

CAMOS

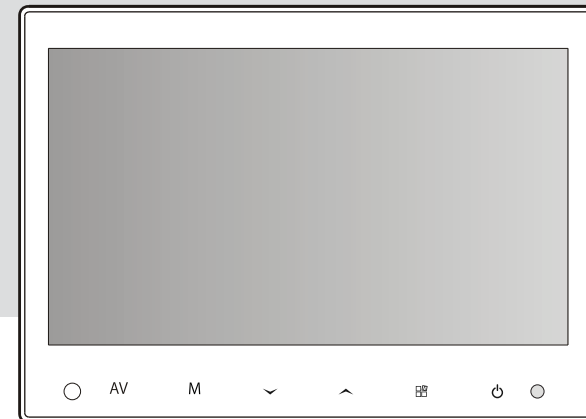
INSTRUCTION MANUAL

CM-709M2

7" 4CHANNEL DIGITAL MONITOR

INSTRUCTION MANUAL

Thank you for purchasing this product.
For proper usages and application,
Please read this instruction manual thoroughly.



PRINTED IN KOREA ver. 1.0



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SAFEGUARD INSTRUCTIONS

7" 4CHANNEL DIGITAL MONITOR

Please read the "Safety Rules" carefully before using this product. Following the safety rules prevents users from damages related with the misuse of the product. It is very important to follow these safety rules. We state "Caution" and "Warning" to clarify any potential risk for a damage associated with the misuse of the product.



NOTICE

This information is for user's reference for better usability.



CAUTION

This information is for preventing damage or shorten the life time of the products.



WARNING

This information is for preventing bodily harm or even death and use should follow this safety rules.



CAUTION



Should install while power off. (After install products, connect DC jack)
- It may cause to electronic shock or malfunction.



While stop driving (parking), set the car in motion.
- It may cause battery discharge.



Do not use multi socket or extended adaptor.
- It may cause unexpected heating, fire and malfunction.



Unplug product when do not use for a long time.
- It may case fire by short circuit due to heating.



Do not place near magnet.
- It may cause malfunction and trouble.














Before install the body, take enough place at least more than 15cm from the wall to emit heat.



The battery for remote controller is not rechargeable and should replace same or similar model. Used battery may cause environmental pollution, so trash it carefully.
- This may cause a malfunction and problem.

WARNING

-  Do not install the product where sudden temperature increasing could be and use the optimum voltage, temperature and humidity.
- It may cause electronic shock or malfunction.
-  Take care that the product doesn't get wet.
- It may cause electronic shock or malfunction.
-  Do not place near of air bag effective range.
- It may cause malfunction of air bag or accident, injury due to hitting monitor by air bag.
-  Keep cleaning dust on power socket.
- It may cause electronic shock and fire by bad connection.
-  Do not pull cord with a jerk, should catch a plug and pull. Do not use damaged cord.
- It may cause cord malfunction, electronic shock and fire.
-  When clean exterior, power off and wipe with dry cloth.
- Wet cloth may cause a electronic shock.
-  Do not clean exterior with volatility or oily solvent.
Neither keep touching rubber and plastic for long time.
- It may cause change of surface, fall of paint, malfunction and fire.
-  Do not place where vibration and shock could be.
- It may cause throw down and then malfunction and accident.
-  Do not put a pin or needle or try to crack the body.
- In case of inserting them, stop to operate, it may cause electronic shock, fire and malfunction.
-  Do not use in problem condition like smoking, smell something burn.
- It may cause fire. Stop to use and make inquiries to agency.
-  Do not disassemble, repair and remodeling.
- It may cause malfunction and injury, can not get warranty.
- Make inquiries to agent for repair and checkup.

