VPON

Notice

The information in this manual was current when published. The manufacturer reserves the right to revise and improve its products.
All specifications are therefore subject to change without notice.

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Other brand and product names referred to in this manual are trademarks or registered trademarks of their respective holders.
Trademarked names are used throughout this manual. Rather than place a symbol at each occurrence, trademarked names are designated with initial capitalization.
Inclusion or exclusion is not a judgment on the validity or legal status of the term.

Warning

To reduce risk of electric shock, do not remove cover. No user service-able parts inside. Refer servicing to qualified service personnel.
Do not expose this appliance to rain or moisture.
Do not install this product in hazardous areas where highly combustible or explosive products are stored or used.
The lightning flash/arrowhead symbol, within and equilateral triangle, alerts the user to the presence of a shock hazard within the product' s enclosure.

VPON

CE Warning

This is a Class A product, in a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

FCC Warning

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Important information

Before proceeding, please read and observe all instructions and warnings contained in this manual. Retain this manual with the original bill of sale for future reference and, if necessary, warranty service.
When unpacking your VPON unit, check for missing or damaged items. If any item is missing, or if damage is evident, **DO NOT INSTALL OR OPERATE THIS PRODUCT.** Contact your dealer or us for assistance.

Table of Content

Chapter 1: Introduction

VP-300 is a high performance camera server built-in as a mini web server with real-time video capturing capability. The video is grabbed and compressed for faster transmission to your PC through 100Mbps Ethernet.

It supports full motion live video footage with its corresponding audio through the Internet, Intranet connection. Up to four video cameras can be hooked up to this 19" rack mountable unit to deliver real-time full-motion Audio/Video transmission to anywhere in the world through a desktop PC, workstation, or laptop. All that is needed is an Internet browser and our proprietary plug-ins software. This system also allows users to record digital video footage continuously onto their computer hard drive. Attached video cameras can be remotely controlled to swivel and zoom in and out, and the unit can be triggered to initiate certain events through our specialized call-back feature by utilizing another Web-Based software NetRecorder. The VP-300 is a completely Plug & Play device to getting up and running as soon as possible without the need for ongoing maintenance or custom hardware/software configurations.
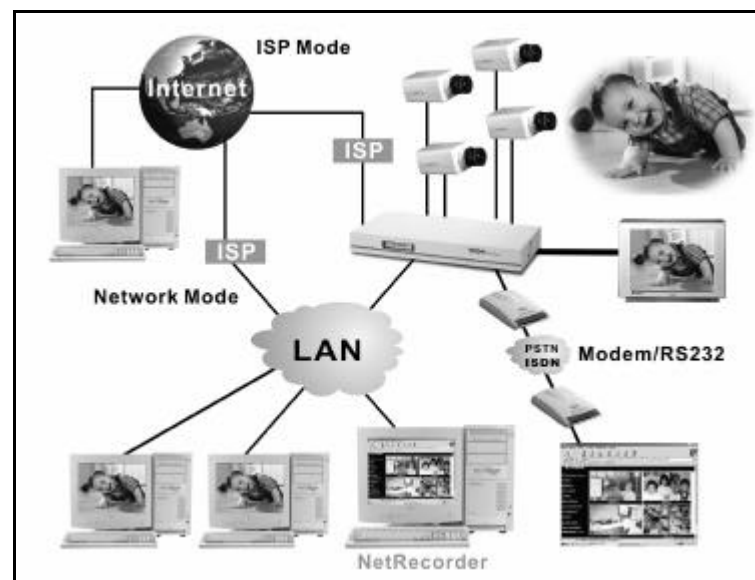
A sample configuration is shown below.

Figure1.1.1   Simple VP-300 Network Configuration

The installation is easy: All you have to do is to plug the power and assign VP-300 an IP address for Internet connection. Then, you can view the video through your browser, Internet Explorer or Navigator, at any time, anywhere in the world. Quick installation procedure is described in section 1.3.

It is perfect for factory/office monitoring, ATM surveillance, children care, security system, tourism, sales presentation and more...

VP-300 is the new era of the network video transmission. It makes you see whatever you want easily!

1.1 Main Features

- Designed for an optimum audio and video surveillance.
- View 30fps full motion live video in remote sites from your PC
- Transmit audio in both directions by using sound card inside PC
- Control a camera on another continent remotely over the web
- Allow multiple users could view real-time events anytime and from anywhere in the world, over the Internet
- Plug & Play without requiring custom hardware, software or ongoing maintenance
- Built-in Web Server, the video is grabbed, compressed and transmitted to your PC through Internet, Intranet or telephone line.
- Easy system configuration via HTTP Home Page or RS-232 port
- Use a standard Web Browser as your client application
- Built-in General purpose I/O for remote control
- Video adjustable for hue, contrast, saturation and brightness
- Support upload HTML file to FLASH ROM for home page customization
- Support TV-OUT function
- Industrial 19"" 1U Rack Mount or desktop
- Support Motion Detection

1.2 System Requirements

- Composite CCD camera, V8 or camcorder… (NTSC or PAL standard)
- The equipment for connecting to network:
  1. Network mode: RJ-45 Ethernet network port connected to Internet and a static Internet IP
  2. ISP mode: Modem or ISDN TA and ISP account

  3. Modem/RS-232 Mode: RS-232 Port and a serial cable connected to host

  PC.

 PC for the configuration / browsing
 1. Pentium336 PC or higher, desktop or notebook
 2. 64MRAM or higher
 3. PCI VGA Card
 4. Microsoft Windows 95/98
 5. Internet Browser (such as Microsoft Internet Explorer 4.0 or higher)

1.3 Quick Installation Procedure

Follow the instructions included in this section to install VP-300 into your networking environment. Each phase of the documented installation procedure is summarized below:

• Connecting VP-300 Camera Server

• Configuring the Running Mode of VP-300 Camera Server

Connecting VP-300 Camera Server

To get your VP-300 VPON Camera Server up and running on an Ethernet network, follow these instructions:

1. Connect the video camera(s), the microphone, and the speaker to VP-300 Camera Server.

a. Connect the video output of your camera(s) to VP-300 Camera Server port(s) using standard 75 ohm coaxial video cable, terminated with a BNC-connector .

b. Connect the microphone to **Line In port** and connect the speaker to **Speaker port** of VP-300 Camera Server.

2. Connect the power supply to VP-300 camera server.

Now you will see LCD be lighted. After hearing one short beep sound, VP-300 will start to boot. It takes around 30 seconds. During this period, LCD will keep

lighting. When you hear a long beep sound, and "**READY**" LCD message is

displayed, it means VP-300 is ready.

Configuring the Running Mode of VP-300 Camera Server

Now, VP-300 has completed the startup procedure and is ready. Before you can access it, you have to configure VP-300 according to the running mode of VP-300. The default Mode of VP-300 is under Network Mode. **Reference Appendix B. to change running mode and configure VP-300 under Network Mode, ISP Mode, or Modem/RS-232 Mode accordingly**.

- End of this chapter -

Chapter 2: Getting Start

2.1 General Description

VP-300 is a plug and play camera server. It is a stand-alone device and ready to work after power on. The minimum PC system requirement is described in section 1.2.

As VP-300 can transmit video/audio data through Internet, Intranet, PSTN/ISDN, there are three running modes of VP-300: Network Mode, ISP Mode and Modem/RS232 Mode. These three modes cannot run at the same time.

Under Network Mode, VP-300 connects to a local area network or a network device by an Ethernet cable via the RJ-45 port of VP-300.
This is also the default running mode of VP-300

Under ISP Mode, VP-300 will dial and login to an assigned ISP account using a modem connected to COM1 port of VP-300.

Under Modem/RS232 Mode, user runs an application, OYO Viewer, and connects to VP-300 using a modem. This is a point-to-point connection.

To get VP-300 up and running, you have to set the IP of VP-300 under Network Mode or set ISP configuration under ISP Mode, an RS-232 serial cable and a configuration utility WCOMW are required, you can find them in the package of VP-300. Please refer to Appendix B for a step-by-step setup procedure.

> **Please refer to Appendix B for a step-by-step setup procedure to change running mode and configure VP-300 accordingly.**

To get the best performance, we suggest you reading the following sections to install VP-300, and follow the correct way as shown in Figure 2.0 to use VP-300.

Figure 2.0
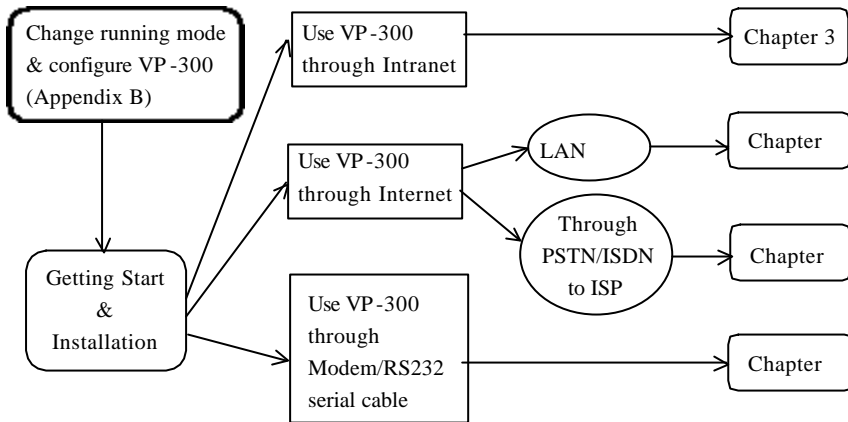
2.2 Use VP-300 through <u>Intranet</u>

First, make sure that you can assign a <u>private IP</u> to VP-300. Then, read Chapter 3 for a step-by-step setup procedure for installation and usage of VP-300 and read Appendix B for changing running mode and configuration. (Figure 2.1)

Figure 2.1
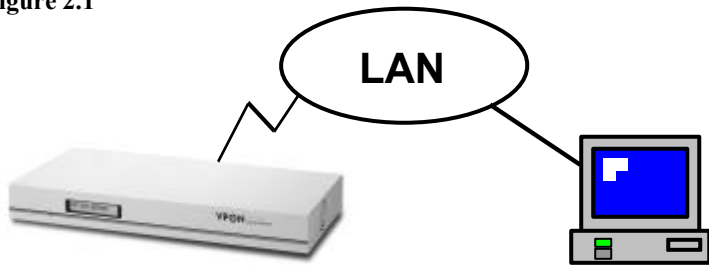
VP-300 (Private IP)

2.3 Use VP-300 through <u>Internet</u>

1. If your environment is LAN ready and it is connected to Internet directly (Figure 2.3a). Assign a static public Internet IP to VP-300. Then read Chapter 3 for a step-by-step setup procedure for the usage of VP-300 and read Appendix B for changing running mode and configuration.

2. If you want to connect VP-300 directly to Internet through PSTN/ISDN to ISP (Internet Service Provider) (Figure 2.3b). A public static IP is required. If the IP is dynamic, you have to set parameters for registry server.

Refer to Chapter 4 and Appendix B for a step-by-step setup procedure for the installation and Chapter 3 for the usage of VP-300 under ISP Mode.

Figure 2.3a
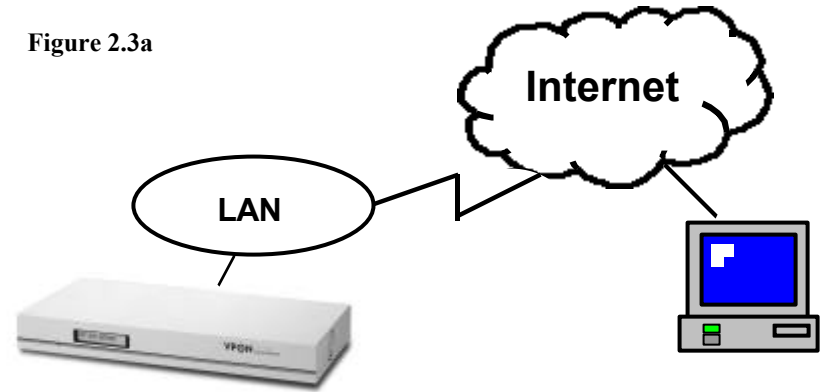
(Static Internet IP)

Figure 2.3b

Modem / ISDN TA

Registry Server

2.4 Use VP-300 through PSTN

If there is no Internet connection, VP-300 can transmit video through PSTN. Under this situation, you can still monitor the remote site. Please refer to Appendix B for installation under Modem/RS232 Mode and Chapter 5 for the usage of VP-300. (Figure 2.4)

Figure 2.4

2.5 Use VP-300 through RS-232 Serial Port

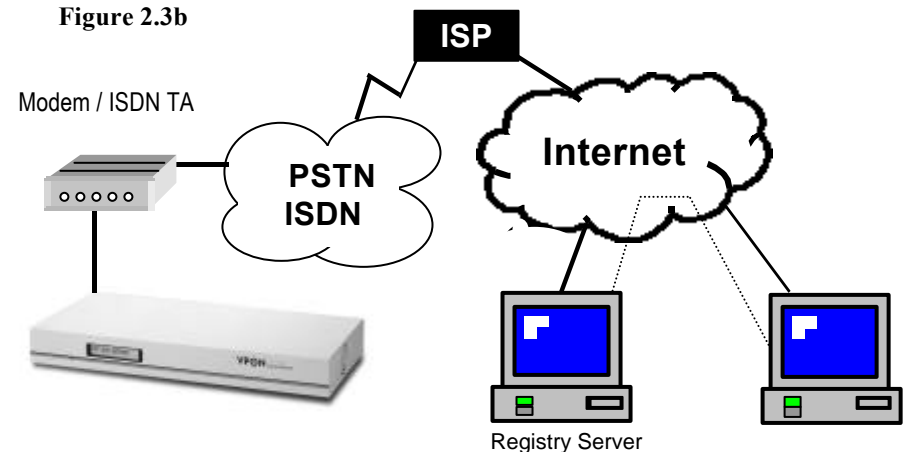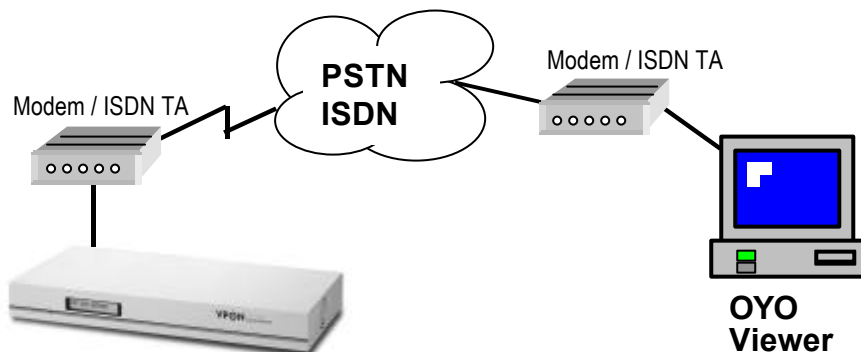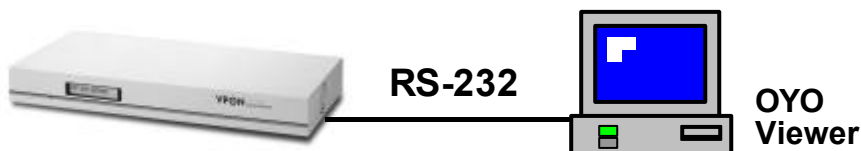If there is no Internet connection, VP-300 can transmit video through RS-232 serial port directly. Under this situation, you can still monitor the remote site in usage of OYO Viewer. Please refer to Appendix B for installation under Modem/RS232 Mode and Chapter 5 for the usage of VP-300.

Figure 2.5

2.6 Physical Description

Read the following information to be familiar with VP-300, making particular note of where the connectors and indicators are located. This information provides a useful reference during the installation of the product into your networking environment.

The Rear Panel
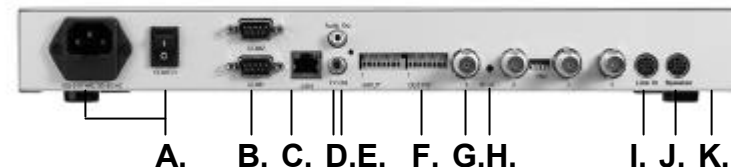
A. Power supply connector and Power switch
The power supply power switch is in the left side on the rear panel of the unit. Press "**I**" to turn on the unit, press "**O**" to shut down the unit

B. RS-232 serial Port
Two 9-pin D-sub connectors provide RS-232 serial connection. RS-232 serial ports are next to the power switch. COM1 and COM2 Ports are for configuration or for modem/ISDN TA.

C. Network connector
Network connector is located between RS-232 serial Ports and Audio-output connector. RJ-45 connector for 100base T Fast Ethernet networks.

