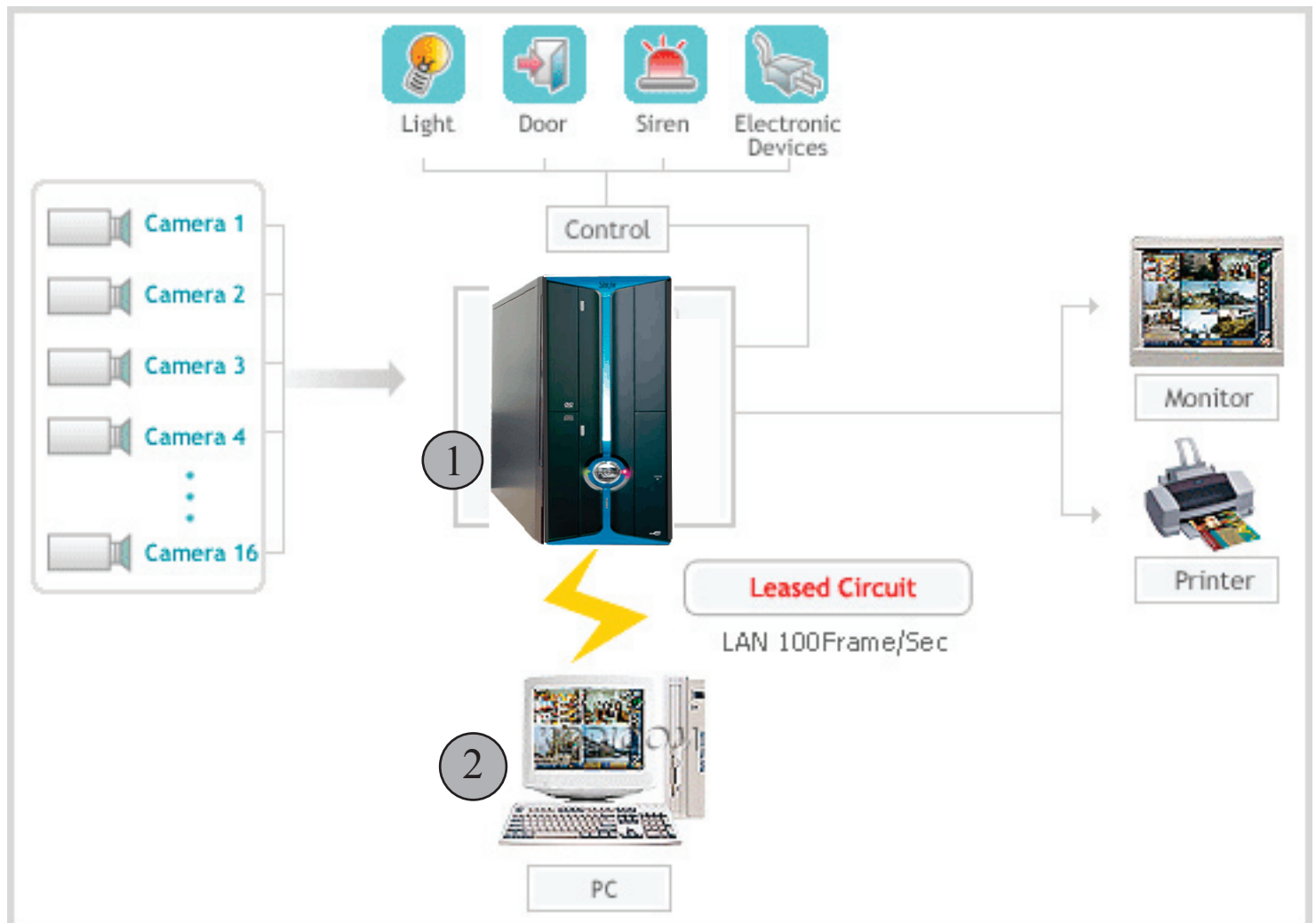


Basic Concept of SW-80 DVR System



1. Digital Surveillance Server:

The Digital Surveillance Server is responsible of capturing images from Video Cameras and record them to Storage Buffer, and enable operator to search or replay record, adjust surveillance internal settings, and transmit video/image through Internet/LAN/WAN to Digital Surveillance Viewer.