1

FEATURE

7" 4CHANNEL DIGITAL MONITOR

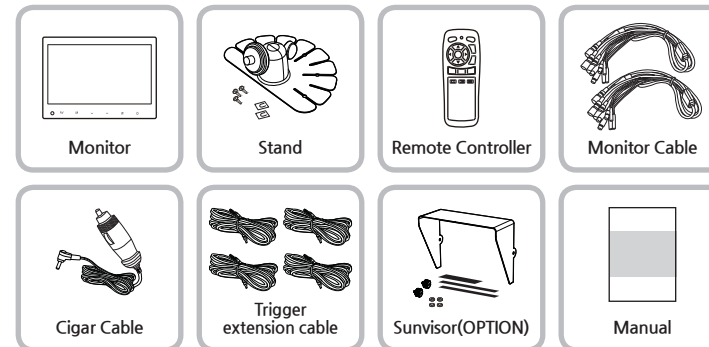
- 7" Wide digital TFT LCD with high resolution and low reflection
- All functions are displayed on screen (OSD function)
- 5 language display (ENG-DEU-ITA-FRA-ESP)
- DC 12~24V
- Touch buttons in front and including remote control
- Max. 4 camera and 2 A/V input (Video / Mono Audio)
- Camera input screen reversion (Normal / Mirror mode)
- User can choose split screen (2/ 3/ 4 / H Split screen)
- 4 Triggerlines one for each camera
- Illumination sensor adopting
- NTSC/PAL (User can choose manually)

2

CONTENTS

7" 4CHANNEL DIGITAL MONITOR

※ When open the gift box, please check below contents. If you find missing parts, please contact sales place.



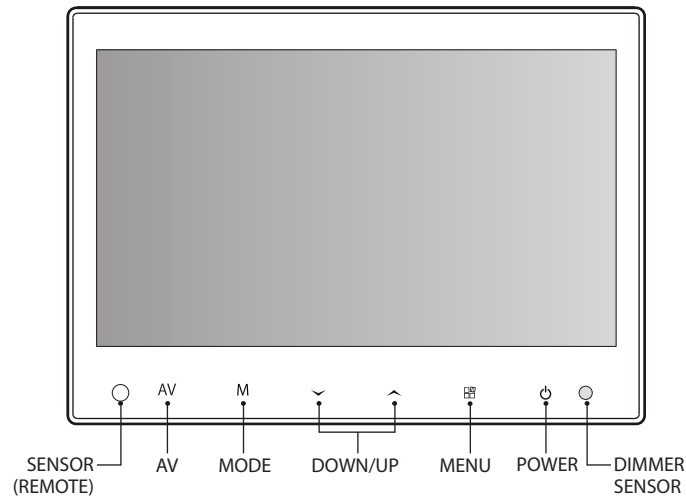
※ Design and specifications could be changed without notices.

3

FUNCTION OF EACH PART

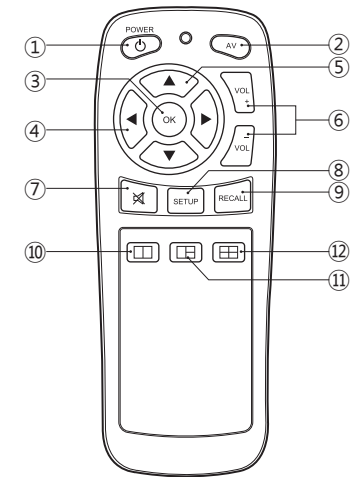
7" 4CHANNEL DIGITAL MONITOR

[MONITOR]



| | |
|-----------------|--|
| ① IR-SENSOR | IR-SENSOR |
| ② AV | Go into AV mode directly and change AV input |
| ③ MODE | Choose split screen (Full/2/3/4 split), choose audio output, Move on OSD menu |
| ④ DOWN/UP | Choose cam input on full screen mode, split mode and change on split screen, volume control, menu setting change |
| ⑤ MENU | OSD menu on/off, screen input information |
| ⑥ POWER | Power on/off |
| ⑦ DIMMER SENSOR | Automatic brightness control sensor |

[REMOTE CONTROLLER]



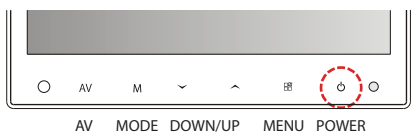
| | |
|-----------|--|
| ① POWER | Power On/Off |
| ② AV | Go into AV mode directly and change AV input |
| ③ OK | Choose button on menu |
| ④ | Menu setting adjusting |
| ⑤ | Choose full screen mode and menu adjusting |
| ⑥ VOL +/- | Volume control |
| ⑦ MUTE | Mute On/Off |
| ⑧ SETUP | OSD menu setup |
| ⑨ RECALL | Actual settings |
| ⑩ | Go into 2 split screen and change split form |
| ⑪ | Go into 3 split screen and change split form |
| ⑫ | Go into 4 split screen and change split form |

4

FUNCTION

7" 4CHANNEL DIGITAL MONITOR

1 POWER ON/OFF



After connecting cigar jack, press POWER button on remote control or monitor then the picture of the camera will be shown on the monitor.

