SeeEyes®

4CHANNEL VIDEO INPUT DIGITAL SPLITTER

SC-04MHD

User's Manual

SeeEyes Co., Ltd.

Precaution and Safety Guidelines

Please read this user's manual thoroughly prior to the use this unit for its easy and convenient use.

Caution (If you do not keep any of the below guidelines, you may get seriously injured or cause somebody's death)

■ **Please make sure to install this product after unplugging power plug. Also, do NOT use this product by connecting many power plugs simultaneously.**

- It may cause abnormal heat, fire or electric shock.

■ **Do NOT leave this product at any place that water falls or splashes. Also, do NOT put anything, which is full of water such as a flower vase, on this product.**

- It may cause the malfunction or fire of the product if liquid goes into it.

■ **Do NOT open the product case randomly, disassemble, repair or remodel this product on your own because there is some high voltage parts.**

- It may cause fire, electric shock or injury due to abnormal operation.

■ **Do Not install this product at a place where there is high humidity, dust or soot.**

- It may cause electric shock or fire.

■ **Please keep the installation place clean and wipe the place with a dry towel. Also, do NOT use water, thinner or organic solvent.**

- It may cause damage on the product surface and may cause product problem or electric shock.

■ **Please leave this product at a cool place which does not have direct rays of the sun, keep the temperature optimal in the installation place, and leave the installation equipment or tools far away from where is crowded.**

- It may cause fire.

■ **Be careful of the danger that may be caused at humid floor, ungrounded power extension cable, worn-out power cord, lack of safety ground connection. If any problem is found, please contact where you purchased this product.**

- It may cause fire or electric shock.

■ **Please keep at least 15 Cm for the back of this device from the wall and keep at least 5Cm for the sides of this device from the wall. Otherwise, the cables may be bent and/or cut due to the narrow space between the device and the wall, and may cause malfunction or fire.**

- It may cause fire, electric shock or injury.

■ **In case of the input voltage for the operation of this device, the voltage fluctuation must be within 10% of the rated voltage and the power outlet must be grounded. In addition, the power outlet for this device shall not be used for other electric heating appliances such as hairdryers, irons, refrigerators, etc.**

- It may cause abnormal overheat, fire or electric shock.

■ **When thundering or lightning, please unplug the power plug for your safety.**

Caution (If you do not keep any of the below guidelines, you may get seriously injured or loss of property.)

■ **Do NOT install this product at where is exposed to strong magnetic or radio waves (RF) and adjacent to wireless devices such as radio or TV, etc.**

■ **Do NOT install this product at where has too high or low temperature or humidity.**
  - The appropriate temperature for this product is between 0°C and 50°C.

■ **Please take special care not to have this product any foreign substances inside, and do NOT put any heavy objects on this product.**
  - It may cause the malfunction of this product.

■ **Please install this product at an well ventilated place and avoid of installing it near direct rays of the sun or hot-air balloon.**

■ **Do NOT install this product at where has strong shock or vibration. Otherwise, it may cause some malfunction of this product.**

■ **Do not use this product and please and please pull off the power plug immediately and contact to sales shop or service center when any smoke or sound is produced from the unit.**
  - It may cause fire or electric shock.

■ **Please fix the product cover firmly and circulate air in the system operation center.**
  - The surrounding environment may cause the malfunction of this product.

■ **Please have regular product inspection at the service center to keep the good condition of system function.**
  - We are not responsible for the product problem that is caused due to user's carelessness.

■ **Please connect power plug to the grounded outlet.**
  - If you do not follow this manual, you may get electric shock or injury.

■ **Please put power plug at where is available to be controlled easily.**
  - When any trouble occurs, the power plug shall be taken off for power down.
    Power cannot be shut off completely by using power button of the product only.

■ **When using this product adjacent to equipment which generates strong radio waves such as radio transceivers (walkie-talkies), repeaters, it may influence video signals, cause a malfunction of the device or some noise on the screen, or the screen may be broken, etc. Therefore, please do not use the influencing and relevant equipment where this device is installed and/or used.**

■ **Please pull the power plug out when lightning strikes or it thunders.**

■ **Transmission distance may vary, depending on coaxial cable type.**

■ **If you need any other technical support except for things mentioned above, please do NOT hesitate to contact our A/S center.**

■ **Please install this item into a flat and safe place. Do not stand it vertically or put it obliquely for use.**
  - It may cause the malfunction of this product or this item may fall and hurt others.

■ **When a coaxial cable is being extended or terminated, it should be connected in the following way.**
  - BNC-M(Male) - BNC-JJ - BNC-M(Male): BNC Connector

■ **Please make the joint part of the cables insulated completely not to expose the metal parts.**

1. Introduction

1-1. Overview

SC-04MHD is a 4 channel multiformat video digital splitter, which provides high-resolution display in various split modes such as quad, 2-split, full screen, etc. in real time. This item supports various input such as AHD, TVI, CVI, CVBS and has various output ports to be compatible with many different external devices. Also, remote control operation is available through the RS-485 port. It displays the date, time and the name of channel on the monitor as well as any channel loss.

1-2. Features

• Various video input (AHD, TVI, CVI, CVBS)

• Support Loop through output

• Display video of four cameras in real time

• Various split mode: Full, 2H, 2V, 4, 4B, 4R

• Auto sequence function

• RS-485 communication port for a remote control

• Alarm port: 4 Input, 1 Output (Relay Contact)