2. Digital Surveillance Viewer:

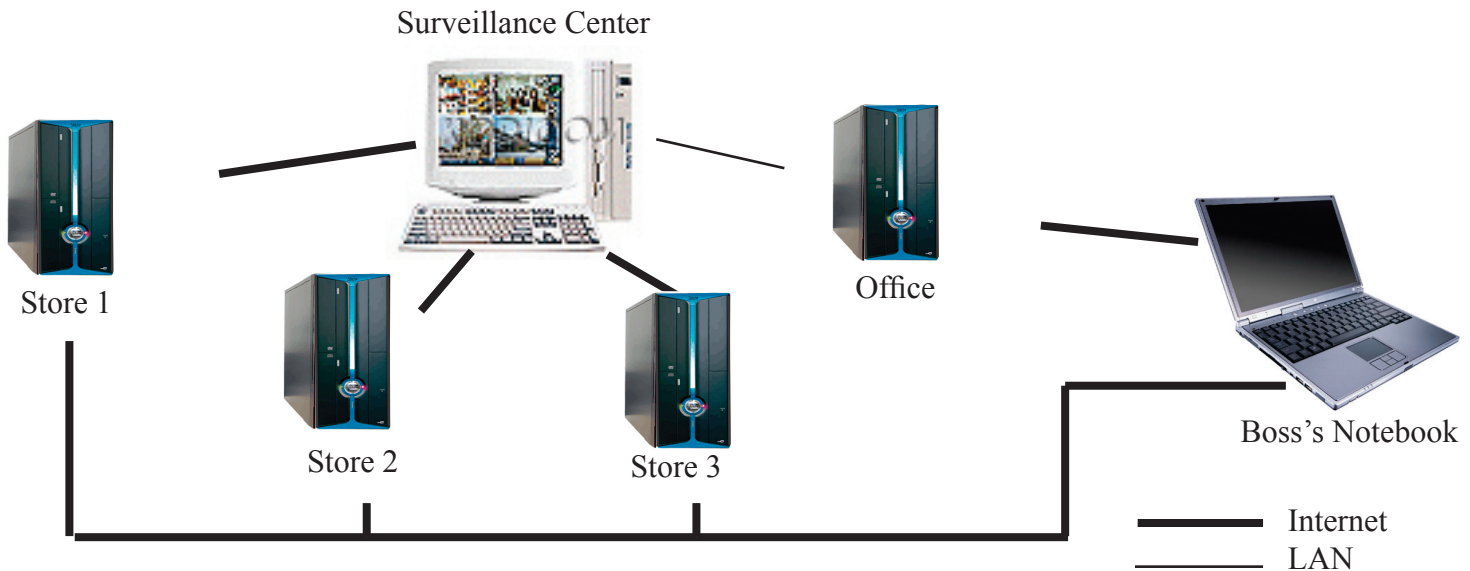
The DVR program of SW-80 comes with a remote viewing/recording module that enable remote user to record instantly captured images, search/replay records, download records and receive alert messages from the Digital Surveillance Server. All the Viewer need is just a PC or notebook with Internet Connection. And thanks for the help of VNC program, authorized viewer can even control the Digital Surveillance Server for trouble-shooting.

For Example:

Typical Chain Store:

Company A have 3 large stores for selling goods and 1 office for administrative works, General Manager wants all the stores and office are visually secured, and let his boss can monitor every stores and office while travelling at Europe, but not willing to hire too many surveillance system operators.

Solutions:



General Manager installed DVR SW-80 at every stores with 16 Cameras deployment, and linked all the Network DVRs to the surveillance center at office by Internet, and installed one SW-80 connecting with center at office by existing computer network, LAN. As all the DVR is connected, he only hired two DVR operators for 24-hour a day surveillance purpose, and manage/backup all the recorded video by high capacity and inexpensive CDR/DVD-R disks. His boss can monitor every stores and office by his personal notebook while he is on vacation.

Real-Time Monitoring

Multi-Screen Monitoring

SW-80 built-in Multiplexer, operator can monitor 1/4/7/10/13/16 cameras simultaneously with one monitor.



Full Screen Monitoring
4 Screen Monitoring
7 Screen Monitoring
10 Screen Monitoring
13 Screen Monitoring
16 Screen Monitoring

Real-Time Monitoring

SW-80 built-in 25 Frame/sec monitoring/recording processing speed. Operator can monitor camera real-time.

Remote Monitoring

SW-80 built-in 10/100Mbps Ethernet Adapter, viewer can log in the server by DVR Remote Module, and monitor real-time through the console

Sequencing

Operator can set automatic sequencing of the capturing image. If 4 Cameras are connected, image would display individually and switch to another within a period of time.

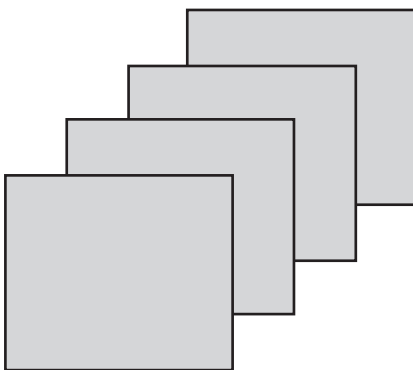


Real-Time Recording

Typical SW-80 system built in:

- 4 to 16 Cameras Input (BNC)
- 1 Audio Input
- Support NTSC/PAL
- Processing Speed: NTSC 30Fps
PAL 25Fps
- 2.5Kb per picture compression rate
- User-Defined Recording Frame rate

Frame rate



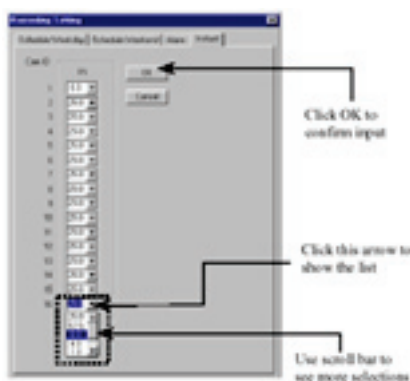
Smoothness of Digital Video is represented by Frame rate. All the video is composed of a series of Frame(Picture) linking and playing together to form a video. Human eye can see up to 25 Frames per second.

As a result, SW-80 captures 25 Frames/sec per camera, when the record is replaying, viewer can see every movement momentarily, just like real-life.