- ※ It is set 4 split mode from the factory.
- ※ If there is no image, the screen will be BLACK.

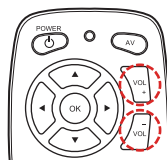
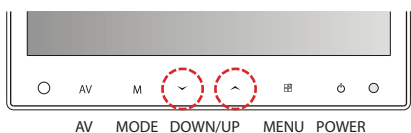


CAM 1 image signal receive



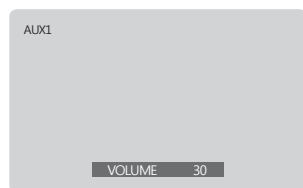
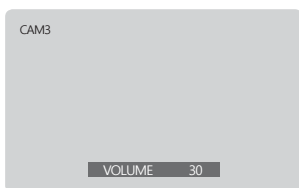
No image signal

2 VOLUME CONTROL



Press VOL +/- button on remote control or Down/Up button on monitor to adjust volume.

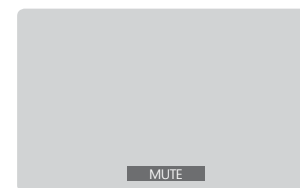
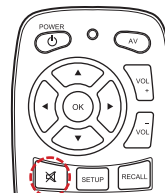
- ※ Volume can be adjust within 1~100 and it is set 30 from the factory.
- ※ Almost all video inputs have audio output, except side cameras.
- ※ In case of choosing a camera without audio or there is no signal, there will be no sound and volume control available.



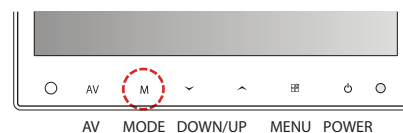
3 MUTE ON/OFF

Press MUTE button on remote control for MUTE function ON/OFF. When MUTE is ON it will be displayed. It disappears for a while OSD MENU is used.

- ※ When user controls volume while mute function is set, the mute function turns off.



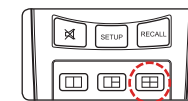
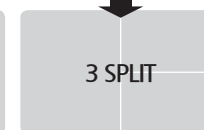
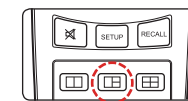
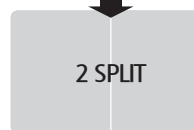
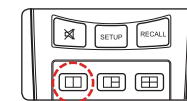
4 SCREEN SPLIT MODE SWITCH : FULL / 2 / 3 / 4 SPLIT



Press M (Mode) on monitor, then the screen switches as below order.



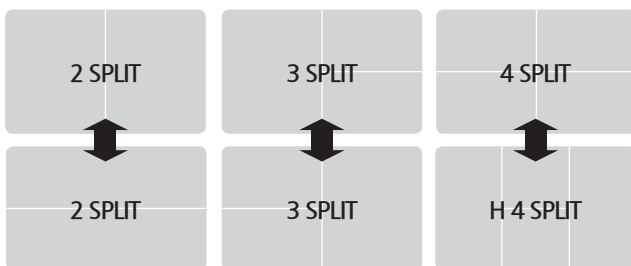
- ※ User can choose split screen directly with split button on remote control.



5 CHANGE SPLIT MODE



Each split screen has two options. On split mode, press DOWN/UP button of monitor or split screen button of remote control then the screen switches between both options.



6 CHANGE INPUT

1) Camera mode

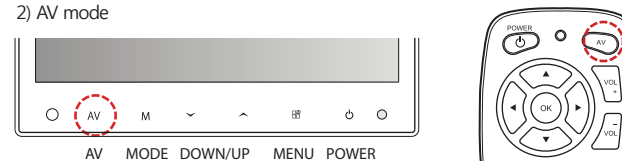


On split or AV mode, press ▲ button on remote control (or UP button of monitor) then it will change camera input of CAM1~CAM4 as below order.

