Marshall Electronics

Operation Manual
Full-HD Miniature POV Camera

CV502-WPM/WPMB

CV225-M/MB

CV502-M/MB

CV505-M/MB, CV565-MGB

CV343-CS/CSB, CV345-CS/CSB, CV365-CGB

Please read this guide carefully before installing and using the camera.
Please retain this guide for reference.

MENU STRUCTURE

SETUP	SUB MENU	SUB MENU
LENS	ESC	
	DC IRIS	
WB CONTROL	AUTO	
	ATW	
	PUSH	
	MANUAL	COLOR TEMPERATURE
		RED GAIN
		BLUE GAIN
AE CONTROL (EXPOSURE)	BRIGHTNESS	0~20
	AGC LIMIT	0~20
	SHUTTER	AUTO
		MANUAL
		FLICKERLESS
	DSS (SENS-UP)	OFF, x2~64
BACK LIGHT	BACK LIGHT	WDR
		BLC
		SPOT
	ACE	LOW, MIDDLE, HIGH
	ECLIPSE	LEVEL
		COLOR
DAY/NIGHT	AUTO	ANTI-SAT.
		AGC LEVEL
		AGC MARGIN
		DWELL TIME
	COLOR	
	NIGHT	
IMAGE STABILIZER	RANGE	10%, 20%, 30%
	FILTER	LOW, MIDDLE, HIGH
	AUTO C	OFF, HALF, FULL

MENU STRUCTURE

SETUP	SUB MENU	SUB MENU
GENLOCK	MODE	OFF, ON
	OUTPUT	OFF, ON
	H-SYNC PHASE	
	PHASE SET	
AUDIO	AUDIO LEVEL	0~143
	AUDIO AGC	OFF, ON
	AGC MAX	0~119
	SAMPLE BITS	16, 20, 24, 32 BITS
IMAGE CONTROL	COLOR LEVEL	0~20
	SHARPNESS	0~20
	MIRROR	
	FLIP	
	D-ZOOM	1.0X ~ 16.0X
	DEFOG	AUTO
		MANUAL
	DNR	OFF, LOW, MIDDLE, HIGH
	MOTION	
	SHADING	
	GAMMA	0.3~0.8
	FRAME RATE	
	BLACK LEVEL	0~32
DISPLAY CONTROL	CAM VERSION	
	CAM TITLE	
	PRIVACY	
	CAM ID	0~255
	BAUDRATE	
	LANGUAGE	
RESET	ON/CHANGE	USER/FACTORY
EXIT		

OSD Joystick and Button
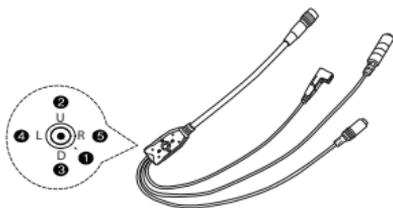
① SET   *Used to access the menu and confirm selection.*
② UP   *Used to move the cursor up.*
③ DOWN *Used to move the cursor down*
④ LEFT   *Used to move the cursor to left and change the value.*
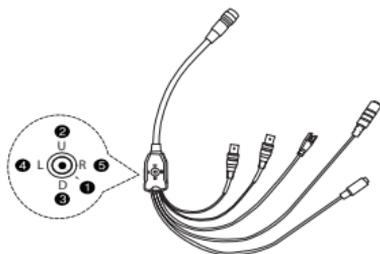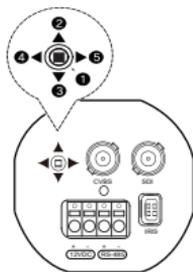⑤ RIGHT *Used to move the cursor to right and change the value.*
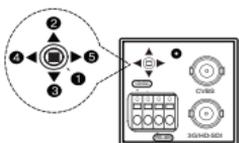
CV502
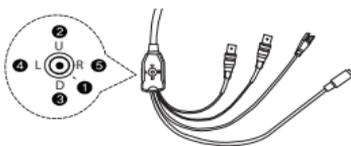
Cable for CV502-MP/CV225

I/O Cable for CV505/345

I/O Cable for CV-565/365

CV343
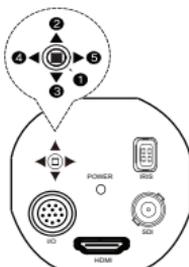
CV345
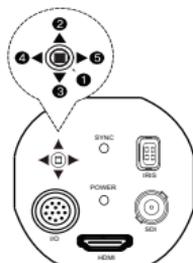
CV365

Select LENS using the UP or DOWN button.
You can change between ESC and DC IRIS using the LEFT or RIGHT button.

■ **ESC:** Manual IRIS Lens (Fixed IRIS lens)

Shutter will automatically control exposure if SHUTTER is set as AUTO.

■ **DC IRIS:** DC Auto IRIS Lens.

IRIS will automatically control exposure.

MENU	
LENS	ESC
WB CONTROL	ATW
AE CONTROL	↵
BACK LIGHT	↵
DAY / NIGHT	AUTO↵
IMAGE STABILIZER	OFF
AUDIO MIC	ON
GENLOCK	↵
IMAGE CONTROL	↵
DISPLAY CONTROL	↵
RESET	ON↵
EXIT	

MENU	
LENS	DC IRIS
WB CONTROL	ATW
AE CONTROL	↵
BACK LIGHT	↵
DAY / NIGHT	AUTO↵
IMAGE STABILIZER	OFF
AUDIO MIC	ON
GENLOCK	↵
IMAGE CONTROL	↵
DISPLAY CONTROL	↵
RESET	ON↵
EXIT	

Select WB CONTROL using the UP or DOWN button.
You can change between AUTO, ATW, PUSH, and MANUAL using the LEFT or RIGHT button.

- **AUTO:** Controls the automatic adjustment of the light source's color temperature to 3,000°K ~ 8,000°K.

- **ATW:** Continuously adjusts camera color balance in accordance with any change in color temperature. Compensates for color temperature changes within the range of 1,900°K to 11,000°K.

- **PUSH:** Color temperature will be manually adjusted by pushing the OSD button. Place the white paper in front of the camera when OSD button is pressed to obtain the optimum result.

- **MANUAL:** Select this to fine-tune White Balance manually.
  You can adjust the blue and red tone level manually.

