Failure to follow these instructions could result in serious personal injury or death.

Failure to follow these instructions could result in personal injury or property damage.

Notifies user of references to use conveniently.

**WARNING**

- Install this equipment avoiding a direct ray of light, heats and moistures.
  - Doing not, can result in lowering efficiency, electric shock or fire.

- Do not pull electric wire or do not touch power plug with wet hands.
  - Can result in electric shock or fire.

- Do not bend the power cable forcedly or do not press it with heavy materials.
  - Can result in electric shock or fire.

- Do not use damaged power cord or loose outlet plug.
  - Can result in electric shock or fire.

- Do not use the outlet fully.
  - Can result in electronic shock or fire.

- Do not disassemble, repair or convert this product without permission.
  - Can result in electric shock or fire. When repair is required, contact the service center.

- Do not open the cover of the product at your convenience or do not insert inductive stick into the ventilation hole.
  - Especially, SMPS is open, so only professional technicians are allowed to work on.

**CAUTION**

- Do not place equipment on the inclined or uneven plane.
  - Can cause lowering of efficiency or malfunction.

- Do not vibrate or shock in operation.
  - Can cause out of order with equipment and hard disk (HDD).

- Be caution that do not cover the ventilation hole of HDD or put liquid into the equipment.
  - may cause out of order of equipment and hard disk drive (HDD).
Open the box at the clean and even place. And read operation manual thoroughly before you install.

Check the items supplied with your DVR system. Refer to the picture above and contact your dealer if you find anything is missing or damaged.

The specification and appearance may be changed without prior notice.
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Program Info & Setup
Icon Adjustment
Remote search execute & setup
Menu – Remote setup (Camera)
Menu – Remote setup (Alarm)
Menu – Remote setup (Record)
Menu – Remote setup (Record table)
Menu – Remote setup (Record policy)
Menu – Remote setup (Motion)
Menu – Remote setup (Motion link)
Menu – Remote setup (Sensor)
Menu – Remote setup (Sensor link)
Menu – Remote setup (Video loss)
Menu – Remote setup (Video loss link)
Menu – Remote setup (Sytem)
Menu – Remote setup (Disk error/S.M.A.R.T)
Menu – Remote setup (Disk error/S.M.A.R.T link)
Play & Pause / Audio transmission / Mouse click to right
Channel button/Layout change button
PTZoperation
Remote search (Image playback screen / Section)
Remote search (Hotkey & Event search)
Remote search (Connection info / button / playback button)
Remote search (Split screen change / Audio / Image control button)
Remote search (Saving related button)
Remote search (Preview)
Remote search (Mouse click to right)
Remote search (Time table)
Backup playback

PLAYER

Chapter VII. APPENDIX

Front Key
Hot Key
Product Warranty
Chapter-I. System Overview
## System Specification

<table>
<thead>
<tr>
<th></th>
<th>XQ 400</th>
<th>XQ 900</th>
<th>XQ 1600</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Video IN / Loop Out</strong></td>
<td>4/4</td>
<td>9/9</td>
<td>16/16</td>
</tr>
<tr>
<td><strong>Video Display</strong></td>
<td>1, 4</td>
<td>1, 4, 9</td>
<td>1, 4, 9, 16</td>
</tr>
<tr>
<td><strong>Monitor Out</strong></td>
<td>1ch Composition / 1ch S-Video</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>VGA Out</strong></td>
<td>1ch</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Spot Out</strong></td>
<td>2ch</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Audio In/Out</strong></td>
<td>4 in / 1 out</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Audio Compression</strong></td>
<td>G.723</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Display Resolution</strong></td>
<td>720x480</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Recording Resolution</strong></td>
<td>720x480, 720x240, 360x240</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Video Compression</strong></td>
<td>Mpeg4 Level 1,2,3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Display Frame</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NTSC</td>
<td>120fps</td>
<td>270fps</td>
<td>480fps</td>
</tr>
<tr>
<td>PAL</td>
<td>100fps</td>
<td>225fps</td>
<td>400fps</td>
</tr>
<tr>
<td><strong>Record Frame</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NTSC</td>
<td>120fps</td>
<td>240fps</td>
<td>480fps</td>
</tr>
<tr>
<td>PAL</td>
<td>100fps</td>
<td>200fps</td>
<td>400fps</td>
</tr>
<tr>
<td><strong>Playback Frame</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NTSC</td>
<td>120fps</td>
<td>240fps</td>
<td>240fps</td>
</tr>
<tr>
<td>PAL</td>
<td>100fps</td>
<td>200fps</td>
<td>200fps</td>
</tr>
<tr>
<td><strong>OS</strong></td>
<td>Embedded Linux</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Network</strong></td>
<td>10/100 BaseT(1EA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>USB</strong></td>
<td>USB2.0 (Front 2EA, Rear 1EA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>EIDE</strong></td>
<td>2ch (Max 4EA HDD)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Console</strong></td>
<td>RS232C</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PTZ</strong></td>
<td>RS485</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Alarm Function (In/Out)</strong></td>
<td>4/4</td>
<td>8/4</td>
<td>16/4</td>
</tr>
<tr>
<td><strong>Front Key</strong></td>
<td>34 Key, Jog/ Shuttle</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Remote controller</strong></td>
<td>ID Remote controller</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Watchdog / Power monitor</strong></td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LCD</strong></td>
<td>16X1 Line green back LCD</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Front LED</strong></td>
<td>Power, Network, HDD</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dimension</strong></td>
<td>435(W) x 425(D) x 87(H) mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Operation temp.</strong></td>
<td>0~45 °C</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Operation humidity</strong></td>
<td>5~85%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>7kg (Without CDRW, HDD)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Power</strong></td>
<td>Micro ATX 115/230VAC, 60/50Hz, 6/3A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
System Characteristics

- 480FPS real-time recording – 16ch / CIF (360*240 at NTSC) standard
- High level specification with elegance design and jog/shuttle, easy UI with LCD
- Control recording resolution, quality, frame rate by each camera
- USB mouse supported
- LIVE screen editing, Digital zoom, SPOT monitor supported
- Event / Panic / Schedule record, optimized record mode supported
- Diversified search by Time, Calendar, Event supported
- Diversified backup by USB2.0 and DVD-RW supported
- Convenient backup by AVI, Mini viewer etc
- 10/100 Base-T network
- DDNS, NTP, E-MAIL, CALLBACK functions
- DISK ID, S.M.A.R.T functions, real-time disk health check
- Multi-language supported
- Intensive security function by chosen AUTHORITY
- Diversified network program by LIVE, SEARCH, CMS, AGENT
Chapter-II. H/W Description
System appearance

