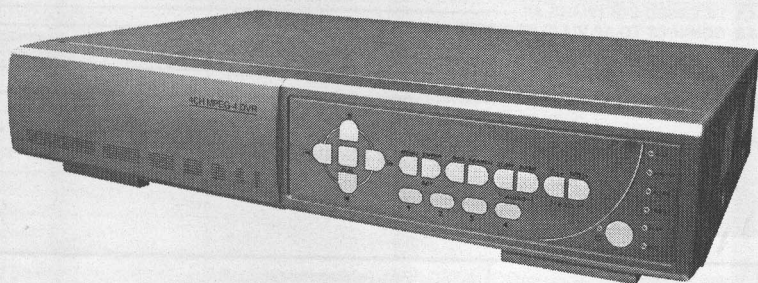# QUICK START

4 CH MPEG-4 DVR

For detailed instructions, please refer to user's manual in the disk.

Please read instructions thoroughly before operation and retain it for future reference.

781(ENGLISH)_V0.92

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SPECIFICATION

1.1 SPECIFICATION
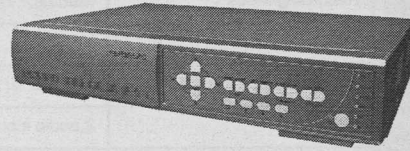
Video System	NTSC / PAL (switch able)
Video Compression Format	MPEG 4
Video Input	4 Channels. Composite video signal 1 Vp-p 75Ω BNC
Video Loop Out	4 Channels. Composite video signal 1 Vp-p 75Ω BNC
Video Output	Main Monitor Output: Composite video signal 1 Vp-p 75Ω BNC Call Monitor Output: Composite video signal 1 Vp-p 75Ω BNC
Maximum Recording Rate	Frame: 720 x 480 pixels with 30 IPS〈NTSC〉/ 720 x 576 pixels with 25 IPS〈PAL〉 Field : 720 x 240 pixels with 60 IPS〈NTSC〉/ 720 x 288 pixels with 50 IPS〈PAL〉 CIF: 352 x 240 pixels with 120 IPS〈NTSC〉/ 352 x 288 pixels with 100 IPS〈PAL〉
Adjustable Recording Speed	Frame: 30, 15, 7, 3 IPS <NTSC> / 25, 12, 6, 3 IPS <PAL> Field: 60, 30, 15, 7 IPS <NTSC> / 50, 25, 12, 6 IPS <PAL> CIF: 120, 60, 30, 15 IPS <NTSC>/ 100, 50, 25, 12 IPS <PAL>
Image Quality Setting	Best, High, Normal, and Basic
Hard Disk Storage	IDE type, ATA66, supported HDD ＊1, support HDD capacity over 400GB
HDD Quick Cleaning	Quick clean up the "index system" of the recorded files. 250GB under 2 seconds

Specification Continued...

Recording Mode	Manual／Timer／Motion／Alarm
Watermark	Yes
Refresh Rate	120 IPS for NTSC / 100 IPS for PAL
Audio I/O	2 audio inputs, 1 audio output (Mono)
Motion Detection Area	16 x 12 grids per camera for all channels
Motion Detect Sensitivity	4 adjustable variables with precise calculation for motion detection
Pre-alarm Recording	Yes (8MB)
USB Interface	Support USB 1.1/ 2.0 device
Backup Device	USB 1.1 / 2.0 backup device and network remote backup
Web Transmitting Compression Format	Motion JPEG
Ethernet	10/100 Base-T. Support remote control and live view via Ethernet
Web Interface	Support licensed software AP, and IE browser
Remote Alarm Notification	E-mail images, and images uploading to FTP site's specific account
Network Connection	Support TCP/IP, PPPoE, DHCP and DDNS functions
PTZ control	Support PELCO-D protocol
Dwell Time (Sequential Channel Switch)	Programmable with adjustable dwell time
Alarm I/O	4 inputs, 1 output
Digital Zoom	2X digital zoom (live mode)
Key Lock	Yes
Video Loss Detection	Yes
Camera Title	Support up to 6 letters
Video Adjustable	Hue／Color／Contrast／ Brightness
Date Display Format	YY/MM/DD, DD/MM/YY, MM/DD/YY, and Off
Power Source	DC 19V
Power Consumption	＜42 W
Operating Temperature	10℃ ~ 40℃ (50℉~104℉)
Dimensions (mm)	343mm (W) x 59mm (H) x 223mm (D)
System Recovery	System auto recovery after power reconnected
Optional Peripheral	**VGA connector**