D. Audio Output connector
Audio-output connector provides audio data output to the speaker.

E. TV Output connector
TV-output connector is located under the Audio-output connector for composite video output to TV set.

F. GPI/O block
GPI/O block is located between video-input connector and TV-out connector. General purpose input and output block provides 4 Remote control in/out points, Photo-couple Digital Input, and 24V/200mA Relay Output.

G. Reset button

The Reset button is located between the first and the second video input connectors. It provides the reset function to default values.

H. Video input

VP-300 allows a single video source to be connected via the Video input connector; VP-300 accommodates up to 4 separate video sources.

I. Line In connector

Line In connector is next to Speaker connector, it provides the function to input audio data via a microphone.

J. Speaker connector

Speaker connector is located in the right side on the rear panel of the unit. It provides audio output via speaker.

K. Serial Number

The serial number is in the bottom of unit.

2.7 Make the Physical Connection

Before you can make the VP-300 to work, you shall make the following physical connection.

- **Power Supply** (there is a power cord comes with VP-300)
  - 90-264VAC,47-63HZ

- **Video Input** (there are 4 BNC to RCA connectors come with VP-300)
  - Support NTSC/PAL composite video
  - 4 BNC video input connectors
  - Built-in 75 ohm terminator switch

- **TV/Monitor output**
  - Support NTSC/PAL video output
  - One RCA composite Video output
  - One RCA for Audio output

- **Remote Control Input/Output** (The plug wire shall longer than 12mm)
  - 4 Remote control in/out points
  - Photo-couple Digital Input
  - 24V/200mA Relay Output

- **Audio Input/Output** (There are 1 one-miniDIN-to-4-RCA cable for audio input and one-miniDIN-to-4-PhoneJack cable for audio output come with VP-300)
  - 4 Audio input/out
  - Speaker output
  - Line-In Input signal

- **Others**
  - One RS-232 serial port
  - One RS-232/422/485 serial port
  - One 100BaseT Ethernet port
  - Front panel 16 digits LCD display

2.8 Power On VP-300

Before power on VP-300, you should check the followings:

2.8.1 Apply correct AC voltage to the external power supply. The AC power input range is 100-240 volts, 50-60 Hz.

2.8.2 Connect the appropriate video inputs to the unit. Depends on the composite video standard used at your local area, VP-300 automatically detects NTSC/PAL video when power up. If you did not apply video signals when power up, it will set to default value which is NTSC standard. That will cause VP-300 failed to import video.

2.8.3 VP-300 is set to Network Mode after power up by default. If you want to change the running mode of your VP-300, read Appendix B. and follow a step-by-step setup procedure for the installation to change to ISP mode or Modem/RS-232 running mode.

2.8.4 After power up successfully and get correct messages on LCD, you can refer to Chapter 3, 4 and 5 for further operations.

- End of this chapter -

Chapter 3: Use VP-300 Under Network Mode

3.1 First Time Step-by-step Setup

The default settings of VP-300 at Network Mode are as following.
For first time startup, VP-300 is set to default value when it is delivered from factory. The default settings of VP-300 are as follows.

Running Mode	Network Mode
User's Name	WEBMONITOR
User's Password	OYO
Administrator's Name	WEBMONITOR
Administrator's Password	OYO
Custom Modem Init String (COM1)	Nil
COM1 Baud Rate (bps):	115200
COM2 Baud Rate (bps):	9600
COM2 Hardware Flow Control	Enable
Video Encoding Algorithm	H.263
Set Video Resolution	320x240
Camera Control Device	Nil
Enable Video Zoom In/Out	Enable
Camera source	1　(1,2,3,4)
Brightness	50
Contrast	70
Saturation	95
Hue	50
Quality	70
Gain Control	Un-checked
Gain	50
Automatic	Un-checked
Mirror Horizontally	Unchecked
Mirror Vertically	Unchecked
MAX connections for this camera	0

| MAX bandwidth for this camera (Bytes/sec)	0
MAX bandwidth of each connection for this camera (Bytes/sec)	0
Audio Source	1
Microphone Gain	50
Speaker Volume	50
Microphone Control Timeout	0
Speaker Control Timeout	60
IP address	192.168.10.10
Gateway IP address	0.0.0.0
Sub net mask	255.255.255.0
Motion Detection	Disable
TV Output	Enable

Please follow the instructions step by step for quick getting start.

1. Plug one end of power cord to "**AC Inlet**" on back panel of VP-300 and the other end to an AC wall outlet (100V-240V)
2. Connect video sources (Camera) to "**VIDEO INPUT**" by video cable. You can connect up to 4 video sources. There are 4 BNC to RCA connector come with VP-300 for your convenience.

> **Note:** VP-300 can auto-sense the presence and the standard of video sources (NTSC or PAL). But be sure that all video sources are the same standard.

3. Make sure the network cable (RJ45) connect to the socket marked "**LAN**" on the back panel of VP-300 and the other end to the hub of this local area network. (Figure 3.1.1)

Figure 3.1.1

Ethernet (IP address: 192.168.10.xxx)　　　**Ethernet (IP address: 192.168.10.10)**
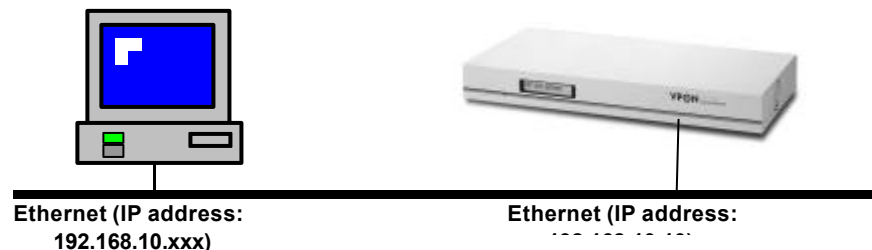
4. Make sure that VP-300 is set at Network Mode. For first time start up please refer to section **2.8.3** of Power On VP-300 at Chapter 2.

5. Power on cameras first then power on VP-300. You will see LCD be lighted. After hearing one short beep sound, VP-300 will start to boot. It takes around one minute. During this period, LCD will keep lighting. You may see the "**INITIALIZING…**" and "**WEB/FTPSERVER OK**" message on the LCD. When you hear a long beep sound, and "**READY**" message is displayed, it means the VP-300 is ready.

6. When VP-300 is ready. The backlight of LCD will be OFF. You may see the following messages on the LCD.
  ● **"LAN/H263/NTSC"**
    STATUS: Display the current information of running mode / codec algorithm / video standard

  ● **"FW3.04/HW1.0+DB"**
    STATUS: Display the version and information of firmware and hardware, +DB means daughter board is installed.

  ● **"REQUEST: 4"**
    STATUS: Display the total HTTP request being serviced.

  ● **"FPS: 30"**
    STATUS: Display the current total video frame rate.

  ● **"MIC: 3   SPK: 0"**
    STATUS: Display the current occupied microphone and speaker.

7. Now, VP-300 has completed the startup procedure and is ready. Before you can access it, you have to configure VP-300 according to the running mode of VP-300. **Reference Appendix B. to change running mode and configure VP-300 under Network Mode or ISP Mode accordingly**.

Please see the following section to browse and view the live video.

3.2   Browse and View Live Video

The default running mode of VP-300 is Network Mode and the default IP address of VP-300 is 192.168.10.10. If you need to use VP-300 under Network mode, your VP-300 and PC must be in the same LAN. There are two ways to solve this problem. The first one is to change the IP address of your VP-300 and the second one is to change the IP address of the host PC. **If you want to follow the first method, please reference Appendix B to change the IP address and configure VP-300 under Network Mode accordingly. Then jump to Step 5 directly.**

To use the second method, follow Step 1 to Step 4 preparing to connect to VP-300.
1. To browse VP-300 under the default Network Mode, go to "**Network**" on "Control Panel" of the host PC.

Figure 3.2.1
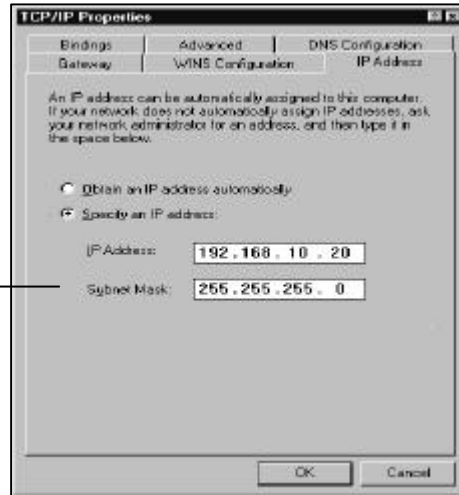

2. Choose "TCP/IP" and go to "Properties"

Figure 3.2.2

3. Change IP address of the host PC to: **192.168.10.20**
4. Change Subnet Mask of the host PC to:

Figure 3.2.3

255.255.255.0

> **Note:** Remember the original IP address and Subnet Mask. When the configuration of VP-300 is finished, you need to reset the host PC to these original values.

And reboot the host PC.

5. Run a web browser and connect to http://192.168.10.10 (If you have changed the IP address of VP-300, it shall be the new IP address). When it is connected, you will see a login dialog-box. Enter the default Administrator's name **"webmonitor"** and Administrator's password **"oyo"**. Click **"OK"** button.
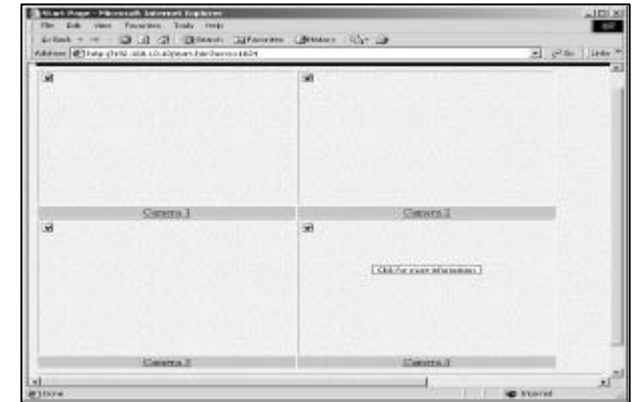
Figure 3.2.4

Then you will see the home page of VP-300.

6. In case you didn't install Plug-ins program that comes with a diskette in VP-300 package. You will see the screen as follows
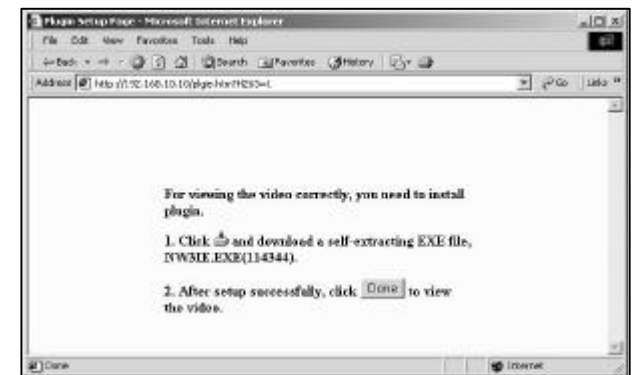
Figure 3.2.5

7. Click on anyone of four video window areas. You will see a dialog popup.

Figure 3.2.6

8. Click 'Yes' to download plug-in program from VP-300 then you will see the following screen.
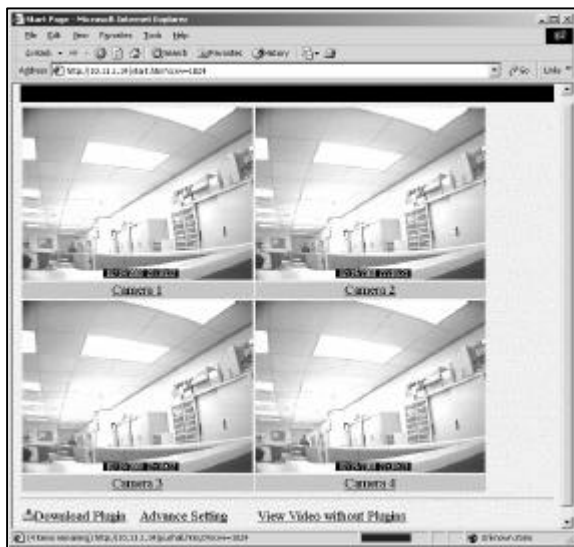
Figure 3.2.7

9. Click ⬇ to start downloading plug-in and install it. After finishing the jobs, you shall see the following screen.
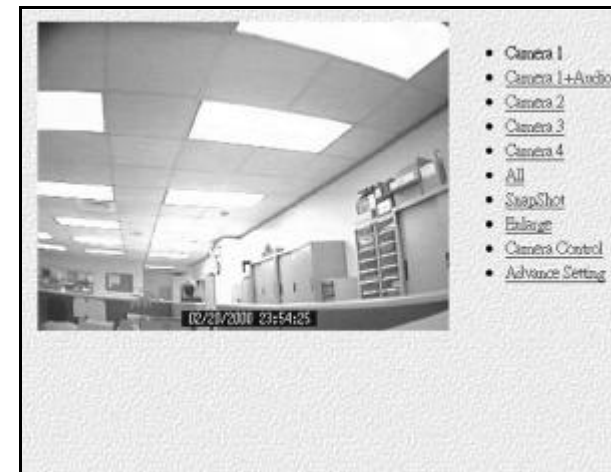
Figure 3.2.8

10. Instead of installing plug-in program in your PC. You can click **"View Video Without Plugins"** on the left side of home page, and you will view the live video by using Java applet. Liveview Java applet utilize JPEG image snapshot from VP-300.

Figure 3.2.9

11. Click 'Camera 1' link to switch to the signal camera view screen

Figure 3.2.10

12. On the right side of the page, you can see some links

To view camera 1 ⟶
To view camera 1 with audio I/O ⟶
To view camera 2 ⟶
To view camera 3 ⟶
To view camera 4 ⟶
To view all cameras ⟶
Take a image snapshot from this camera ⟶
Enlarge the video window ⟶
Do the Advance Setting ⟶

- Camera 1
- Camera 1+Audio
- Camera 2
- Camera 3
- Camera 4
- All
- SnapShot
- Enlarge
- Advance Setting

13. Please see the following sections for advance configuration.

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3.3 System Configuration For First-time User

1. Run a web browser and connect to http://192.168.10.10. (If you have changed the IP address of VP-300, it shall be the new IP address). When it is connected, you will see a login homepage. Enter the default Administrator's name **"webmonitor"** and Administrator's password **"oyo"**. Click the **"OK"** button.

Figure 3.3.1
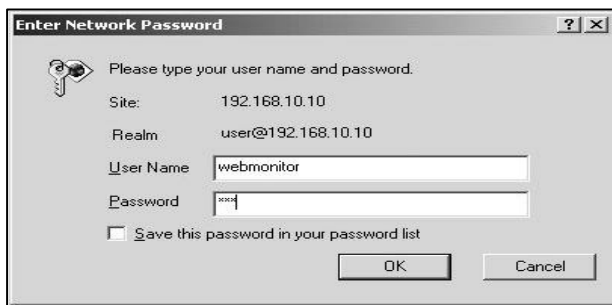
2. Then you will see the home page of VP-300. (You can also see live video when cameras are connected to VP-300.)

Figure 3.3.2

VPON
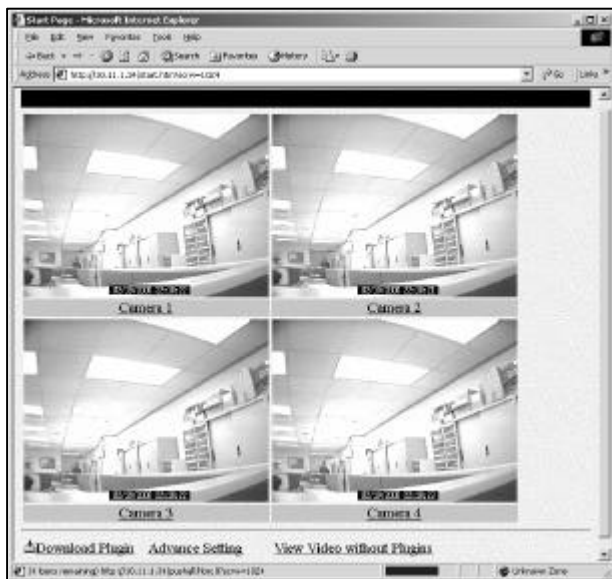
3. Scroll down the above page. On the bottom of this page, Click "**Advance Setting**" then you will see a brand new web page. On the left side of this web page, choose **"System Configuration"** to do the configuration.