1) Front View

2) Side View

3) Top View
Chapter II

DVR rear panel

1) 4CH Rear Panel

Video input(4CH)
Video out
Alarm input
Alarm output
Network port
RS232 port
S-VHS out
USB port
VGA port
Audio in/out
NT/PAL switch
Factory reset switch
Power AC115V~230V switch
Ground bolt
Power switch

2) 9CH Rear Panel

Video input(9CH)
Video out
Alarm input
Alarm output
Network port
RS232 port
S-VHS out
USB port
VGA port
Audio in/out
NT/PAL switch
Factory reset switch
Power AC115V~230V switch
Ground bolt
Power switch
3) 16CH Rear Panel
System rear connection detail

1) Video Source Connection

It connects video sources (camera image) to BNC connector via cable.

2) LOOP OUT Connection

BNC connector of LOOP OUT can be used other device’s input.
Caution : It may cause low quality of picture when connecting unconnected cable from any device to LOOP OUT BNC.

3) Monitor Connection

CVBS OUT/SPOT : It connects normal CCTV CRT monitor.
S-VHS : It connects monitor that supports S-VHS(S-VIDEO)
VGA : It connects PC monitor or LCD monitor (not supporting DVI)

** Default of video output is designated to CVBS OUT + VGA OUT.
For screen out's conversion, It convert to CVBS OUT only if you press front panel's DISPLAY button for more then 3 second.
The CVBS OUT's quality will be better If you use CVBS OUT only.

4) Audio Connection

It connects audio source (mic) to audio input of RCA and connects speaker to audio output.

5) Network Connection

It supports 10/100 BaseT, connects Cat5 cable with RJ-45
6) RS232 port Connection.

RS232 port is connected to PC and other devices for specific function and After Sales purpose.

7) USB port Connection

It consists of 2 USB (Front), 1 USB (Rear), its supported devices are such as USB mouse, USB external HDD and USB memory stick

8) ALARM IN(SENSOR) Connection

It consists of ALARM IN(SENSOR) and SIGNAL+G(GND).
Ref : The spec. is Max 6V/50mA

9) ALARM OUT Connection

* Alarm output 1~4CH
It can be on/off for buzzer, headlamp etc.
Alarm input mode consists of NORMAL OPEN and NORMAL CLOSE.
Ref : The spec. Max24V/2A
9) Ground (Field GND) Connection

It connects bolt with wire to the Ground to protect DVR and user’s safety from surge, static electricity and noise.

10) Factory Reset Switch and NTSC/PAL Shift Switch

The factory reset switch located at the left side of NTSC/PAL switch is used to return to factory default setup values.

When you need to shift NTSC/PAL mode, turn off the DVR before shift switch, then restart the DVR.

11) Power Connection

Power Supply is Micro ATX 115/230VAC, 60/50Hz, 6/3A
115/230VAC is changeable with shift switch.
Main power can be turned on/off by switch.
Chapter II

System Front Description

<Front DOOR CLOSE >

<Front DOOR OPEN >
Remote controller Description

<table>
<thead>
<tr>
<th>ICON</th>
<th>FUNCTION</th>
<th>HOT KEY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>POWER ON/OFF</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PLAYBACK &amp; PAUSE</td>
<td>LATEST SEARCH</td>
</tr>
<tr>
<td></td>
<td>STOP</td>
<td>TO LIVE</td>
</tr>
<tr>
<td></td>
<td>REWIND</td>
<td>FIRST SEARCH</td>
</tr>
<tr>
<td></td>
<td>FAST FORWARD</td>
<td>LAST SEARCH</td>
</tr>
<tr>
<td></td>
<td>STEP REVERSE</td>
<td>CALENDAR SEARCH</td>
</tr>
<tr>
<td></td>
<td>STEP FORWARD</td>
<td>EVENT SEARCH</td>
</tr>
<tr>
<td></td>
<td>DISPLAY</td>
<td></td>
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<tr>
<td></td>
<td>SEQUENCE</td>
<td></td>
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<tr>
<td></td>
<td>FREEZE</td>
<td></td>
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<tr>
<td></td>
<td>ZOOM</td>
<td></td>
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<tr>
<td></td>
<td>SETUP</td>
<td></td>
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<tr>
<td></td>
<td>BACKUP</td>
<td></td>
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<tr>
<td></td>
<td>COLOR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STATUS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ENTER</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DIRECTION</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MENU</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ESCAPE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RECORD</td>
<td></td>
</tr>
</tbody>
</table>

○ How to change remote controller ID
A) Enter ‘ID’ button for 3seconds
B) Power LED is lightened.
C) Enter 2 letters of digit. (00 ~ 99) – In case 00, means no ID function
   - ID set is available from 01 to 99.
D) Save setting value, then LED is off.
E) It enables to communicate the same ID DVR
F) LED is ON every time data is transferred.
Chapter II

Installation Guide for HDD & ODD devices

Description

1. ODD(CD-RW/DVD-RW) devices should be installed as “Secondary Slave”.
2. HDD for system needs to be installed as “Primary”.

Guide Chart for installing several HDDs

<table>
<thead>
<tr>
<th>Installed</th>
<th>HDD</th>
<th>HDD</th>
<th>System</th>
<th>ODD(CD-RW/DVD-RW) Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IDE</td>
<td>Connector</td>
<td></td>
<td>IDE</td>
</tr>
<tr>
<td>HDD x 1</td>
<td>HDD#1</td>
<td>PRIMARY MASTER</td>
<td>JR 1</td>
<td>SYSTEM</td>
</tr>
<tr>
<td>HDD x 2</td>
<td>HDD#1</td>
<td>PRIMARY MASTER</td>
<td>JR 1</td>
<td>SYSTEM</td>
</tr>
<tr>
<td></td>
<td>HDD#2</td>
<td>PRIMARY SLAVE</td>
<td>JR 1</td>
<td></td>
</tr>
<tr>
<td>HDD x 3</td>
<td>HDD#1</td>
<td>PRIMARY MASTER</td>
<td>JR 1</td>
<td>SYSTEM</td>
</tr>
<tr>
<td></td>
<td>HDD#2</td>
<td>PRIMARY SLAVE</td>
<td>JR 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HDD#3</td>
<td>SECONDARY MASTER</td>
<td>JR 2</td>
<td></td>
</tr>
</tbody>
</table>
System On
- Put the power to the DVR.
- Turn on the power switch at the rear and press power button in front.
- It takes about 90 seconds to boot (It may take more when network cable isn’t connected)