• Display and save the date and time when alarm and loss are generated

• Various video output resolution

  HDMI: 1920x1080p 25/30/50/60Hz, 1920x1080i 50/60Hz, 1280x720p 50/60Hz,

        1024x768@60Hz, 1360x768@60Hz, 1600x1200@60Hz

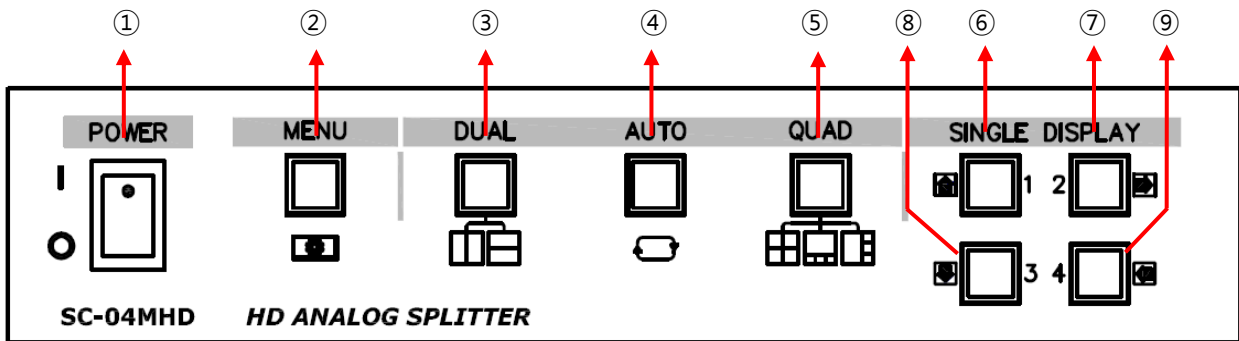 VGA: 1920x1080p 60Hz, 1280x720p 60Hz, 1024x768@60Hz, 1360x768@60Hz, 1600x1200@60Hz

  CVBS: NTSC, PAL

2. Components

SC-04MHD	Adapter (DC12V)	HDMI Cable	Rubber Feet & Screws	Rack Brackets & Screws	User's Manual

3. 3. Product Parts and Peripheral Device Connection

3-1. Front Interface

① **POWER:** To turn the power on/off.

② **MENU**: To set up this item and/or check the current settings.

③ **DUAL:** To turn to the horizontal/vertical 2-split screen mode.

　　　　The green LED will be on when pressing this button in split mode.

　　　　In the menu, it is possible to enter the sub-menu or save the settings via this button.

Split Mode	Split Screen			
Vertical 2-split mode	CH1　CH2	CROPPING MODE CH1　CH2	CH3　CH4	CROPPING MODE CH3　CH4
Horizontal 2-split mode	CH1　CH2	CH3　CH4		

④ **AUTO:** To enable auto sequence mode.

Once you press this button in the split mode for a second, the green LED will be on, the video will be displayed from 1CH to 4CH in full screen successively.

Once you press this button for a few seconds in the cropping mode of a vertically two-split mode, the LED will be flickering and a red circle will be shown in the relevant channel. After then, you can shift the relevant video to another position by using the up/down/left/right keys and save it by pressing this button for a few seconds again.

Once you press this button in the auto sequence mode again, the green LED will be off and the auto sequence mode will be terminated. In the menu. It is possible to enter the upper menu or cancel the settings via this button.

Split Mode	Split Screen			
Auto Sequence	CH1	CH2	CH3	CH4

⑤ **QUAD:** To turn to the horizontal/vertical 4-split (quad) screen mode.

The green LED will be on when pressing this button in the split mode.

Split Mode	Split Screen
Vertical 4-split mode	
Horizontal 4-split mode	

⑥ **SINGLE DISPLAY 1:** To display the channel 1 in full screen and select a channel to crop in general.

To move to the top in the menu mode.

⑦ **SINGLE DISPLAY 2:** To display the channel 2 in full screen and shift the cropped image in general.

To move to the right in the menu mode.

⑧ **SINGLE DISPLAY 3:** To display the channel 3 in full screen and select a channel to crop in general.

To move to the bottom in the menu mode.

⑨ **SINGLE DISPLAY 4:** To display the channel 4 in full screen and shift the cropped image in general.

To move to the left in the menu mode.

※ **How to use the CROPPING function (VIDEO SCALE 16:9)**

The cropping function enables in the vertical 2-split modes only. Press the DUAL key to display the video in 16:9 (or 4:3, Full) and press the key again to display the center image and "CROPPING MODE" message in the center (This message will disappear within three seconds).
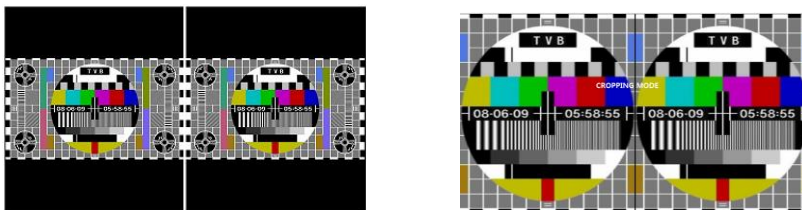
Press the **AUTO KEY** for a few seconds to make the AUTO KEY LED flickering and a red line displayed. Press the **SINGLE DISPLAY 3** to shift the image on the right side and press **SINGLE DISPLAY 1** to shift the image on the left side. Press the **SINGLE DISPLAY 2** to shift the image to the right and press the **SINGLE DISPLAY 4** to shift the image to the left during the red line is activated.

(CROPPING MODE)   (SINGLE DISPLAY 2 KEY)   (SINGLE DISPLAY 4 KEY)
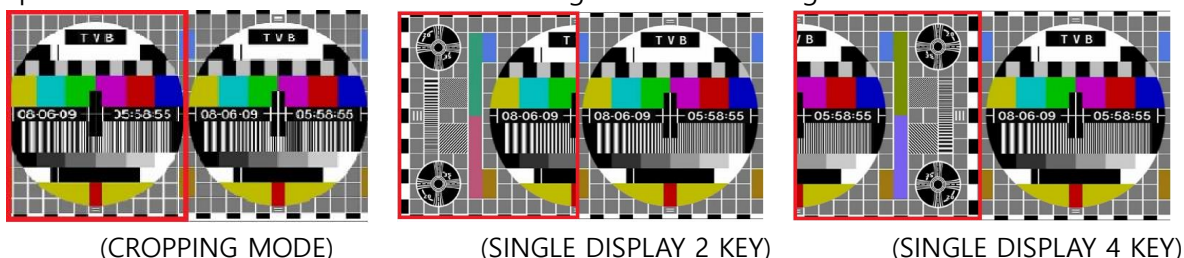
Press the AUTO KEY for a few seconds to terminate the cropping mode by making the red line disappear and the AUTO KEY LED off.

