# System Features
- Connects up to 4/8 Video Camera
    - Adjustable Brightness, Contrast, Saturation, Hue and Sharpness
- High Resolution
    - 720X480 60Hz for NTSC
    - 720X576 50Hz for PAL
- Various Display Modes
    - QUAD Split Mode
    - Full Screen Mode
    - PIP Screen Mode
    - Non-realtime 8 Split Mode
    - Dual Split Mode
    - Auto Sequence Mode
- High Performance Freeze Function
    - Flicker Free Image Capture
- High Performance Zoom Function
    - Selectable Zoom Area
- Various Overlay Information
    - Camera Title
    - Real Time and Date
    - Alarm/Loss/Motion Message
- Playback in QUAD or Full Screen Image
- Provide Various Event Input and Detection
    - Video Loss Detection
    - Motion Detection
    - 60 Event Report

Rear Panel Installation
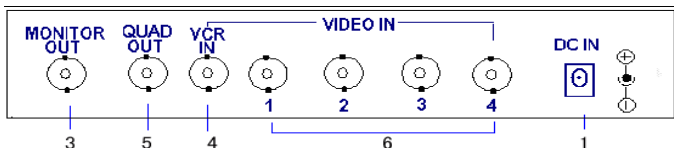
Camera Connection
Accept 4composite video inputs from the camera.
Monitor Connection
Provide 1 composite video output for the main monitor.
VCR OUT Connection
Provide 1 composite video output for recording in the VCR.

VCR IN Connection
  Accept 1 composite video input for playback from the VCR.
Power Jack Connection
  DC ~12V, Center is positive.

Front Key Operation

Key Definition
Short key   long key
Press it in less than 1second   press it in more than 1 second

Setup Menu Function
Refer to the Setup Menu Operation section.

Zoom Function
A zoomed area can be moved by pressing 4 arrow keys when zoom function is invoked. Freeze function can also be invoked while zoom function is invoked.

Freeze Function
All displayed channel is frozen when freeze function is invoked. Zoom function can also be invoked while freeze function is invoked.

Playback Function
When playback function is running, 4 channel keys select camera to be displayed as single full screen and the MODE key makes quad display mode.

Quad A or B Display
Key A/B selects page to be displayed. Page A and B is toggled for each A/B key.

Multi Channel Display

The display modes are circulated as the following sequence, Non-realtime 4 Split, 2 Picture-in-Picture, 1 Picture-in-Picture and Dual Split for each MODE key.

UP and DOWN key selects the channel in 2 Picture-in-Picture, 1 Picture-in-Picture and Dual Split mode, and then the selected channel boundary is blinked. The camera in the selected channel can be chosen by LEFT and RIGHT key

Auto Sequence Display

AUTO key invokes auto sequence display mode and this mode can be maintained until any other display mode is selected.

Single Channel Display

Each channel button selects camera to be display as full screen. When pushing same button, camera is toggled to the other page.

PAL/NTSC System

System can be defined as NTSC or PAL standard with the following method. The first method is to power on with pressing RIGHT or LEFT key and the second one is to define in the setup menu.

Setup Menu Operation

The system provides a built-in GUI setup screen. For each menu, the key function is described in the lower region to help operation. The following figure shows the structure of GUI menu.