  - **COLOR TEMP:** Select color temperature from LOW, MIDDLE, or HIGH.
  - **BLUE:** Adjust the Blue tone of the image. (0~20)
  - **RED:** Adjust the Red tone of the image. (0~20)

MENU	
LENS	ESC
WB CONTROL	MANUAL
AE CONTROL	↵
BACK LIGHT	↵
DAY / NIGHT	AUTO↵
IMAGE STABILIZER	OFF
AUDIO MIC	ON
GENLOCK	↵
IMAGE CONTROL	↵
DISPLAY CONTROL	↵
RESET	ON↵
EXIT	

WB CONTROL	
COLOR TEMP	LOW
BLUE	10 |━━━━━━━|
RED	10 |━━━━━━━|
RETURN	↵
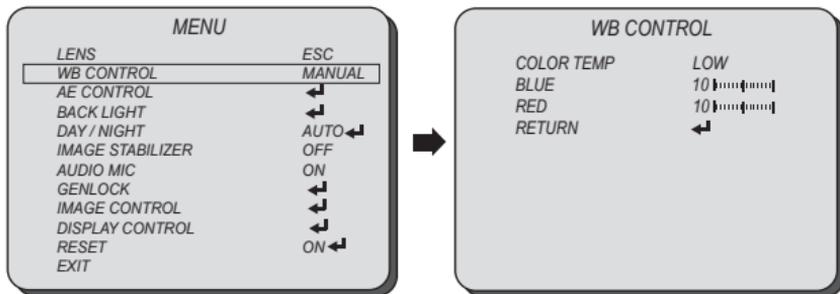
- *Adjust White Balance first by using the AUTO or ATW mode before switching to MANUAL mode.*
- *White Balance may not work properly under the following conditions. In this case, select the ATW mode.*
  - *When the ambient illumination of the subject is dim.*
  - *If the camera is directed towards a fluorescent light or is installed in place where illumination changes dramatically, the White Balance operation may become unstable.*

Select AE CONTROL using the UP or DOWN button.
You can select one sub-mode from BRIGHTNESS, AGC LIMIT, SHUTTER, and DSS using the UP or DOWN button.

```
              MENU
    LENS                    ESC
    WB CONTROL              MANUAL
    AE CONTROL              ↵
    BACK LIGHT              ↵
    DAY / NIGHT             AUTO↵
    IMAGE STABILIZER        OFF
    AUDIO MIC               ON
    GENLOCK                 ↵
    IMAGE CONTROL           ↵
    DISPLAY CONTROL         ↵
    RESET                   ON ↵
    EXIT
```

```
           AE CONTROL
    BRIGHTNESS         10 |┅┅┼┅┅|
    AGC LIMIT          10 |┅┅┼┅┅|
    SHUTER             AUTO
    DSS                OFF
    RETURN             ↵
```
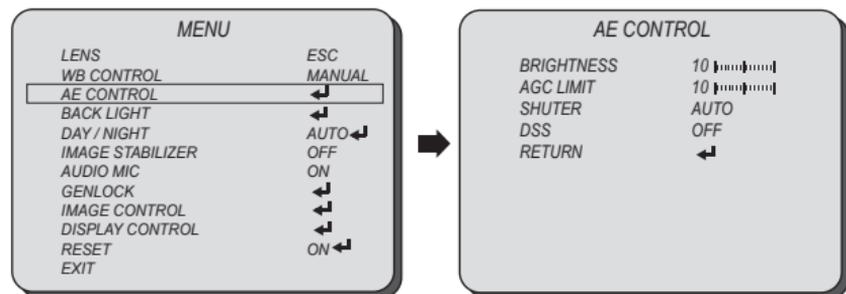
- **BRIGHTNESS:** The brightness control function adjusts gain and iris to keep a brightness level.

- **AGC LIMIT:** This function controls the amplification/gain process automatically if the illumination falls under the usable level.
  Camera will raise up gain to the selected gain limit under dark conditions.

- **SHUTTER:** This function control shutter speed.

  - **MANUAL:** Shutter speed will be fixed at the selected speed. (1/60~40,000)
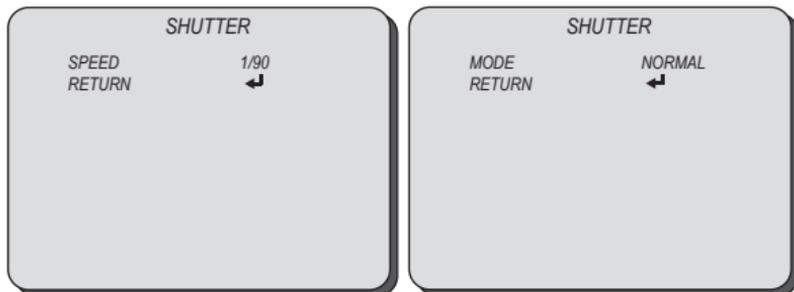 - **AUTO:** Shutter controls exposure automatically when IRIS is manual. (NORMAL/DEBLUR)
  - **FLICKERLESS:** This function will help to decrease video flickers due to a conflict with the installed lighting frequency.

```
             SHUTTER
    SPEED            1/90
    RETURN           ↵
```

```
             SHUTTER
    MODE            NORMAL
    RETURN          ↵
```

- **DSS (Digital Shutter Speed):** When luminance condition is low, DSS can adjust the picture quality by maintaining the light level. Slow shutter speed limits to x64.

Select BACK LIGHT using the UP or DOWN button and enter using SEL button.
You can select one sub-mode from BACK LIGHT, ACE, and ECLIPSE using the UP or DOWN button.