❑　Any changes made to the actual product are subjects to no further notification.
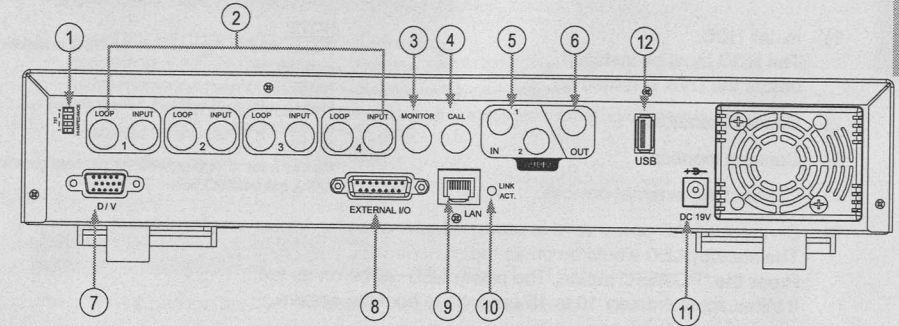
1.2 FRONT PANEL

1) "LED LIGHT" :

2) "MENU" :
Press "MENU" button to enter main menu.

3) "ENTER" / "SET" :
Press "ENTER" button to confirm.

Press "SET" to change channel display position.
Press "▲▼◄►" to select the channel which you like to change,
Press "＋" or "－" select the channel which You would like to show.
Press "ENTER" button to confirm.

4) "SEARCH " :
Press "SEARCH" button to enter the search mode.

5) "SLOW " :
Under playback mode, press "SLOW" button to show slow playback.

6) "ZOOM " :
Press "ZOOM" button to enlarge the picture of selected channel (under live mode).

7) "⊞ " / " — " :
Press "⊞ " button to show the 4 channel display mode.
Press " — " button to change the setting in the menu.

8) "SEQ" / " ＋ " :
Press "SEQ" button to activate the call monitor function and press "SEQ" button again to escape the call monitor mode.
Press "＋ " button to change the setting in the menu.

9) "POWER" :
Press this button to turn on / off the DVR.
(Under recording mode, please stop record before turn off the DVR).

10) "CH1 " "CH2 " "CH3 " "CH4 " :
Press "1 " "2 " "3 " "4 " buttons to select the channel.

11) "REC" :
Press "REC" button to activate the manual recording.

12) "PLAY" :
Press "PLAY" button to playback the recorded files.

13) "UP / PAUSE , DOWN / STOP, LEFT / FAST REWIND, RIGHT / FAST FORWARD" :
Press "▲▼◄►" to move the cursor up / down / left / right.
Under playback mode, press " ❚❚ " button to pause playback.
Under playback mode, press " ■ " button to stop playback.
Under playback mode, press " ◄◄ " button to fast rewind.
Under playback mode, press " ►► " button to fast forward.

14) " ⊂⊃ AUDIO " :
Press these two buttons to select live or playback sounds of the 2 audio channels.

15) " ⊂⊃ P.T.Z " :
Press these two buttons at the same time to enter / exit the PTZ control mode.

16) Press "POWER" button on the DVR front panel to shutdown, and then press "POWER" + "►" to switch to PAL system.
(Press the buttons until the monitor show the video image of the DVR.)

17) Press "POWER" button on the DVR front panel to shutdown, and then press "POWER" + "◄" to switch to NTSC system.
(Press the buttons until the monitor show the video image of the DVR.)

18) Press "MENU" + "ENTER" buttons on the DVR front panel to key lock.

1.3 REAR PANEL

1) 75Ω / HI:
When using Loop function, please switch to HI. When you don't use Loop function, please switch to 75Ω.

