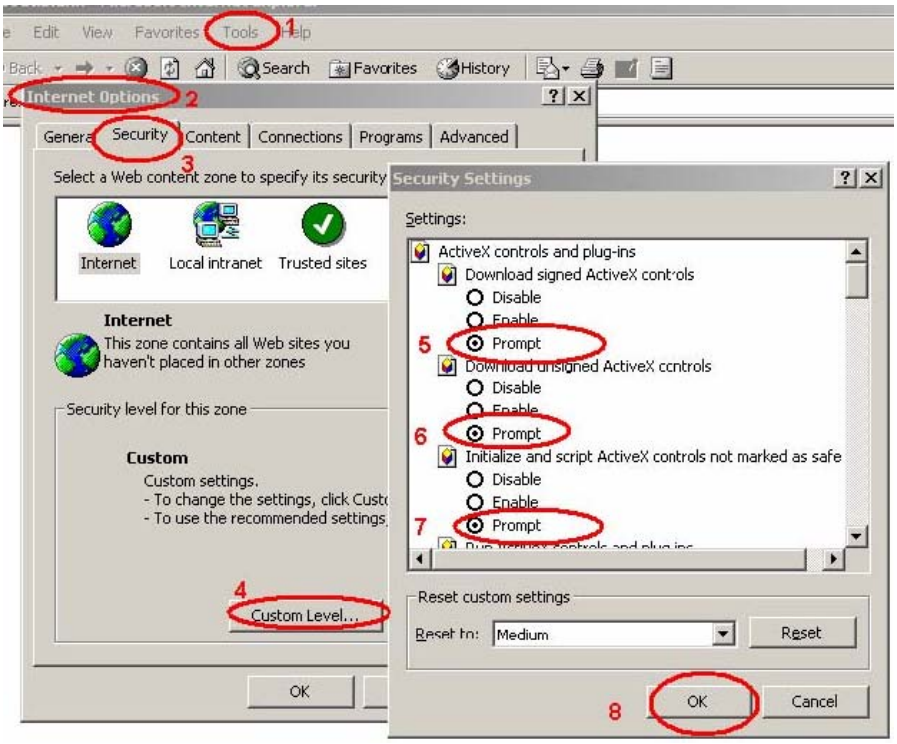
Appendix A --- Enable ActiveX options on your PC

Your Internet Explorer security settings must allow for the web page to work correctly. To use the IP camera, user must setup his IE browser as follows:

From your IE browser ➔ ”Tools” ➔ ”Internet Options…” ➔ ”Security” ➔”Custom Level…”, please setup your “Settings” as follow.

Enable the 3 options as below,

- Download the signed ActiveX controls
- Download the unsigned ActiveX controls
- Initialize and script the ActiveX controls not masked as safe to Prompt



By now, you have finished your entire PC configuration.

Appendix B --- Bandwidth Estimation

The frame rate of video transmitted from the IP camera depends on connection bandwidth between client and server, video resolution, codec type, and quality setting of server. Here is a guideline to help you roughly estimate the bandwidth requirements for your IP camera.

The required bandwidth depends on content of video source. The slow motion video will produce smaller bit rate generally and fast motion will produce higher bit rate vice versa. Actual results generated by the IP camera may be varying.

MPEG4 @ 30fps / kbps

Quality	704*480	352*240	176*120
Excellent	2000	800	200
Detailed	850	250	80
Good	450	150	60
Standard	350	110	50
Medium	250	90	40

Note:

Audio streaming also takes bandwidth around 5 kbps to 64kbps. Most xDSL/Cable modem upload speeds may not even reach up to 128 kbps. Thus, you may not be able to receive any video while streaming audio on a 128 kbps or lower connection. Even though the upload speed is more than 128kbps, for optimal video performance, disabling audio streaming will get better video performance.

Appendix C --- Mobile phone viewing

To use IP cameras via mobile phones, please make sure your RTSP is set to “ON” (Default is “ON”). To change the settings of IP cameras, please refer to the “General of Camera Settings” for details.

3G Mobile Phone viewing

For 3G mobile phone viewing, type “**rtsp://<IP>:<PORT>/video.3gp**” into your 3G web browser. <IP> is the IP address of your IP camera, <PORT> is the RTSP port of your IP camera (Default value is 8554).

Example: rtsp://100.10.10.1:8554/video.3gp

Note:
You can also use RTSP clients (RealPlayer, MPlayer, Windows Media Player, Quicktime…etc.) to view RTSP streaming, just type in “**rtsp://<IP>:<PORT>/video.3gp**” as the Player’s URL.

2.5G Mobile Phone viewing

For 2.5G mobile phone viewing, type “**<IP>/mobile.wml**” into your 2.5G web browser. <IP> is the IP address of your IP camera.