■ BACK LIGHT

- **WDR:** Enable user to view both object and background more clearly when background is too bright.
  - ● WDR-LEVEL: *Select the WDR level from LOW, MIDDLE, and HIGH using the LEFT or RIGHT button.*
- **BLC:** Enable a back light compensation feature.
- **SPOT:** Enable a user to select a desired area on a picture and view that area more clearly when background is too bright.
  - ● **AE HOR POS:** *Move the SPOT area horizontally using the LEFT or RIGHT button.*
  - ● **AE VER POS:** *Move the SPOT area vertically using the UP or DOWN button.*
  - ● **AE WIDTH:** *Change the width of SPOT area using the LEFT or RIGHT button.*
  - ● **AE HEIGHT:** *Change the height of SPOT area using the UP or DOWN button.*
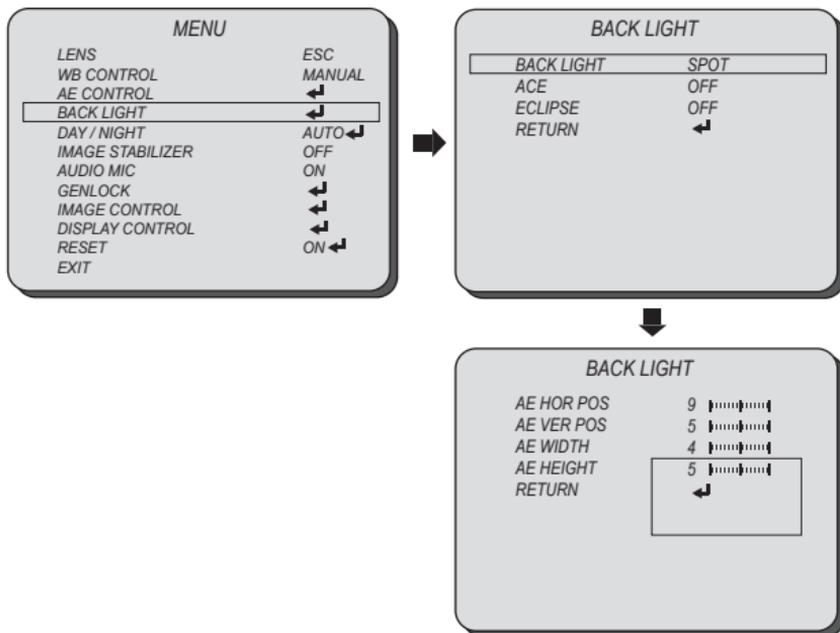
```
           MENU
LENS                ESC
WB CONTROL          MANUAL
AE CONTROL          ↵
BACK LIGHT          ↵
DAY / NIGHT         AUTO ↵
IMAGE STABILIZER    OFF
AUDIO MIC           ON
GENLOCK             ↵
IMAGE CONTROL       ↵
DISPLAY CONTROL     ↵
RESET               ON ↵
EXIT
```

```
         BACK LIGHT
BACK LIGHT          SPOT
ACE                 OFF
ECLIPSE             OFF
RETURN              ↵
```

```
         BACK LIGHT
AE HOR POS          9
AE VER POS          5
AE WIDTH            4
AE HEIGHT           5
RETURN              ↵
```

Select BACK LIGHT using the UP or DOWN button and enter using SEL button.
You can select one sub-mode from BACK LIGHT, ACE, and ECLIPSE using the UP or DOWN button.

■ **ACE:** Brightness correction of the dark image area.

Select the GAIN level from OFF, LOW, MIDDLE, and HIGH using the LEFT or RIGHT button.

■ **ECLIPSE:** Highlight the bright area with a masking box with a selected color.

Enable/Disable ECLIPSE, selecting from OFF or ON using the LEFT or RIGHT button.

   ■ **LEVEL:** *Select the masking level from 0~20 using the LEFT or RIGHT button.*
   ■ **COLOR:** *Select the color of masking from GRN, MAG, RED, BLUE, BLK, WHT, YEL,*
   and CYN using the LEFT or RIGHT button.

MENU	
LENS	ESC
WB CONTROL	MANUAL
AE CONTROL	↵
BACK LIGHT	↵
DAY / NIGHT	AUTO ↵
IMAGE STABILIZER	OFF
AUDIO MIC	ON
GENLOCK	↵
IMAGE CONTROL	↵
DISPLAY CONTROL	↵
RESET	ON ↵
EXIT	

BACK LIGHT	
BACK LIGHT	SPOT
ACE	OFF
ECLIPSE	ON
RETURN	↵

BACK LIGHT	
LEVEL	11
COLOR	CYN
RETURN	↵
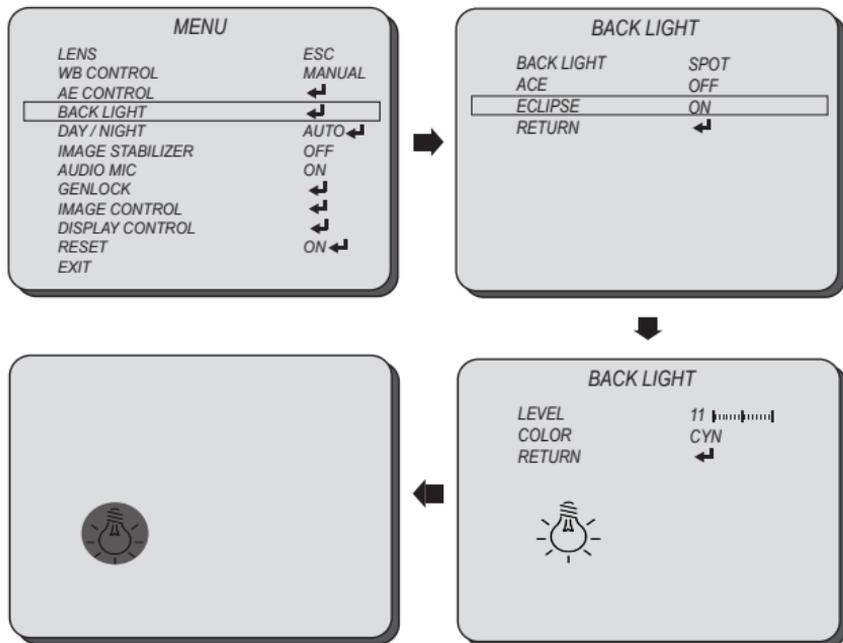
Select DAY / NIGHT using the UP or DOWN button.
You can select one sub-mode from AUTO, COLOR, and NIGHT using the UP or DOWN button.