2) VIDEO INPUT (CHANNEL 1 - 4) :Connect to video source, such as camera.
LOOP (CHANNEL 1 - 4):Video output.

3) MONITOR:
Connect to Main monitor.

4) CALL MONITOR:
Connect to CALL monitor. Show the channel switch display. When the alarm is triggered, the call monitor will show the image of the triggered channel for a period of time.

5) AUDIO IN :
Connect to audio source, such as camera which equipped with audio function.
When users start the recording function, the audio input will be recorded.

6) AUDIO OUT :
Connect to monitor or speaker.
With 1 mono audio output from the same source.

7) D/V PORT (Digital Video Port):
Connect to VGA connector card.

8) EXTERNAL I/O PORT:
Connect to external device. Control external device or controlled remotely by external device (alarm input, external alarm).

9) LAN:
Connect to Internet by LAN cable.

10) LINK / ACT LED light:
When the Internet is activated, the LED light will be on

11) POWER:
Connect to provided adapter.

12) USB:
Support firmware update and files backup.

2.1 GETTING STARTED
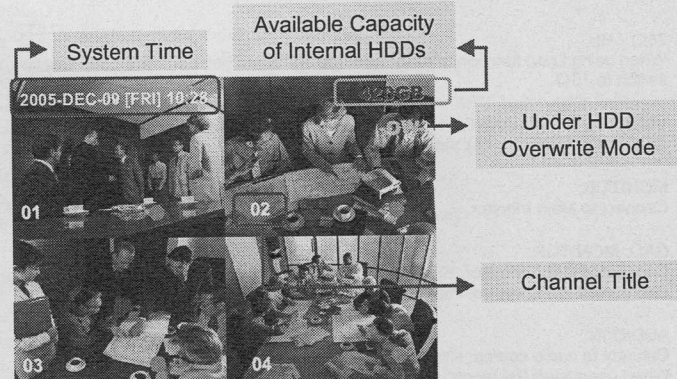
Connecting all the devices to construct a surveillance.

1) Install HDD:
   The HDD must be installed
   before the DVR is turned on.

2) Connect cameras.

3) Connect monitors.

4) Connect the external devices.

5) Connect the AC power cord to power adapter and plug into an electrical outlet.
   The standby LED would be on as red.
   Press the "POWER" button. The power LED will be on as red.
   It takes approximately 10 to 15 seconds to boot the system.

NOTE:
Please refer to Appendix #1 for HDD installation instructions.
NOTE:
Please refer to "Section 1.3 Rear Panel" for connection.
NOTE:
Please refer to Appendix#2 for pin configurations of the external I/O port .

System Time

Available Capacity of Internal HDDs

2005-DEC-09 [FRI] 10:28

Under HDD Overwrite Mode

01   02

Channel Title

03   04

2.2 SYSTEM TIME SETUP

Go to Menu mode, move the cursor to "DATE", and press "ENTER", then the screen will show the following options.

(MENU)
RECORD
TIMER
► DATE
ADVANCE

DATE	
DATE	2006-JAN-13 16:35:22
FORMAT	Y-M-D
DAYLIGHT SAVING	ON

DAYLIGHT SAVING	
START	4TH-SUN-MAR 01: 00: 00
END	4TH-SUN-OCT 01: 00: 00
ADJUST	01 : 00

NOTE: The illustrated setting means: During the daylight saving time period (start from the 4th Sunday of March, end on the 4th Sunday of October), the DVR system time will plus one hour.