Setup Main menu

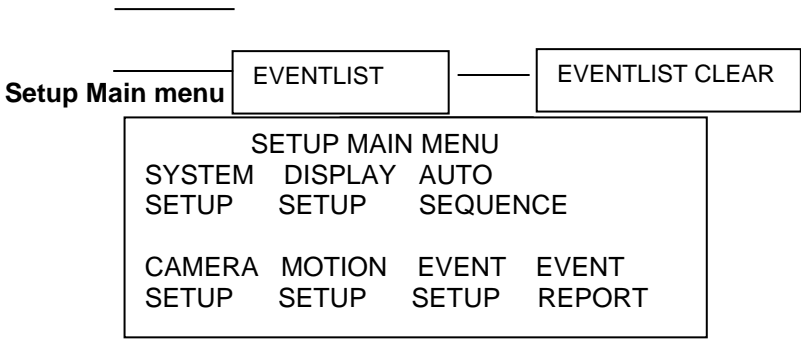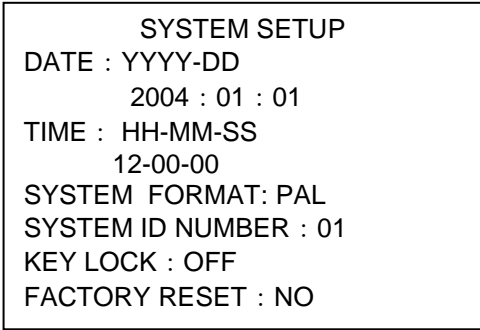```
                    ┌──────────────┐   ┌────────────────────┐
                    │ EVENTLIST   │────────│ EVENTLIST CLEAR   │
                    └──────────────┘   └────────────────────┘

         ┌──────────────────────────────────────┐
         │   SETUP MAIN MENU   │
         │ SYSTEM   DISPLAY   AUTO   │
         │ SETUP   SETUP   SEQUENCE   │
         │   │
         │ CAMERA   MOTION   EVENT   EVENT   │
         │ SETUP   SETUP   SETUP   REPORT   │
         └──────────────────────────────────────┘
```
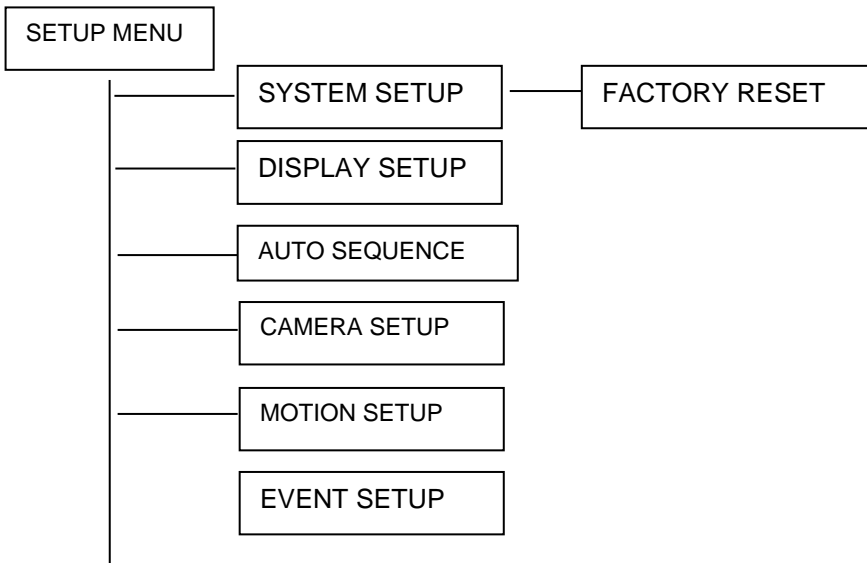
Press UP or DOWN, LEFT or RIGHT button to select, press ENTER button to confirm, use MENU button to exit.

**System Setup Menu**

```
         ┌──────────────────────────────────────┐
         │          SYSTEM SETUP                  │
         │  DATE : YYYY-DD                        │
         │          2004 : 01 : 01                │
         │  TIME :  HH-MM-SS                      │
         │        12-00-00                        │
         │  SYSTEM  FORMAT: PAL                   │
         │  SYSTEM ID NUMBER : 01                 │
         │  KEY LOCK : OFF                        │
         │  FACTORY RESET : NO                    │
         └──────────────────────────────────────┘
```

Press UP or DOWN button to select, use LEFT or RIGHT button to adjust Press ENTER button to confirm, press MENU to exit.

Factory Reset Menu