■ **AUTO:** The camera will stay in DAY in a normal environment, but will switch
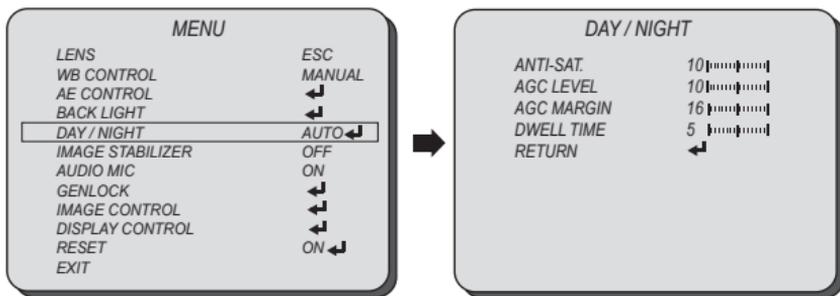to NIGHT mode when ambient illumination falls below this pre-set level.
ICR(IR Cut) filter is removed when it switches to Black/White.
Select the AUTO mode using the LEFT or RIGHT button and enter into sub-menu using SEL button.

- **ANTI-SAT.:** Adjust the anti-saturation level manually.
This feature will reduce the saturation in which part of the
camera receiving the light affected by the IR or light in Night mode.
If the saturation is reduced the surroundings will be darker.

- **AGC LEVEL:** Set the level of threshold for switching day to night. This level is same
as the exposure gain level.

- **AGC MARGIN:** Set the margin between Day →Night switching level and Night →Day
switching level.

- **DWELL TIME:** Select the dwell time between Day →Night and Night →Day change.

MENU		DAY / NIGHT	
LENS	ESC	ANTI-SAT.	10
WB CONTROL	MANUAL	AGC LEVEL	10
AE CONTROL	↵	AGC MARGIN	16
BACK LIGHT	↵	DWELL TIME	5
DAY / NIGHT	AUTO ↵	RETURN	↵
IMAGE STABILIZER	OFF		
AUDIO MIC	ON		
GENLOCK	↵		
IMAGE CONTROL	↵		
DISPLAY CONTROL	↵		
RESET	ON ↵		
EXIT			

■ **COLOR:** The camera keeps color mode constantly.

■ **NIGHT:** The camera keeps Black/White mode constantly.

Select IMAGE STABILIZER using the UP or DOWN button and enter ON using SEL button.
You can select one sub-mode from RANGE, FILTER, and AUTO C using the UP or DOWN button.

- ■ **IMAGE STABILIZER:** This function will reduce image blurriness due to vibrations caused by hand shake or Pan/Tilt operation. The image will be digitally zoomed in to compensate the shifted pixels.

    - ▬ **RANGE:** Set the digital zoom level for image stabilizing. (Max. 30%: x1.4 Digital Zoom)
    - ▬ **FILTER:** Select the level of correction hold filter for the worst case of image.
        - ● HIGH: Less image correction. ● Low: More image correction.
    - ▬ **AUTO C:** Select the image auto centering level according to a vibration type.
        - ● FULL: The camera will correct the blurriness due to vibrations caused by both hand shake or Pan/Tilt operation.
        - ● HALF: The camera will correct the blurriness due to vibrations caused by hand shake.
        - ● OFF: Disable the auto centering function.
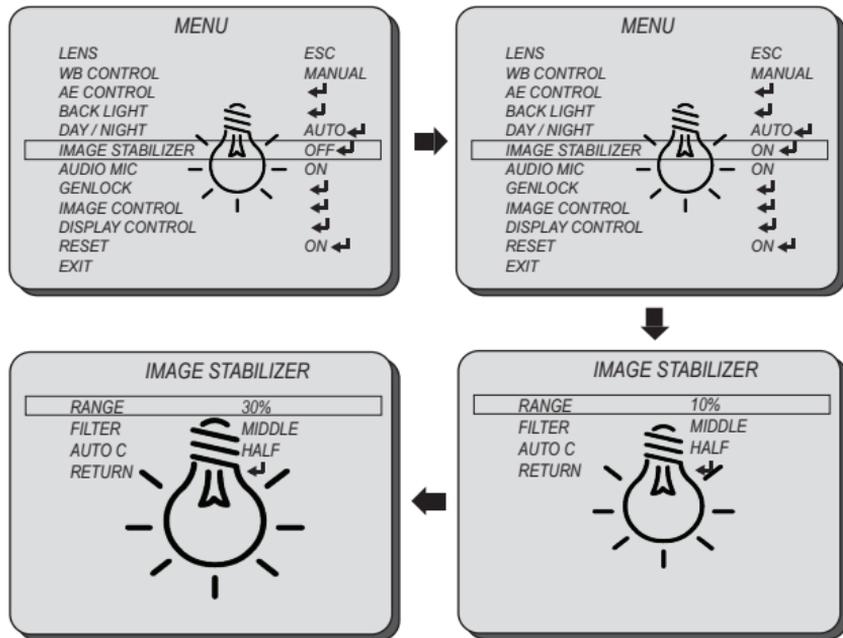
AUDIO MIC

Select AUDIO MIC using the UP or DOWN button and enter ON using SEL button.
You can select one sub-mode from AUDIO LEVEL, AUDIO AGC, AGC MAX, and SAMPLE BITS
using the UP or DOWN button.

■ **AUDIO MIC:** The audio input will be embedded on SDI and HDMI output.

    ■ **AUDIO LEVEL:** Enabled when AUDIO AGC is set OFF. Adjust the audio level manually.
    ■ **AUDIO AGC:** Automatically adjusts the MIC gain as the input signal becomes too loud
    or too low.
    ■ **AGC MAX:** Enabled when AUDIO AGC is set ON. Set the maximum level of AUDIO AGC.
    ■ **SAMPLE BITS:** Select the bit depth of audio.

MENU	
LENS	ESC
WB CONTROL	MANUAL
AE CONTROL	↵
BACK LIGHT	↵
DAY / NIGHT	AUTO ↵
IMAGE STABILIZER	ON ↵
AUDIO MIC	ON
GENLOCK	↵
IMAGE CONTROL	↵
DISPLAY CONTROL	↵
RESET	ON ↵
EXIT	

➡

AUDIO MIC	
AUDIO LEVEL	24
AUDIO AGC	OFF
AGC MAX	NOT_USED
SAMPLE BITS	24 BITS
RETURN	↵
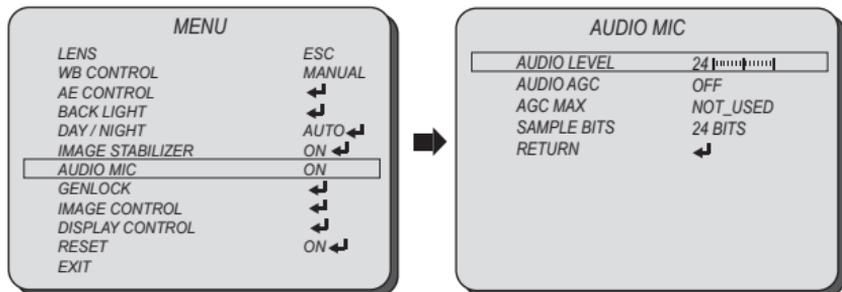
Select GENLOCK using the UP or DOWN button.
You can select MODE, OUTPUT EN, H-SYNC PHASE, and PHASE SET using the UP or DOWN button.