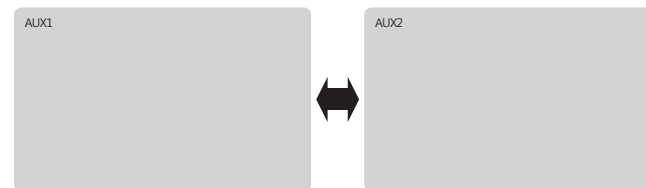
※ In case of press ▼ button on remote control then it changes in reverse order. To use the monitor button, go into full screen by pressing M(MODE) button and use DOWN/UP button.



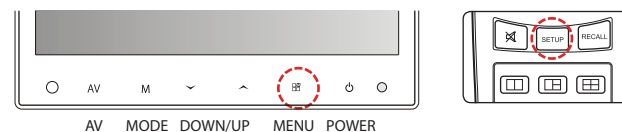
2) AV mode



On camera mode, press AV button of monitor or remote control then the screen goes to AV mode directly.



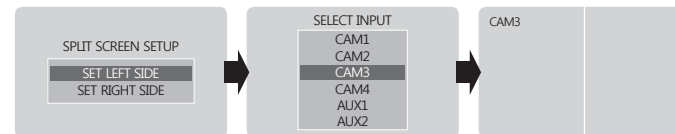
3) SPLIT mode



To choose the OSD MENU [SETUP] on each split mode, press menu button of monitor or SETUP button of remote control.

• Split screen

User can change camera mode on each split screen. Press M(MODE) button of monitor or DOWN/UP button of remote control and choose a Camera.



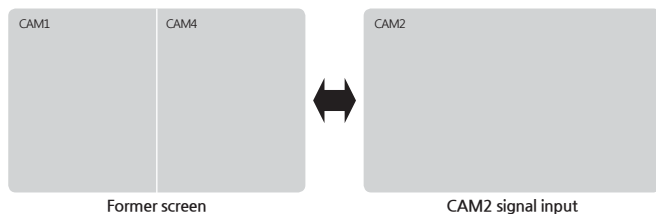
Notice ※ It is same way for every split screen mode.

7 SCREEN SWITCH WHILE TRIGGER INPUT

<Trigger input> or <trigger signal> is when a circuit works by a signal, for example if driver uses right/left turn signal or reverse gear, the monitor shows connected camera on driving mode.

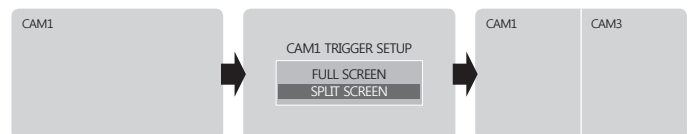
※ Below example is based on {TRG1 (Left turn signal)=CAM1 / TRG2 (Right turn signal)=CAM2 / TRG3 (Reverse gear)=CAM3 / TRG4 (Front or something else)=CAM4}.

1) If there is a trigger signal input, the connected camera is displayed as full screen and switches back when the signal switches off.



2) In case of TRG1 (Left turn signal) or TRG2 (Right turn signal), you can choose full screen or split screen by OSD setting.

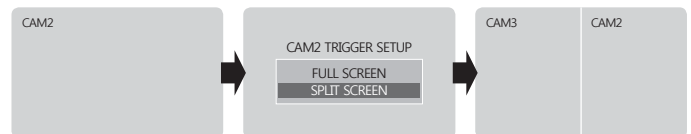
※ This function is for showing not only Left(Right) but also rear side at once, regardless former screen status. It displays CAM1(2) and CAM3 as split screen while TRG1(2) signal input.



Press MENU [] button of monitor or SETUP button of remote control on CAM1 full screen mode, then OSD menu appears.

Press DOWN button of monitor or ▼ button of remote control on CAM1 full screen to move [SPLIT SCREEN] and press OK button.

If there is the left signal input (TRG1), then CAM1 (Left) in left side and CAM3 (Rear) in right side will be shown on the screen.