Figure 3.3.3

System Configuration
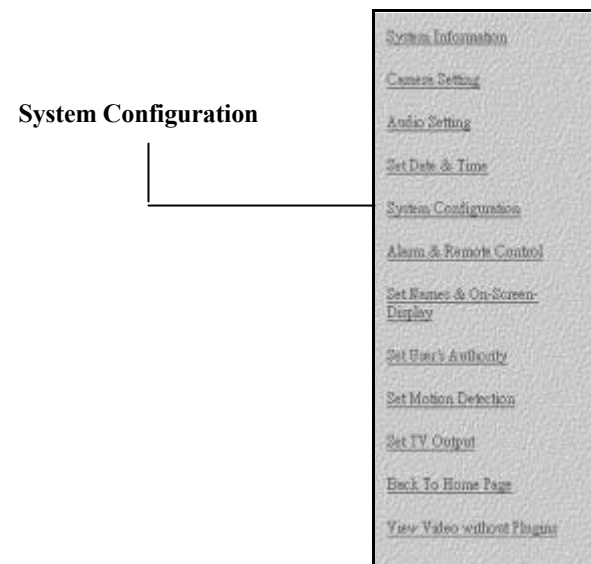
4. Input IP Address, Gateway IP Address and Subnet Mask in **TCP/IP Setting** ' segment.

Figure 3.3.4

5. You may change account name and the password. In "**Account Setting"** segment, input User Name, User Password, Administrator's Name and Administrator's Password.

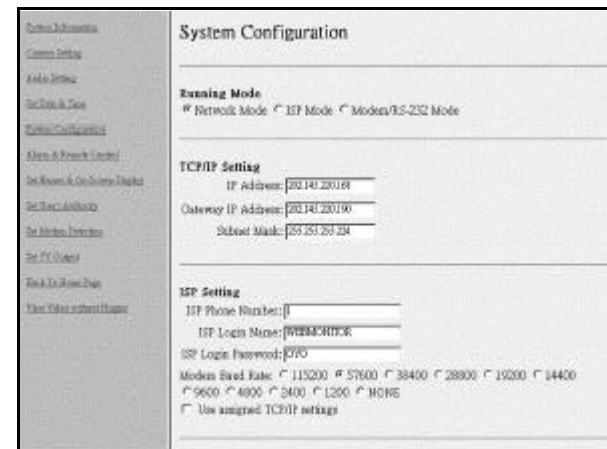**Note1:** VP-300 provides two layers protection. You can limit users with User Name and Password to login VP-300. To set the configuration of VP-300, you must have Administrator's Name and Administrator's Password.

Note2: Keep the password carefully and remember it. Once you forget the password, you can reset VP-300. The user name and password will be reset to the default values. It also means you have to set the configuration again.

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6. Choose **"Video Compression Algorithm"**. Users may choose between JPEG, M-JPEG and H.263. The different compressions mean different video quality and transfer speed.


Note1: If the compression algorithm is M-JPEG or H.263, you need a plug-in program when you connect to VP-300. You can get this plug-in program from the Setup Disk or from our web site

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Compression Format	Video Quality	Data Stream
JPEG	Good	High
M-JPEG	Good	High (Less than JPEG)
H.263	Common	Low

7. Click the **"Done"** button and go back to the home page of VP-300. VP-300 will save these parameters and reboot. During the period of rebooting, VP-300 will not transmit any video.

8. Remember to change the IP address of your PC to make sure that VP-300 and your PC are on the same network.

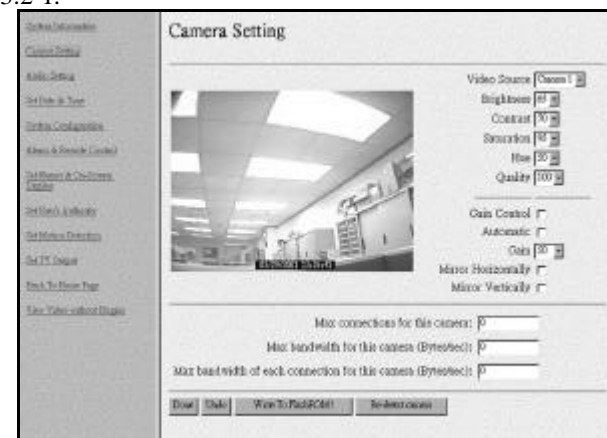### 3.3.1   System Information

Figure 3.3.1-1
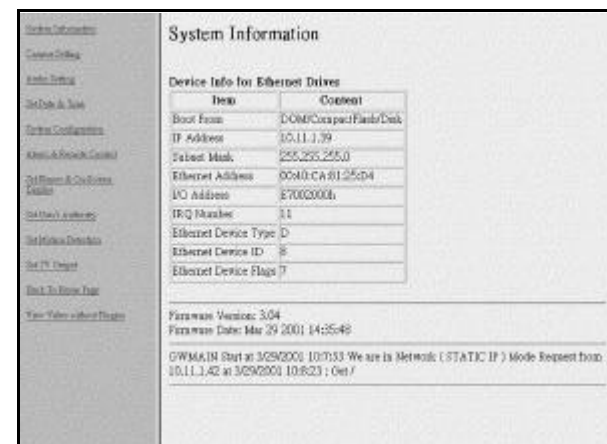
Just show some information inside VP-300.

3.3.2   Camera Setting

1. On the left side of home page, click "**Camera Setting"** and you will have a page as Figure 3.3.2-1.

Figure 3.3.2-1

2. Choose a certain camera to set the video via camera setting interface.

Note: 1. You can choose a camera to set the video. After the video is set, the

parameters are applied to the certain camera. The setting values for the

other video sources won't be affected.

2. Choose one global brightness value carefully among cameras attached,

then set Gain values for each camera individually.

3. You can set Brightness, Contrast, Saturation, Hue and Quality.
- Brightness: Higher value, brighter of the video
- Contrast: Higher value, stronger contrast
- Saturation: Higher value, more color saturation
- Hue: Higher value, higher hue
- Quality: Higher value, better video quality

Note: With a higher value of quality, it also means a heavier data transmission.

4. Further Camera setting
- Video Source: Select the Video Source to do the setting. The live video from camera will appear on the left side.
- Brightness, Contrast, Saturation, Hue and Quality: You can set Brightness, Contrast, Saturation, Hue and Quality here. **These parameters are applied to all video sources. To adjust brightness of each camera, use "Gain Control" as described in the following.**
- Gain Control: Check the gain control option will cause VP-300 to do the GAIN effective in the selected video source.
- Gain: Select the value of GAIN. The GAIN ranged from 0 to 100.
- Automatic: Check the automatic option will cause VP-300 to keep the GAIN effective as specified no matter day or night, light or dark. **To check automatic option will force VP-300 to check Gain Control option automatically.**
- Mirror Horizontally: Check this option to mirror the selected video source left and right.
- Mirror Vertically: Check this option to rotate the selected video source up and down.

- Max connections for this camera: Limit the maximum connections allowed to access this camera.
- Max bandwidth for this camera (Bytes/sec): Limit the maximum bandwidth in Bytes/second allocated to access this camera.
- Max bandwidth of each connection for this camera (Bytes/sec): Limit the maximum bandwidth allocated to each connection of this camera.

Click the **"Done"** button to make the new settings take effect.

Note: VP-300 will not save this setting if you didn't click "Write To FlashROM!".

3.3.3 Audio Setting

1. On the left side of home page, click **"Audio Setting"** and you will have prompted out Figure 3.3.3-1.

Figure 3.3.3-1
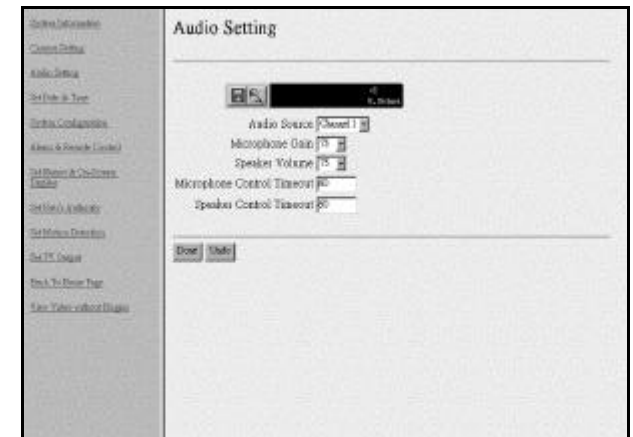
2. Choose a certain audio source to set the parameters

3. You can set following parameter:
   3-1 Audio Source:
       Select an audio input and output source to set parameters

3-2 Microphone Gain
Set the value of GAIN for Microphone of Audio input in VP-300.

3-3 Speaker Volume
Set the value of GAIN for Speaker of Audio output in VP-300.

3-4 Microphone Control Timeout
At a given time, there is only a user can control the operation of Microphone connected to VP-300. Once users get the control right, they can select the source (1,2,3,4) to control but only one source can be controlled at any time. This timeout value is the maximum period in seconds that user can own the right without any bother. In this period, nobody can rob the control right except the administrator. Once timeout, anybody can ask to gain the control right of Microphone excluding the original owner.

3-5 Speaker Control Timeout
At a given time, there is only one user can control the operation of Speaker connected to VP-300. The rule of timeout and grant of control right is the same as the one of Microphone Control described above.

4. The Audio operation interface:

Bandwidth used

Speaker Volume

Microphone ON/OFF

Save audio data to file
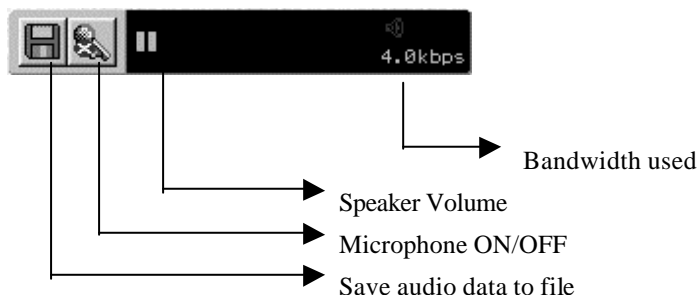
3.3.4 Set Date and Time

1. On the left side of home page, choose "**Set Date & Time**".

2. Follow the format to enter the date and the time.

3. Click the "**Done**" button and go back to the home page of VP-300. VP-300 will save these parameters as the system date and time.
(Figure 3.3.4-1)

Figure 3.3.4-1

3.3.5 Further system configuration

1. Running Mode:
Select one of three modes to run. There are Network mode and ISP mode and Modem/RS-232 Mode.

2. TCP/IP setting:
For Network mode, you need to fill in all of the TCP/IP setting. To gain IP address from a DHCP or BOOTP server, you can assign the IP address of VP-300 to be 255.255.255.253(DHCP) or 255.255.255.255(BOOTP). Since the IP gained through these two methods is dynamic, see **3** and **8** for further information about registering dynamic IP to a registry server.

Note: 1. If users assign a static IP address for VP-300, users just need to fill in all the TCP/IP setting following the item.

2. For a DHCP server, if users need to gain IP address, users can assign the IP address of VP-300 to be **255.255.255.253**. For a BOOTP server, if users need to gain IP address, users can assign the IP address of VP-300 to be **255.255.255.255**.

3. ISP setting:

For ISP mode, you need to fill in all of the ISP setting. If you check 'Use assigned TCP/IP settings' then VP-300 will use the above TCP/IP setting as Internet network setting. If it's not checked, VP-300 will negotiate the network settings with ISP automatically. If the IP assigned to VP-300 is a static IP, you can visit VP-300 by this IP directly. If it's dynamic IP, VP-300 provides a way to register itself to a registry server. User can visit this registry server and find the IP of VP-300.

Figure 3.3.5-1

Running Mode

setting, TCP/IP

setting, and ISP

setting
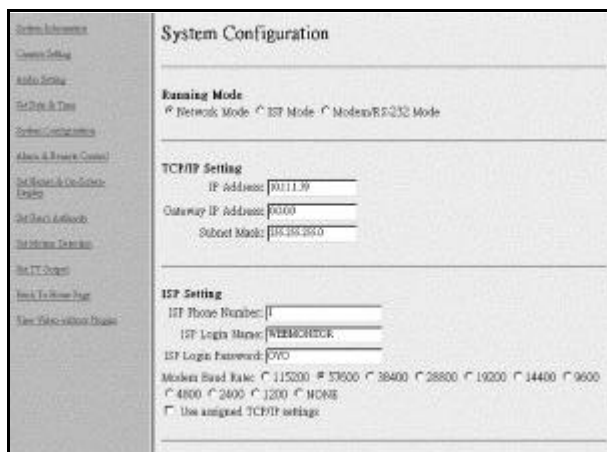
4. Account Setting:

Set the user's and administrator's name and password. To keep the name field empty will cause VP-300 skip checking the authority. **The 'Set User's Authority' Page only takes effective when the user's name and password are not empty in this page.**

5. COM Port Setting

Set the Modem baud rate and initial string. If the initial string is kept empty, VP-300 will use default initial string to send to Modem. In most cases, the default initial string will work well.

6. Set Video Compression algorithm & resolution

Select one of three Compression algorithms. There are H.263, JPEG and Motion-JPEG. Also you can select the video resolution from 320x240(Default) or 640x480.
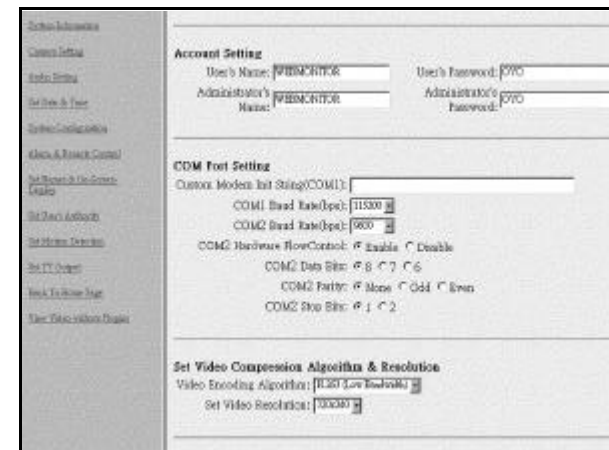
7. Set Camera Control

Select the device type of controllable cameras. There are VP-202, VP-203, Cannon VCC3/VCC4, Li-lin PIH-717X and Acqutek DOM 1200A and Pelco D type camera. You shall check which camera number that device hooked to (from 1 to 6) and the timeout of exclusive control right. At a given time, there is only a user can control the camera connected to VP-300. This time-out value is the maximum period in seconds the user can own the right without any bother. In this period, nobody can rob the control right from that one had own the right except the administrator. After the time expired, the exclusive control right will grant to the others.

8. Set IP Registry Host IP Address & Path

When the IP address of VP-300 is dynamic, user should set these parameters for VP-300 to register itself to a registry server, thus user wants to visit this VP-300 can find it by visiting the yellow page provided by registry server. Contact with your local distributor for configuring these parameters. The IP address of default registry host is **202.145.220.168**, and the default HTTP port for register is left empty, and the value of registry host path is "**cgi**". Please visit http://202.145.220.168/registry.htm to query or browse registered VP-300.

When you are using an NAT to translate a public IP into the local IP of your VP-300, registry server will use the public IP address provided by this NAT instead of the private IP assigned to VP-300. In case this NAT translates a port of a public IP to the private IP of VP-300, users have to explicitly set this port number in the field of "Register HTTP Port as:"

VP-300 will report this value to registry server. If this field is empty, VP-300 will report its current HTTP port number.

> **Note:** Please wait at least 30 seconds for VP-300 rebooting for new system parameters

Figure 3.3.5-3

Set Camera Control, and Set IP Registry Host IP Address & Path
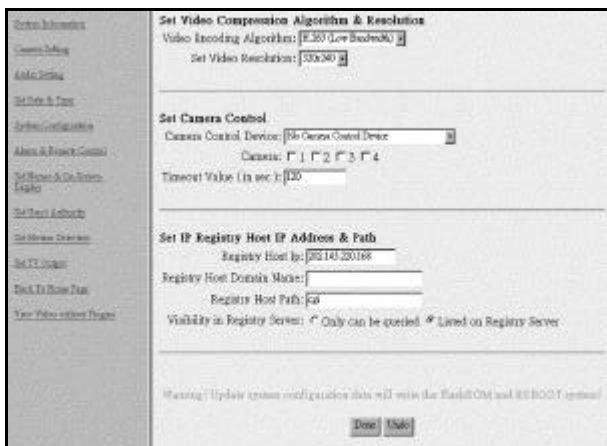
3.3.6   Alarm and Remote Control

You can choose the item "Alarm and Remote Control" from VP-300 home page to enter this page as Figure 3.3.5. The Alarm Status shows the "NO"(Normal Open) or "NC"(Normal Close) state of the GPIs. You can also control the outputs of GPOs by selecting the state of each GPO and click ing the output bottom. The output of the GPOs will latch on the state you selected.