MENU	
LENS	ESC
WB CONTROL	MANUAL
AE CONTROL	↵
BACK LIGHT	↵
DAY / NIGHT	AUTO↵
IMAGE STABILIZER	OFF
AUDIO MIC	ON
GENLOCK	↵
IMAGE CONTROL	↵
DISPLAY CONTROL	↵
RESET	ON ↵
EXIT	

GENLOCK	
MODE	ON
OUTPUT EN	ON
H-SYNC PHASE	+15
PHASE SET	ON↵
RETURN	↵
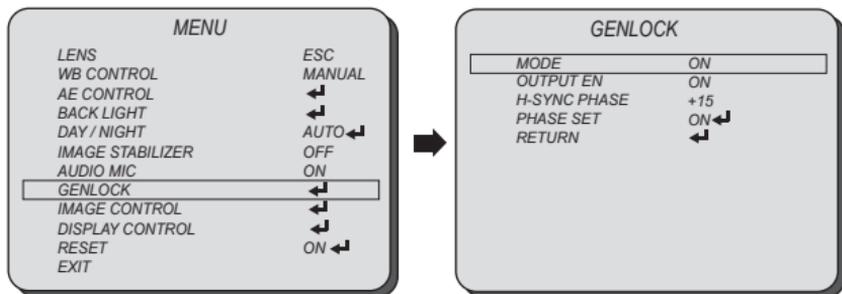
- **MODE:** Enable or disable the genlock function.
  Enable/Disable MODE, selecting from OFF or ON using the LEFT or RIGHT button.

- **OUTPUT EN:** Enable or disable the reference signal loop out.
  Enable/Disable OUTPUT EN selecting from OFF or ON using the LEFT or RIGHT button.

- **H-SYNC PHASE:** Adjust H-sync pixel offset for a fine tuning.
  Adjust the offset using the LEFT or RIGHT button.

- **PHASE SET:** Apply the changes from "H-SYNC PHASE".

Select IMAGE CONTROL using the UP or DOWN button.
You can select COLOR LEVEL, SHARPNESS, MIRROR, AND FLIP using the UP or
DOWN button.

MENU	
LENS	ESC
WB CONTROL	MANUAL
AE CONTROL	↵
BACK LIGHT	↵
DAY / NIGHT	AUTO ↵
IMAGE STABILIZER	OFF
AUDIO MIC	ON
GENLOCK	↵
IMAGE CONTROL	↵
DISPLAY CONTROL	↵
RESET	ON ↵
EXIT	

IMAGE CONTROL	
COLOR LEVEL	15
SHARPNESS	10
MIRROR	OFF
FLIP	OFF
D-ZOOM	1.0X
DEFOG	OFF
DNR	LOW
MOTION	ON
SHADING	OFF
GAMMA	0.3
FRAME RATE	HD1080P60
BLACK LEVEL	10
RETURN	↵

■ **COLOR LEVEL:** Adjust the color level value for a fine color tune.

  Adjust the color level from 00~20 using the LEFT or RIGHT button.

■ **SHARPNESS:** Increasing this value, the picture outline becomes stronger and clearer.

  Adjust the sharpness level from 00~20 using the LEFT or RIGHT button.

■ **MIRROR:** Video output is rotated horizontally.

■ **FLIP:** Video output is rotated vertically.

IMAGE CONTROL	
COLOR LEVEL	15
SHARPNESS	10
MIRROR	ON
FLIP	OFF
D-ZOOM	1.0X
DEFOG	OFF
DNR	LOW
MOTION	ON
SHADING	OFF
GAMMA	STANDARD
FRAME RATE	HD1080P60
RETURN	↵

IMAGE CONTROL	
COLOR LEVEL	15
SHARPNESS	10
MIRROR	OFF
FLIP	ON
D-ZOOM	1.0X
DEFOG	OFF
DNR	LOW
MOTION	ON
SHADING	OFF
GAMMA	0.3
FRAME RATE	HD1080P60
BLACK LEVEL	10
RETURN	↵

IMAGE CONTROL

Select IMAGE CONTROL using the UP or DOWN button.
You can select D-ZOOM, DEFOG, and DNR using the UP or DOWN button.

MENU	
LENS	ESC
WB CONTROL	MANUAL
AE CONTROL	↵
BACK LIGHT	↵
DAY / NIGHT	AUTO ↵
IMAGE STABILIZER	OFF
AUDIO MIC	ON
GENLOCK	↵
IMAGE CONTROL	↵
DISPLAY CONTROL	↵
RESET	ON ↵
EXIT	

IMAGE CONTROL	
COLOR LEVEL	15
SHARPNESS	10
MIRROR	OFF
FLIP	OFF
D-ZOOM	1.0X
DEFOG	OFF
DNR	LOW
MOTION	ON
SHADING	OFF
GAMMA	0.3
FRAME RATE	HD1080P60
BLACK LEVEL	10
RETURN	↵

■ **D-ZOOM:** Digitally zoom the video output up to 16X.

Adjust the digital zoom level from 1.0~16.0X using the LEFT or RIGHT button.

■ **DEFOG:** This feature will help increase visibility in extreme weather conditions, such as fog, rain or in a very strong luminous intensity.

▬ **MANUAL:** Set the level of defoging function (LOW, MIDDLE, HIGH).
▬ **AUTO:** This feature will help increase visibility in extreme weather conditions, such as fog, rain or in a very strong luminous intensity.

IMAGE CONTROL	
COLOR LEVEL	15
SHARPNESS	10
MIRROR	ON
FLIP	OFF
D-ZOOM	1.0X
DEFOG	ON
DNR	LOW
MOTION	ON
SHADING	OFF
GAMMA	0.3
FRAME RATE	HD1080P60
BLACK LEVEL	10
RETURN	↵

DEFOG	
MODE	AUTO
LEVEL	MIDDLE
RETURN	↵

■ **DNR:** This feature will reduce the video noise at low ambient light.