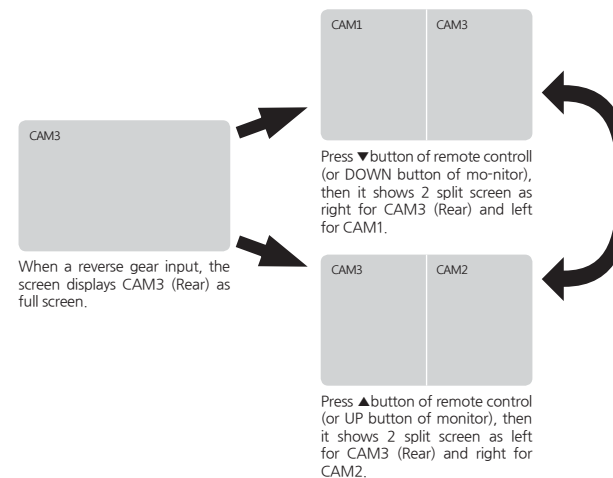
Press MENU [] button of monitor or SETUP button of remote control on CAM2 full screen mode, then OSD menu appears.

Press DOWN button of monitor or ▼ button of remote control on CAM2 full screen to move [SPLIT SCREEN] and press OK button.

If there is the right signal input (TRG2), then CAM2 (Right) in right side and CAM3 (Rear) in left side will be shown on the screen.

3) When there is the TRG3(Rear light) input, CAM3 will be shown as full screen and user can also choose 2 split screen.

※ This function is available for rear and side screen.

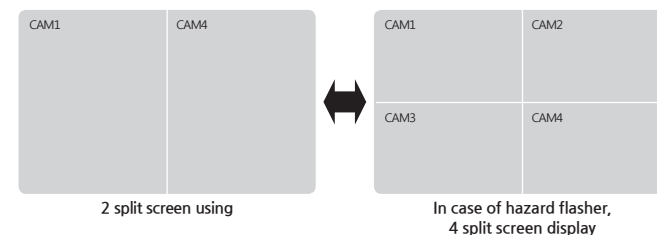


When a reverse gear input, the screen displays CAM3 (Rear) as full screen.

Press ▼ button of remote control (or DOWN button of monitor), then it shows 2 split screen as right for CAM3 (Rear) and left for CAM1.

Press ▲ button of remote control (or UP button of monitor), then it shows 2 split screen as left for CAM3 (Rear) and right for CAM2.

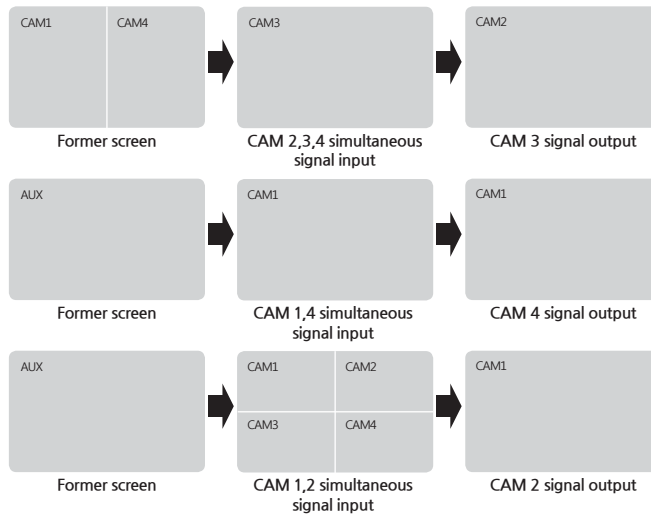
4) In case of hazard flasher (TRG1+TRG2), the monitor displays CAM1~CAM4 as quad split screen. And the screen switches back when the signal switches off.



- 5) When there is an input signal of more than 2 triggers, the monitor displays fully connected screen (Trigger input screen) as the priority order. And the screen switches back when the signal switches off, the rest will be displayed as the priority order.



※ TRIGGER PRIORITY ORDER
CAM3 > CAM1+CAM2 > CAM1 > CAM2 > CAM4



- ※ If the screen turns to trigger signal, only volume, mute and audio out choice available.
- ※ If there is trigger signal input while power off (Stand-by) status, the screen switches on and displays chosen trigger line (camera). And the screens turns off when the trigger signal switches off.