MPEG-4 Compression Technology

All the recorded video are compressed into MPEG-4 format at 2.5Kb per picture, this is a universal format with high compression rate, video can be viewed or played at any workstations.

Adjustable recording Frame rate and Resolution



Recording setting for instant recording

Although each captured picture is compressed into 2.5Kb in size, operator can adjust the recording Frame rate from 25, 12.5, 8, 4, 1, 1/60.

Resolution of the image can also be adjusted, in
PAL mode: 192x144, 384x288, 640x480
NTSC mode: 160x120, 320x240, 640x480

Also, operator can also adjust brightness and contrast rate.

Multi-Recording Mode



Continuous Recording

Recording continue 24-hour a day, 7 days a week, non-stop.

Time-Scheduled Recording

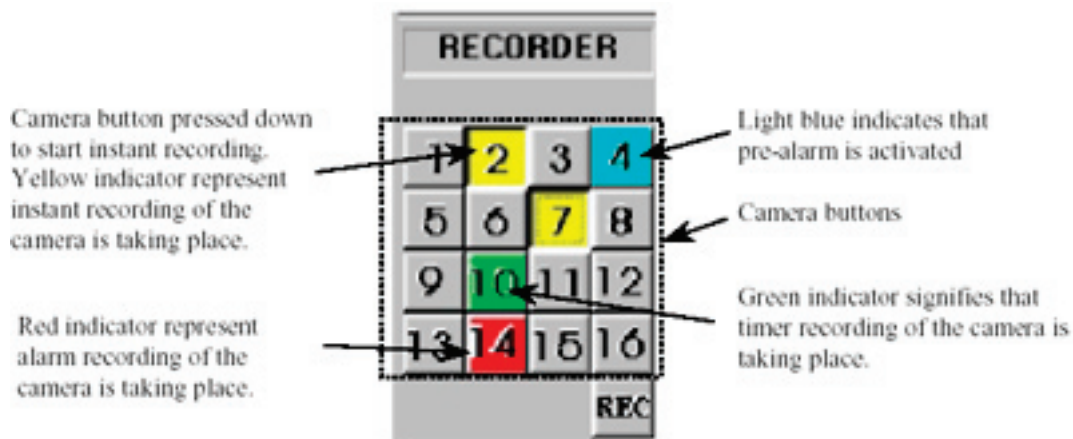
Recording fix at weekdays or weekend during a specified period of time.

Motion Detection Recording

Recording only takes place when motion or movement is detected. This mode greatly reduces unnecessary recording.

Pre-Alarm Recording

When motion is detected, system can save the record before and after the event, so that complete coverage is possible.

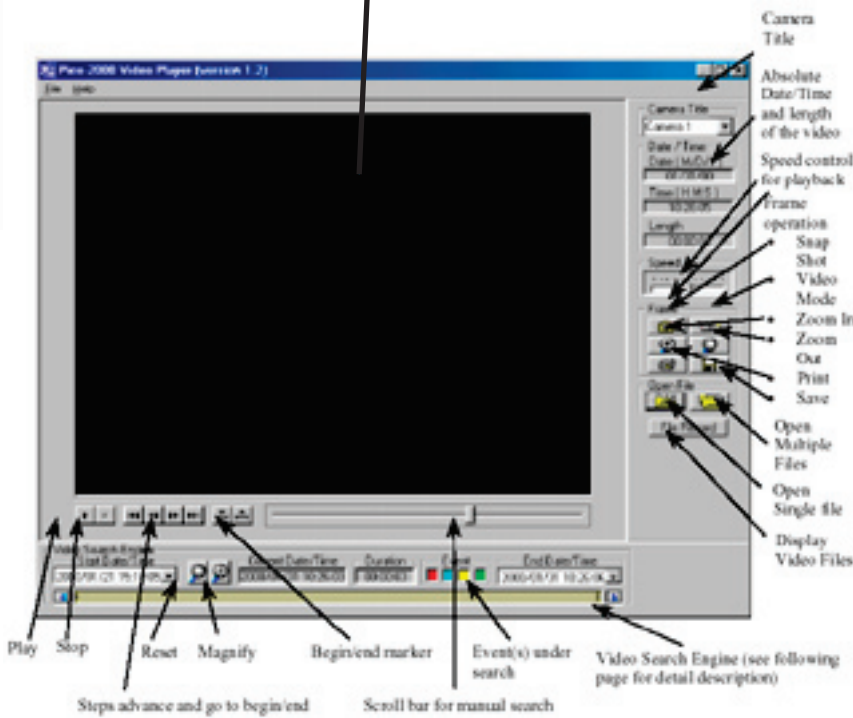


Retrieval/Search of Record

Triplex Operation (Record, Search and Transmit)

Operator can search, backup or snapshot recorded data without affecting normal recording operation, and SW-80 also get an easy to use Video Search Engine, and all the record is named by camera ID, year/date/hour/minute mechanism.