※ **Not to change the channel to any channel having alarm or video loss from the cropped image, please turn off the ALARM I/O and LOSS in the MENU SYSTEM.**

3-2. Backside Interface
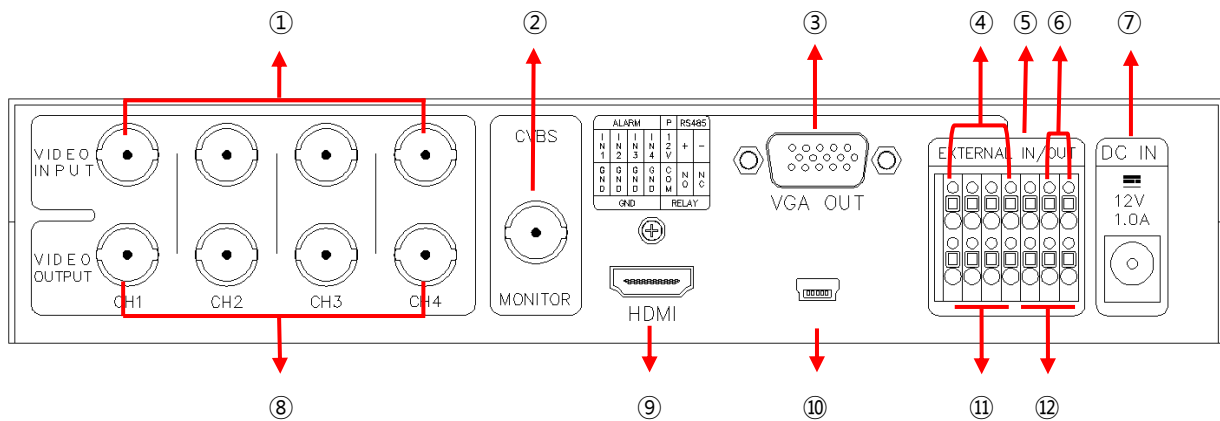
① **VIDEO INPUT**: HD Analog (AHD, TVI, CVI) and CVBS video input (up to four channels).

② **CVBS:** CVBS video output.

③ **VGA OUT:** RGB output.

④ **ALARM INPUT**: Alarm input to control the video display screen by a foreign sensor or switch connected.

● Display Mode per Foreign Alarm Input

Foreign Input				Display Mode
IN 1	IN 2	IN 3	IN 4	
0	0	0	0	Normal Mode
1	0	0	0	CH 1 Full Display
0	1	0	0	CH 2 Full Display
0	0	1	0	CH 3 Full Display
0	0	0	1	CH 4 Full Display
For more than a channel input				4 Splitter Display

※ When alarm is entered in a specific channel, the relevant video channel will be displayed.

※ Input OFF mode ="0", Input ON mode ="1" (The GND and the Inx produce a short circuit)

※ The relevant video channel will not be displayed when the alarm signal is entered into a channel having signal attenuation.

④-① **Alarm Input**

The GND and the Inx open or produce a short circuit by using a contact signal (switch, replay) that does not receive electric signal. When an alarm is produced by a foreign alarm input, the relevant channel will be displayed. When pressing other buttons during the Alarm Hold time, the alarm will be cleared.

④-② **Alarm Clearance**

When the external control data (alarm input) is eliminated, it returns to the last display mode which had been displayed before the external data has entered, after the Alarm Hold time. You can set the Alarm Hold time as following steps: SETUP MENU → SYSTEM MENU → ALARM HOLD.

④-③ **Alarm Operation Structure**
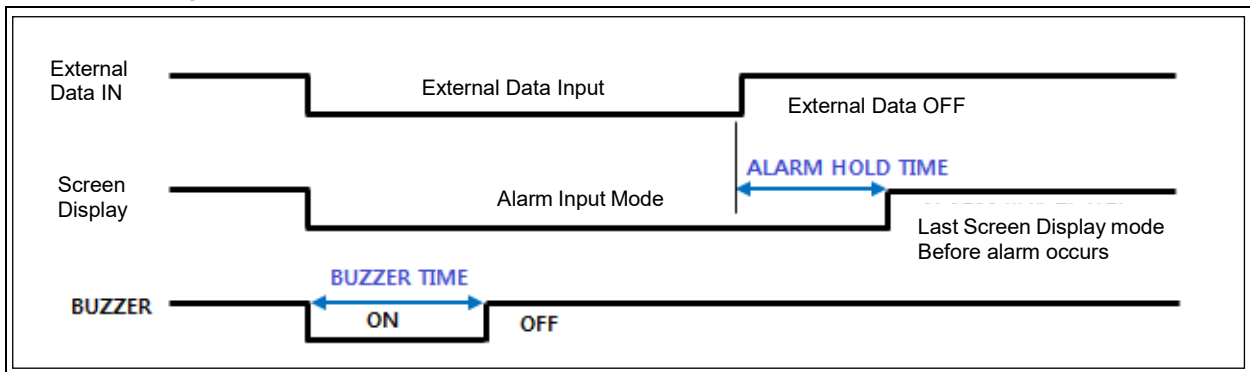
⑤ **POWER**: DC 12V/200mA output.

⑥ **RS-485:** RS-485 communication by an external device for a remote control.

⑥-① **Communication Settings**

- Data Length: 8 Bit, Start/Stop Bit: 1Bit, Parity Bit: None, Baud Rate: menu set point.
- Control Communication Data Format

Byte	Value	Function
1	0xA0	STX (Launching data)
2	0x16	Device Code: Product identification code
3	0x01 ~ 0xFF	Address (Device ID)
4	Data Byte	Control Data
5	Check Sum	Check Sum = Byte2 + Byte3 + Byte4

⑥-② **Control Data Code**

Hex	Function	Remark	Packet
0x34	CH 01 Full Display, UP (Cropping Channel Selection/ Left Screen)	Screen, Menu	0xA0 0x16 0x01 0x34 0x4b
0x35	CH 02 Full Display, RIGHT (Cropping Channel Position/ Shift to the right)	Screen, Menu	0xA0 0x16 0x01 0x35 0x4c
0x36	CH 03 Full Display, DOWN (Cropping Channel Selection/ Right Screen)	Screen, Menu	0xA0 0x16 0x01 0x36 0x4d
0x37	CH 04 Full Display, LEFT (Cropping Channel Position/ Shirt to the left)	Screen, Menu	0xA0 0x16 0x01 0x37 0x4e
0x47	Dual Display, ENTER	2-split, Menu	0xA0 0x16 0x01 0x47 0x5e
0x48	Menu	Menu	0xA0 0x16 0x01 0x48 0x5f
0x50	Quad Display	4-split	0xA0 0x16 0x01 0x50 0x67
0x5A	Auto Sequence, PREV.	Screen, Menu	0xA0 0x16 0x01 0x5a 0x71
0x5B	Cropping Mode	Cropping	0xA0 0x16 0x01 0x5b 0x72

⑦ **DC IN:** Power input.