Figure 3.3.6-1
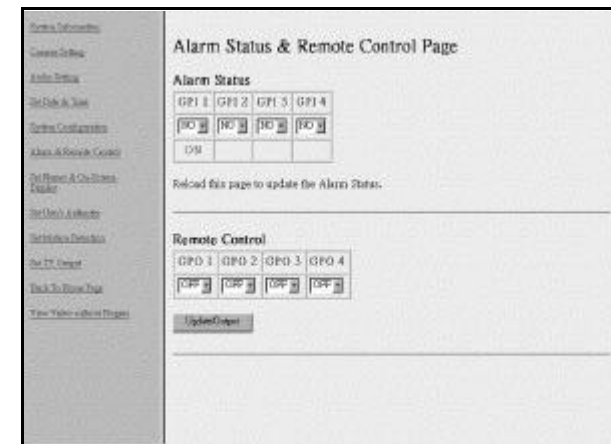
> **Note:** If the Alarm Status type is set to "NO"(Normal Open), once this GPI port is close-circuit, it is considered to be triggered. And the Alarm Status will be displayed as "ON" in red word. It's blank if this GPI is open-circuit which is the non-triggered state of a Normal Open GPI. For "NC" (Normal Close), open-circuit is considered to be a triggered state.

3.3.7   Set Name of Server and Camera

You can choose the item "Set Name of Server & Camera" from VP-300 home page to enter this page as Figure 3.3.7-1 You can set the server name if you have multiple VP-300 on network. You can also set camera names to indicate the physical location of the cameras or any identification for easy understanding.

Figure 3.3.7-1

Set Names & On-Screen-Display

Set Names of Server and Cameras

Server Name	VPON Camera Server
Camera 1	Camera 1
Camera 2	Camera 2
Camera 3	Camera 3
Camera 4	Camera 4

You can set a text string for each camera and this text will be overlaid directly on the video like time-stamp. You can specify the content and position of this text (Figure 3.3.7-2).

Figure 3.3.7-2

Set Overlay Text(English Alphabet Only)

Camera 1		enable: ☐ x: 0 y: 0
Camera 2		enable: ☐ x: 0 y: 0
Camera 3		enable: ☐ x: 0 y: 0
Camera 4		enable: ☐ x: 0 y: 0

On this page, you can also set the position of the time stamp of each camera. There are 4 pre-defined position, just select the position you like (Figure 3.3.7-3).

Figure 3.3.7-3

Set Time Stamp

Camera 1	○ Disabled ○ Upper Left ○ Upper Center ○ Upper Right ○ Lower Left ⊙ Lower Center ○ Lower Right
Camera 2	○ Disabled ○ Upper Left ○ Upper Center ○ Upper Right ○ Lower Left ⊙ Lower Center ○ Lower Right
Camera 3	○ Disabled ○ Upper Left ○ Upper Center ○ Upper Right ○ Lower Left ⊙ Lower Center ○ Lower Right
Camera 4	○ Disabled ○ Upper Left ○ Upper Center ○ Upper Right ○ Lower Left ⊙ Lower Center ○ Lower Right

Timestamp Date Format: MM/DD/YYYY

You can set Timestamp Date Format as MM/DD/YYYY or DD/MM/YYYY in this page also.

3.3.8 Set User's Authority

You can choose the item " Set User's Authority" from VP-300 home page to enter this page as Figure 3.3.8-1

Figure 3.3.8-1

Besides setting the user's and administrator's name and password, you can set up to 16 user's name and password and their authority. For example, enter "*USER*" and "*1234*" as the name and password of User 1 and enable camera 1 and 3. Later you can connect to VP-300 and login in using "*USER*" and "*1234*" as user 1. After logging in, only camera 1 and camera 3 will be displayed. If the name and password are left blank, this entry then will be removed. If the name and password are both the same word ---"*BLANK*", user logging without entering password will use this account. Enabling '**camera control**' will grant the right to control camera. Enabling "**Audio 1(2,3,4)**" will grant the right to do the audio operation.

3.3.9 Set Motion Detection

1. On the left side of home page, click **"Set Motion Detection"** and you will have a page as Figure 3.3.9-1

Figure 3.3.9-1

Figure 3.3.10-1

2. Choose a certain camera to set the motion detection parameters.
3. You can enable or disable the motion detection function of one camera. If enabled, a 8x8 red block will be displayed on the top-left corner of the video if motion has been detected.
4. Set the sensitivity of camera, the value of sensitivity from 5 to 100.
5. Enable "Show Detect Area" will make the video outside the detection area to be darker. It is convenient for configuration purpose.
6. Set the Motion Detection Area makes VP-300 focus sensing on the restricted area.

3.3.10   Set TV Output Configuration

1. On the left side of home page, click **"Set TV Output"** and you will have a page as Figure 3.3.10-1
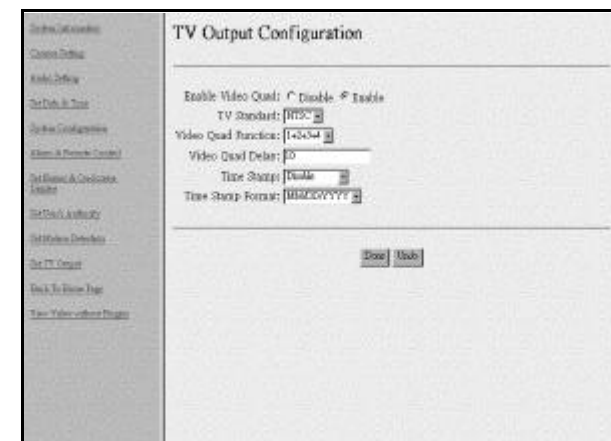
2. You can enable or disable the Video Quad function of VP-300. If enabled, you will view the video images from TV set, then you just read instructions as following.
3. Choose the TV standard. VP-300 supports two kinds of choices here for you, "NTSC" and "PAL". In different areas, there may be different standards of the TV set. Please choose the correct standard of your TV set.
4. Choose the Video Quad function. You can choose how the images to be displayed on the TV screen at one time. There are six choices for you.
   "1": only display the images from camera1
   "2": only display the images from camera2
   "3": only display the images from camera3
   "4": only display the images from camera4
   "1-2-3-4": display the images from camera1, 2, 3, and 4 in turn
   "1+2+3+4": display the images from all cameras at the same time
5. Choose Time Stamp and Time Stamp format. You can enable or disable Time stamp and choose the Time stamp Date Format as MM/DD/YYYY or DD/MM/YYYY in this page. Besides, you can choose the locations of the time stamp date format on TV screen.
7. Click "Done" to finish TV Output setting.

3.3.11 Back to Home Page

On the left side of home page, click **"Back to Home Page"** and you will go back to the home page of VP-300 in your browser.
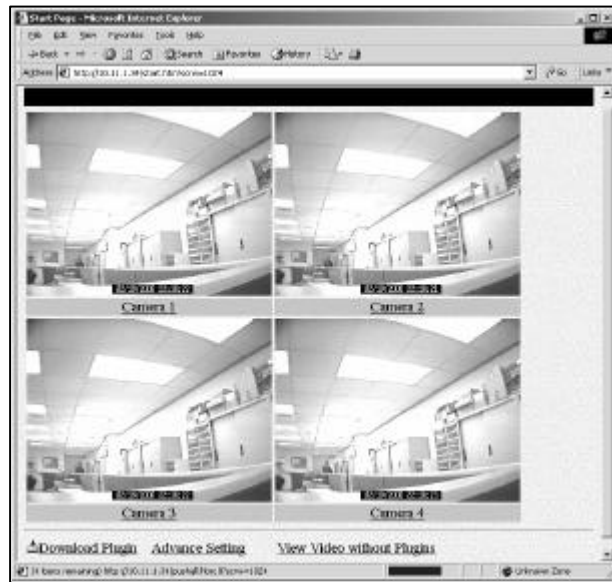
3.3.12 View Video Without Plugins

Instead of installing plug-in program in your PC. You can click **"View Video Without Plugins"** on the left side of home page, and you will view the live video by using Java applet. Liveview Java applet utilize JPEG image snapshot from VP-300.
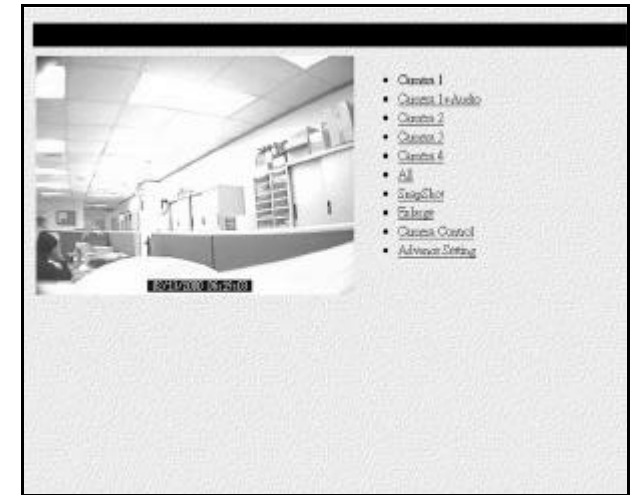
3.4 Audio Functions

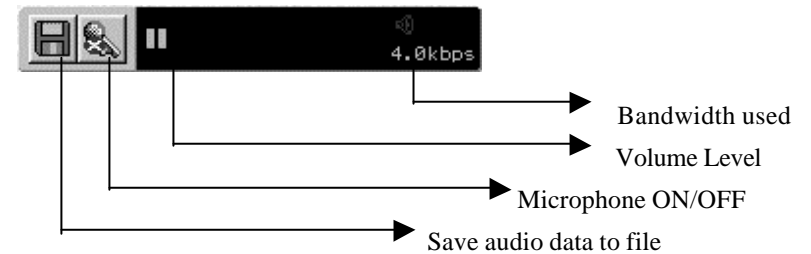**1.** Start visit VP-300 from Home Page (Figure 3.4.1)

Figure 3.4.1

2. Click 'Camera 1' link to view the first camera.(Figure 3.4.2)

Figure 3.4.2

3. Click 'Camera 1+Audio' link to the page of both the first video and audio. The Audio operation interface is as follows:

Bandwidth used

Volume Level

Microphone ON/OFF

Save audio data to file

Notice:
The audio function of VP-300 supports two-way audio but only one-way audio data recording. That means you cannot record the audio data from host PC and VP-300 at the same time.
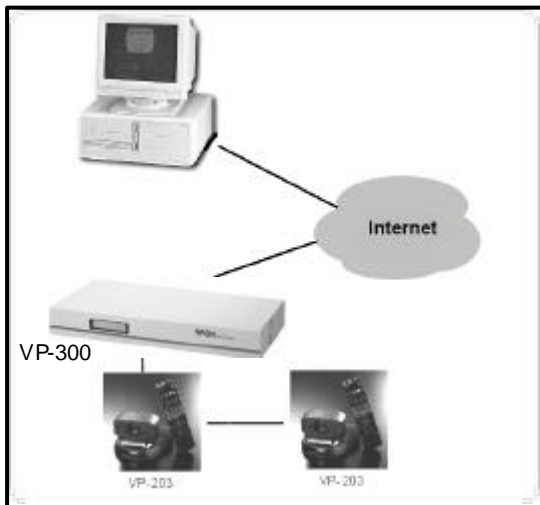
3.5 Remote Camera Control

There are two kinds of remote camera control configurations. One is using PTZ cameras with built-in RS232 interface, the other one is using VP-201 and VP-202 camera control interfaces to accomplish the job. VP-300 hardware box, OYO viewer and Internet browsers are transparent to both configurations. VP-201 and VP-202 are considered as external devices to VP-300.

3.5.1 Remote Camera Control using PTZ Cameras

Currently, VP-300 supports those cameras with built-in RS232 control interface. The typical camera model is SONY EVI-D30.The VP-203 camera supplied by Formosa Industrial Computing is functionally compatible with SONY EVI-D30. The configuration diagram is as Figure 3.5.1
Maximum 6 cameras can be daisy-chained by the above configuration.

Figure 3.5.1

3.5.2 Remote camera control using VP-201 and VP-202

Please refer to Figure 3.5.2 for system configuration VP-201 converts RS232 signals from VP-300 into RS485 then connect to VP-202. There are 8 pairs of power IOs which can survive at 0.5A/120ac or 1A/24VDC for attaching to PTZ device. Please check the correct voltage ratings of your PTZ device and make the right connections, Select **"Remote Camera Control"** function at system configuration and choose the correct type of camera control. Operation procedure is the same as section 3.5.2 except there is no **"Preset"** and **"Recall"** functions.
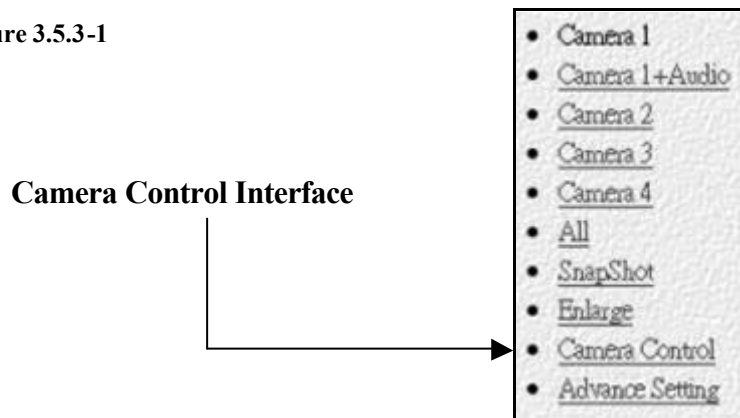
Figure 3.5.2
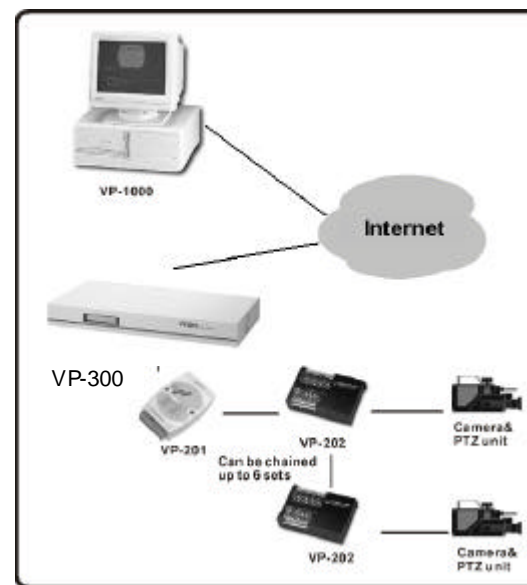
3.5.3   Operation

1. If you have equipped a camera control device with VP-300, you can use the camera control interface to control a camera (Figure 3.5.3-1).

Figure 3.5.3-1

Camera Control Interface

- Camera 1
- Camera 1+Audio
- Camera 2
- Camera 3
- Camera 4
- All
- SnapShot
- Enlarge
- Camera Control
- Advance Setting

2. Select the proper camera control device in the 'system configuration' page (refer to section 3.3) and the camera it is attached and you can use UP/DOWN/LEFT/RIGHT to make the camera move a little bit toward the direction you clicked. Also you can use ZOOM and FOCUS buttons to zoom or focus in and out. Due to the network transmission delay, the video may not response as soon as you click the button. (Figure 3.5.3-2)

Figure 3.5.3-2
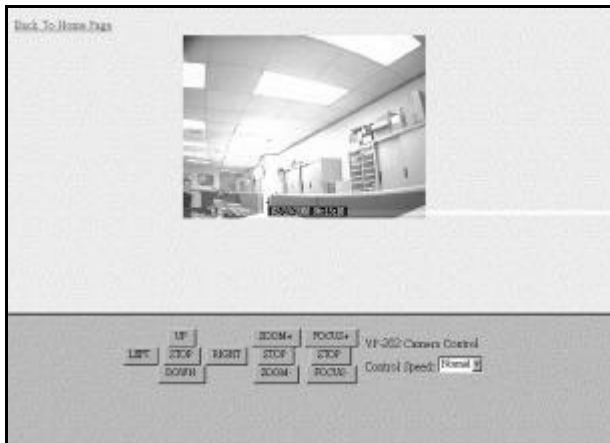
3. If the device has built in preset function, you can use the buttons described above to move the camera to where you want and use Preset button to make the camera control device to remember the position. After presetting, you can use Recall buttons to make the camera move to a preset position.

Click on the buttons on the Pan/Tilt, Zoom blocks will force the camera to operate follow the corresponding commands. But please be patient to allow enough time for the video to transmit back from the remote side. Don't click the buttons too fast or it may be difficult to get the right view you want remember "click and wait" is the most efficient operation.