- Support of Camera Name and date/time stamp for legal evidence

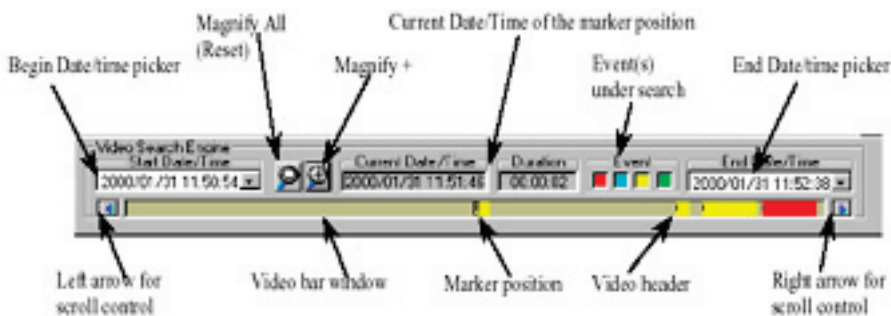


- Easy Search record by year, date, hour and minute

- Easy search record by list, and records are split up at the time intervals of 15 minutes, that makes retrieval of record much more easier



- Operator can snapshot recorded video, and adjust brightness, contrast, or zoom; or play back, forward, fast forward, backward, skip, slow motion, pause, frame by frame



- Print snapshot image

- Easy locate target Frame by Video Search Engine



- Backup snapshot image to Floppy Disk

Support Wide Range Cameras

Type of cameras supported

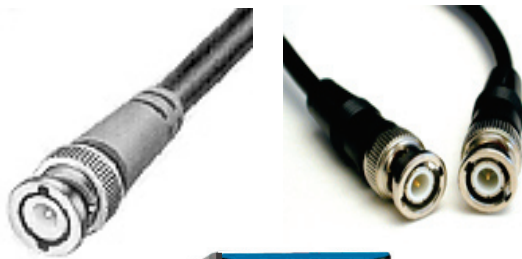
SW-80 supports most cameras, Miniature, Professional Video Camera, Doom Camera with BNC output interface.

Most popular Doom Camera



Professional Video Camera

Miniature Camera



Professional Zoom Camera



- SW-80 also supports Pan/Tilt/Zoom, Infrared, Color or B/W Cameras

Infrared Camera

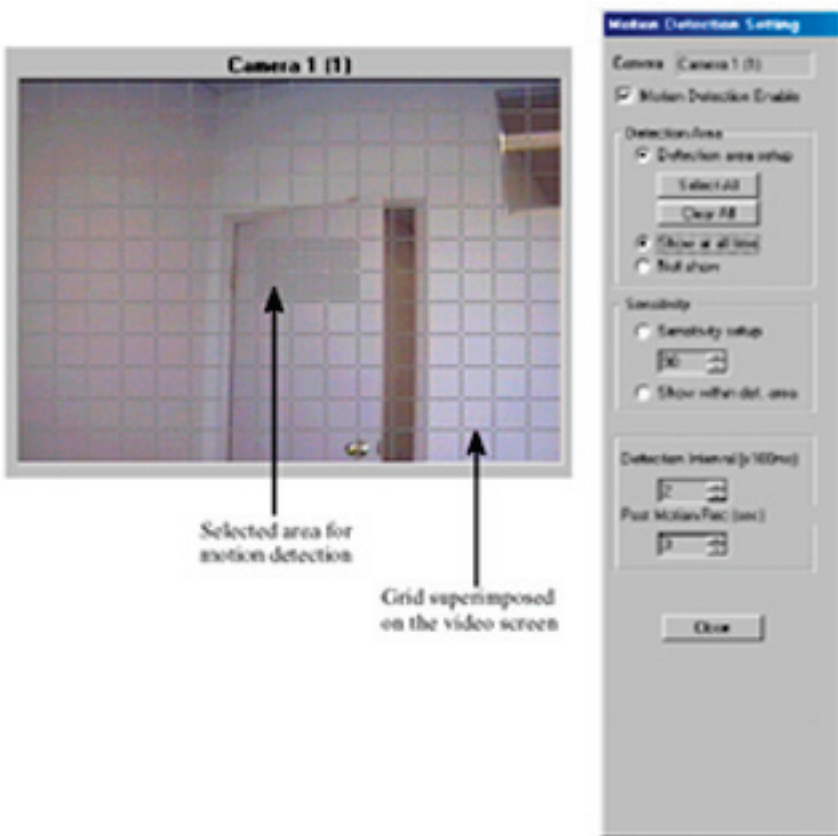


Pan/Tilt Controller



Motion Detection System

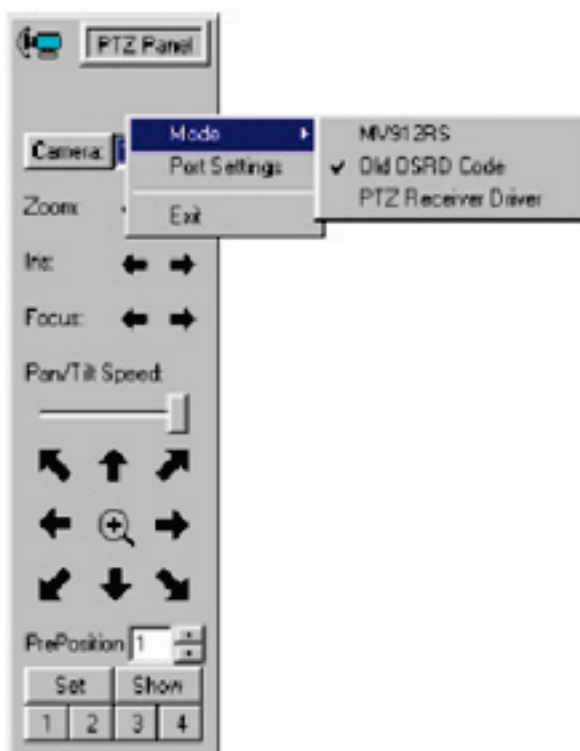
- Operator can define their detection area by selecting blocks easily



- Adjustment of motion sensitivity for various environmental factors

- Start Pre-Alarm recording before and after motion is detected.