System Shutdown
- Press Power button, then shutdown menu appears. Enter power button to shutdown system.
- Or select [SETUP > SYSTEM > SYSTEM SHUTDOWN] to shutdown system.
Chapter-III. Monitoring Screen
Monitoring Screen

1. Monitoring screen: it monitors each channel.
   
   <Screen Indication>
   
   LeftUp: Camera Name
   P – Pan/tilt
   A – Audio

   RightUp: Record mode (Blue-Normal, Red-Event)
   Motion status

   Central: Video Loss, Hidden Camera

2. Status Bar: DVR status Indication
   (Backup, HDD usage, Current Time, SEQUENCE, FREEZE, Login info. etc)
Screen Split

Press DISPLAY button or mouse menu: changed on 1 -> 4 -> 9 -> 16 by turn

Direct Channel

1) Press channel No. on the remote control or front panel.
2) Click the screen to watch specific channel using mouse.
** Pressing No.1 button responds a bit delayed to wait a possible signal input of No.10~16 (approx 2.5 seconds)

LOG IN
Login to menu for setup
Default: ID – admin
PASSWORD - 1

CAUTION

It is recommended to change ID and PW for your safety.

CAMERA ALLOCATION function (changing camera display position)

1) Press Enter in the monitoring screen, then box is selected at No.1 camera.
2) Locate the box to the camera No. you want to move using direction buttons.
3) Enter the camera number to switch
4) Then, selected camera is switched with the Camera number you pressed.
5) To exit, press ESC or Enter

Ex) Switching camera No 4 and 12.
Menu Bar  * Click MENU button or right button of mouse

DISPLAY
1, 4, 9, 16
: Split screen change (the same as DISPLAY button)

MISCELLANEOUS

SEQUENCE
Sequence camera group regularly

FREEZE
Pause the screen

ZOOM
1 Full Live screen available only.
Select Zoom : Press zoom button and locate the box to magnify using direction keys
Move Zoom : It can be moved using direction key after press Enter.

<ZOOM selected screen>  <ZOOM screen>

NOTICE
Zoom screen may provide low quality or be shaken as formatted digitally.
Chapter III

PTZ
Pan Tilt/Zoom/Focus/Iris Preset setting and moving functions are supported. Each function can be different from each PTZ protocol.

ALARM
Control Alarm output function.
CHAPTER III

STATUS

RECORD
Displays current recording status

EVENT
Displays current event information (motion/alarm).

DISK
Displays current Disk information

NETWORK
Displays current network information.
Also displays current connected client information.
Chapter III

PANIC RECORD
Set recording mode in an emergency situation.
Press SETUP>RECORD> EVENT RECORD>FPS/QUALITY

SETUP
Select to enter into SETUP menu

CAMERA COLOR
Changes camera screen color

OSD
Changes OSD (On Screen Display)'s position.

SEARCH
Select to enter into SEARCH menu
BACKUP
Select to backup recorded data.

1) Backup Device Search

2) Select data to backup

3) Calculate data size

4) Warning when data size is over

5) Make Image after pressing OK.

6) Burning to CD
MUTE
Sound off

LOGOUT
Press SETUP>SYSTEM>USER
Chapter-IV. SETUP
SETUP SCREEN

SYSTEM
Set up various system related items.

INFORMATION
DATE/TIME
DISK
USER
LOG
LOGOUT
SYSTEM SHUTDOWN
INFORMATION

DEVICE NAME: User can change the DVR name on his own.
LANGUAGE : Select language.
VERSION : Shows S/W version info.
(With UPGRADE button, you can upgrade the newest S/W version)

NOTICE

Contact manufacturer or distributors for more Upgraded version.

CONFIGURATION IMPORT : You can read setup values saved in USB or Initialize the setup values

CONFIGURATION EXPORT : You can record setup values in USB equipment.
Chapter IV

DATE/TIME

Set date, time & Time zone of System.

⚠️ CAUTION
When you use it for the first time
Set these items in advance.

TIME SYN
Synchronize time with internet time server.

⚠️ CAUTION
Set the GMT on the DATE/TIME list and
Adjust TIME SYNC.

HOLIDAY
In the schedule record setup, it automatically
converts normal date to holiday schedule.

It works when record is setup as schedule mode.
DISK

DISK TABLE
Shows current disk information connected to system.
IMPORTED : DISK installed
RECORD : RECORD possible
SYSTEM : DISK allotted for SYSTEM

TOTAL DISK FORMAT
Format all connected HDD disks.
(When you select info column of connected DISK separately,
You can format DISK one by one.

⚠️ CAUTION
One of DISKS should be a system disk for recording system logs & other TEMP file issuing purposes.

⚠️ CAUTION
Backup devices such as CD-RW/DVD-RW need to be installed as Secondary Slave.
(JR 2 Connector. – Slave jumper setting)

<SYSTEM DISK selected Screen>  <On FORMAT Screen>
USER

Shows currently registered user lists. User accounts can be added or deleted.

+ add account with this button.
X Delete account with this button.

USER ADD
Possible to add user account according to authority.

CONFIRM LOGIN
When YES selected, LOGIN needs to be confirmed every time to enter into setup / system menu.

AUTO LOGOUT ENABLE
LOGOUT automatically after a certain period of time.

AUTO LOGOUT TIME
Set idle time to LOGOUT
LOG

LOG
Shows all log infos on SYSTEM and other events

CLEAR : Remove all log info.

UP/DOWN button : Move to next/previous log info page by page .

 Move to first part of LOG info.

 Move to Last part of LOG info.

LOGOUT
LOGOUT function  when exiting set up

SYSTEM SHUTDOWN
SYSTEM ends.
The same as POWER OFF button of front or remote control.
NETWORK

Set up various NETWORK items

LAN
DDNS
E-MAIL
CALLBACK
LAN

MAX CONNECTION
Shows maximum numbers of Connectable users.
(Up to 4)

STATIC TYPE
Select in case of STATIC IP.
All setting values of IP, GATEWAY, NETMASK Need to be set manually.