The 6 preset buttons allow you to tell the camera to remember 6 positions that you prefer. When the camera is located at some position and you click the preset button, this position will be kept inside the camera's memory. After a while, if you move the camera to another position and you want it to move back to the previous preset position, just click the corresponding recall button and it will move back to that position automatically. This function is handy when it is difficult to adjust the camera to the right position. You can preset it locally and then recall it remotely. But one thing bad is that after power off the camera, previous preset values will be lost. In this case you have to do the presetting from the beginning.

3.6 Recording Video to a File
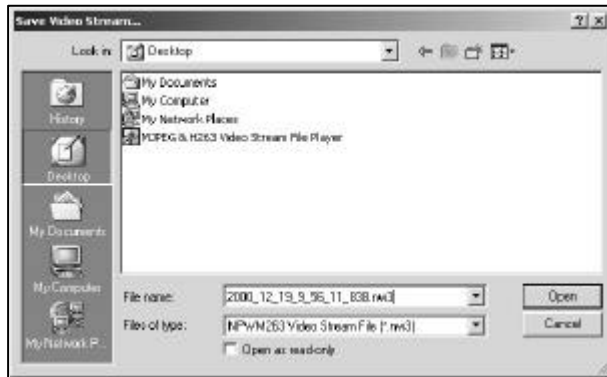
Step by Step to record video to a file:

1. Move mouse over the video window

2. Click the right button of mouse and you will have prompted out Figure 3.6.1

Figure 3.6.1

3. Click the "File" Icon and you will have prompted out Figure 3.6.2. Please specify the filename to save the video.

Figure 3.6.2

4. To stop the recording, move the mouse over the video window and click the right button of mouse. You will have prompted out Figure 3.6.3. Click the "Stop" Icon to stop the recording.

Figure 3.6.3

- End of this chapter -

Chapter 4: Use VP-300 Under ISP Mode

If users don' t have Internet/Intranet connection as required in the default Network Mode, they still can use a modem or ISDN TA to dial up to ISP and make an internet connection. Then users can use their browser to view the video transmitted from VP-300. Besides viewing the video, users can also record the video, play them back, make a snapshot of picture or print it out and make VP-300 callback on a trigger of GPI port and transmit the video to the preset PC when event happens...just as under Network mode.

If you want to connect VP-300 to Internet through PSTN/ISDN to ISP (Internet Service Provider), first configure VP-300 to run under ISP Mode. A public static IP is required. If the IP is dynamic, you have to set parameters for registry server.

4.1   Getting Start under ISP Mode

Before users run ISP mode, please make sure the modem was already completely installed. VP-300 is configured to Network mode as the factory default, if users want to connect the internet though a modem or ISDN TA under ISP Mode, users have to change the running mode first. **But we strongly recommend users not to use WCOMW to change the running mode directly to ISP Mode,** because VP-300 did not supply configuration interface to define the modem device under ISP Mode, we suggest users switch to Modem/RS-232 Mode first and configure modem setting via OYO Viewer. Then users can switch to ISP Mode though WCOMW or OYO Viewer. Refer to Appendix B for a step-by-step procedure to change the running mode via WCOMW or a step-by-step procedure via OYO Viewer as chapter 5.1.and Chapter 3 for the usage of VP-300.
The installation procedure for VP-300 under ISP Mode was as following.
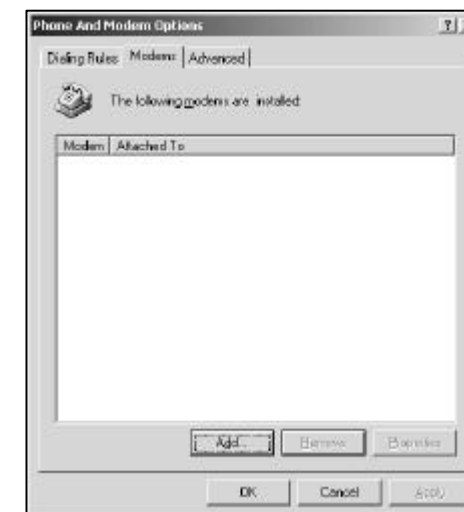
4.1.1   Modem Installation

1. To install modem device first under the default Network Mode, go to "**Phone and Modem options**" on "**Control Panel**" of the host PC.

Figure 4.1.1.1

2. Select "**Modems**" and go to "**Add**" to install new modem device.
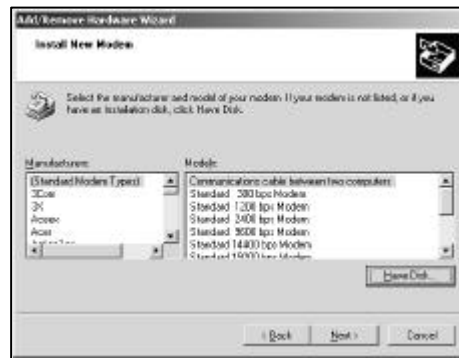
Figure 4.1.1.2

3. Install New Modems, please check "**Don' t detect my modem; I will select it from the list.**"

Figure 4.1.1.3

4. Select the manufacturer and model of the modem. If the modem is not listed, or if users have an installation disk, please click "Have Disk".

Figure 4.1.1.4

5. If users click "Have Disk", then please insert the manufacturer' s installation disk into the drive selected, and click "OK".

Figure 4.1.1.5

6. Select the file location of the modem driver and click "Done " and make sure the resource that copy the manufacturer' s file.

Figure 4.1.1.6

Figure 4.1.1.7

7. Select the correct modem model and click "Next" to be continued.
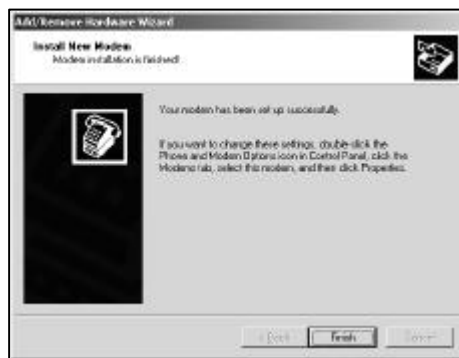
Figure 4.1.1.8

8. Select the port you want to install the modem on. Users can select one of the ports, because the modem didn' t connect to the host PC physically.

Figure 4.1.1.9

9. The modem installation is finished. Please continue do the configuration of modem setting in OYO Viewer.

Figure 4.1.1.10

Note: Before running VP-300 under ISP Mode at first time, we strongly recommend users to change the running mode under **Modem/RS-232 Mode** first and do system configuration in **OYO Viewer**.

4.1.2 Switch to Modem/RS-232 Mode

The default setting of VP-300 is Network Mode. If you need to change the mode of VP-300 to Modem/RS-232 mode, refer to Appendix B. to change the running mode and to follow a step-by-step setup procedure for the installation.

4.1.3 Use OYO Viewer to do the configuration

The physical installation procedure for "OYO Viewer Installation", "Hardware Installation" and "Connecting to VP-300" are the same as Modem/RS-232 Mode. For the corresponding parameter settings, please refer to section 5.1 to 5.3

4.1.4   System Configuration

After connecting to VP-300 using OYO Viewer with a RS-232 cable, click

the "Configure Server" icon on the left task bar for configuration and select "Miscellaneous Settings". Here the function is for modem initialization string. Some modems may have compatibility problem. Setting the correct initialization string makes it easier to resolve compatibility problems.

1. Click "Install" to install the modem.

Figure 4.1.4.1
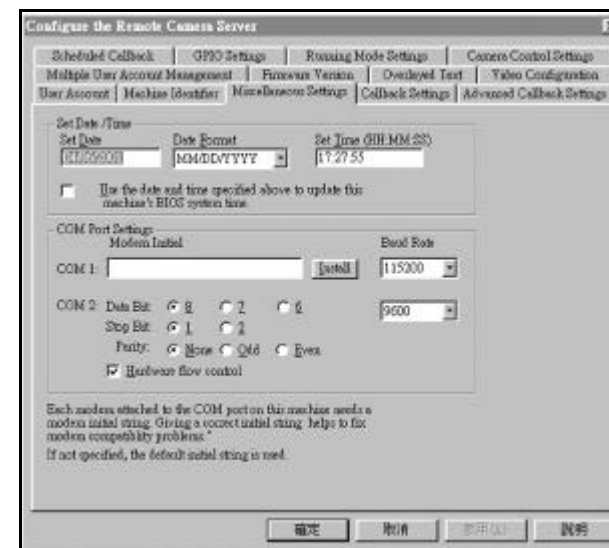
2. Here is the modem list in the left of the screen. Select the correct modem model that you already installed them, then click "OK", or click
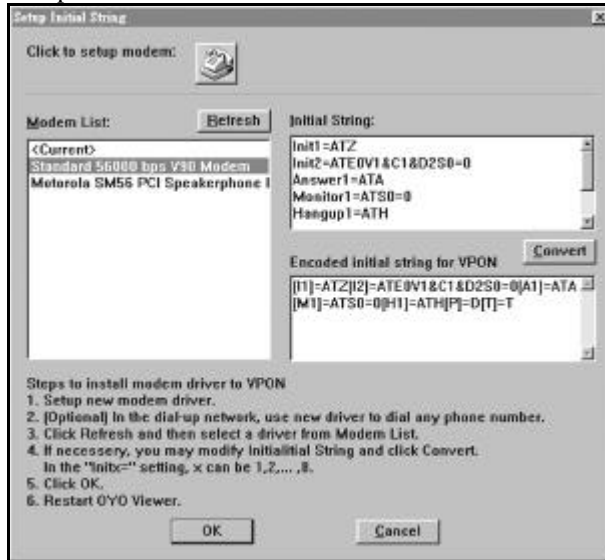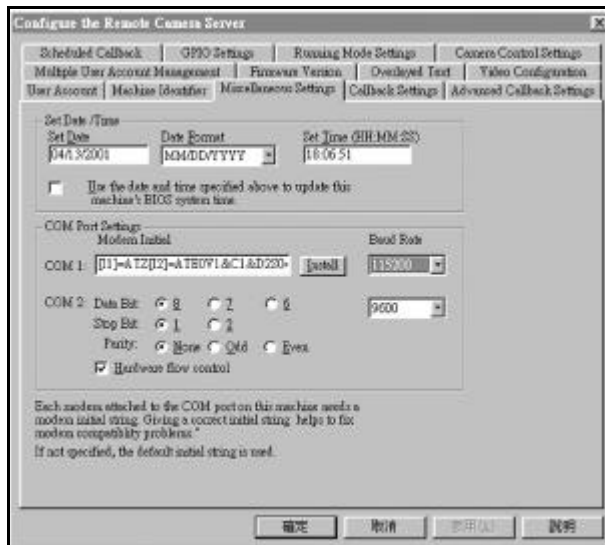
the icon ![phone icon] to setup a new modem driver.

Figure 4.1.4.2

3. Then users will see the correct modem device in COM1 block and users can also select the value of baud rate. Most of modern modems can communicate with host on 115200 bps.

Figure 4.1.4.3

4.1.5 IP Configuration

Click on the "Running Mode Setting" block of the configuration window, will bring up Figure 4.1.5.1 ,the running mode setting window.

1. For ISP mode, users need to fill in all of the ISP setting, including the **ISP Phone Number**, **User Name**, **User Password** and **COM1 Baud Rate**. After VP-300 reboot from current modem mode into ISP mode, it will automatically connect to ISP as you specified. If users check "**Use assigned TCP/IP settings**" then VP-300 will use the above TCP/IP setting as Internet network setting. In most of cases, users do not have to check this setting, and VP-300 will negotiate the network settings with ISP automatically. If the IP assigned to VP-300 is a static IP, users can visit VP-300 by this IP directly. If it's dynamic IP, VP-300 provides a way to register itself to a registry server. User can visit this registry server and find the IP of VP-300.

Figure 4.1.5.1
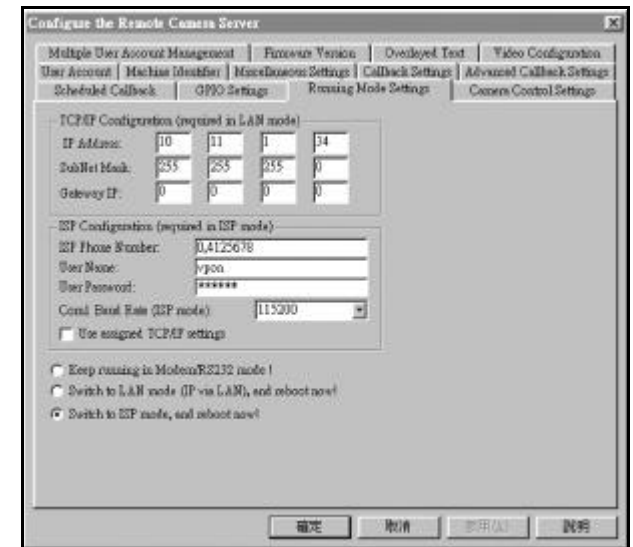
2. Then check the "Switch to ISP mode and reboot now!" button and click "OK". Now there must be a message shown on the screen to tell users that configuration data updated successfully. VP-300 will be disconnected and reboot. It may take a few seconds.
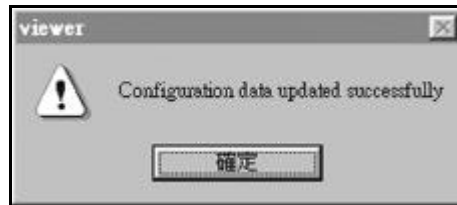
Figure 4.1.5.2

Figure 4.1.5.3

Note: Before running VP-300 under ISP Mode at first time, we strongly

recommend users to change the running mode under **Modem/RS-232 Mode**

first and do system configuration and modem driver setup in **OYO Viewer**.

4.1.6 View live video via the browser

Before running VP-300 under ISP mode, users must plug the modem serial
cable to com1 port instead of RS-232 serial cable. If the IP assigned to VP-300
is a static IP, users can visit VP-300 by this IP directly. If it's dynamic IP, VP-300
provides a way to register itself to a registry server. User can visit this registry
server and find the IP of VP-300. Please enter the registry host homepage first,
the default IP address of registry host is **202.145.220.168/registry.htm**.
(Figure 4.1.6.1) Users can choose search by MAC ID (Ethernet Address) or
search by name to find their own VP-300 IP location. Besides, users can
browse all records in this registry server to find the IP address of their own
VP-300. (Figure 4.1.6.2)

Note: For dynamic IP, users must check the IP address for the registry host to

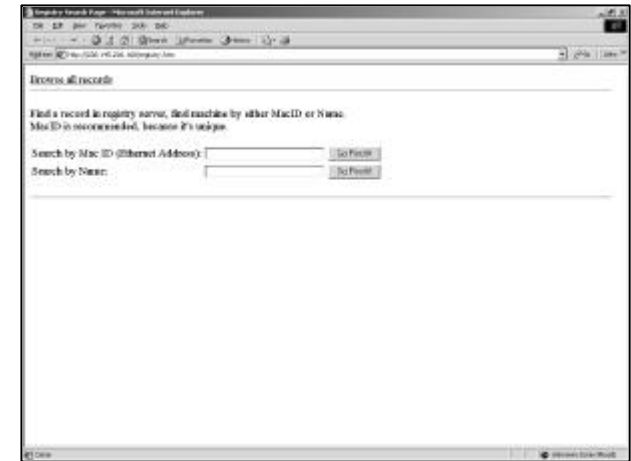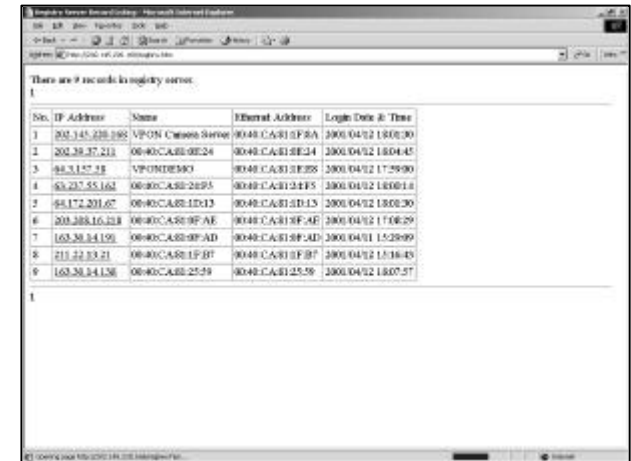find out the assigned dynamic IP.

Figure 4.1.6.1

Figure 4.1.6.2

4.2 Browse and view the video

Users can view the live video by click the IP address now, and the operations

of ISP mode is the same as Network mode, please refer to the usage of VP-300

in chapter 3.