5 SETTINGS

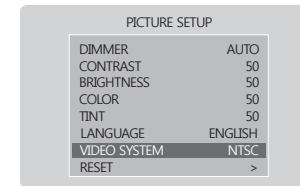
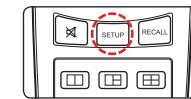
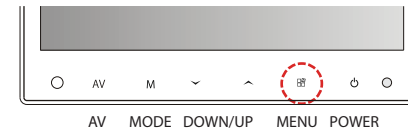
7" 4CHANNEL DIGITAL MONITOR

1 Video Standard System, NTSC/PAL conversion

If use PAL system on NTSC system using country, it may cause a malfunction. This products can convert NTSC/PAL system manually but it is not automatic. Before use, please check and set the system.



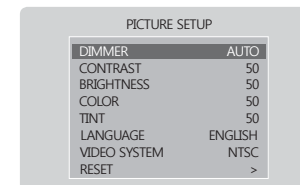
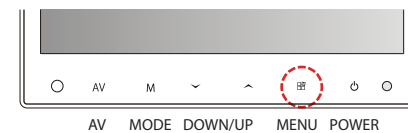
NTSC system country : USA, CANADA, JAPAN, KOREA, TAIWAN, MEXICO
PAL system country : AUSTRALIA, BELGIUM, CHINA, DENMARK, FINLAND, GERMAN, U.K, NETHERLAND, ITALY, KUWAIT, MALAYSIA, NEW ZEALAND, SIGNAPORE, SPAIN, SWEDEN, TAILAND, NORWAY.



- 1) Press SETUP button of remote control (or MENU button of monitor) to go into OSD MENU [PICTURE SETUP].
- 2) Move to VIDEO SYSTEM by pressing ▼ button of remote control (or MODE button of monitor) then choose video standard system by pressing ◀▶ button (or DOWN/UP button of monitor)

2 Dimmer sensor setting

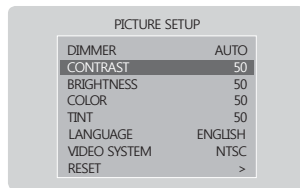
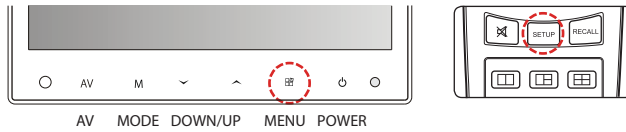
※ User can choose DAY/NIGHT/AUTO and it is set AUTO from the factory.



- 1) Press SETUP button of remote control (or MENU button of monitor) to go into OSD MENU [PICTURE SETUP].
- 2) Move to DIMMER by pressing ▼ button of remote control (or MODE button of monitor) then choose by pressing ◀▶ button (or DOWN/UP button of monitor)

3 Brightness and Contrast setting

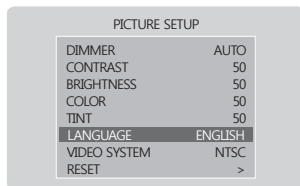
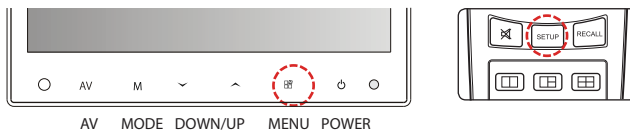
User can control CONTRAST/BRIGHTNESS/COLOR/TINT.
 ※ Each menu is set 50 from the factory.



- 1) Press SETUP button of remote control (or MENU button of monitor) to go into OSD MENU [PICTURE SETUP].
- 2) Move to each menu what by pressing ▼ button of remote control (or MODE button of monitor) then choose as by pressing ◀▶ button (or DOWN/UP button of monitor)

4 Language setting

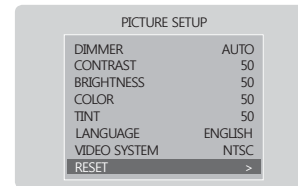
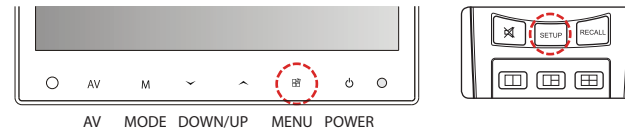
※ It support 5 languages and is set ENGLISH from the factory.