DHCP TYPE
Select during automatic DHCP IP.
User set DNS only.
(under the situation of DHCP server operating mode)

ADSL TYPE
In case USER ID, P/W are needed to input such as PPPoE of ADSL line
DDNS (DYNAMIC DNS)

**ENABLE**
Select if you want DDNS

This is under the situation of Dynamic IP Network.

**SERVER**
Select DDNS server

- **EZDDNS**: Specialized DDNS server operated by TOM
  - www.ezddns.com
- **DYNDNS**: DDNS common server

**NOTICE**

In order to use DDNS service
Account & HOSTNAME should be registered in the server first.

**HOSTNAME**
User name of IP ADDRESS ON Dynamic IP circumstance.
It is the same name as registered on DDNS server.

**USERNAME / PASSWORD**
Type the user name & password registered on DDNS service.

**ROUTER**
Check if NETWORK is through ROUTER or IP sharer.

**CAUTION**

Recommended to use EZDDNS Server rather than DYNDNS as DYNDNS is not optimized The system.


Chapter IV

E-MAIL

ENABLE
Select when you need E-MAIL transmission. ALL event information is sent to admin’s E-mails.

SMTP SERVER
Write the MAIL sending SMTP server name.

AUTH ENABLE
Check when you need account authority.

ID / PASSWORD
Input account & password.
CALLBACK

ENABLE
Check to use CALLBACK function.

All event or specific information are sent to “Agent” Program which is installed on P.C.

CALLBACK ADD
Register IP address of P.C for callback function
DEVICE

These are item lists for the control of CAMERA, ALARM.

CAMERA
ALARM
DISPLAY
MAIN MONITOR
SPOT MONITOR
MISCELLANEOUS
**CAMERA**

**ENABLE**
Check if you want to use current camera

**TITLE**
Can change the camera name.

**HIDDEN**
Doesn’t show the screen on live mode
Even though it records and runs normally.

**PTZ ENABLE**
Check if you want to use PTZ function.

**PTZ PROTOCOL**
Select PTZ PROTOCOL.
Various of protocol information including PELCO-D are implemented.
If you can not find one, please contact manufacturer

**PTZ ADDRESS**
When you use many of same PTZ equipments
You can name on these PTZ sites.
Site numbers can be from 0 to 255.

**PTZ PORT**
Adjustable related protocol BAUDRATE, DATA BIT.
Chapter IV

ALARM

ENABLE
Check if you use specific ALARM.

TITLE
Changes connected ALARM names.

ALARM TYPE
Select specific ALARM TYPE.
(NORMAL OPEN, NORMAL CLOSE)

MAIN MONITOR
Set up SEQUENCE, EVENT POPUP of main monitor.

SEQUENCE
Set up the screen switching times.

EVENT POPUP
Check if you want event pop up function.
Chapter IV

DISPLAY
Shows all OSD display details.

CAMERA INFORMATION
Selects the display of CAMERA NO, TITLE

EVENT INFORMATION
Select OSD display for the EVENT.

STATUS INFORMATION
Shows various status of OSD.

SPOT MONITOR
Set up functions of SPOT MONITOR.

SPOT NUMBER
Select SPOT output numbers.

SPOT SEQUENCE ENABLE
Select SPOT switching channel.

FIXED CAMERA
Select the camera number not to switch.

SEQUENCE CAMERA
Select which camera to switch.

SEQUENCE DWELL
Adjust switching times.
MISCELLANEOUS

Control of remote controller/key related functions.

REMOTE CONTROLLER ID
Designate remote control ID. It is useful when many DVRs installed at the same place.

KEY TONE ENABLE
Select button volume on the front panel.
These are control lists of recording related functions.

- RECORD POLICY
- RECORD
RECORD POLICY
Select RECORD types.
- Two types (Single Record, Overwrite)

RECORD
Set up specific record type per each camera.

RESOLUTION
Set up resolution.
- 360*240(CIF)
- 720*240(HALF-D1)
- 720*480(D1)

RECORD MODE
Set up record type.
NORMAL+EVENT is focused record mode.

NORMAL/EVENT RECORD FPS
Set up how many frames to record.

NORMAL/EVENT RECORD QUALITY
Set up record quality.

SCHEDULE
Set each week’s schedule.
EVENT

This is for the control of all event items such as MOTION, SENSOR.

- MOTION
- SENSOR
- VIDEO LOSS
- SYSTEM
MOTION

SETUP
Set up the MOTION area & sensor.

Click mouse right or MENU KEY button to see motion area window

RECORD
Set pre& post record mode.

⚠️ CAUTION
When record frames are less, PRE/POST RECORD need to be set a lot more for correct record search.

ACTION
Setting up list for how to act after EVENT.
- POPUP CAMERA/DWELL
  : Set popup channel & time.
- ALARM/BUZZER DWELL
  : Set alarm & buzzer time.
- E-MAIL
  : Select EVENT info to be sent by e-mail.
- CALLBACK
  : Select EVENT info to be sent to AGENT.
- WRITE LOG
  : Select to write LOG info.
SENSOR

SETUP
Set the SENSOR name & TYPE.

NORMAL OPEN : Normally it opens and sends signals when detects sensors.

NORMAL CLOSE : Normally it closes, and it sends SIGNAL when detects sensors.

RECORD
Set Connecting camera, Pre, post record.

| CAUTION |

When record frames are less, PRE/POST RECORD need to be set a lot more for correct record search.

ACTION
Setting up list for how to act after EVENT.

POPUP CAMERA/DWELL
Set popup channel & time.

ALARM/BUZZER DWELL
Set alarm & buzzer time.

E-MAIL
Select EVENT info to be sent by e-mail.

CALLBACK
Select EVENT info to be sent to AGENT.

WRITE LOG
Select to write LOG info.
Chapter IV

VIDEO LOSS

VIDEO LOSS can be an event type and can set camera record and action.

SETUP
Select whether you want VIDEO LOSS Function or not.

RECORD
Set connecting camera Pre& post record.

⚠️ CAUTION
When record frames are less, PRE/POST RECORD need to be set a lot more for correct record search.