3.1 RECORDING

The DVR offers three recording modes: manual record, event recording, and timer record.
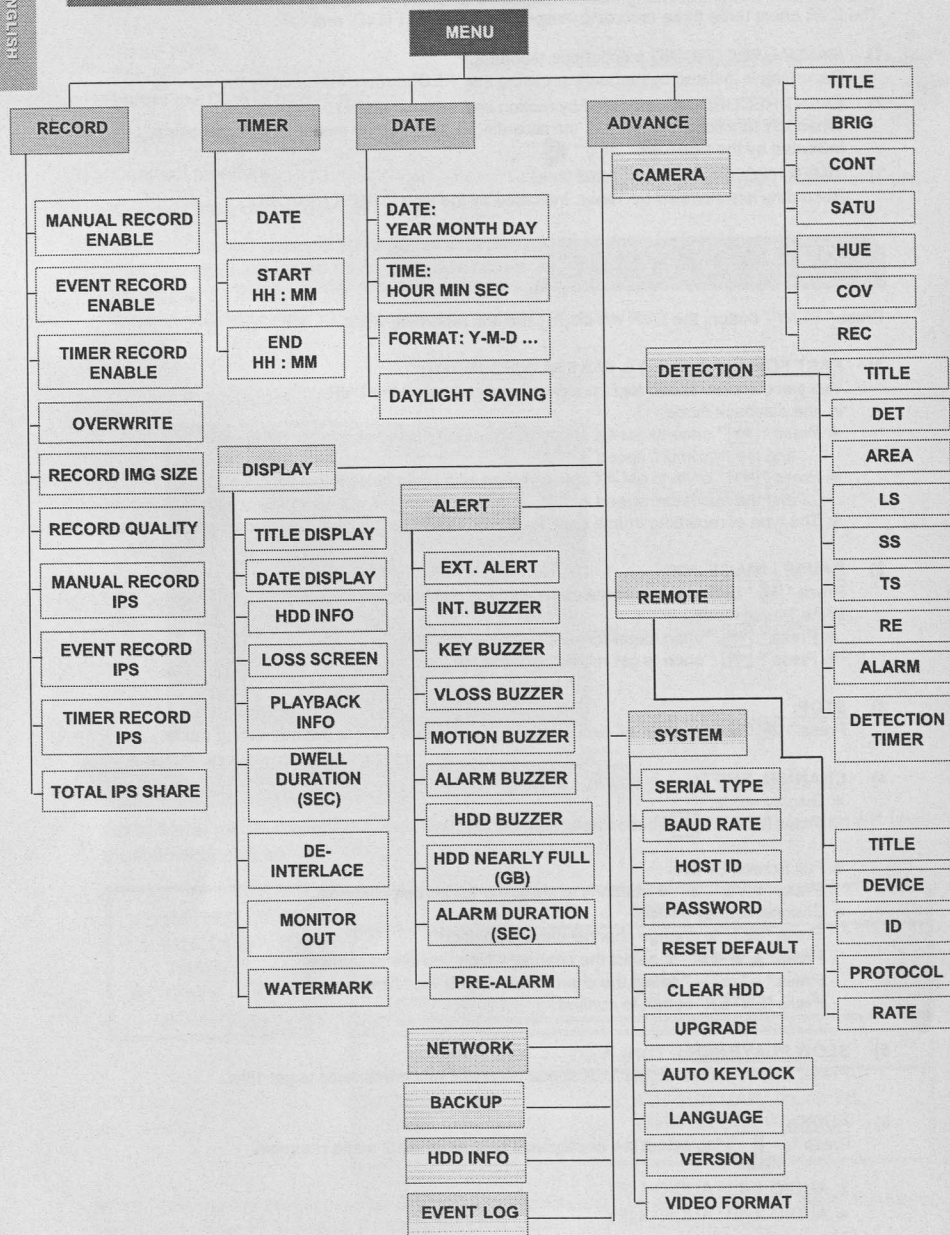The DVR offers three three recording image size: FRAME, FIELD, and CIF.

1) MANUAL RECORDING (continuous recording) :
   Recording is initiated by manually pressing the "REC" button. Indicated by the sign "●"

2) EVENT RECORDING (triggered by motion and external alarm) :
   When this functions is activated, the recording is triggered by motion or external alarm.
   Indicated by the sign " 🔔 " and " 🔲 " .

3) TIMER RECORDING (scheduled time) :
   Recording is scheduled by Timer. Indicated by the sign "TIMER RECORD".

3.2 PLAYBACK

Press " PLAY " button, the DVR will display the last recording video.

1) **FAST FORWARD (F.F.) & FAST REWIND (REW):**
   You can increase speed for fast forward and rewind on the DVR.
   In the playback mode,
   * Press " ▶▶ " once to get 4X speed forward and press twice to get 8X speed,
     … and the maximum speed is 32X.
   * Press " ◀◀ " once to get 4X speed rewind and press twice to get 8X speed,
     … and the maximum speed is 32X.
   * The type of recording image size (Frame or FIELD or CIF) will also shown on the screen.