Select the DNR level from OFF, LOW, MIDDLE, and HIGH using the LEFT or RIGHT button.

Select IMAGE CONTROL using the UP or DOWN button.
You can select MOTION, SHADING, and GAMMA using the UP or DOWN button.

- **MOTION:** This feature will observe the object movement by motion zone and sensitivity that are pre-set with sub menu. The motion detection icon can be displayed out.
  - **DET WINDOW:** *Set the motion detection window.*
    - **WINDOW ZONE:** *Select the motion detection window.*
    - **WIDOW USE:** *Enable/disable the motion detection window selected from WINDOW ZONE.*
    - **DET H-POS:** *Move the motion detection mask area horizontally.*
    - **DET V-POS:** *Move the motion detection mask area vertically.*
    - **DET H-SIZE:** *Change the width of motion detection window.*
    - **DET V-SIZE:** *Change the height of motion detection window.*
  - **SENSITIVITY:** *Set the motion detection sensitivity.*
  - **MOTION OSD:** *Enable/disable the motion detection OSD.*

IMAGE CONTROL	
COLOR LEVEL	15
SHARPNESS	10
MIRROR	ON
FLIP	OFF
D-ZOOM	1.0X
DEFOG	ON
DNR	LOW
MOTION	ON
SHADING	OFF
GAMMA	0.3
FRAME RATE	HD1080P60
BLACK LEVEL	10
RETURN	↵

MOTION	
DET WINDOW	↵
SENSITIVITY	5
MOTION OSD	ON
RETURN	
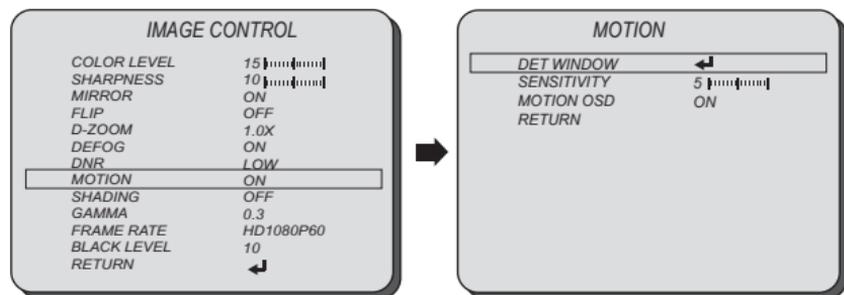
- **SHADING:** This feature will correct the inconsistent brightness level in the image.

- **GAMMA:** This feature will adjust video output brightness in in 33 steps.
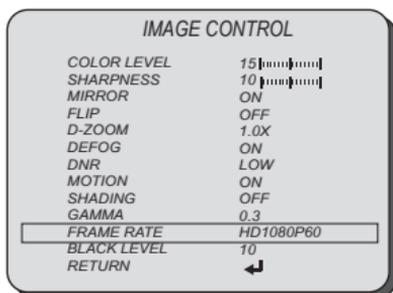 *Select the GAMMA level from 0.3 to 0.8 using the LEFT or RIGHT button.*

Select IMAGE CONTROL using the UP or DOWN button.
You can select FRAME RATE using the UP or DOWN button.

■ **FRAME RATE:** Change video output specification.

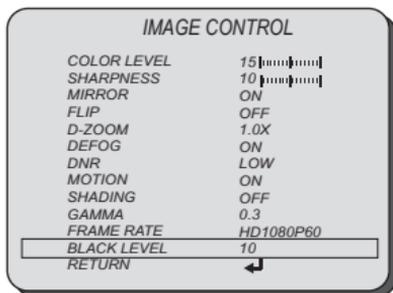*Select the FRAME RATE using the LEFT or RIGHT button.*

Abailable Frame Rate are;
720p25, 720p30, 720p50, 720p60, 1080p25, 1080p30, 1080i50, 1080i60, 1080p50, 1080p60.
720p59 (720p59.94), 1080p29 (1080p29.97), 1080i59 (1080i59.94), and 1080p59 (1080p59.94)

```
            IMAGE CONTROL

   COLOR LEVEL      15 |||||||||||||
   SHARPNESS        10 |||||||||||||
   MIRROR           ON
   FLIP             OFF
   D-ZOOM           1.0X
   DEFOG            ON
   DNR              LOW
   MOTION           ON
   SHADING          OFF
   GAMMA            0.3
   FRAME RATE       HD1080P60
   BLACK LEVEL      10
   RETURN           ↵
```

■ **BLACK LEVEL:** This feature will adjust video output black level in 33 steps.

Select the BLACK LEVEL from 0 to 32 using the LEFT or RIGHT button.

```
            IMAGE CONTROL

   COLOR LEVEL      15 |||||||||||||
   SHARPNESS        10 |||||||||||||
   MIRROR           ON
   FLIP             OFF
   D-ZOOM           1.0X
   DEFOG            ON
   DNR              LOW
   MOTION           ON
   SHADING          OFF
   GAMMA            0.3
   FRAME RATE       HD1080P60
   BLACK LEVEL      10
   RETURN           ↵
```

17

DISPLAY CONTROL

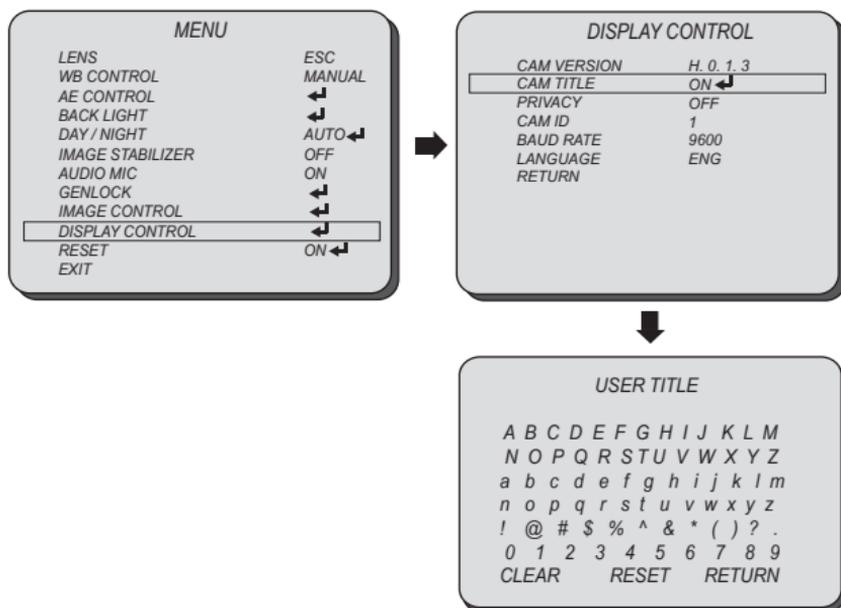*Select DISPLAY CONTROL using the UP or DOWN button.*
You can select CAM VERSION, CAM TITLE, PRIVACY, CAMERA ID, BAUD RATE, and
LANGUAGE using the UP or DOWN button.