⑧ **VIDEO OUTPUT:** HD-Analog and CVBS video output.

　※ When connecting it to the BNC port, 75Ω termination will be released as there is the auto termination switch inside. Therefore, if you do not connect it to an external device such as a DVR after connecting it to the BNC port, the displayed image may blur due to the termination problem.

⑨ **HDMI:** HDMI output.

⑩ **MINI-USB:** To update the firmware.

⑪ **GND (Ground):** Alarm input and power output. To control the product by an external device.

⑫ **RELAY:** Electric signal output.

　　　　To operate a light or an emergency bell by using electric signal when any alarm occurs.

　　　　N.O (Normal Open): the contact point is off.

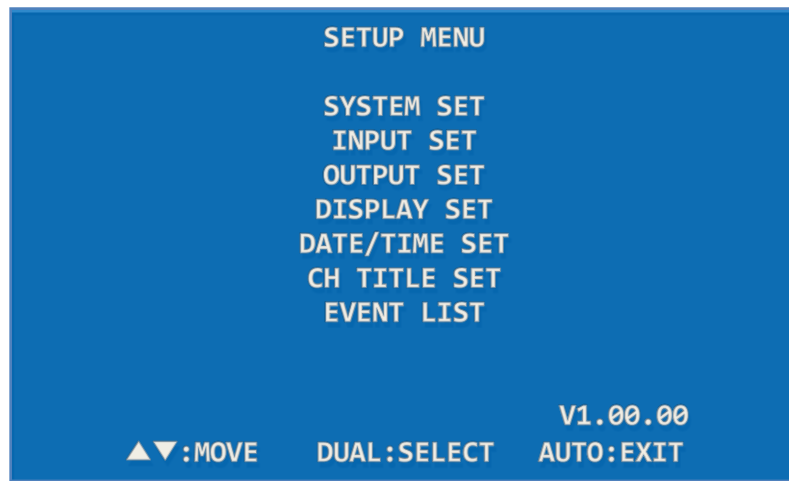　　　　N.C (Normal Close): the contact point is on.
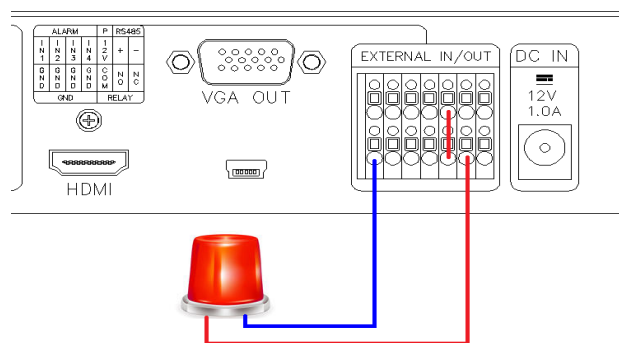
ALARM Output Example

4. Menu Setup

MENU Structure

SYSTEM	INPUT	OUTPUT	DISPLAY	DATE/TIME	CH TITLE	EVENT
• SYSTEM ID	• CH1	• HDMI/VGA	• CH INFO. BOX	• DATE FORMAT	• CH01	NO. YY/MM/DD HH:NN:SS EVT CH
• BAUDRATE	• CH2	• CVBS	• CH TITLE	• LOCATION	• CH02	
• ALARM I/O	• CH3		• CH TITLE POS.	• DATE SET	• CH03	
• ALARM HOLD	• CH4		• CH TITLE SIZE	• TIME SET	• CH04	
• BUZZER OUT			• DATE & TIME			
• BUZZER TIME			• BORDER LINE			
• LOSS			• SEQUENCE TIME			
• EVENT SAVE			• DE-INTER MODE			
• EVENT CLEAR			• VIDEO SCALE			
• DEFAULT ALL						

4-1. Start-up Screen of the Menu

```
            SETUP MENU

           SYSTEM SET
            INPUT SET
           OUTPUT SET
           DISPLAY SET
          DATE/TIME SET
           CH TITLE SET
           EVENT LIST


                        V1.00.00
   ▲▼:MOVE   DUAL:SELECT   AUTO:EXIT
```

- Press the menu button on the front side of SC-04MHD to display the menu as shown above.
- Move the sub-menus by using the $\triangle \triangledown$ buttons and press the DUAL(Select) button to select one of the sub-menus.
- To enter the setup screen, please press the menu button when the above image is displayed.
- Use the $\triangle \triangledown$ buttons to select the sub-items in each setup menu and change the setting values by $\triangleleft \triangleright$ buttons.
- Press AUTO button to return to the menu from the sub-menu.

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4-2. SYSTEM Setup

```
                    SYSTEM SET

   SYSTEM ID     001
   BAUDRATE      9600
   ALARM I/O     OFF
   ALARM HOLD    03[SEC]
   BUZZER OUT    OFF
   BUZZER TIME   05[SEC]
   LOSS           ON
   EVENT SAVE    OFF
   EVENT CLEAR   OFF
   DEFAULT ALL   OFF

        ▲▼:MOVE    ◄►:CHANGE   AUTO:PREV.
```

4-2-1. SYSTEM ID

Use the system ID when controlling SC-04MHD in a long or short distance by RS-485. You can insert from 1 to 255.

SYSTEM SET> Press ▲▼ buttons to select SYSTEM ID> Press ◄► buttons to enter/change the values (1~255).

4-2-2. BAUDRATE

Set the baud rate when controlling SC-04MHD in a long or short distance by RS-485. The available rates are 2400, 4800, 9600, 19200.

SYSTEM SET> Press ▲▼ buttons to select BAUDRATE> Press ◄► buttons to set the baud rate among 2400, 4800, 9600, 19200.

4-2-3. ALARM I/O

Set the alarm input/output.

SYSTEM SET> Press ▲▼ buttons to select ALARM I/O> Press ◄► buttons to set the ALARM I/O ON/OFF.

When this function is off, the alarm does not operate.

4-2-4. ALARM HOLD

Set the alarm screen duration time after clearing the alarm.