Pan/Tilt/Zoom Control(Optional)

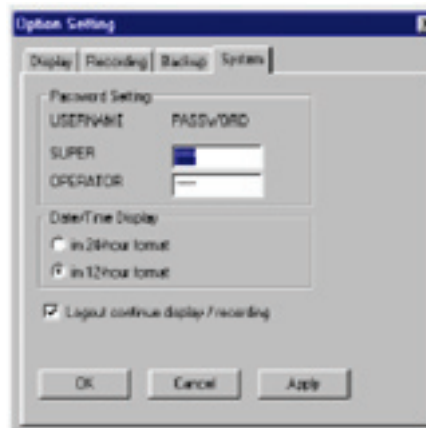


SW-80 supports Pan/Tilt/Zoom camera and even control them, remote viewer can also perform the same operation with remote program module

System Security

Password Protected

- Operator have to key in password in order to log in the system and change internal surveillence settings.



Automatically Daily Operation and System Stability

Automatically Operation

- SW-80 starts DVR Program, log in and execute surveillence settings automatically, operator does not need to set the settings every time. As a result, no Keyboard, Mouse or other Control Peripherals are needed for normal daily operations. Also, internal settings can be changed by VNC Remote Control Program at remote operator by authorized password.

System Stability

- Every SW-80 DVR passed through our internal testing, long duration non-stop recording test to ensure system hardware stability before delivery.

Also, SW-80 embedded with Microsoft build OS that provides good integration of hardware and network compatibility.

Operating at Log off

- When no user logged in the system, DVR still record and capture images, display image and even transmit images through Internet. This function ensure normal daily surveillence operation would not be affected by human fault.

Easy Backing up Mechanism

MPEG-4 [AVI] Backing up technology

System backups all the recorded video by latest MPEG-4 technology, and compressed and converted into AVI format that can be opened by all computers, that also ensure universal use.

Approximate Recording size by MPEG-4

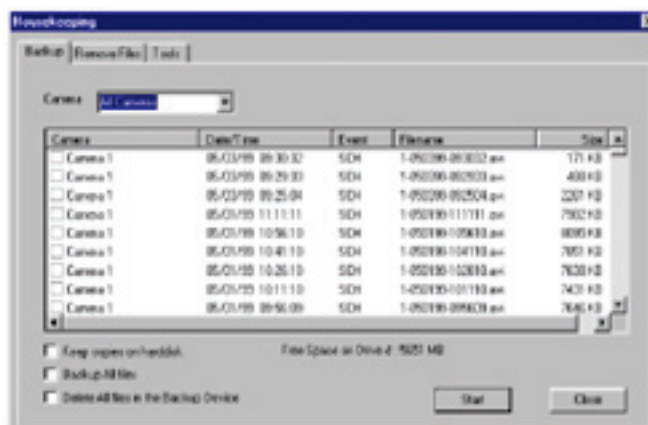
Duration Frame/sec	1 Minute	1 Hour	1 Day	1 Month
25	4 MB	225 MB	5.4 GB	162 GB
12.5	2 MB	112 MB	2.7 GB	81 GB
8	1.2 MB	72 MB	1.8 GB	52 GB
4	0.6 MB	36 MB	0.9 GB	26 GB
1	0.2 MB	9 MB	0.2 GB	6.5 GB

Scheduling Backup Period

User can specified when and how to backup recorded data at the server. Data can be stored by CDR/CDRW, image can be saved by Floppy(Snapshot)(JPEG/BMP)

Normal Mode: The Digital Surveillance Server will record video into Fixed Hard Drive (s). As required, you can backup the recorded video to a Removable IDE drive or CD-Writer via the normal Backup Function.

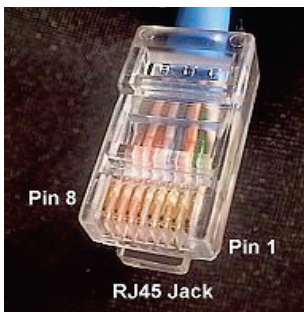
Archive Mode: The Digital Surveillance Server will record video into the assigned Removable IDE Hard Drive(s). When it is about full, it can be removed from the recorder physically for additional archiving to DAT or other backup media. The DSR Digital Surveillance Recorder will maintain continuous recording to an alternate removable drive during the archiving operation. When the videos inside a Removable drive are obsolete, they can be erased immediately before video recording is resumed on this drive.



Wide Range Support of Computer Network and Peripherals

SW-80 built-in 10/100Mbps Ethernet Adapter, and equipped with Microsoft build OS, it supports PSTN, ISDN & LAN network.