2) **PAUSE / IMAGE JOG:**
   Press " ❙❙ " button to pause the current image displayed on the screen.
   In the Pause mode,
   * Press " ▶▶ " once to get forward by frame change.
   * Press " ◀◀ " once to get rewind by frame change.

3) **STOP:**
   Press " ■ " button under all circumstance, it will return DVR to live monitoring mode.

4) **CHANNEL SHIFT:**
   * Display mode:
     Press MODE " ⊞ " button to 4 channels display.

   * Full Screen Switch:
     Press "1 " "2 " "3 " "4 " buttons to show the full screen channels.
   * Channel display switch:
     Press "SET" to change channel display position.
     Press "▲▼◀▶" to select the channel which you like to change,
     Press "+" or "−" select the channel which you like show.
     Press "ENTER" button to confirm.

5) **SLOW PLAYBACK:**
   Press "SLOW" button to get 1/4X speed playback and press twice to get 1/8X.

6) **AUDIO:**
   Press " ⊂⊃ " to select live or playback sounds of the 2 audio channels.

   * AUDIO 1 (L) ; AUDIO 1 (P)
   * AUDIO 2 (L) ; AUDIO 2 (P)

3.3 MENU TREE

```
                              MENU
   ┌──────────┬──────────┬──────────┬─────────────────────────┐
 RECORD     TIMER      DATE      ADVANCE                    TITLE
                                                            BRIG
                                                            CONT
                                   CAMERA                   SATU
                                                            HUE
                                                            COV
                                                            REC
```

RECORD
- MANUAL RECORD ENABLE
- EVENT RECORD ENABLE
- TIMER RECORD ENABLE
- OVERWRITE
- RECORD IMG SIZE
- RECORD QUALITY
- MANUAL RECORD IPS
- EVENT RECORD IPS
- TIMER RECORD IPS
- TOTAL IPS SHARE

TIMER
- DATE
- START HH : MM
- END HH : MM

DATE
- DATE: YEAR MONTH DAY
- TIME: HOUR MIN SEC
- FORMAT: Y-M-D …
- DAYLIGHT SAVING

ADVANCE → CAMERA
- TITLE
- BRIG
- CONT
- SATU
- HUE
- COV
- REC

ADVANCE → DETECTION
- TITLE
- DET
- AREA
- LS
- SS
- TS
- RE
- ALARM
- DETECTION TIMER

ADVANCE → REMOTE
- SYSTEM (see below)

SYSTEM
- SERIAL TYPE
- BAUD RATE
- HOST ID
- PASSWORD
- RESET DEFAULT
- CLEAR HDD
- UPGRADE
- AUTO KEYLOCK
- LANGUAGE
- VERSION
- VIDEO FORMAT

REMOTE
- TITLE
- DEVICE
- ID
- PROTOCOL
- RATE

DISPLAY
- TITLE DISPLAY
- DATE DISPLAY
- HDD INFO
- LOSS SCREEN
- PLAYBACK INFO
- DWELL DURATION (SEC)
- DE-INTERLACE
- MONITOR OUT
- WATERMARK

ALERT
- EXT. ALERT
- INT. BUZZER
- KEY BUZZER
- VLOSS BUZZER
- MOTION BUZZER
- ALARM BUZZER
- HDD BUZZER
- HDD NEARLY FULL (GB)
- ALARM DURATION (SEC)
- PRE-ALARM

- NETWORK
- BACKUP
- HDD INFO
- EVENT LOG

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3.4 USB UPGRADE

Users can use USB to upgrade.

Please format the USB memory device as FAT 32 format first.

1) Get the upgrade files from your distributor.
2) Save the upgrade files in your USB device (Do not change the file name).
3) Go to the "MAIN MENU – SYSTEM - UPGRADE" , and press "ENTER".
4) Select "YES", and press "ENTER" again to confirm upgrade.

NOTE:
① The USB format must be "FAT 32".
② If the USB can't be detected by the DVR, the "USB ERROR" message will on the screen.