- **CAM VERSION:** Display the firmware version of the camera.

- **CAMERA TITLE:** The camera title can be entered and it will appear over the video output.
  You can input the camera title from the virtual keyboard using the LEFT, RIGHT, UP, DOWN, and
  SET button.

MENU	
LENS	ESC
WB CONTROL	MANUAL
AE CONTROL	↵
BACK LIGHT	↵
DAY / NIGHT	AUTO ↵
IMAGE STABILIZER	OFF
AUDIO MIC	ON
GENLOCK	↵
IMAGE CONTROL	↵
DISPLAY CONTROL	↵
RESET	ON ↵
EXIT	

DISPLAY CONTROL	
CAM VERSION	H. 0. 1. 3
CAM TITLE	ON ↵
PRIVACY	OFF
CAM ID	1
BAUD RATE	9600
LANGUAGE	ENG
RETURN	

USER TITLE

```
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
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
! @ # $ % ^ & * ( ) ? .
0 1 2 3 4 5 6 7 8 9
CLEAR     RESET     RETURN
```
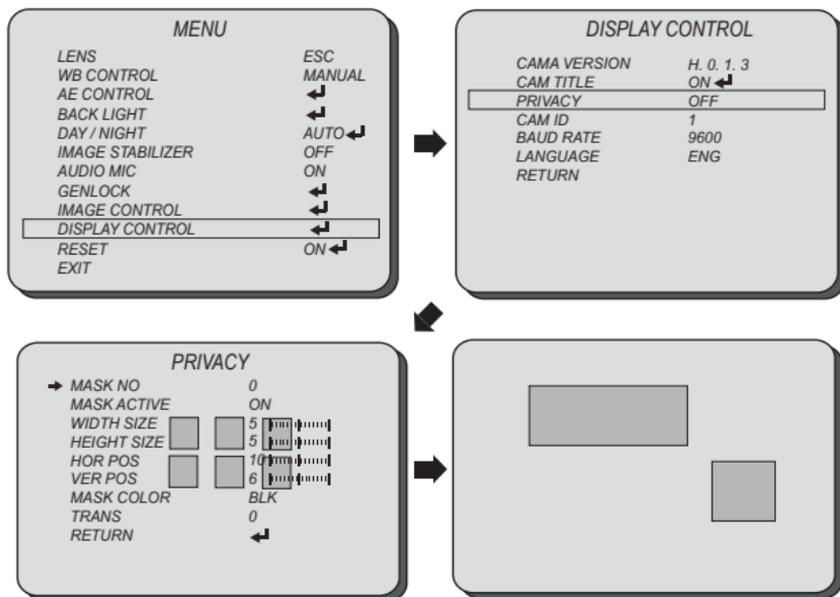
Select DISPLAY CONTROL using the UP or DOWN button.
You can select PRIVACY using the UP or DOWN button.

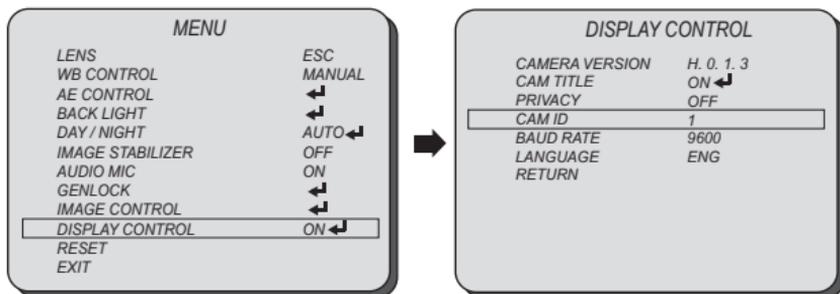■ **PRIVACY:** Mask an area you want to hide on the screen.

- **MASK NO:** *Select the mask number to modify using the LEFT or RIGHT button.*
- **MASK ACTIVE:** *Enable/Disable the mask display using the LEFT or RIGHT button.*
- **WIDTH SIZE:** *Change the width of SPOT area using the LEFT or RIGHT button.*
- **HEIGHTSIZE:** *Change the height of SPOT area using the UP or DOWN button.*
- **HOR POS:** *Move the SPOT area horizontally using the LEFT or RIGHT button.*
- **VER POS:** *Move the SPOT area vertically using the UP or DOWN button.*
- **MASK COLOR:** *Select the mask color using the LEFT or RIGHT button.*
- **TRANS:** *Select the mask transparency using the LEFT or RIGHT button.*

MENU	
LENS	ESC
WB CONTROL	MANUAL
AE CONTROL	↵
BACK LIGHT	↵
DAY / NIGHT	AUTO ↵
IMAGE STABILIZER	OFF
AUDIO MIC	ON
GENLOCK	↵
IMAGE CONTROL	↵
DISPLAY CONTROL	↵
RESET	ON ↵
EXIT	

DISPLAY CONTROL	
CAMA VERSION	H. 0. 1. 3
CAM TITLE	ON ↵
PRIVACY	OFF
CAM ID	1
BAUD RATE	9600
LANGUAGE	ENG
RETURN	

PRIVACY	
➜ MASK NO	0
MASK ACTIVE	ON
WIDTH SIZE	5
HEIGHT SIZE	5
HOR POS	10
VER POS	6
MASK COLOR	BLK
TRANS	0
RETURN	↵

Select DISPLAY CONTROL using the UP or DOWN button.
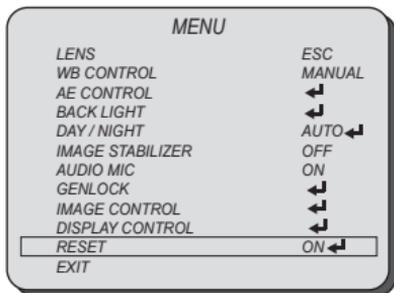*You can select CAMERA ID, BAUDRATE, and LANGUAGE using the UP or DOWN button.*

- **CAMERA ID:** Select the camera ID number from 0~255.