SYSTEM SET> Press ▲▼ buttons to select ALARM HOLD> Press ◄► buttons to set the alarm screen duration time (1~99 seconds).

4-2-5. BUZZER OUT

Set the buzzer when a button is used, an alarm is generated and/or any video signal loss is detected.

SYSTEM SET> Press the ▲▼ buttons to select the BUZZER OUT> Press the ◀▶ buttons to set the BUZZER OUT ON/OFF.

When this function is off, the buzzer does not operate.

4-2-6. BUZZER TIME

Set the buzzer duration time.

SYSTEM SET> Press the ▲▼ buttons to select the BUZZER TIME> Press the ◀▶ buttons to set the buzzer duration time (1~99 seconds).

4-2-7. LOSS

Set the video signal loss detection.

SYSTEM SET> Press the ▲▼ buttons to select the LOSS> Press the ◀▶ buttons to set the LOSS ON/OFF.

When this function is off, it does not detect any video signal loss.

4-2-8. EVENT SAVE

Save the warned channel and occurred time to the EVENT LIST when an alarm or video loss alert occurs.

SYSTEM SET> Press the ▲▼ buttons to select the EVENT SAVE> Press the ◀▶ buttons to turn this function ON/OFF.

When this function is off, it does not save the warned channel and occurred time.

4-2-9. EVENT CLEAR

Delete all records saved in the EVENT LIST.

SYSTEM SET> Press the ▲▼ buttons to select the EVENT CLEAR> Press the ◀▶ buttons to turn this function ON/OFF.
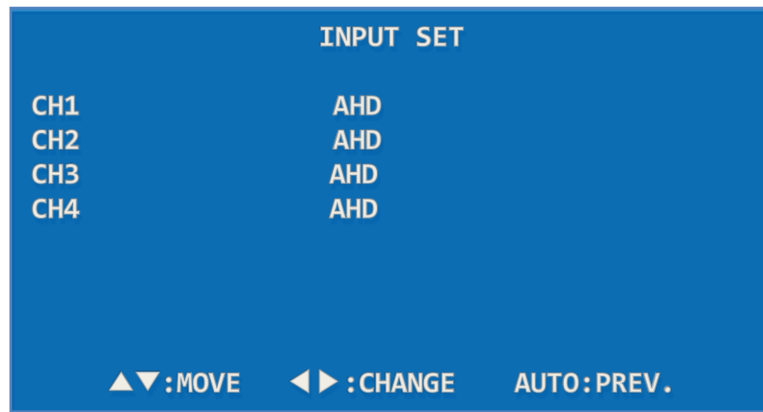
To delete all records, please turn this function on and press the DUAL(Select) button.

4-2-10. DEFAULT ALL

Reset it to the factory default settings.

SYSTEM SET> Press the ▲▼ buttons to select the DEFAULT ALL> Press the ◀▶ buttons to turn this function ON/OFF. To reset it to the factory defaults, please turn this function on and press the DUAL(Select) button.

4-3. INPUT SET

```
              INPUT SET

   CH1              AHD
   CH2              AHD
   CH3              AHD
   CH4              AHD




   ▲▼:MOVE    ◀▶:CHANGE    AUTO:PREV.
```
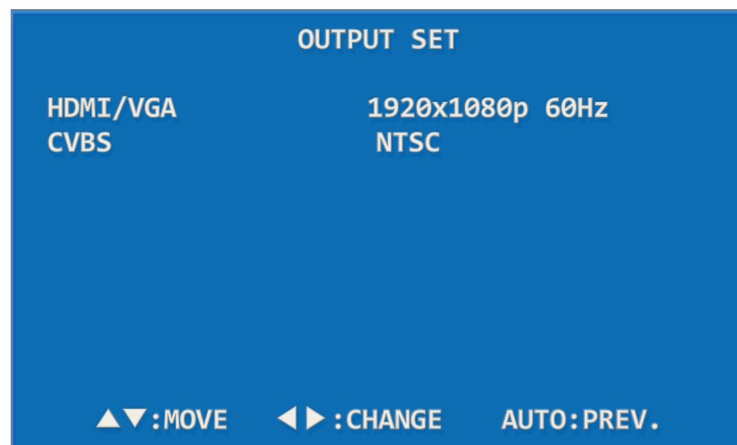
Set the video input signal format.

Press the ▲▼ buttons to select the channel that you would like to set> Press the ◀▶ buttons to set the video input format among AHD, TVI, CVI, CVBS.

The camera resolution is automatically recognized. (The factory default format is AUTO. If the video is not displayed or has some noise, please set this video input format same as the actual input signal format)

4-4. OUTPUT SET

```
              OUTPUT SET

   HDMI/VGA          1920x1080p 60Hz
   CVBS              NTSC





   ▲▼:MOVE    ◀▶:CHANGE    AUTO:PREV.
```

Set the output signal resolution such as HDMI/VGA/CVBS. The output resolution of HDMI and VGA are same. Please check the supported resolution of monitors in advance that are connected to SC-04MHD (Quad splitter). If a connected monitor's resolution is not set in SC-04MHD, no video image may be displayed.

4-4-1. HDMI/VGA
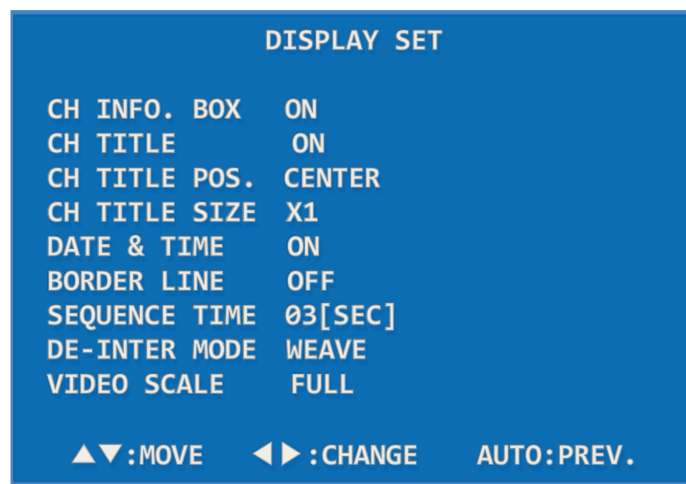
Set the output resolution of HDMI and VGA.