ACTION
Setting up list for how to act after EVENT.

POPUP CAMERA/DWELL
Set popup channel & time.

ALARM/BUZZER DWELL
Set alarm & buzzer time.

E-MAIL
Select EVENT info to be sent by e-mail.

CALLBACK
Select EVENT info to be sent to AGENT.

WRITE LOG
Select to write LOG info.
Chapter IV

SYSTEM
Sets how to operate event related with DISK mainly.

DISK FULL
Sets when HDD is full of record.

DISK ERROR
Sets when there is an error on HDD.

S.M.A.R.T
Enables the system to prevent possible malfunction of HDD by interfacing between system and HDD.
Chapter-V. SEARCH
The exact record file searched.

It randomly shows the first searched record file when it goes to SEARCH MODE. This type is the same as on event search, so it is possibly not to shows The exact record file searched.
SEARCH MENU

DISPLAY
Select screen division mode. (1, 4, 9, 16 spirit)

SEARCH KEY

PLAY/PAUSE: Play from the position that played the latest
BACK STEP: Calendar Search
REW: Move to the first recorded data
STEP: Event Search
FF: Move to the last recorded data
STOP: Exit Playback (Return to Live Display)

CALENDAR SEARCH
Select date, hour, minutes, seconds in turn on calendar search.
When you click MINUTE, you can find specific record status as right below.
**EVENT SEARCH**

It shows all EVENT record list. If you click related EVENT, it plays that event promptly.

**SEARCH KEY**

Can be selectable on EVENT search.
- **START/END**
  : Set EVENT search start, end time.
- **MOTION/SENSOR/VIDEO LOSS**
  : Selectable per each camera

**DATE/TIME SEARCH**

Search data by Date/Time. You can search the event promptly when you know the exact event time.

**CAUTION**

It may not be the same channel image as shown on EVENT LIST because it shows the first display image recorded at that time zone.
FIRST
Move to first part of recorded DATA.

LAST
Move to last part of recorded DATA.

BOOKMARK
Sets automatically starting time during back up. It is useful to set a bookmark as starting time while search the data.

PLAYBACK USER INTERFACE
Playback buttons appears when locate the mouse pointer at the bottom of screen.
DEVICE
Search internal or external SYSTEM DISK.

LOCAL DEVICE
Search the data of internal DISK.

BACKUP DEVICE
Search backup device (Select when you play the backup data.)
If there are various backup devices, you can select a specific one.
Chapter-VI. Client program
With connected to DVR remotely, it is to perform Remote Monitoring, Remote Search, Remote Backup etc. (Please install remote program from the program CD)

Environment conditions for Remote Program

1. INTEL P-4
2. 256M or higher main memory (512M recommend)
3. WINDOWS O/S (WIN 2000, XP, Vista (32bit))
4. 32MB VGA card supports RGB (ATI series recommend)
5. At least 10Mbps network speed (Max 100Mbps support)

Please note that some buttons and graphics may not be activated at this moment. Those inactivated buttons will be used later when system upgrades and expands.
**Chapter VI**

1. **Connection information and Button**

   Shows DVR’s name, IP address and connection status.

   DVR connection button.

   ![DVR Connection Window](image)

   **Add** : Enter IP address and user authentication to connect DVR

   **Modify** : Modify IP address and user authentication of the existing list

   **Delete** : Delete existing use.

   ![New Connection/Modify Dialogue Window](image)

   **DVR name** :
   Specify a name that you can easily identify.

   **Address** :
   Specify assigned IP address to connect DVR (Type the Host name of REAL IP or DDNS.)
Service Port : Set this the same as the service port assigned to DVR.

Program Information and Set up

Program Information :
Shows Remote Program's information.

Program Setup :
Sets up Remote Program. (Language, Display Output, Resolution, Save Path, Network Speed Etc)
Language:
To choose program's language.

Video Display:
YUV mode: According to your PC graphic card ability, the support can be decided. This mode shows faster, clear ability of image transmission than RGB mode.

RGB mode: It is widely compatible with most graphic cards, and select this when YUV mode is not supported.

Resolution from 1024X768 starts:
It always shows 1024 x768 when you check.

※ Above setting value will apply after restart of the program.

Data Save Place :Sets up basic path of AVI file to save.
AVI Saving time : Sets up saving time of AVI file from remote.

Network Speed :
High Speed : System sends off images at high speed possible.
Low Speed : System sends off images at normal speed in consideration of stability.

Status Icon

Status icon of connected DVR
Chapter VI

<Recording Status>
Shows and check the recording status

<Event Status>
Shows DVR's event status and you can check the status of Motion, Sensor, Video Loss at real time.

<Alarm Control>
You can On/Off the DVR's alarm if you press the Alarm control button.

<HDD Status>
Shows the connected DVR HDD status. You can check temperature and status at real time.

REMOTE SEARCH Execution and Set Up

Set Up Execution
Pressing each button operates REMOTE SEARCH or Set Up. REMOTE (LIVE) and REMOTE SEARCH are made up in separate program.
Remote Set Up <Camera>

1. No : Item to select camera No
   To set up all the camera equally, Choose “select all”

2. Enable : Selection item to use camera, Removing the check stops using that channel.

3. Title : Item to revise/type the camera name.

4. Security : When checked, It displays ‘Hidden’ on monitor. (though it keeps recording)

5. Link PTZ : Sets up PTZ camera.

   - PTZ address: Item to assign PAN TILT address per camera.
   - Name : Item to check PTZ Camera's model name.
   - ID : Item to select PTZ address per camera.

   - Port bit rate : Item to select the PTZ's port bit rate.
   - Data bit : Item to select data bit.
   - Stop bit : Item to select Stop bit.
   - Parity : Item to select Parity.

6. Audio : Item to select which audio channel to be used among total 4 audio inputs.
Remote Setup <Alarm>

No: Item to select Alarm No.
   To set up all the camera equally, Choose “select all”

Enable: Item to select to use Alarm. Removing the check stops using that channel.

Title: Item to type Alarm’s name.
Type: Item to select Alarm’s type.
   - Normal Open: Type of alarm open in general situation.
   - Normal Close: Type of alarm close in general situation.
Remote Set Up <Record>

No : Item to select Camera No.
To set up all the camera equally, Choose “select all”

Resolution : Item to change the resolution.
- NTSC : 720X480, 720X240, 360X240
- PAL : 720X576, 720X288, 360X288

Normal Record Frame : Item to select normal record frame.
Normal Record Quality : Item to select normal record quality.