NETWORK OPERATION

4.1 LICENSED SOFTWARE AP

1) Install the Software:

① Place the attached CD into CD-ROM and it will start to install application programs into PC (Including AP and JAVA program).
② The PC will run the setup file automatically.
③ After setup, user will see " " icon on the desktop.

NOTE:
For the latest version of the software AP, please refer to your distributor, or refer to "Section 4.3 CONNECT TO AP VIA IE BROWSER".

2) Software Operation:

① Connect DVR to PC via RJ45 network line.

② LAN Setting :
The default DVR IP is "192.168.1.10", and default "username" and "password" are both "admin". Users should set PC's IP address as "IP:192.168.1.*XXX* (1~255, except 10)" (in order to make the PC and DVR under the same domain).

③ Double click to enter login page.
Key in IP (192.168.1.10), username (admin), password (admin), port (80) in the login page. After connect to the DVR with local LAN, users could modify the network settings in DVR or in system config of the licensed software AP.

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④ Network Type ~ Static IP :
Set the network information in the DVR menu or in System Config of the licensed software AP.

Network Type ~ Dynamic IP (DHCP and PPPoE) :
Set the Network information in System Config of the licensed software AP.
For detailed DHCP and PPPoE setting, please refer to P.32 and P.33 of the manual.

⑤ After setup the network information, double click 🖳 to enter login page.
Key in "Username", " Password", "IP" (Static IP) or "Host name" (Dynamic IP), and "Port". And then click the green button to connect.
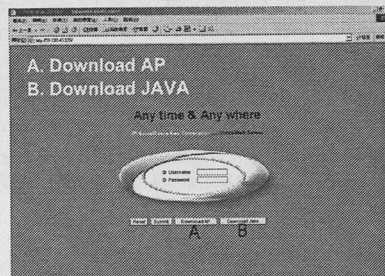
4.2 CONNECT TO AP VIA IE BROWSER

The DVR can be viewed over the network with a web browser. Please install licensed software AP first.
*** This function is suitable in both Windows 2000 and Windows XP ***
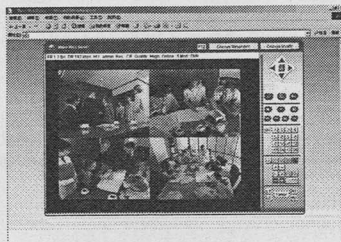
Step 1: Type in IP address into the URL address box and press enter.
Then you'll see the following page.

Note: If the TCP port number is not 80, see the example below.
IP address: 60.121.46.236 ; Port number: 888
→ Key in "60.121.46.236 :888" into the URL address box and press enter.

A. Download AP
B. Download JAVA

Any time & Any where

NOTE: Users can download the latest AP version from the website.
NOTE: Users can update the JAVA program from the website.

Step 2: Key in the "username" and "password" to login.

APPENDIX #1 – INSTALL THE HDD

Carefully following the steps to ensure correct installation.
*** Note: Please set the HDD to "Master Mode" or "Single Mode" ***

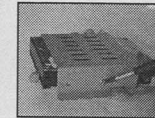Fig. 1   Fig. 2   Fig. 3   Fig. 4   Fig. 5

1) Open the upper cover of the DVR and screw out the bracket.

2) Screw HDD to the HDD bracket. (Refer to Fig.1 & 2)

3) Connect the HDD to power connector and IDE BUS (make sure to align the HDD precisely to the pin connection)
And then screw the HDD bracket onto DVR base. (Refer to Fig. 3)

4) Close the upper cover of the DVR. (Refer to Fig. 4 & 5)

APPENDIX #2 – PIN CONFIGURATION

COMPUTER   DVR

Pin	Signal
1	RS232-TX
9	GND
2	RS232-RX
10	RS485-B
3	ALARM INPUT1
11	RS485-A
4	ALARM INPUT2
12	ALARM INPUT3
5	ALARM INPUT3
13	ALARM INPUT4
6	ALARM INPUT4
14	ALARM RESET
7	EXTERNAL ALARM NC
15	EXTERNAL ALARM COM
8	EXTERNAL ALARM NO