- End of this chapter -

Chapter 5: Using VP-300 Under Modem/RS-232 Mode

Beside Network mode and ISP mode, users also can use VP-300 to monitor the remote side under Modem/RS-232 Mode. Install VP-300 at the remote site, users can view, at the local site, the video transmitted from VP-300 via OYO Viewer operation. VP-300 is configured to Network mode as the factory default. Before modem/RS-232 mode, users need to change the running mode first. (Appendix B) Under Modem/RS-232 mode, users can use a modem dial to VP-300 to make a point-to-point connection and OYO Viewer is the software in this connection. Via OYO Viewer, the video were viewed transmitted from VP-300. Besides, users can also record the video, play them back, make a snapshot of picture or print it out and make VP-300 callback on a trigger of GPI port and transmit the video to the preset PC when event happens.

Figure 5. 0

5.1 OYO Viewer Installation

1. Start Windows98 on the host PC.
2. Insert Setup diskette into the diskette drive (3.5") of host PC.
3. From the Windows Program Manager, select FILE, then RUN
4. Type "A:\setup.exe" (replace "A" with the letter of your 3.5" diskette drive), then click OK.
5. Follow installation instructions accordingly.

When it is installed successfully, you will find an icon of **OYO Viewer** on the desktop of Windows. (You can also find it on the startup toolbar.)

5.2 Hardware Installation

1. Connect the external power supply to **DC Input** on the back panel of this product.

2. Connect video sources to **"Video Input"** by RCA cable. You can choose to connect up to 4 video sources.

> **Note1:** VP-300 can auto-sense the standard of video sources (NTSC or PAL). But be sure that all video sources are the same standard.
>
> **Note2:** Please make sure that you have connected video sources to this product before you power on it.

3. Connect an external modem or an RS-232 null modem cable (included in the package) to **COM1 Port**.

4. If you are connecting modem, connect the telephone line into LINE jack of external modem. If you are connecting RS-232 cable, connect the other end to one of COM Port (1 - 4) on the host PC.

5. VP-300 is set to Network Mode after power up by default. Before it is working under Modem/RS-232 Mode, please check the running mode first. If you want to change the running mode of your VP-300, read Appendix B. and follow a step-by-step setup procedure for the installation to change to ISP mode or Modem/RS-232 running mode.

6. After power up successfully and get correct messages on LCD, you can refer to Chapter 3 and 4 for further operations.

5.3   Connecting to VP-300

1.   Run **OYO Viewer** on the Host PC by clicking the icon of **OYO Viewer** on the desktop of Windows. And you will see the interface of OYO Viewer as Figure 5.3.1.
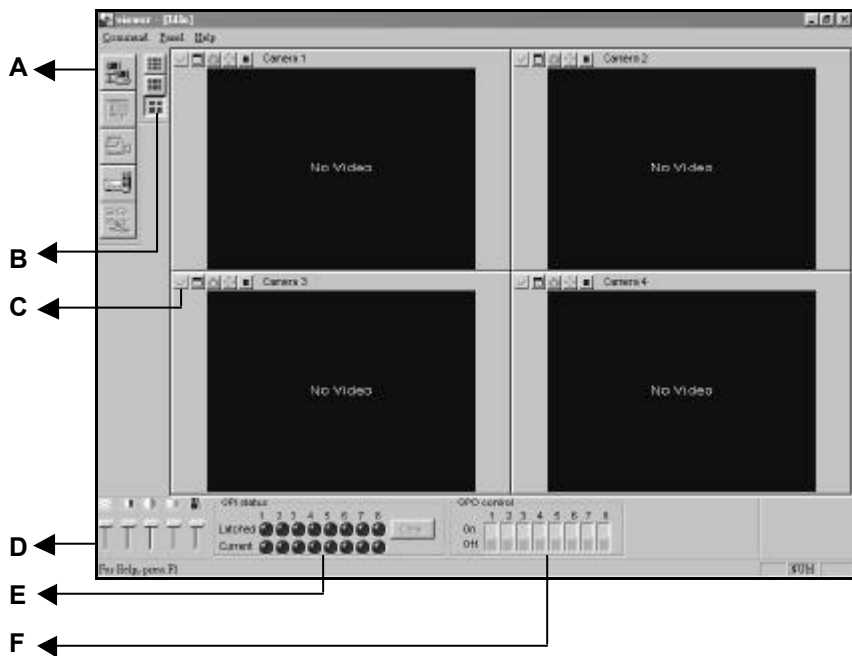
A. Command Task Bar

Command Task Bar supplies "**Connect**", "**Configure Server**", "**Record Video**", "**Play Back**", and "**Redetect Camera**" functions. Following the Chapter 5.3.1 to 5.11.11.

B. Video Image Frames Control Task Bar

Switch the way to display the images at the same time. The images from 4 or 6 or 8 camera resources would be displayed at the same time on the screen.

C. Single Camera Information

Click these buttons upper the screen, the images from the single camera resource were displayed and users can remote control the camera and take a snap shot of the images.

D. Camera Control Bars

Users can set Brightness, Contrast, Saturation, Hue and Quality on the video Window by tilting up and down of the control bars at the left bottom of OYO window.

E. GPI Status

Users can see the input status change here on the OYO viewer window.

F. GPO Control Panel

Users also can set the status of the IO points from the OYO windows.

When the main screen of OYO Viewer shows, click the **"Connect"** icon on the left task bar. It will show the dialogue box. (Figure 5.3.1)
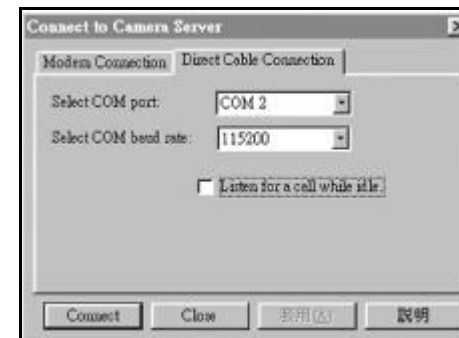
Figure 5.3.1

2.   You can connect through modem or using the null modem cable came with VP-300. Figure 5.3.1 shows connecting through COM1 using direct cable connection. You can select COM port and baud rate you want, then click the "Connect" button to make the connection. If you are using modem, you should click the "Modem Connection" button to bring up Figure 5.3.2. You can select the modem type that were installed on your machine and type in the login name, password , phone number before making the connection. Make sure the modem was installed properly. (Figure 5.3.2) **Please refer to Section 4.1.1 to follow the step-by-step procedure to set up the modem.**

Figure 5.3.2
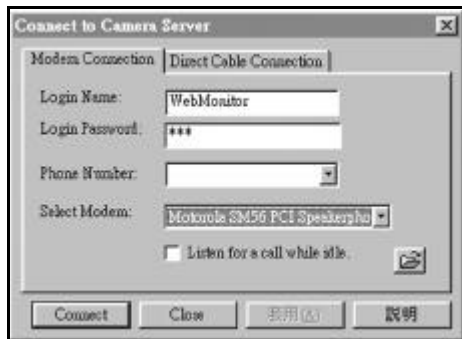
Note1: Make sure to input the phone number completely and correctly. Don't miss prefix, long-distance code (if have), extension number etc…

3. After entering all data, click on "**CONNECT**". At this moment, you can get the connection window pump up on your OYO Viewer's main screen. As Figure 5.3.3
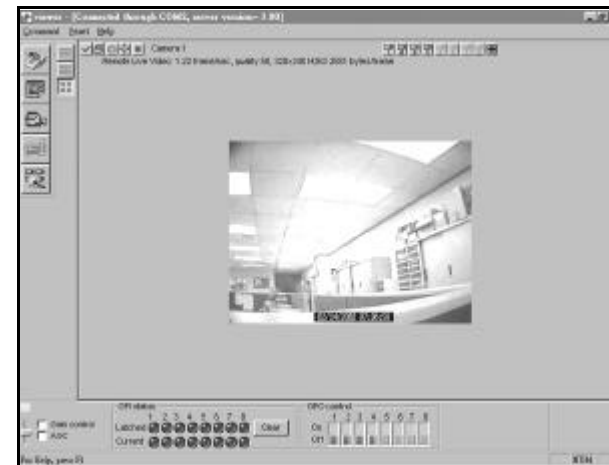
Figure 5.3.3

When the connection (between Client PC and VP-300) is done, you can view the video transmitted from VP-300 immediately. Also, it shows **"Call connected"** on the center of the screen.

5.4 Screen Splitting

Viewer has three kinds of displaying video windows. You can view all of the video at the same time as shown at Figure 5.0. Or you can view only one single video by clicking the window you want. The result is as Figure 5.4
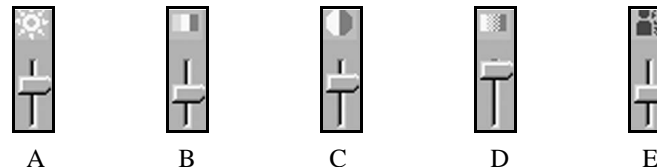
Figure 5.4

5.5 Camera Setting

1. You can set Brightness, Contrast, Saturation, Hue and Quality on the video Window by tilting up and down of the control bars at the left bottom of OYO window as shown on Figure 5.5.

Figure 5.5

2. Click the arrow to increase or decrease each value

A   B   C   D   E

● Icon A : Brightness: Higher value, brighter video

VPON

- Icon B : Hue: Higher value, higher hue
- Icon C : Contrast: Higher value, stronger contrast
- Icon D : Saturation: Higher value, more color saturation
- Icon E : Quality: Higher value, better video quality

3. It takes a few seconds for the new settings to take effect.

> **Note:** The video performance is changed by the algorithm. If you find these settings don't work well, we suggest you set cameras via a local monitor or TV.
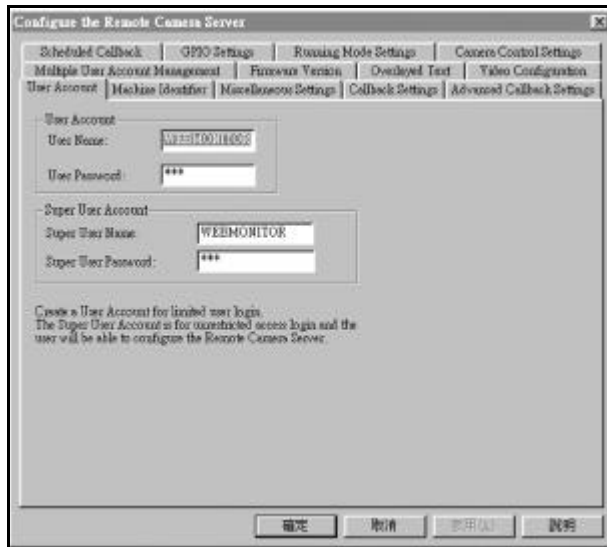
5.6 Set Account Name and Password

1. Click the Configuration icon on the top left of OYO window bring up "Configure the Remote camera server" dialog box and select "user account" block such as Figure 5.6.1

Figure 5.6.1

2. Input **User's Name**, **User's Password**, **Super User Name** and **Super User Password**. And click OK button.

VPON

> **Note1:** VP-300 provides two layers protection. You can limit users with User's Name and Password to login VP-300. To set the configuration of VP-300, you must have Administrator's Name and Administrator's Password.
>
> **Note2:** Keep the password carefully and remember it. When you forget the password, you can reset VP-300. The user name and the password will be reset to the default values. It also means you have to set the configuration again.

3. Other configuration function , please refer to Chapter 5.4 for details.

5.7 Record the Video

OYO Viewer can record the video appearing on the screen and save as a file to the hard disk of Client PC.

> Start to record

Click the Capture icon on the top left of OYO window to record the video. OYO Viewer will record all the video appearing on the screen.

> Stop recording

Click the Stop icon on to stop recording. OYO Viewer will generate the file name of recorded video automatically and save to the "VideoDir" directory of OYO Viewer. If you did not change anything when setup OYO Viewer, the directory should be under window's "Program File".
The file name format is as below:

> LV_YYYY_MM_DD_hh_mm_ss.vid

5.8 Play Back

Before running this function, make sure to disconnect from VP-300.

1. Click the Playback icon [icon] on the left top of OYO window. Go to **your OYO "Video Dir" directory** and choose the file you want to play.

2. Open the file. It will show the first image of recorded video on the screen.

3. The default playing speed is **NORMAL**. Click the "**Fast"** button to switch the playing speed between **FAST** and **NORMAL**.
You can play the recorded video automatically or manually.

Automatically
Click "**PLAY**" button, OYO Viewer will play the entire recorded video.

Manually
Click the "**Forward**" button to browse the video one picture by one.

4. To stop playing back, click the "**Pause**" button.

5. To play another recorded video, click the "**Stop**" button on the left task bar. Then execute Step 1 to 5 again. Please refer to Figure 5.8 for example.
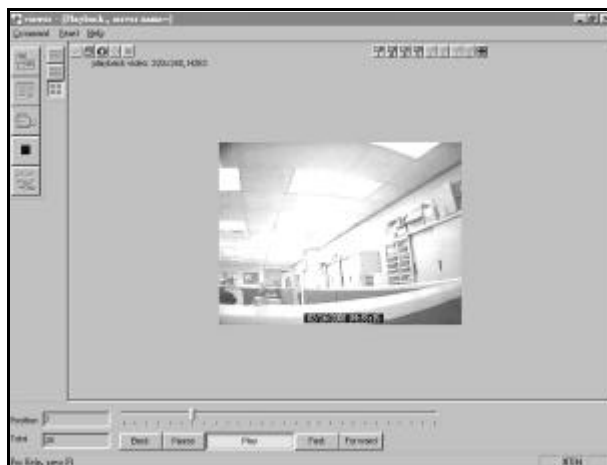
Figure 5.8

5.9 Snapshot

1. Play the recorded video manually.

2. Choose the picture(s) on the screen that you want to make a snapshot by clicking "Pause" button.

3. Click the Snapshot icon [icon] on the top left of the screen.

4. It pops up a dialogue box showing the picture on the screen. (Figure 5.9)

Figure 5.9

5. Click **"Save"** to save this picture on the screen to a **BMP** file. The file name is automatically generated under the directory "Program files" by the system in a "**YYYY_MM_DD_hh_mm_ss.BMP**" format. If you click **"Close"** before save, it means you give up to make a snapshot of this picture.

6. If you want to print out the picture, click "**Print**" button to do it.

5.10 Disconnect from VP-300

Click the icon ![icon] on the top left of OYO window to cut the connection.

5.11 Configuration

Click the "Configuration" icon ![icon] on the left task bar for configuration.

5.11.1 User Account

1. VP-300 provides two level protections. You can limit users with User's
Name and User's Password to login into VP-300. To set the configuration of
VP-300, you must have Super user's Name and Password.

Figure 5.11.1
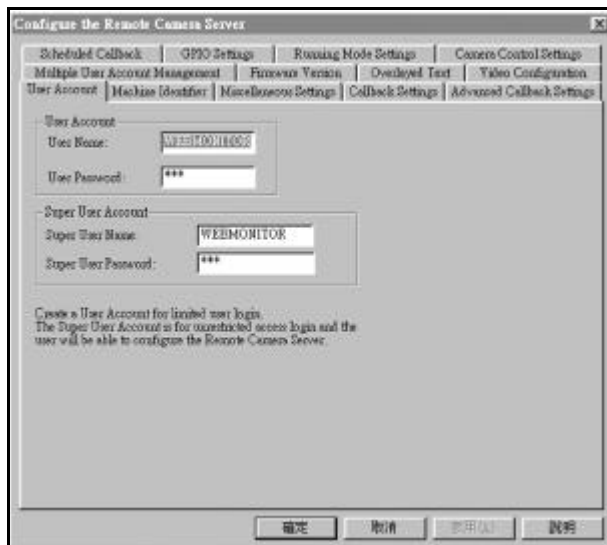
2. Keep the password carefully and remember it. When you forget the
password, you can reset VP-300 by pushing the default button at the back
panel. The user name and the password will be reset to the default values.
It also means you have to set the configuration again.

5.11.2 Machine Identifier

You can enter the machine name of your VP-300 for identification if there are
multiple VP-300 in your system. Also you can enter the camera names for
easier identification.