Press the ▲▼ buttons to select HDMI> Press the ◀▶ buttons to change the output resolution> Press the DUAL(Select) button to apply the selected resolution (Supported Resolution: 1920x1080p 25/30/50/60, 1920x1080i 50/60, 1360x768/60, 1600x1200/60, 1024x768/60, 1280x720 50/60)

4-4-2. CVBS

Set the NTSC/PAL video format.

Press the ▲▼ buttons to select CVBS> Press the ◀▶ buttons to set the CVBS format(NTSC or PAL). To complete this setting, please press the DUAL(Select) button.

4-5. DISPLAY SET

```
              DISPLAY SET

  CH INFO. BOX    ON
  CH TITLE        ON
  CH TITLE POS.  CENTER
  CH TITLE SIZE  X1
  DATE & TIME     ON
  BORDER LINE     OFF
  SEQUENCE TIME  03[SEC]
  DE-INTER MODE  WEAVE
  VIDEO SCALE     FULL

   ▲▼:MOVE    ◀▶:CHANGE   AUTO:PREV.
```

4-5-1. CH INFO. BOX

Display the video input status on the left top of the monitor.

It disappears within 10 seconds after SC-04MHD is turned on. When the video input signal is lost or changed, it is shown again and disappears within 10 seconds. When it is off, the channel information will not be displayed.

4-5-2. CH TITLE

Set the channel title and cropping mode message.

DISPLAY SET> Press the ▲▼ buttons to select the CH TITLE> Press the ◀▶ buttons to set this function ON/OFF. When it is off, the channel name will not be displayed on the screen.

4-5-3. CH TITLE POS.

Change the location to display the channel name(title) on the monitor screen.

DISPLAY SET> Press the ▲▼ buttons to select the CH TITLE POS.> Press the ◀▶ buttons to move the CH TITLE to the left, right, or center.

4-5-4. CH TITLE SIZE

Set the channel title size. It is possible to select X1 or X2.

DISPLAY SET> Press the ▲▼ buttons to select the CH TITLE SIZE> Press the ◀▶ buttons to set X1 / X2.

4-5-5. DATE & TIME

Set the current date and time.

DISPLAY SET> Press the ▲▼ buttons to select the DATE & TIME> Press the ◀▶ buttons to set it ON/OFF.

4-5-6. BORDER LINE

Select whether to have the border line to distinguish the split video images easily.

DISPLAY SET> Press the ▲▼ buttons to select the BORDER> Press the ◀▶ buttons to turn this function ON/OFF.

4-5-7. SEQUENCE TIME

Set the display switching time by seconds (3~99 seconds) in the Auto Sequence mode.

SYSTEM SET> Press the ▲▼ buttons to select the SEQUENCE TIME> Press the ◀▶ buttons to set the sequence time.

4-5-8. DE-INTER MODE

Set the scan method. In this menu, it is possible to change the video signal in the interlace scanning method (e.g. 1920x1080 60i) to the progressive scanning method (e.g. 1920x1080 60p). When watching video of moving object recorded by a CVBS camera, the video will be displayed unclearly with some noise. For HD analog cameras, it should be set as WEAVE and for CVBS (NTSC / PAL) cameras, it should be set as 2D. When connecting both HD analog cameras and CVBS cameras to this splitter together, this mode should be set as 2D. However, in this case, there might be minute image shaking.
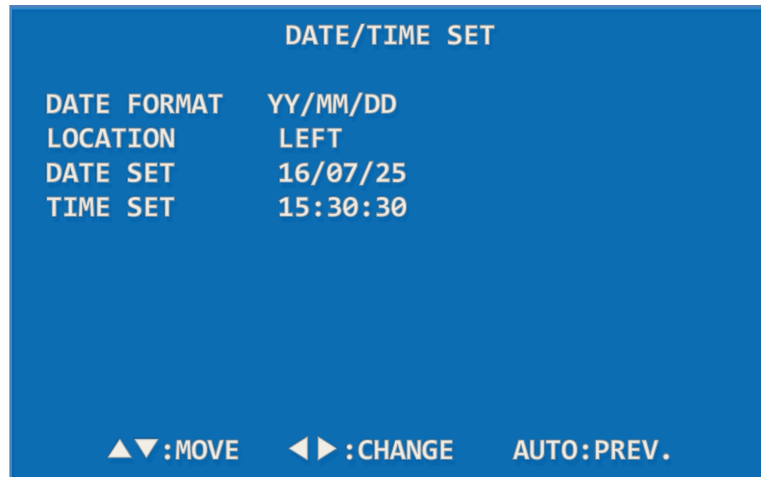
SYSTEM SET> Press the ▲▼ buttons to select the DE-INTER MODE> Press the ◀▶ buttons to set the 2D/WEAVE.

4-5-9. VIDEO SCALE

Set the screen ratio of CVBS (NTSC/PAL) video and HD Analog video to either Full, 16:9 or 4:3.

Press the ▲▼ buttons to select the VIDEO SCALE> Press ◀▶ buttons to set the video screen ratio.

4-6. DATE/TIME SET

```
              DATE/TIME SET

   DATE FORMAT   YY/MM/DD
   LOCATION      LEFT
   DATE SET      16/07/25
   TIME SET      15:30:30




     ▲▼:MOVE    ◀▶:CHANGE   AUTO:PREV.
```

4-6-1. DATE FORMAT

Set the date format.

DATE & TIME SET> Press the ▲▼ buttons to select the DATE FORMAT> Press the ◀▶ to set the date format.

4-6-2. LOCATION

Set the location to display the date and time on the screen.

DATE & TIME SET> Press the ▲▼ buttons to the LOCATION> Press the ◀▶ buttons to move the displayed date and time to the left, right or center.

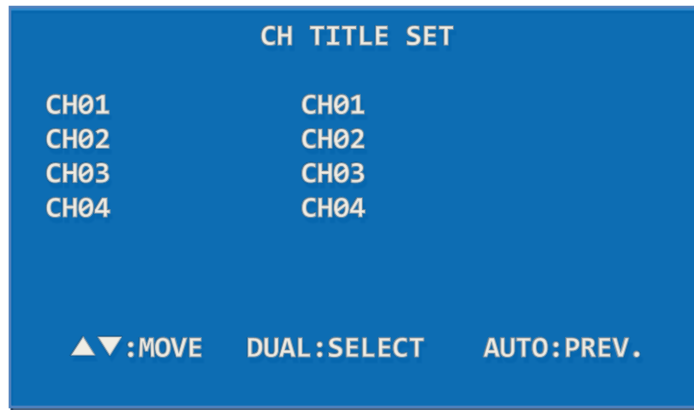### 4-6-3. DATE SET

Set the date.