- **BAUDRATE:** Set the baudrate of RS-485 communication (2400, 4800, 9600, 19200, 38400, 57600, 115200).

- **LANGUAGE:** You can select the menu language according to your requirements.
  Select the OSD language from ENGLISH, CHN, CHN(S), and JPN using the LEFT or RIGHT button.

MENU	
LENS	ESC
WB CONTROL	MANUAL
AE CONTROL	↵
BACK LIGHT	↵
DAY / NIGHT	AUTO↵
IMAGE STABILIZER	OFF
AUDIO MIC	ON
GENLOCK	↵
IMAGE CONTROL	↵
DISPLAY CONTROL	ON↵
RESET	
EXIT	

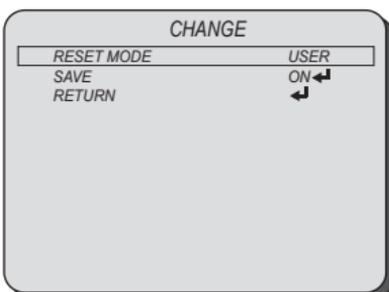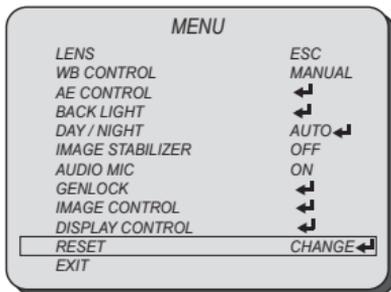| DISPLAY CONTROL	
CAMERA VERSION	H. 0. 1. 3
CAM TITLE	ON↵
PRIVACY	OFF
CAM ID	1
BAUD RATE	9600
LANGUAGE	ENG
RETURN	

RESET

Select RESET using the UP or DOWN button.

■ **RESET:** Reset the camera settings to the factory defaults or user setting value.

```
                    MENU
    LENS                    ESC
    WB CONTROL              MANUAL
    AE CONTROL              ↵
    BACK LIGHT              ↵
    DAY / NIGHT             AUTO ↵
    IMAGE STABILIZER        OFF
    AUDIO MIC               ON
    GENLOCK                 ↵
    IMAGE CONTROL           ↵
    DISPLAY CONTROL         ↵
    RESET                   ON ↵
    EXIT
```

■ **ON:** *Set the camera setting to either "FACTORY" or "USER" of "CHANGE" menu.*
Make sure to select the right mode from "CHANGE" before defaulting the camera.

```
                    MENU                              CHANGE
    LENS                    ESC
    WB CONTROL              MANUAL        RESET MODE          USER
    AE CONTROL              ↵            SAVE                ON ↵
    BACK LIGHT              ↵            RETURN              ↵
    DAY / NIGHT             AUTO ↵
    IMAGE STABILIZER        OFF
    AUDIO MIC               ON
    GENLOCK                 ↵
    IMAGE CONTROL           ↵
    DISPLAY CONTROL         ↵
    RESET                   CHANGE ↵
    EXIT
```

■ **RESET MODE:** Select the desired setting mode.

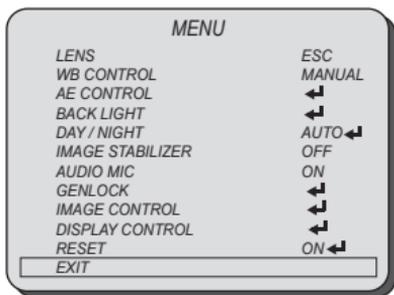*Select from USER or FACTORY using the LEFT or RIGHT button.*

■ **USER:** Select "USER" if setting value user saved last is needed.
■ **FACTORY:** Select "FACTORY" if factory default setting is needed.
   "FRAME RATE", "CAM ID", and "BAUDRATE" will not change.

EXIT

Select EXIT using the UP or DOWN button.

■ **SAVE:** Exit the setup after saving the setting value changes.

```
                    MENU
        LENS                    ESC
        WB CONTROL              MANUAL
        AE CONTROL              ↵
        BACK LIGHT              ↵
        DAY / NIGHT             AUTO↵
        IMAGE STABILIZER        OFF
        AUDIO MIC               ON
        GENLOCK                 ↵
        IMAGE CONTROL           ↵
        DISPLAY CONTROL         ↵
        RESET                   ON↵
        EXIT
```

TROUBLESHOOTING

Before sending the camera for repair, please check below to make sure that the camera is installed correctly.
If it still does not perform adequately, please consult with your supplier.

Problem	Solutions
Nothing appears on the screen.	a. Check that all connected devices are powered on. b. Confirm that the voltage is correct. c. Confirm that the power supply provides enough current to power the camera. d. Check that all video cables are correctly connected.
The picture is not clear.	a. Check that your monitor is correctly adjusted. b. Confirm that the glass in front of the lens is clean. If there is dust, dirt or fingerprints on the glass, the image quality will be affected. To clean the glass use a soft, dry and non-abrasive cloth or a commercially available lens cleaning set. c. Correctly adjust the focus.
The picture has interference.	a. The camera may be close to a high voltage source, such as a power generator. b. The BNC cable is not terminated properly. c. The video cables are not connected properly.
The picture is flickering continually.	a. Check the termination and set the impedance at 75Ω properly. b. Ensure that the camera is not pointing towards the Sun or any light source. c. Check if there is any intermediate device. d. Check if the distance of the video cable exceeds the maximum transferable limitation.
The camera is not synchronizing with the reference signal.	a. Make sure Tri-Level reference signal is used. b. Locking takes up to 1 minute depending on the signal strength. Make sure the sync LED is solid lit. c. Check if the cable and connectors used in reference sync are in good condition. d. Make sure the cable length used in reference sync does not exceed 100ft. e. Make sure OUTPUT EN is on when using the genlock output.

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