Figure 5.11.2
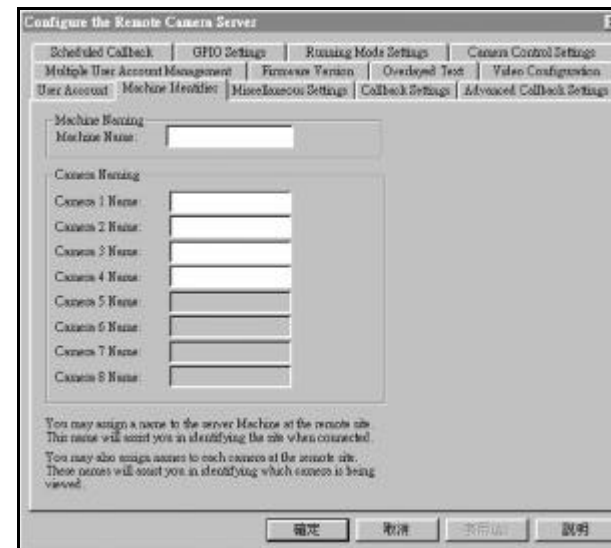
5.11.3 Multiple Account Management

This function enables you to add, remove and edit user accounts for
accessing VP-300. (Figure 5.11.3.1) There is a maximum of 16 accounts you
can create with different access rights to the cameras. The check boxes
before the camera names that are not checked when adding the user, will
have no video on the screen when the user connects to VP-300. (Figure
5.11.3.2) This prevents the user from viewing critical video defined by the
super user. You can remove or edit the access rights after users been
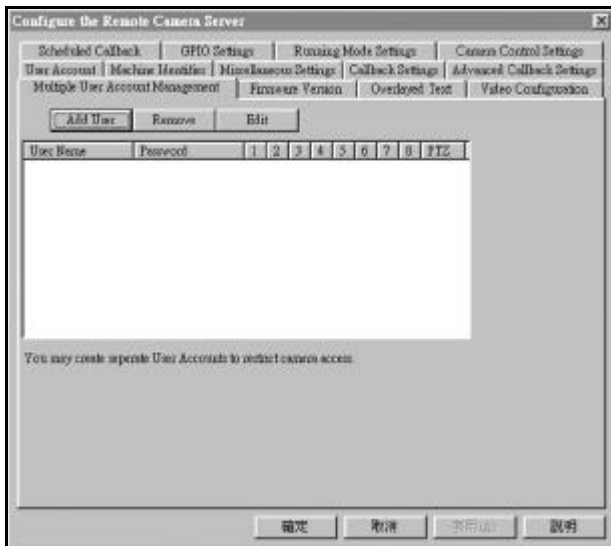created.

Figure 5.11.3.1

Figure 5.11.3.2

5.11.4 Running Mode

Currently, there are three running modes for your selection, LAN, ISP mode and modem mode. Click on the "Running Mode Setting" block of the configuration window, will bring up Figure 5.11.4 ,the running mode

setting window. For LAN mode operation, you are requested to fill in the TCP/IP configurations. Check the "Switch to LAN mode" button. VP-300 will reboot from current modem mode into LAN Mode. **Please wait for at least one minute for the reboot process.** After finishing the reboot process, VP-300 will back to ready state, the message will show "Ready"on LCD. You can login to VP-300 through IE or Netscape browsers. **For ISP mode operation, you need to have a public static IP address**. Check the "Switch to ISP mode" button and fill in the ISP phone number, login name, password and MODEM baud rate. After VP-300 reboot from current modem mode into ISP mode, it will automatically connect to ISP as you specified.

Figure 5.11.4
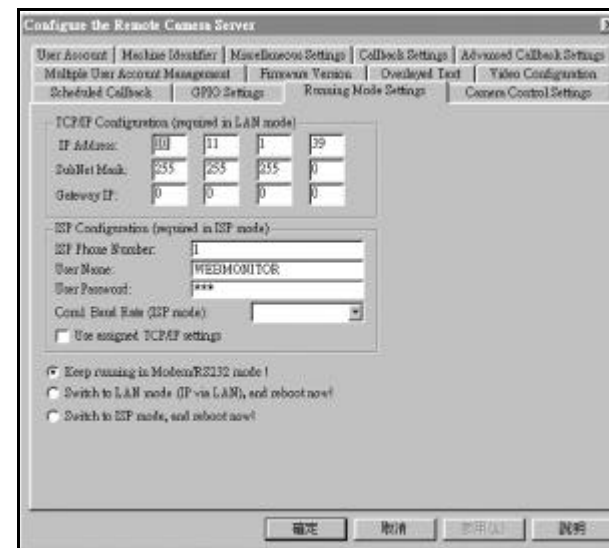
5.11.5 Camera Control Settings

In order to control the PAN,TILT, ZOOM functions of the remote cameras, you have to set up the camera control driver before operation. Click on the "**Camera Control Setting**" block and bring up the window as Figure 5.11.5. If you are using (VP-203 SONY EVI-D30 compatible) camera, select the plug –in for it and click OK. For details on camera control, please refer to Chapter 8," Controlling Remote Cameras".

Figure 5.11.5

Figure 5.11.6

5.11.6 GPIO Settings

There are 4 general purpose inputs and 4 general purpose outputs on the rear panel of VP-300. GPI ports are dry contact points. That means no voltage or current is allowed to put on them. GPO ports are reed relay. And the suggested ratings are maximum 24 volts DC and 200 mA current. You can see the input status change on the OYO viewer window. You also can set the status of the IO points from the OYO windows. Fig 5.11.6 is for setting the relationship between the cameras and input points. An N.O. means "Normally Open", N.C. for "Normally Close" and "X" means don't care. The GPIs follow an OR combination. On Fig 5.11.6 for example, VP-300 is going to fire a call back when GPI1 detects a "Close" condition. Because GPI1 was set to a normally open condition and other GPIs are ignored on video1 setting.

When the link between VP-300 and client OYO viewer sets up, the video from camera1 will be transmitted back.
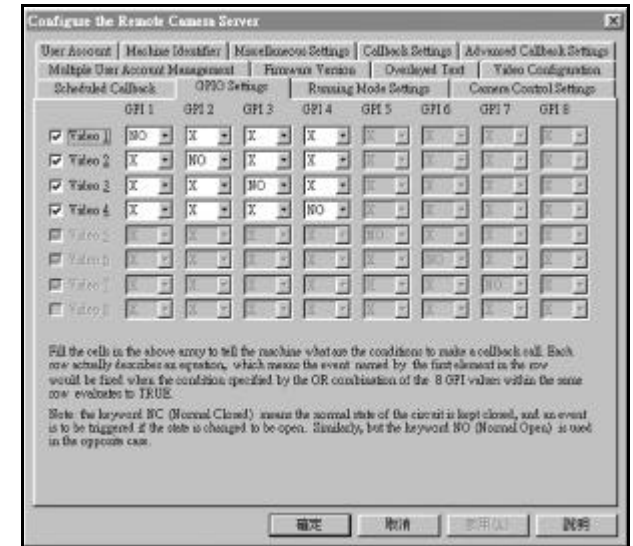
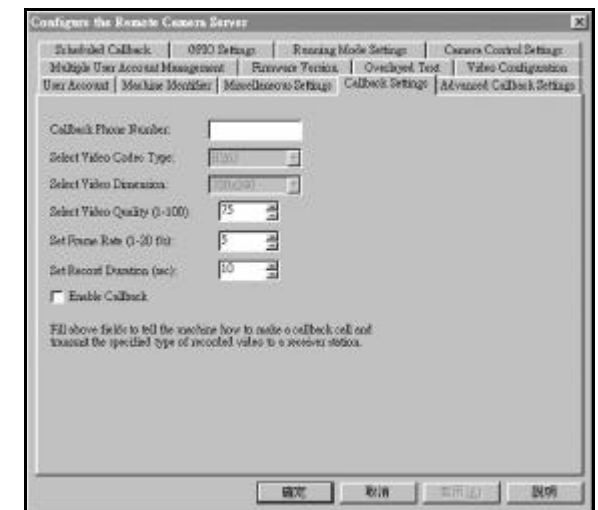## 5.11.7 Call Back Setting

This function enables you to set the call back phone number, video quality, frame rate and record duration of the call. Remember to enable the call back after configuring the settings. The higher the quality setting, the smaller the frame rate and the smaller the frames that can be recorded during the preset record time.

Figure 5.11.7

5.11.8 Scheduled Call Back

Please make sure the call back parameters at 5.11.7 are set correctly before working on scheduled call back.

There are three choices on this function. Regular, irregular and disable call back. When regular call back, VP-300 will try to establish the link to remote client between the preset time period at the preset time interval. This is good for verification of the link and remote site. When non-regular call back, VP-300 will make call when the preset time is reached. You can add or remove the preset time from the time table.
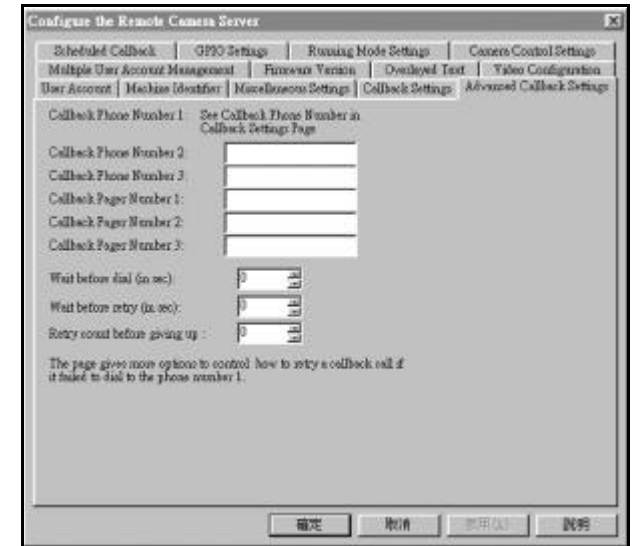
Figure 5.11.8
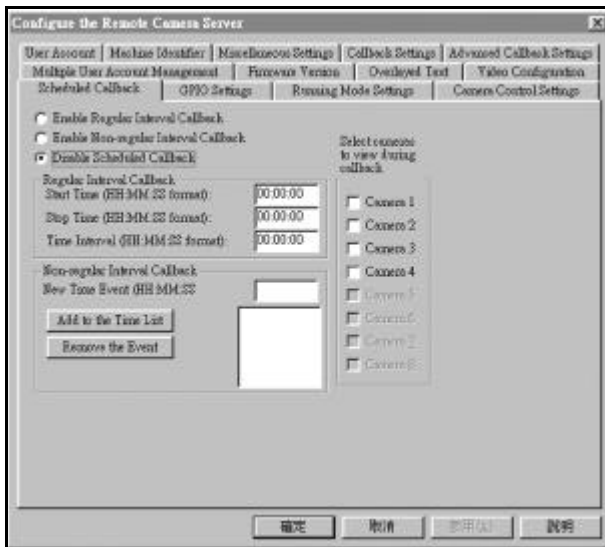
5.11.9 Advance Call Back Setting

This function is used mostly for security control. You can set 5 telephone numbers plus the one on call back setting adds up 6 numbers for call back. If VP-300 fails on the number in call back setting, it will try the number in this setting from call back number 2 until it makes through the call. The "wait before dial" setting enables external alarm panel to use the same telephone line with VP-300. You can set this number to give external alarm panel enough time for sending data back to control center and let VP-300 dial after alarm panel finishes its job. VP-300 will record the video inside its memory and sends back after link establishes with OYO client. Please refer to fig.5.11.9 for example.
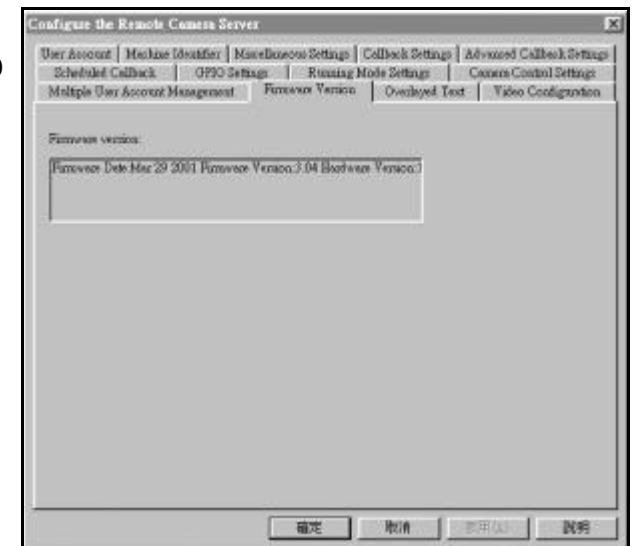
Figure 5.11.9

5.11.10 Firmware version

Click this block will show on the screen the firmware version currently used on this VP-300.

Figure 5.11.10

5.11.11 Miscellaneous Setting

The function is for the setting of date, time, com port baud rate and modem initialization string. Some modems may have compatibility problem. Setting the correct initialization string makes it easier to resolve compatibility problems. Please refer to fig.5.11.11 for example.

Figure 5.11.11
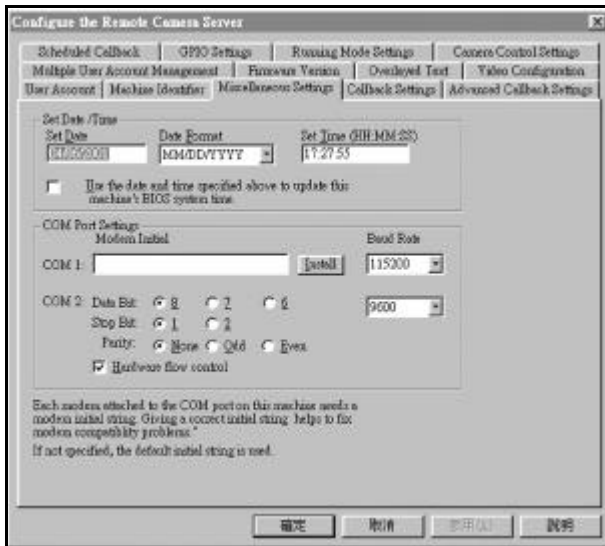
5.12 Remote Camera Control

For a detail instruction of equipped VP-300 with camera control device, please reference Section 3.11.

Select the video that you want to control. The screen will enter into single video mode. Click the camera control icon at the left top of the screen, the camera control dialog box will prompt out as Figure 5.12

Figure 5.12

Click on the buttons on the Pan/Tilt, Zoom blocks will force the camera to operate follow the corresponding commands. But please be patient to allow enough time for the video to transmit back from the remote side. Don't click the buttons too fast or you will never get the right view you want ! Remember "click and wait" is the most efficient operation.

The 6 preset buttons allow you to tell the camera to remember 6 positions that you prefer. When the camera is located at some position and you click the preset button, this position will be kept inside the camera's memory. After a while, if you move the camera to another position and you want it to move back to the previous preset position, just click the corresponding recall button and it will move back to that position automatically. This function is handy when it is difficult to adjust the camera to the right position. You can preset it locally and then recall it remotely. But one thing bad is that after power off the camera, previous preset values will be lost !
In this case you have to do the presetting from the beginning.

5.13 GPI/O and Callback Setting

VP-300 can call back automatically to a preset PC when some event happens. It is perfect for the security purpose. This function is available only under Modem/RS232 Mode.

1. Follow the procedures on Chapter 5 to install VP-300 at the remote site.

2. Connect **GPI** or **GPO** port on the back panel of VP-300 to external devices such as alarm, sensor for input to GPI or relay for output of GPO.

> **Note1: GPI** means General Purpose Input. For this kind of device, like a sensor, it can make an open or short circuit of two points connected to VP-300.
> **Note2: GPO** means General Purpose Output. For this kind of device, like an alarm, VP-300 can make a short circuit of its two points connected to VP-300.
> **Note3:** The **GPI ports are dry contact points. That means no voltage or current is allowed to put on them. GPO ports are reed relay. And the suggested ratings are maximum 24 volts DC and 200 mA current.**
> **Note4:** VP-300 has 4 sets of GPI/GPO, so you can connect 4 GPI equipment and 4 GPO equipment.

3. Run **OYO Viewer** to make a connection from your PC to VP-300. When it is connected, configure the callback environment as stated in **section 5.11.7.**

4. Configure the **GPI/O Settings** as stated in **section 5.11.6**

5. Disconnect from VP-300.

Setup at the callback center

1. Connect PC to a modem (external or internal).

Note: Make sure that you have installed this modem successfully.

2. Connect the telephone line into LINE jack of modem

Note: This telephone number should be the same as you input at the callback telephone number of the VP-300.

3. Run **OYO Viewer** on this PC.

Note: When you want to use the callback function, you have to run **OYO Viewer** permanently. You can minimize the window, but DO NOT exit **OYO Viewer**. Make sure to check the "Listen Call when idle" box before clicking the "**Close**" button. This process makes OYO viewer listen to incoming call when not communicating with remote VP-300 server.

Figure 5.13
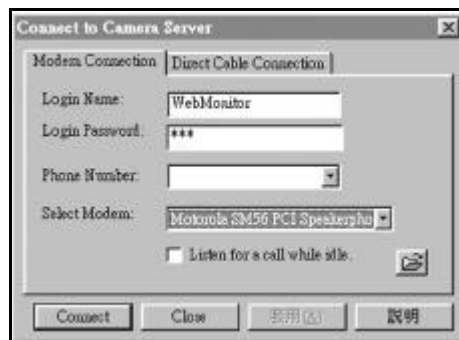
When the condition you have set happens, VP-300 will callback automatically to this PC. When the connection is done, you will see the recorded video first and the recorded video will be saved to a file. After the transmission is finished, you can see the real time video.