RJ-45



- Connect other Computer, Hubs, Router, Internet

BNC



- Connect the Video Cameras

USB 2.0

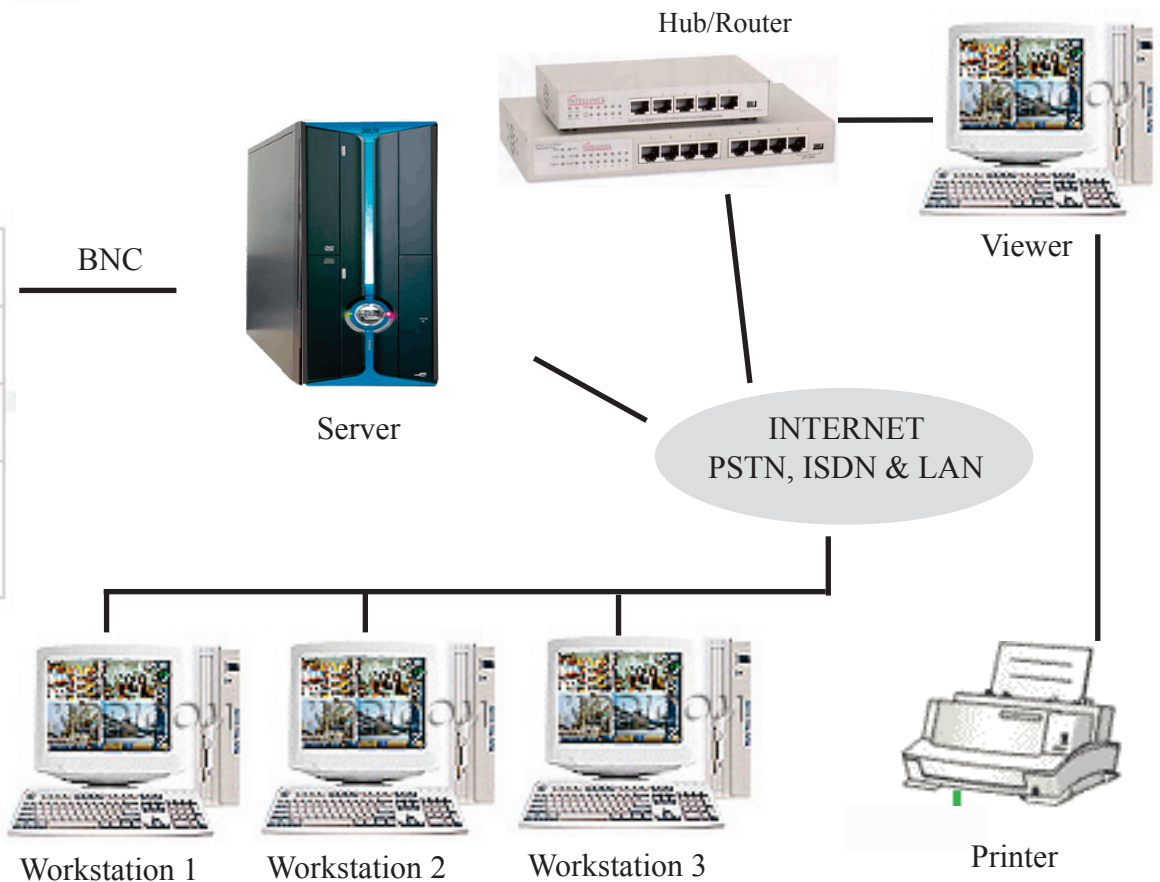


- Connect with Keyboard, Mouse, Printeretc

Telephone Lines [Optional]



- Connect to the Internet

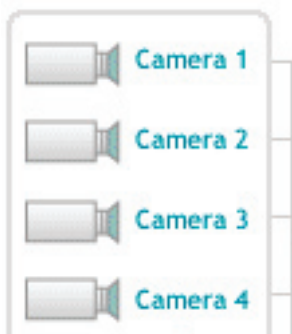


Remote Monitor, Record and Control through Network or Internet

Basic Concept

SW-80 DVR Program comes with two parts, Server Program and Viewer Program. Operator can monitor, record and control the Server by Viewer and VNC Program with authorization password.

What Server can do is almost what Viewer can do



INTERNET/
NETWORK



Viewer

- Connect with Video Cameras and record all captured image

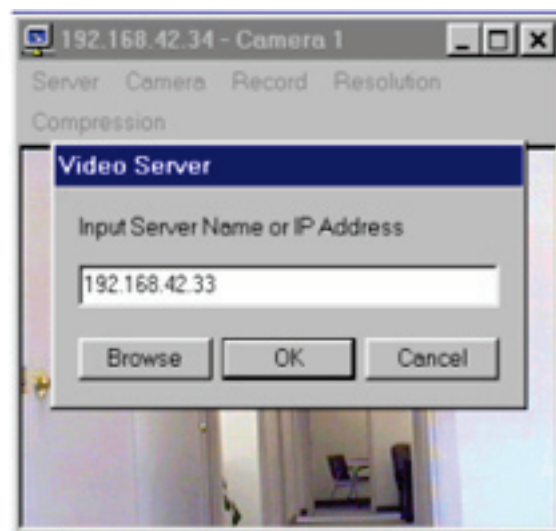
- Operator can monitor, record real-time, search record, backup and control the DVR Program of the Server.