```
         ┌──────────────────────────────────────┐
         │          FACTORY RESET                 │
         │             WARNING!                   │
         │      THIS SYSTEM GETS TO LOSE          │
         │      THE CURRENT SETTING VALUE         │
         │      AND WILL BE INITIALIZED           │
         │      WITH FACTORY RESET MODE.          │
         │                                        │
         │          ARE YOU SURE?                 │
         │           YES     NO                   │
         └──────────────────────────────────────┘
```

Press LEFT or RIGHT button to select, press ENTER button to confirm,
Press MENU button to exit.

Display Setup Menu

```
DISPLAY SETUP
DISPLAY ON SCREEN
♦TITLE  ♦DATE  ♦TIME
SCREEN POSITION X: 0 Y: 0
BORDER LINE COLOR :
              ☐ BLACK
              ☐ GRAY1
              ☐ GRAY2
              ☐ WHITE
              ☐ OFF
```

Press UP or DOWN button to select, use LEFT or RIGHT button to adjust,
press MENU button to exit.

Camera Setup Menu

```
        CAMERA SETUP
TITLE : CAMERA1
BRIGHTNESS : 0
    CONTRAST : 0
    SATURAST : 0
             HUE : 0
SHARPNESS : 0
   MIRRORING : OFF
```

Press UP or down button to select, LEFT or RIGHT button to adjust,
press MENU button to exit.

Auto Sequence Setup Menu

```
              AUTO SEQUENCE SWELL TIME
PAGE A QUAD : 3SEC        PAGE B QUAD : 3SEC
            CAMERA1 : 3SEC          CAMERA5 : 3SEC
            CAMERA2 : 3SEC          CAMERA6 : 3SEC
            CAMERA3 : 3SEC          CAMERA7 : 3SEC
            CAMERA4 : 3SEC          CAMERA8 : 3SEC
```

Press UP or down button to select, LEFT or RIGHT button to adjust,
Press MENU button to exit.

Motion Setup Menu

```
              MOTION SETUP
DETECTION TIME
       ALWAYS OFF
            ON : 11 : 00 : 00
            OFF : 12 : 00 : 00
       SENSITIVITY : 0
         VELOCITY : 0
MASKING AREA
    [X,  Y]=(0,  0)
```

Press UP or down button to select, LEFT or RIGHT button to adjust,
Press MENU button to exit.

Event Setup Menu

```
              EVENT SETUP
BUZZER/REPORT  □ CONTROL
CHANNEL  1  2  3  4  5  6  7  8
ALARM       □  □  □  □  □  □  □  □
LOSS        □  □  □  □  □  □  □  □
MOTION      □  □  □  □  □  □  □  □

BUZZER HOLD TIME : 05SEC
REPORT HOLD TIME : 60SEC
```

Press UP or DOWN, LEFT or RIGHT button to select, press ENTER button to enable, press MENU button to exit.

Event Report

```
                    EVENT REPORT
                              1 OF 6 PAGE
  NO   YY-MM-DD  HH : MM : SS  CH     EVENT
  1     04-07-30   16 : 56 : 03    1     LOSS
  2     04-07-30   16 : 56 : 03    2    ALARM
  3     04-07-30   16 : 56 : 03    3    MOTION
  4     04-07-30   16 : 56 : 03    4     LOSS
  5     04-07-30   16 : 56 : 03    5    ALARM
  6     04-07-30   16 : 56 : 03    6    MOTION
  7     04-07-30   16 : 56 : 03    7     LOSS
  8     04-07-30   16 : 56 : 03    8    ALARM
  9     04-07-30   16 : 56 : 03    1    MOTION
  10    04-07-30   16 : 56 : 03    2     LOSS
  LIST CLEAR : ON
```

Press UP or DOWN button to select, press LEFT or RIGHT button to select page, press MENU button to exit.

Event List Clear Menu

```
                LIST CLEAR
                 WARNING!
        THIS SYSTEM GETS TO LOSE
         THE CURRENT EVENTLIST AND
        WILL BE INITIALIZED WITH BLINK

              ARE YOU SURE ?
              YES       NO
```

Press LEFT or RIGHT button to select, press ENTER button to confirm, press MENU button to exit.