DATE & TIME SET> Press the ▲▼ buttons to select the DATE SET> Press the ▲▼ and ◀▶ buttons to set the date.

4-6-4. TIME SET

Set the time.

DATE & TIME SET> Press the ▲▼ buttons to select the TIME SET> Press the ▲▼ and ◀▶ buttons to set the time.

4-7. CH TITLE SET

```
                 CH TITLE SET

    CH01              CH01
    CH02              CH02
    CH03              CH03
    CH04              CH04



    ▲▼:MOVE    DUAL:SELECT    AUTO:PREV.
```
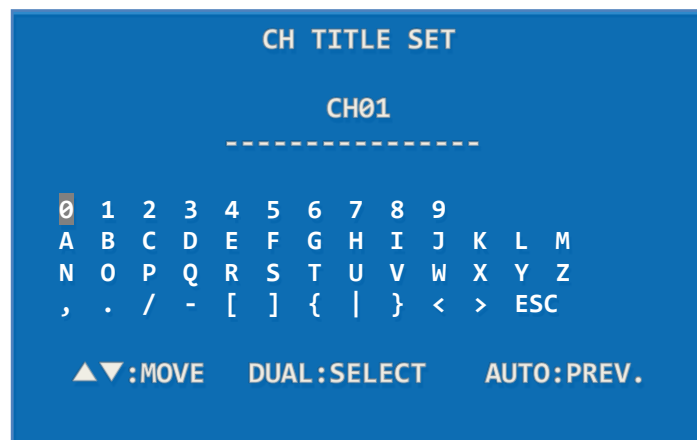
Display the channel title(name) on the screen.

CH TILTE SET> Press the ▲▼ buttons to select the CHANNEL> Press the DUAL(SELECT) button to set the channel title(name).

4-7-1. CHANNEL

Change the channel settings.

CH TILTE SET> Press the ▲▼ buttons to select the channel to be modified> Press the DUAL(SELECT) button to enter the channel settings.

```
                 CH TITLE SET

                    CH01
                ----------------

    0  1  2  3  4  5  6  7  8  9
    A  B  C  D  E  F  G  H  I  J  K  L  M
    N  O  P  Q  R  S  T  U  V  W  X  Y  Z
    ,  .  /  -  [  ]  {  |  }  <  >  ESC

    ▲▼:MOVE    DUAL:SELECT    AUTO:PREV.
```

4-7-2. TITLE

Change the channel title(name). (Up to 16 letters)

Move to each letter (total: 47 letters) by using ▲▼ and ◀▶ buttons and press the DUAL(SELECT) button to enter the selected letter. After entering the channel title, please press the AUTO(PREV.) or ESC buttons to save the entered title and go to the CH TITLE SET mode.

4-8. EVENT LIST

```
                     EVENT LIST

NO. YY/MM/DD HH:MM:SS   EVT  CH
003 16/05/03 15:38:20   ALM  02
002 16/04/29 17:00:30   S_L  03
001 16/03/03 12:08:40   S_L  04




    ◄►:MOVE PAGE      AUTO:PREV.
```

Display the relevant channel and occurred time when an alarm or video loss occurs in a specific channel. (S_L: Signal Loss, ALM: Alarm)

5. Connection Diagram
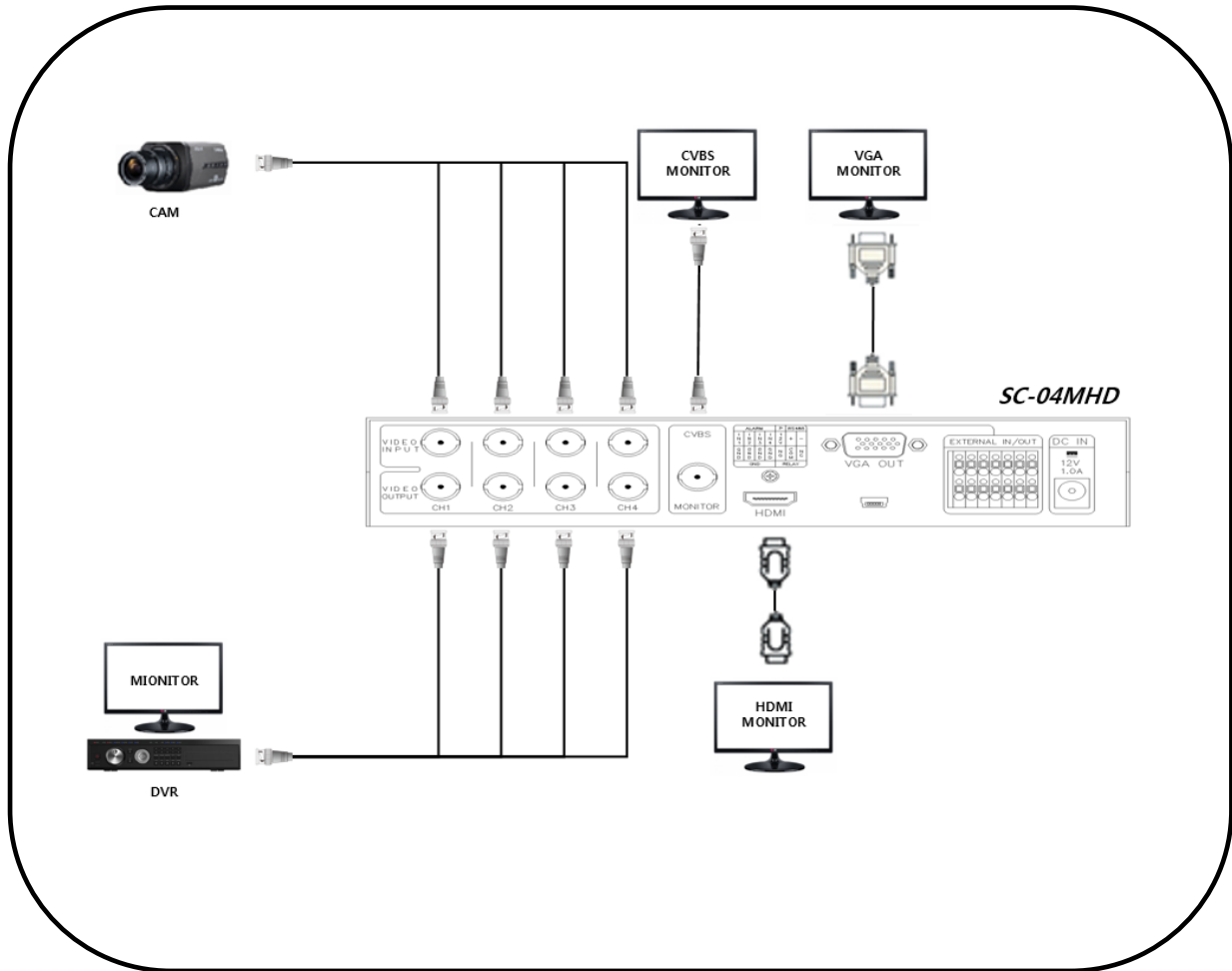
※ CVI signal is displayed irregularly randomly as the original image does not come out when SC-04MHD is turned on and off. In this case, please disconnect and reconnect the relevant BNC connector of the cable and then turn it on and off.