This designation offers great flexibility to DVR Operator, they can manage DVR settings and control immediately when emergency

Viewer Program supports Windows 98/2000/XP/NT

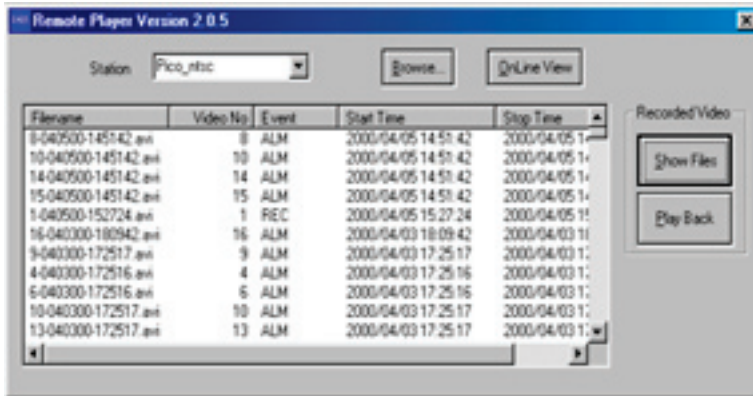
TCP/IP Configuration

Each Viewer PC must enter correct IP of Server in order to make connection.



Main Screen of Center Program

Search/Retrieve recorded data stored at Server



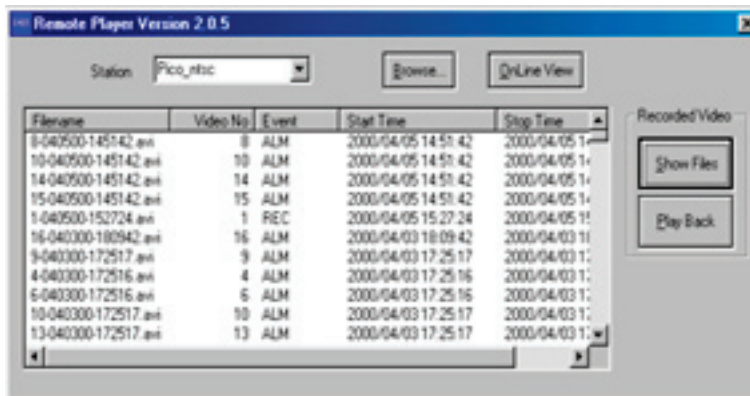
- Direct & Immediate Search for any Picture by Date, Time and Camera Name

- Various Searching Function: play back, forward, fast forward, backward, skip, slow motion, pause, frame by frame, zooming up and brightness control etc.

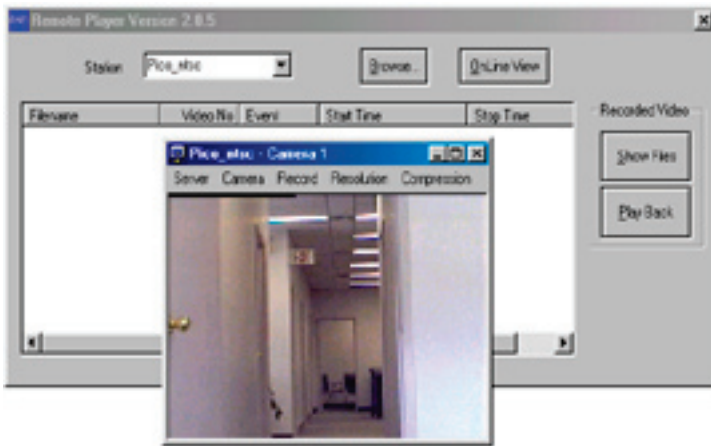
- Print snapshot image for legal evidence

Back up recorded data stored at Server

- Operator can backup/download the snapshot image, recorded video from Server to Viewer PC

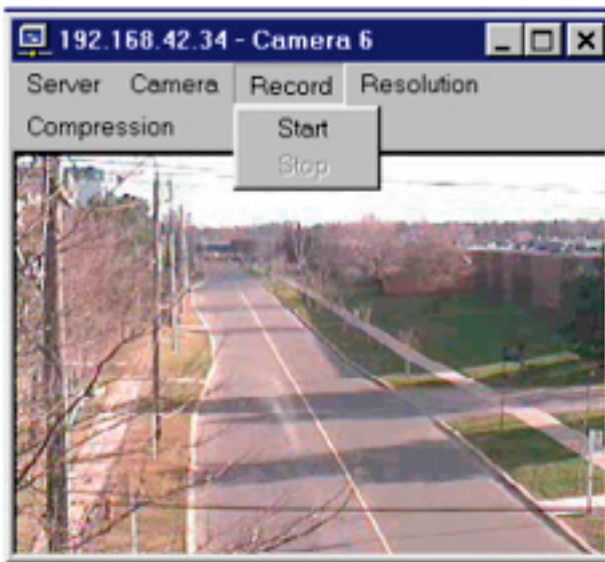


Real-Time Monitor Capturing image



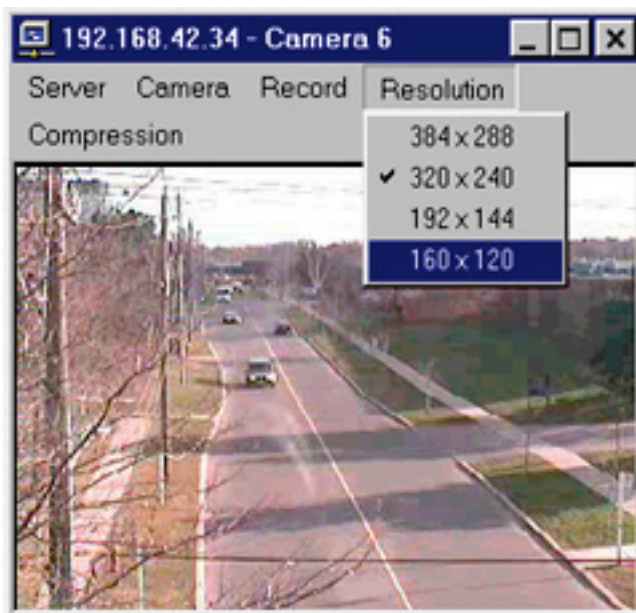
- Operator can monitor capturing images real-time