Event Record Frame : Item to select Event (Motion + Sensor + Video Loss) record speed.
Event Record Quality : Item to select Event (Motion + Sensor + Video Loss) record quality.

Schedule : Item to select record schedule.
- Normal : Always Record
- Event : Motion, Sensor, Video Loss
- N + E : Always + Event Record
- Clear : Delete the current record schedule.
Chapter VI

Remote Set Up <Record (Timetable)>

1. Select the Record Mode

2. Select Day/Time

Schedule Indication by color

- Normal(N) : (Blue)
- Event(E) : (Red)
- Normal(N) + Event(E) : (Green)
- Clear (No Record) : (White)

<Schedule of Record>
It is the list of selection in which schedule to use in operating the relevant camera channel.

First select the item you need among Normal time, Event and Normal time + Event.

Then drag mouse from the wanted position on time line.

※ To edit schedule record, you need to set record as schedule mode.
Record Policy: Item to select record policy

Overwrite: When HDD capacity is almost consumed, it erases old data and record new.
Single Record: To stop recording on 100% of HDD capacity.
Chapter VI

Remote Set Up <Motion>

1. **Camera No**: Item to select Camera No.
   
   To set up all the camera equally, Choose “select all”

   ✔ **Enable**: Selects to use motion sensor. Removing the check stops using that channel.

   **Sensitivity**: Adjusts the sensitivity in motion detection. There are 5 steps and as the number increase, it gets more sensitive.

2. **Area**: Item to select motion area.

   Area is selected when drag the mouse on the image.

   **<Set Up Area Tool>**

   - **Draw**
   - **Clear**

   **Area Draw button**
   **Area Clear Button**
Remote Set Up <Motion (Link Record)>

Link Camera:
Selects which channel to record when motion is detected on the relevant channel.
※ Multiple selection possible

Pre Record: Sets pre-event recording time. (Max 5 second)
Post Record: Sets post-event recording time. (Max 60 second)

Remote Set Up <Motion (Link Action)>

Popup Camera:
Selects which channel to Popup when motion is detected on the relevant channel.
※ It works when the Popup setting is ‘Yes’ on DVR.

Popup Time:
Sets Popup time

Link Alarm:
Select Alarm to be linked when motion Is detected.
※ Multiple selection possible

Alarm Time: Sets Alarm output time. (Max 30 second)
Buzzer Time: Sets buzzer output time in DVR. (Max 30 second)

Mail: When motion is detected, the log is sent to the selected e-mail.
Call Back: When motion is detected, the log is sent to the selected IP address.
Log: Item to save Log writing when motion detected.
(It is not recorded on the system Log but used for event search.)

Motion detection function is a mode to detect in accordance with the amount of color Changes of image. So, please be careful that DVR keeps recording as continuous motion when the image of camera is blinking caused by light problem or camera Auto Iris problem.
Chapter VI

Remote Set Up <Sensor>

1. **Sensor No**: Sets sensor No.
   - To set up all the camera equally, choose “select all”
   - **Enable**: Selects to use sensor, Removing the check stop using relevant sensor.

2. **Title**: Item to select sensor’s name.
3. **Type**: Item to select sensor type.
   - Normal Open: Type of Alarm open in general situation.
   - Normal Close: Type of Alarm close in general situation.
Remote Set Up <Sensor (Link Record)>

**Link Camera:**
Selects which channel to record when sensor is detected on the relevant channel.

*Multiple selection possible*

- **Pre Record:** Sets up pre recording time. (Max 5 second)
- **Post Record:** Sets up post recording time. (Max 60 second)

Remote Set Up <Sensor (Link Action)>

**Popup Camera:**
Selects which channel to Popup when sensor is detected on the relevant channel.

*It works when the Popup setting is ‘Yes’ on DVR.*

- **Popup Time:** Selects Popup time.
- **Link Alarm:** Selects Alarm to be linked when sensor is detected.

*Multiple selection possible*

- **Alarm Time:** Selects Alarm output time. (Max 30 second)
- **Buzzer Time:** Selects buzzer output time. (Max 30 second)

**Mail:** When sensor is detected, the log is sent to the selected e-mail.

**Call Back:** When sensor is detected, the log is sent to the selected IP address

**Log:** Item to save Log writing when sensor detected (It is not recorded on the system Log but used for event search.)
Remote Set Up <Video Loss>

1. **Camera No**: Item to select camera No.
   
   To set up all the camera equally, Choose “select all”

2. **Enable**: Selects to use Video Loss.
2 Remote Set Up <Video Loss (Link Record)>

Link Camera:
Selects which channel to record when video loss is detected on the relevant channel.
※ Multiple selection possible

Pre Record: Sets up pre recording time. (Max 5 second)
Post Record: Sets up post recording time. (Max 60 second)

3 Remote Set Up <Video Loss (Link Action)>

Popup Camera:
Selects which channel to Popup when video loss is detected on the relevant channel.
※ It works when the Popup setting is ‘Yes’ on DVR.

Popup Time:
Selects Popup time.

Link Alarm:
Selects Alarm to be linked when video loss.
※ Multiple selection possible

Alarm Time: Selects Alarm output time (Max 30 second)
Buzzer Time: Selects buzzer output time (Max 60 second)

- Mail: When video loss occurred, the log is sent to the selected e-mail
- Call Back: When video loss occurred, the log is sent to the selected IP address.
- Log: Item to save Log writing when video loss occurred.
  (It is not recorded on the system Log but used for event search.)
Remote Set Up <System>

1. **DISK FULL** : List for all installed HDD disks.
   - Disk Full Notice Enable : Activate Disk Full Notice when installed disks are full.

2. **Remote Set Up <Disk Full (Link Action)>

   - **Popup Camera** :
     - Not available as of now
   - **Popup Time** :
     - Not available as of now
   - **Link Alarm** :
     - Selects which Alarm to be linked when all installed HDD disks are full.
     - *Multiple selection possible
   - **Alarm Time** : Selects Alarm output time. (Max 30 second)
   - **Buzzer Time** : Selects buzzer output time (Max 30 second)
Chapter VI

- **Mail**: When all installed HDD disks are full, the log is sent to the selected e-mail.
- **Call Back**: When HDDs are full, the log is sent to the selected IP address.
- **Log**: Selects to save Log writing when installed HDDs are full. (It is not recorded on the system Log, but used for event search.)