- 1) Press SETUP button of remote control (or MENU button of monitor) to go into OSD MENU [PICTURE SETUP].
- 2) Move to LANGUAGE by pressing ▼ button of remote control (or MODE button of monitor) then choose by pressing ◀▶ button (or DOWN/UP button of monitor)

5 Initialization

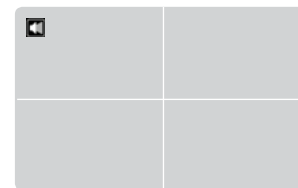
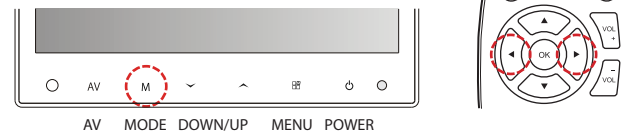
※ It initializes monitor as from the factory mode. (Except on Video Standard System, NTSC/PAL)



- 1) Press SETUP button of remote control (or MENU button of monitor) to go into OSD MENU [PICTURE SETUP].
- 2) Move to SETUP by pressing ▼ button of remote control (or MODE button of monitor) then choose by pressing ◀▶ button (or DOWN/UP button of monitor)

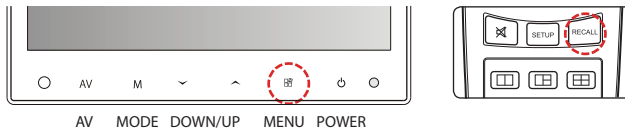
6 AUDIO Output

On split mode, user can choose 1 screen for audio output.

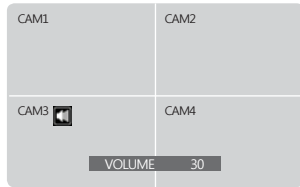


- 1) Press ◀▶ button of remote control (or MODE button of monitor) for 1 second, then speaker icon appears where audio out is used.
- 2) Whenever press ◀▶ button of remote control (or MODE button of monitor) the icon move to other screen.

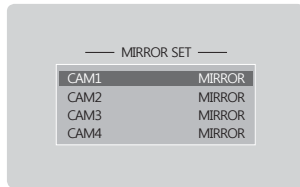
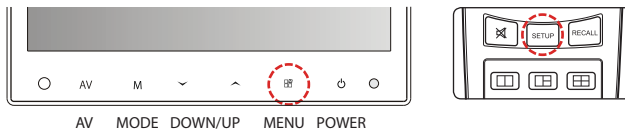
7 Screen Information



Press MENU button of monitor or RECALL button of remote control, then it displays actual screen information (Input mode / Audio output / Volume).



8 CAMERA Mirror/Normal mode setting



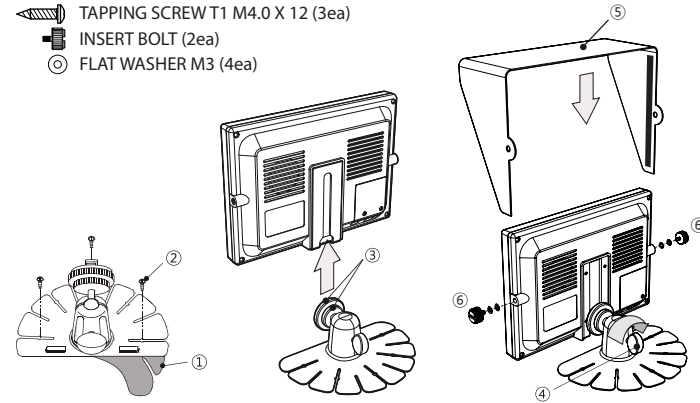
- 1) Press SETUP button of remote control (or MENU button of monitor) to go into OSD MENU [MIRROR SET].
- 2) Move to a camera which by pressing ▼ button of remote control (or MODE button of monitor) then choose by pressing ◀▶ button (or DOWN/UP button of monitor).

※ It is set MIRROR mode from the factory.