Real-Time Record Capturing image



- Operator can record the capturing images real-time through Internet/Network

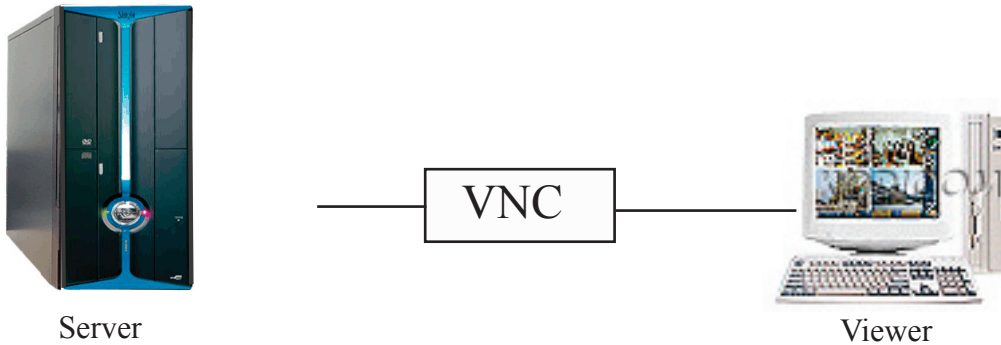
Adjustment of Resolution, Image Quality and Image Quality Transmission



Operator can also adjust the resolution, Frame rate; and the Image Quality Transmission parameter as well.

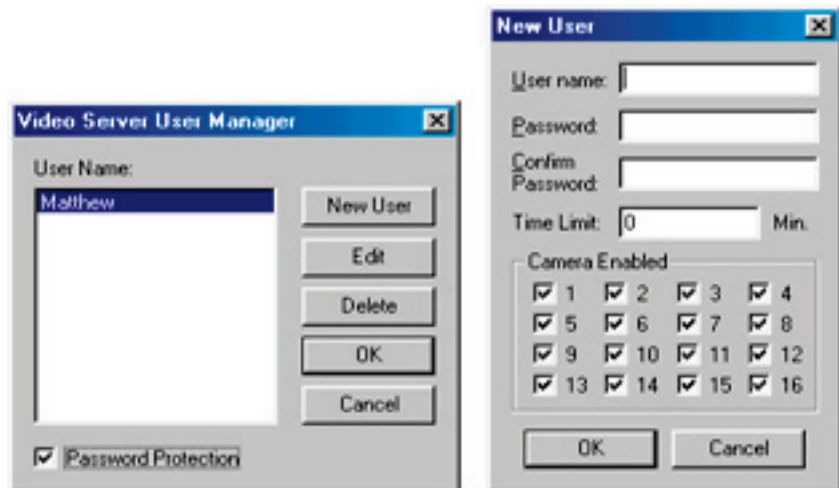
Direct Control of the DVR Server

Through VNC Viewer, user can control the DVR Program directly.



Multi-User Login Account

Server can create user account, and restrict the viewing of camera to viewer

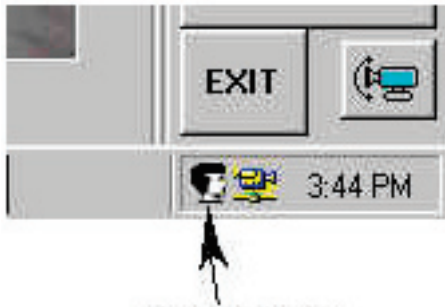


Multi-Connections and Viewing System

When viewer PC logged in Server A, who can also login to Server B Simultaneously, and perform the same operations as well



Alarm Alert Module

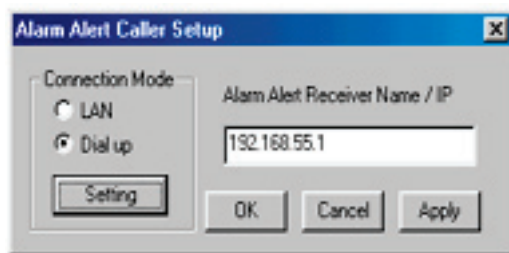


Alarm Alert Icon

The alarm alert application consists of two software modules, the Alarm Alert Caller and the Alarm Alert Receiver.

The Alarm Alert Caller runs with the Server unit and the Alarm Alert Receiver is installed in the remote viewer PC.

The alarm alert signal can reach the remote machine through dial-up connection, LAN connection or through Internet connection.



- Enter correct IP Address

- Whenever alarm is triggered at Server, signal would transmit and give alert signal to remote viewer, such as motion detection alarm