3. **Disk Error**: Shows data error on all of the HDDs installed.
   - **Enable Disk Error**: When there is a disk error, it is linked to action.

4. **Remote Set Up <Disk Error (Disk Action)>**

   ![Link Action](image)

   - **Popup Camera**: Not available at this moment
   - **Popup Time**: Not available at this moment
   - **Link Alarm**: Selects Alarm to be linked when HDD error.
   - **Alarm Time**: Sets Alarm output time (Max 30 second)
   - **Buzzer Time**: Sets buzzer output time (Max 30 second)

5. **SMART**
   - **Enable SMART**: Select to use SMART feature.

   **SMART Function??**
   It checks the physical errors and observes the HDD disk continuously such as Temperature, I/O device errors and general conditions of the HDD disk.
Remote Set Up <SMART (Link Action)>

Popup Camera:
Not available at this moment

Popup Time:
Not available at this moment

Link Alarm:
Selects which alarm to be linked

※ Multiple selection possible

Alarm Time: Sets Alarm output time (Max 30 second)
Buzzer Time: Sets Buzzer output time (Max 30 second)

Mail: When smart related problem occurs, the log is sent to the selected e-mail.

Call Back: When problem occurs, the log is sent to the selected IP address.

Log: Selects to save Log writing when smart related problem occurs
(It is not recorded on the system Log but used for event search.)
Chapter VI

5 PLAY & PAUSE

Starts or stops image transmission on the Remote Live screen. This starts automatically when search or set in the setup menu.

Starts to play when pressed. Stops to play when pressed.

6 AUDIO Transmission

Controls Audio volume. ※Audio signal is sent on full screen mode only.

Sound volume control gauge

Mute Button:
Stops audio transmission.

7 Right Mouse Click Action

When the right button is clicked on Remote Live, the following menu below appears and the following functions can be used.

Whole Screen: Hides the function button and shows the image full screen.

AVI Saving Begins:
Starts AVI saving of the channel Selected.
※Audio signal is saved on full screen mode only.

Image Saving..: Save image file of channel selected (Save JPEG or BMP)
Printing..: Print current image of the channel.
Chapter VI

8 Channel Button

Moves to the channel selected and it has the same function as double click the left mouse button on the selected channel.

9 Layout Modify Button

Screen Division Button: Selects desirable screen division.
Whole Screen: All buttons are hidden and the screen displays full.

※ Left double click of mouse returns to the previous screen from whole screen.
PTZ Operation

A camera supporting PTZ can be used on Remote Viewer program. ※ Refer to PTZ support list

Direction Button: Button to move top, bottom, left, right

Channel Indication: Indicate current channel

Speed Control Button: Button to control moving speed

Image Control Button: Button to adjust Zoom, Focus, Iris

Pre set move button

Pre set save button

Preset Move: Move to saved preset No.
Preset Save: Save preset No.
Chapter VI

Remote Search

1. Playback Display

   Camera Name
   
   Recorded Date/Time
   
   Green Border Line: Display the selected camera.

2. SECTION

   Selects section
   
   Section is created when Date/Time is changed to former times. Former Date/Time will be kept in section 0. Newly set Date/Time will be kept in section 1.......
Move & Event Search

Move Button: Move to selected time

Event Search Button: Popup the event search window

Move Button

Show start and end time of recorded data.

Moves to the time to search and press OK button.

<Move Window>

Select the time to event search

Select events in detail.

Select the camera to search.

Start event search. Click below Import button to list events.

Shows current searched event lists.

Hotkey: Play the searched event. Click Stop button first and select a certain event list and click Hotkey to play the event.

Import: Search the next event list.

※ 10 lists are shown every time clicks import button

Please make sure to select “WRITE LOG” of the system. If not, event lists aren't searched.
Chapter VI

4 Connection Information and Button

- Shows DVR’s name, IP address and connection status.
- Backup play button
- Connect/Disconnect Button:
  Button to connect to other DVR in the saved list

<Connection List Window>

5 Playback Button

- Previous Frame:
  Play previous frames reverse direction
- Play / Pause
- Next Frame:
  Play next frames forward direction
- Starting:
  Move to starting of record data
- End:
  Move to end of record data
- Fast Rewind:
  Fast reverse play every 1 minute
- Fast Forward:
  Fast play every 1 minute

When many DVRs are registered in the DVR list, each DVR can be remotely searched without closing The Remote Program.

The linked list s can’t be edited while search.
6. **Screen Division Button**

7. **AUDIO Play**
   Controls audio volume. *Audio signal is sent only on one full screen.*

8. **Image Control Button**
   **Brightness**
   - Brightness adjustment button: Adjusts the brightness of playing images.

   **Contrast**
   - Contrast adjustment button: Adjust the contrast of playing images.

   **Blurring**
   - Blurring adjustment button: Adjusts the blurring of playing images.

   **Sharpness**
   - Sharpness adjustment button: Adjust the sharpness of playing images.

   **Zoom Button**
   - Zoom the selected part

   **Reset button**
   - Initializes the adjusted image to original image.
Chapter VI

Saving Button

- **Back Up**: Backup the searched image as compressed image file.
- **Print**: Print the searched images.
- **Image Save**: Saves the searched images as Image File. (Save JPEG or BMP)
- **AVI Save**: Saves the searched images as AVI file.

**Storage Information**: Select start and end time to backup image.

**Backup Camera**: Select the camera to backup

**Including**: Selects audio and event to include.

**Backup Path**: Selects the path to backup

**Total Capacity**: Shows total capacity

**Used Capacity**: Shows used capacity

**Left Capacity**: Shows remaining capacity
Preview:
Preview of the images to print, which is printed with various information written on the bottom of the image.

Image Format
JPG format:
Definition has a little loss due to loss compression method, but archiving size is small.

BMP format:
Archiving size is a bit big due to no compression, but it can be saved as higher definition than JPG.

Saving Path:
Selects the path to backup.
**Storage Information**
Selects camera No and start/end time to save.