6. FAQ

Symptom	Checking Method
No power input	• Please check the adapter's input status. • Please check whether to connect a DC 12V adapter or not. • Please check if the power switch is on.
No video display through loop output port	• Please check if the input video belongs to the supported input video resolutions of SC-04MHD. • Please check the connection status of the BNC connectors. • Please check if the camera and DVR are compatible. • The connected cable length should not exceed the recommended transmission distance.
No video display of CVBS signal	• Please check if the input video belongs to the supported input video resolutions of SC-04MHD. • Please check if the input video format and video format setting of SC-04MHD are same. • Please check the connection status of the BNC connectors. • Please check if the monitor input is set as CVBS. • The connected cable length should not exceed the recommended transmission distance.
No video display of HDMI signal	• Please check if the input video belongs to the supported input video resolutions of SC-04MHD. • Please check if the input video format and video format setting of SC-04MHD are same. • Please check the connection status of the BNC connectors of input video. • Please check if the monitor input is set as HDMI. • Please check if the HDMI output resolution matches the monitor's input resolution. • The connected cable length should not exceed the recommended transmission distance.
No video display Of VGA signal	• Please check if the input video belongs to the supported input video resolutions of SC-04MHD. • Please check if the input video format and video format setting of SC-04MHD are same. • Please check the VGA output resolution. • Please check the connection status of the BNC connectors of input video. • Please check if the monitor input is set as VGA. • Please check if the output resolution of SC-04MHD matches the monitor's input resolution. • The connected cable length should not exceed the recommended transmission distance.

7. Specifications

Model		SC-04MHD
Video Input		AHD, TVI, CVI, CVBS
Video Input Resolution	HD-Analog	1920x1080p 25/30Hz, 1280x720p 25/30Hz
	CVBS	NTSC, PAL
Video Output Resolution	LOOP OUT	Same resolution as the input video signal
	CVBS	720x480i 59.94Hz(NTSC), 720x576i 50Hz(PAL)
	HDMI	1920x1080p 25/30/50/60Hz, 1920x1080i 50/60Hz, 1280x720p 50/60Hz, 1024x768@60Hz, 1360x768@60Hz, 1600x1200@60Hz
	VGA	1920x1080p 60Hz, 1280x720p 60Hz, 1024x768@60Hz, 1360x768@60Hz, 1600x1200@60Hz
Video In/Out Recommended Distance	HD-Analog Input	3C-2V 200m (based on 3C-2V 200m/20Ω)
	CVBS Input	5C-HFBT(RG-6) 600m (based on 5C-HFBT 200m/10Ω)
	Loop through Output	3C-2V 100m (based on 3C-2V 200m/20Ω)
	CVBS Output	3C-2V 200m (based on 3C-2V 200m/20Ω)
	HDMI Output	HDMI Cable 3m
	VGA Output	RGB Cable 1m
Input Power / Power Consumption		MAX. DC 12V / 650mA
Connection Port	VIDEO Input	BNC-F, 75Ω
	VIDEO Output	BNC-F, 75Ω
	CVBS Output	BNC-F, 75Ω
	HDMI Output	A Type
	VGA Output	D-SUB 15Pin
	USB	Mini-USB
EXTERNAL IN / OUT	Alarm	Input: 4EA (8P), Output: 2EA (3P)
	RS-485	2P
	DC 12V Output	1P
LED Indicator	GREEN	DUAL, AUTO SEQUENCE, QUAD modes
Temperature / Humidity		-10°C ~ +50°C / 0 ~ 80%
Case Body / Weight		Steel / 1.3Kg
Dimensions (mm)		220(W) x 44(H) x 190(D) mm

※ The distance mentioned above depends on camera, DVR, cable's specifications and quality.

※ The loop output is in inverse proportion to the input signal's transmission distance.

8. Warranty Certificate

This product has passed thorough quality control and test, and if this gets broken during normal use, we provide the two-year warranty service.

Model No.	
Serial No.	
Distributor	
Date you purchased	
Place you purchased	
Warranty Period	Two (2) year from the date of purchase
Purchaser **Name**	
Address	

• Please check this warranty indication first.

• Please contact your distributor after checking out any defect in the products.

• The standard for repairing, replacement or reimbursement follows Customer.

• Warranty content any defect under normal use within the warranty service period we give you free repair service according to the warranty certificate.

• We charge you with the fee of parts and service despite of free warranty service period. Any breakage made without care such as:

- Breakage or trouble made by natural disaster.
- Breakage or trouble made by breaking the product guide or manual.
- Breakage or trouble made by wrong power voltage or frequency.
- When you want to reassemble for full system or replace parts within warranty service period.
- When unauthorized person modified or made damage on the product trying to repair it.
- Thunderstroke.

• Please note that we don't support the breakage after warranty service period is expired. If the customer wants to get it repaired, we charge them with the fee.

• The specification is subject to change without prior notice for quality improvement.

[MEMO]

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