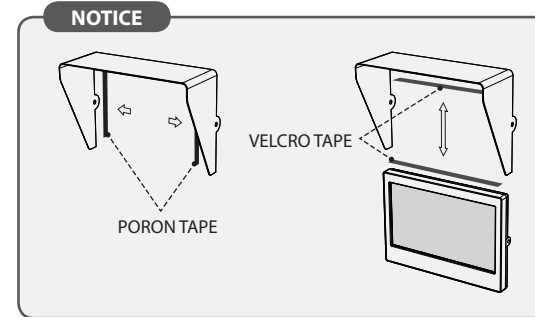
6 CONNECTING AND INSTALLATION

7" 4CHANNEL DIGITAL MONITOR

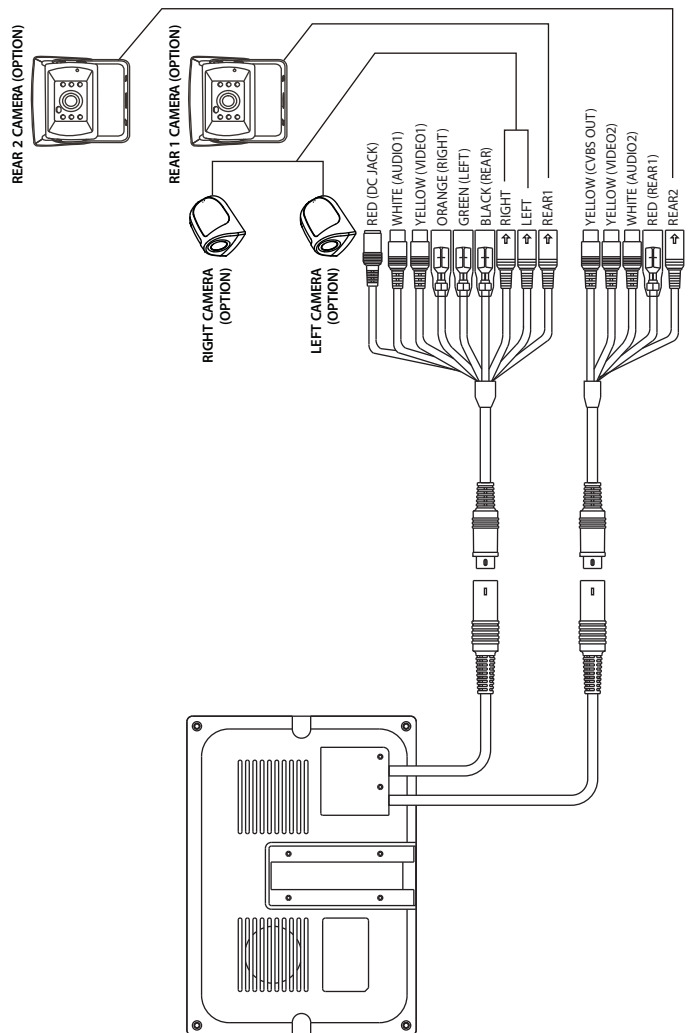
- ✚ TAPPING SCREW T1 M4.0 X 12 (3ea)
- ⊕ INSERT BOLT (2ea)
- ⊙ FLAT WASHER M3 (4ea)



- (1) Clean the place where to install stand and install stand firmly after removing protect tape of stand bottom.
- (2) Fix the stand with enclosed screws.
- (3) Assemble the monitor to stand and fix it in the right angle.
- (4) Connect cable as follows.



※ Installation can be changed as user's pleasure. (Sunvisor - Option)



7 SPECIFICATION

7" 4CHANNEL DIGITAL MONITOR

| | | NTSC | PAL |
|----------------------------|---------------------------------|----------------------------------|-----------|
| LCD Panel | Screen size | 7 inch | |
| | Resolution | WVGA (800 X 480) | |
| | Brightness | 250 cd/m ² | |
| | Contrast ratio | 400 : 1 | |
| Power supply | Voltage | DC 12V-24V | |
| | Current | 500mA (DC 12V, monitor set only) | |
| Input system | | NTSC/PAL | |
| Frequency | Horizontal | 15.734 KHz | 15.625KHz |
| | Vertical | 59.94 Hz | 50 Hz |
| Input signal | Video signal | Composite video signal (CVBS) | |
| | Audeo signal | MONO | |
| Output signal | Video signal | Composite video signal (CVBS) | |
| Speaker | | 0.5Watt max | |
| Language display selection | | 5 Language | |
| Operating temperature | | 14°F~140°F (-10°C~60°C) | |
| Storage temperature | | -4°F~158°F (-20°C~70°C) | |
| Dimension(W x H x D) | 7.9(W) x 4.76(H) x 1.21(D) inch | | |
| | 201(W) x 121(H) x 30.7(D) mm | | |
| Weight | | 1 lb (500g) | |



MEMO

7" 4CHANNEL DIGITAL MONITOR



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