**Including**
Selects audio to include.

**Back Up Patch**
Selects the path to backup

**Total Capacity**
Shows total capacity

**Left Capacity**
Shows remaining capacity

---

**Check “Caption option” of Media Player to display time/date of playing AVI file.**

---

**Right Mouse Click Action**

When the right button is clicked, the following menu below appears and the following functions can be used.

- **Original Size**: Shows original size.
- **AVI Saving**: Starts to save AVI file
- **Image Saving**: Save image of the selected camera (Save JPEG or BMP)
- **Printing**: Print current image of the camera

*Audio signal is save only on full screen.*
Chapter VI

Time Table

Selects year/month/day and hour/minute to search the recorded data.

**Year/Month Select Button:**
Button to move previous and next month.

**Recorded Date (Blue):**
Shows recorded date in blue.

**Current Date (Blue Round):**
Shows current date in blue round.

**No Recorded Date (Black):**
Shows no recorded data in black.

**Timeline Display:** Displays in 24 hours system and one each line is 1 hour unit.

**Camera Selection Button:**
Select the camera.

**Minute selection Pointer:**
Select the minute.
12 Backup Playback

Backup Playback Button:
Click to backup playback

Select the backup data to play.

Backup playback can play a data of image file.
Windows Media Player can play a data of AVI image files.
PLAYER

**Search screen**
- Camera Name
- Green border line: Display the selected camera.
- Recorded Time/Date

**Starting/End**
- Move to starting record data
- Play Progress Bar
- Move to end of record data
Chapter VI

3 Play button

4 Sound volume Control Button

※Audio signal is sent only on one full screen.

5 Layout Button

Layout button : Button to select screen division mode.
Chapter VI

6 Call function/Program Info

Information:
Shows program information.

Call Function Button:
Button to call in the backup file.

Program Info Window:
XQPlayer
Version: 0, 0, 6, 0
Build: 2007.07.23

Select the backup data to play

Backup playback can play a data of Image file.
Windows Media Player can play a data of AVI image files.
Chapter-VII. APPENDIX
# APPENDIX

## Front Key Explain

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<th>DETAIL</th>
<th>REMARK</th>
</tr>
</thead>
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<td>- Power On/Off</td>
<td></td>
</tr>
<tr>
<td>ESC</td>
<td>- Exit menu/mode</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Return to search mode during playback</td>
<td></td>
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<tr>
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<td>- Select each menu</td>
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<td></td>
</tr>
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<td></td>
<td>- The Same function as mouse left click</td>
<td></td>
</tr>
<tr>
<td>SETUP</td>
<td>- Enter into Setup menu</td>
<td></td>
</tr>
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<td>BACKUP</td>
<td>- Backup menu in search mode</td>
<td></td>
</tr>
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<td></td>
<td>- Prompt backup in playback mode</td>
<td></td>
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<tr>
<td>MENU</td>
<td>- Menu setup</td>
<td></td>
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<tr>
<td></td>
<td>- The same as mouse right click</td>
<td></td>
</tr>
<tr>
<td>PTZ</td>
<td>- Enter into PTZ control mode</td>
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<tr>
<td>ALARM</td>
<td>- Enter into Alarm control mode</td>
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<tr>
<td>SPOT</td>
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<td>RECORD</td>
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<td>DISPLAY</td>
<td>- Display screen division mode</td>
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<td>SEQUENCE</td>
<td>- Start/end sequence display mode</td>
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<tr>
<td>FREEZE</td>
<td>- Pause screen display</td>
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<td>ZOOM</td>
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<td>- Reverse step playback</td>
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<td>PLAY/PAUSE</td>
<td>- Play/pause</td>
<td>LATEST SEARCH</td>
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<tr>
<td>STEP</td>
<td>- Step playback</td>
<td>EVENT SEARCH</td>
</tr>
<tr>
<td>REW</td>
<td>- Rewind</td>
<td>FIRST SEARCH</td>
</tr>
<tr>
<td>FF</td>
<td>- Fast forward</td>
<td>LAST SEARCH</td>
</tr>
<tr>
<td>0～9</td>
<td>- 0～9</td>
<td></td>
</tr>
</tbody>
</table>
Hot Key to control the playback and display output on search display

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DETAIL</th>
<th>REMARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISPLAY</td>
<td>- Display mode to exclusive CRT Set Up/Cancel</td>
<td>- Better quality than VGA</td>
</tr>
<tr>
<td>BACK STEP</td>
<td>- Enter to calendar search mode</td>
<td>- Enter from search mode</td>
</tr>
<tr>
<td>PALY/PAUSE</td>
<td>- Move to ending playback</td>
<td>- Enter from search mode</td>
</tr>
<tr>
<td>STEP</td>
<td>- Enter to event search mode</td>
<td>- Enter from search mode</td>
</tr>
<tr>
<td>REW</td>
<td>- Starting to Playback data</td>
<td>- Enter from search mode</td>
</tr>
<tr>
<td>FF</td>
<td>- End to Playback data</td>
<td>- Enter from search mode</td>
</tr>
</tbody>
</table>

PLAY/PAUSE : Play from the position that played the latest
BACK STEP : Calendar Search
REW : Move to the first recorded data
STEP : Event Search
FF : Move to the last recorded data
STOP : Exit Playback (Return to Live Display)
### Product Warranty

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serial NO.</td>
<td>Date of purchase</td>
</tr>
<tr>
<td>Dealer</td>
<td>Address</td>
</tr>
<tr>
<td>Customer name</td>
<td>Address</td>
</tr>
</tbody>
</table>

**Warranty period – 1 year**

As warranty period is counted from the date of purchase, it is recommended that you get the date of purchase to be written.

(If you are not sure about the date of purchase, the warranty period is counted from the date when six months are passed from the date of manufacture.)

**Free Service**

We will recompense in accordance with free service or Consumer Damage Compensation, Ministry of Finance and Economy’s Notification, in case there is any failure of performance or function, which occurred naturally under normal use of product within one year (warranty period) after purchasing the product.

**Pay service**

1. In case of failure due to consumer’s mistake
   - in failure due to the careless handling, repair or conversion of the consumer
   - in failure due to the repair by unqualified person instead of dealer or service center engineer
   - in failure or damage due to falling or such things during relocating after installing
   - in failure due to abnormality of used power or inferiority of the networks and apparatus that is attached to this product

2. In case of other reasons such as disasters (fire, salt damage, flood, landslip, etc....)