Note: It takes time to transmit the recorded video. We suggest you to set Record Duration around 20 seconds and Frame Rate equals 5.

Note1: The phone number is for VP-300 to callback. to the PC client
Note2: Please refer to your modem manual to input the correct format of phone number. Pay attention to prefix number, area number and extension number.

4. The physical installation procedure for "scheduled call back" and "advance call back" are the same as above. For the corresponding parameter settings, please refer to **section 5.11.8 and 5.11.9**

- End of this chapter -

Appendix A: LCD Messages

"INITIALIZING..."
   STATUS: System is initializing.

"VIDEO HW FAILED"
   ERROR: Video hardware self-test failed.

"VIDEO OK"
   STATUS: Video hardware self-test succeeded.

"NETWORK FAILED"
   ERROR: Network hardware self-test failed.

"WEBSERVER FAILED"
   ERROR: Web server startup failed.

"FTPSERVER FAILED"
   ERROR: FTP server startup failed.

"WEB/FTPSERVER OK"
   STATUS: Web/FTP server has beep startup successfully.

"TCPIP ERROR"
   ERROR: TCP/IP Protocol Stack Error.

"READY."
   STATUS: System Ready.

"SYSTEM REBOOT"
   STATUS: System now is rebooting.

"FW3.0/HW1.1+DB"
   STATUS: Display the version and information of firmware and hardware,
      +DB means daughter board is installed.

"FPS:30"
   STATUS: Display the current total video frame rate.

"REQUEST:4"
   STATUS: Display the total HTTP request being serviced.

"MIC:3 SPK:0"
   STATUS: Display the current occupied microphone and speaker.

"LAN/H263/NTSC"
   STATUS: Display the current information of
      running mode / codec algorithm / video standard
"MAC=0040CA810683"
   STATUS: Display the current MAC address (Ethernet address)

"IP ="
"192.168.10.10"
   STATUS: Display the current IP address

"SUBNET MASK ="
"255.255.255.0"
   STATUS: Display the current subnet mask

"GATEWAY IP ="
"0.0.0.0"
   STATUS: Display the current Gateway IP address

- End of this chapter -

Appendix B: WCOMW Usage

B.1 Prepare To Use WCOMW

1. Connect COM2 port (or one empty serial port) in PC and COM1 port of VP-300 via an RS-232 Cable (come with VP-300).

2. Insert the Setup Disk come with VP-300 into your floppy driver and copy all of those files to a directory of the PC and unzip the TeleWriter.zip.

3. Launch WCOMW.EXE on PC (double click on the icon of that file while you are in Windows 98 File Explorer)

4. If you are using other COM port of your PC to connect VP-300, please select it from File Menu.

B.2 Change Running Mode

You can use WCOMW to change the running mode of VP-300 in loader menu as following steps:

1. Power ON VP-300.

2. When you see "Starting Loader..." in WCOMW, press ESC key in two seconds and a loader menu will be displayed on WCOMW as follows, and if you failed to press ESC in 2 seconds, just restart VP-300 to do it again.

   ```
   [1] Set IP/DMS/GW
   [2] Update firmware
   [3] Set Master Code ...
   [4] Query firmware version
   [X] Exit
   Choose ?
   ```

   If you don't see "Starting Loader..." in WCOMW and the menu is displayed directly, you can use WCOMW without entering any key now.

3. Press 3 to set Master Code, and enter 1 for Network Mode, 2 for ISP Mode.

4. Press X to continue to boot.

5. You will see a menu displayed on WCOMW, the title may be read as "Network Mode Configuration Menu" for Network Mode or "ISP Mode Configuration Menu" for ISP Mode. See the next two sections to configure the appropriate parameters for VP-300. If you do not press ESC at the beginning, you will jump to the configuration menu directly.

B.3 Set IP address under Network Mode

1. If you have press X in loader menu and keep the RS232 cable connected, jump to 3.

2. Prepare the configuration as indicated in B.1, then power on VP-300.

3. Wait until you see this menu as follows:

   ---- Network Mode Configuration Menu -----
         [1] Set IP/SubnetMask/GW
         [2] Set Registry Server(IP/Domain/Path)
       [X] Exit
      Choose ?

4. Press 1 to set IP address, subnet mask and the gateway IP address for VP-300. A valid and unused IP address is required.

5. Press 2 to set the parameters for registry server, please reference section **3.8.8**.

6. Press X to exit and continue to boot.

7. Remove the RS-232 cable from VP-300.

B.4 Set ISP parameters under ISP Mode

1. If you have press X in loader menu and keep the RS232 cable connected, jump to 3.

2. Prepare the configuration as indicated in B.1, then power on VP-300.

3. Wait until you see this menu as follows:

   ---- ISP Mode Configuration Menu -----
         [1] Set ISP Parameters(Phone#/Name/Password)
         [2] Set Registry Server(IP/Domain/Path)
       [X] Exit
      Choose ?

4. Press 1 to set ISP phone number, name and password of the user account

5. Press 2 to set the parameters for registry server, please reference section **3.6.8**.

6. Press X to exit and continue to boot.

7. Remove the RS-232 cable from VP-300.

8. Connect modem to COM1 port for dialing to ISP.

- End of this chapter -

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Appendix C: Guide to Revise Firmware of VP-300

NOTICE

For FW3.02 and prior version, we strongly recommend users to use WCOMW as the only way to revise firmware, and after revision, remember to restore default factory settings.

Step-by-step instructions for revising firmware of VP-300

1. See Section 1 to use WCOMW connecting to VP-300
2. See Section 2 to check the version of loader and revise it if necessary.
3. See Section 3 to revise firmware

C.1 To Use WCOMW

A. Use WCOMW connect to VP-300

1.   Connect COM2 port (or one empty serial port) of PC and COM1 port of VP-300 using an RS-232 cable (comes with VP-300).
2.   Insert the Setup Disk come with VP-300 into your floppy driver and copy all of those files to a directory of the PC and unzip the file: **TeleWriter.zip**.
3.   Launch **WCOMW.EXE** on PC (double click on the icon of that file while you are in Windows File Explorer)
4.   If you are using other COM port of your PC, please select it from File Menu.
5.   Power on VP-300.
6.   When you see "**Starting Loader…"** in WCOMW, press **ESC** key in 2 seconds and a loader information and menu will be displayed, and if you failed to press **ESC** key in 2 seconds, just restart VP-300 to do it again. If you don't see "Starting Loader..." in WCOMW and the menu is displayed directly, just go ahead.

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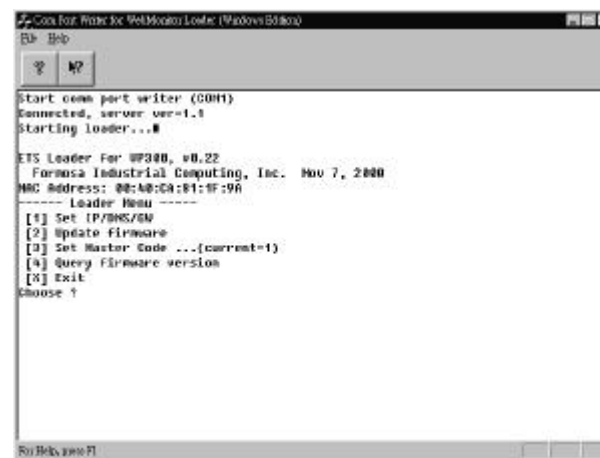
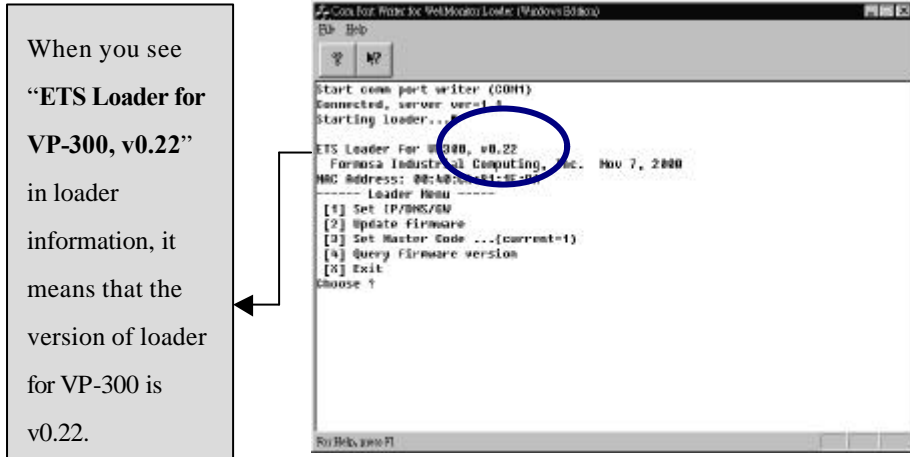(WCOMW Menu Displayed)

ETS Loader for VP300, v0.22   ← **loader information**
  [1] Set IP/DMS/GW
   [2] Update firmware   ← **loader menu**
  [3] Set Master Code ...
  [4] Query firmware version
   [X] Exit
 Choose ?

C.2 To Check the Version of Loader and Upgrade Loader

1. The loader information would be displayed as following. You can also check the version of loader.

<table>
<tr>
<td>
When you see

"**ETS Loader for**

VP-300, v0.22"

in loader

information, it

means that the

version of loader

for VP-300 is

v0.22.
</td>
<td>

</td>
</tr>
</table>

Loader versions and files for VP-300:

----

loader version 0.22   file: ldr300.exe.022

Notice:
Before revising firmware, make sure the loader version of your VP-300 is v0.22 (or later).
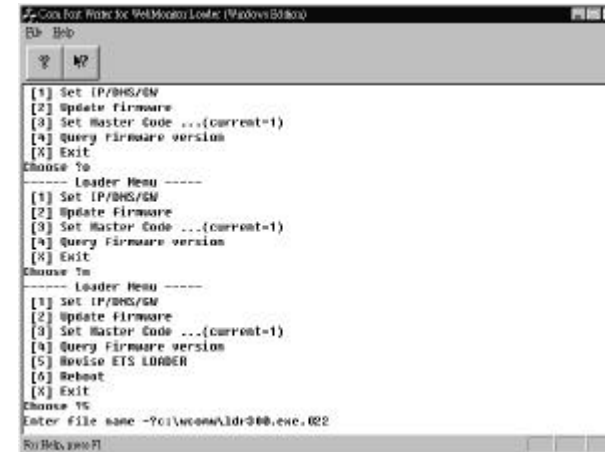
2. Press '**W**', '**E**', '**B**', '**M**', '**O**', '**N**' will pop up additional menu items as:

   [5] Revise ETS LOADER
   [6] Reboot
   [X] Exit
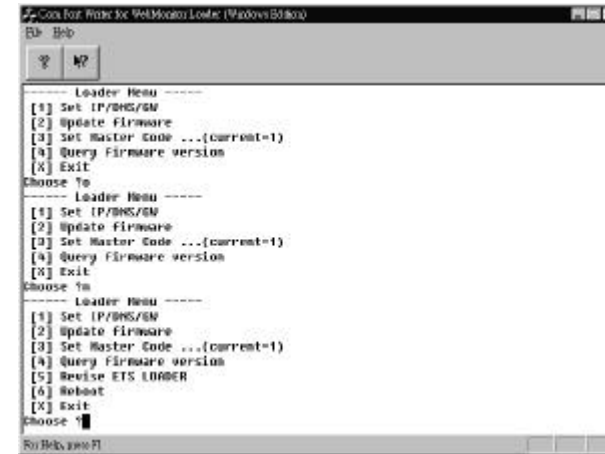
(Additional Menu Popped up)

3. Press **5** to revise loader, enter the full path and filename of the new loader.

(Full Path and Filename of the New Version of Loader Entered)

4. WCOMW is now uploading loader file to VP-300 for revision.

(ETS Loader Updated Successfully)

5. After revision, you have to restart VP-300. Just switch the power of VP-300,

C. 3   To Revise firmware

1. Press **2** to revise firmware.
2. Enter the full path and filename of the new firmware.

(Full Path and Filename of the New Version of Firmware Entered)

3. WCOMW is now uploading firmware file to VP-300 for revision.

(Firmware Updated Successfully)

4. After revision, press **X** to continue booting from the new firmware.
5. After VP-300 is ready, push and hold default settings button until VP-300

stops beeping.
6. VP-300 will restore default setting and reboot.
7. You have completed updating firmware of VP-300, you can now continue to configure it and use the new firmware.

- End of this chapter -

Appendix D: Modem Compatibility

Here is a list of certified modems/ISDN TA that we have tested and compatible with this product

ISDN TA:
Zyxel 2864I
FIC-100TA(X.75)

MODEM:
CinaAction V33600
CinaAction FM56JT
LEMEL 56K External (V1456VQE)
SmartLink 33.6K (3334AV)
USRobotics Sportster Voice 33.6 FaxModem
GVC 33.6K (SF-1133V/R16)
ADI 56K (SVD-56KIM)
The modem list for VP-300
Lemel MD-56KVC-E
CinaAction FM-56JT
BOSSCO H52PT-3030
USRobotics 56K FAX EXT

- End of this chapter -

<u>Appendix E: Troubleshooting</u>

E.1   General

Q: LCD is not lit when power on.
1.   Check power cable if it is well connected.

Q: Network indicator is not lit.
1.   Check the network cable connection
2.   Verify the network is working, you can ping an existing device on the network.
3.   Power off VP-300, wait at least 20 seconds, power on VP-300 and verify again.

Q: LCD backlight is lit and the display of text is freezed.
1.   Switch power to check again
2.   Revise the latest workable FW by WCOMW.

Q: Bad video quality.
1.   Raise the video quality setting.
2.   Check video quality from cameras.
3.   Adjust VGA color to be at least 65536 color.
4.   Try adjusting 75Ohm terminating resister.

Q: No video
1.   Check video cable, connector, power of camera. Use a TV set to verify the functionality of cameras.
2.   Check the corresponding Q&A of each running mode of VP-300 for this problem.

Q: Cannot control PTZ camera
1.   Check cable connection and power of the camera.
2.   COM2 parameters are not correct, or not accommodate with the PTZ device.
3.   ID of the PTZ camera is not set correctly.
4.   Switch the power of both VP-300 and PTZ camera.
5.   VP-300 do not support this type of PTZ camera.

E.2   Network Mode

Q: Cannot access VP-300 from browser.
1.   Verify network cable is well connected to hub and the network is good.
2.   Make sure you are using IP in the same subnet of VP-300.
3.   Clear the ARP list.
4.   If you are running MS Proxy Client on your PC, and the IP assigned to VP-300 is not a valid local IP on the network. Try to allocate a valid local IP to VP-300 or disable MS Proxy Client from the Control Panel.
5.   If you can ping the IP of VP-300, disconnect VP-300 from network and ping this IP again. If there is a response, then you have a duplicated IP address on the network.
6.   Clear your browser' s cache and make browser to check if there is newer version of web page at every visit.
7.   If you still cannot access VP-300, try disable proxy in your browser.

Q: You can access VP-300 in intranet, but failed to access it in internet.
1.   Verify your intranet is connected to internet.
2.   Verify if a valid public IP is assigned to VP-300 or a valid public IP is mapped to a valid local IP assigned toVP-300.

Q: No Video.
1.   Reload this page.
2.   Check the General Q&A about this problem.
3.   Clear your browser' s cache and make browser to check if there is newer version of web page at every visit.

Q: If you can access video of VP-300 in intranet, but failed to access video from internet:
1.   Check the settings of firewall and proxy server. VP-300 use standard HTTP protocol and port 80. It might be necessary to enable those video MIME types (video/x-nficwmh263 and video/x-nficwmhjpeg) of VP-300 to be granted by your firewall or proxy server. Also check if they allow large data transmission.
2.   Disable proxy server settings of your browser.

Q: Browser stops responding on mouse click
1.   You are opening too many video strings.
2.   You are opening more than one video string from the same camera.
3.   Your PC is too slow, upgrade and accelerate your system.

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Q: READY message is not present or LCD backlight is always lit.
1.   Check network connection.

E.3 ISP Mode

Q: VP-300 is failed to connect to ISP.
1.   Check cable connection, modem and phone line.
2.   VP-300 cannot compatible with most of ISDN TA under ISP Mode.
3.   Verify ISP phone number, user account, and password are correct.
4.   Check the line of ISP is not busy.

Q: VP-300 has connected to ISP, but cannot being accessed.
1.   If the IP assigned to VP-300 is assigned by ISP and VP-300 failed to register itself to the specified registry server, check the settings of registry server and make sure the registry server is working well.

- End of this chapter -