PLEASE READ CAREFULLY BEFORE USING AND KEEP WELL.

5" TFT LCD Color Rear Vision Monitor for Automobile

MODEL: ECL-500

* Design and Specifications are subject to change without notice.

ㄷ CONTENTS

☡ CHARACTERS

- This monitor has been specially designed for Automobile Rear Vision System.

- It can be used on the power source from 12V to 32V DC.

- It has two external triggers and the triggers have an off- time- delay for 2 seconds.

- It is automatically turned on when a gear is set on the R position.

- Two cameras can be connected up into the monitor.

- This monitor has a speaker and users can hear what is happening behind the vehicle.
  (when used with a camera with integral microphone).

- This monitor has back-lights for buttons and this back-lights are turned on automatically at night.

↺ SUGGESTIONS

TFT LCD Color Monitor

Safety

- Use only DC 12V to 32V.
- In case that dust or liquid was soaked into the case, please turn off power and consult the experienced technician before using.
- Do not cover air duct for preventing from considerable rise in temperature.

Installation

- Do not install the unit in an extremely hot or humid place (radiator, air duct, etc.) or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- The monitor is not designed for waterproof.

General cleaning information

- If your vehicle has been parked in direct sun light resulting in a considerable rise in temperature inside the vehicle, allow the unit to cool off before operating.
- Clean the unit with a slightly damp soft cloth. Use a mild household detergent. Never use strong solvent such as thinner or benzine as they might damage the finish of the unit.
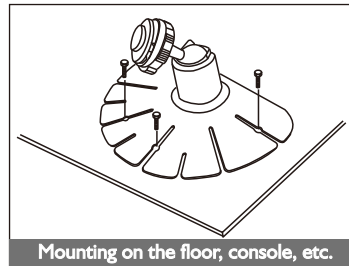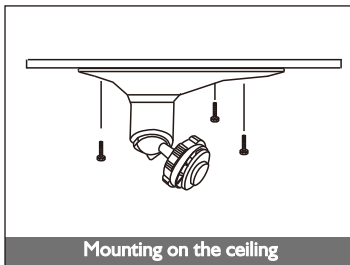
Warning
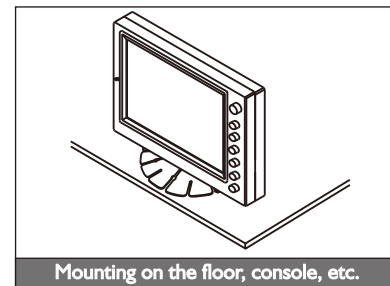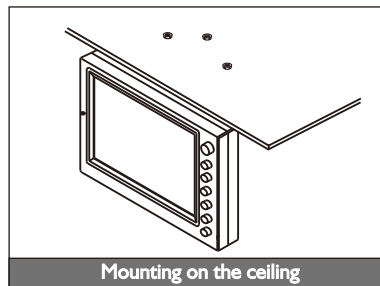*While driving, do not watch Video*

⊐ INSTALLATION

Install the monitor on a place which can stand more weight than 5Kg (10.1b).

- Clean the place before installation.
- Remove the protective paper covering the bottom of the bracket.
- Stick the provided bracket on the surface and fix it firmly with the screws.

Mounting on the ceiling

Mounting on the floor, console, etc.

- Adjust the angle of the monitor and fasten the handle screws strongly.

Mounting on the ceiling

Mounting on the floor, console, etc.
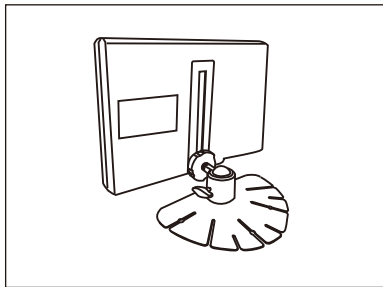
⊏ FUNCTIONS

- When power lamp of the monitor is on, the monitor is in stand-by mode. The monitor is not turned off until the ignition key is on the off position.
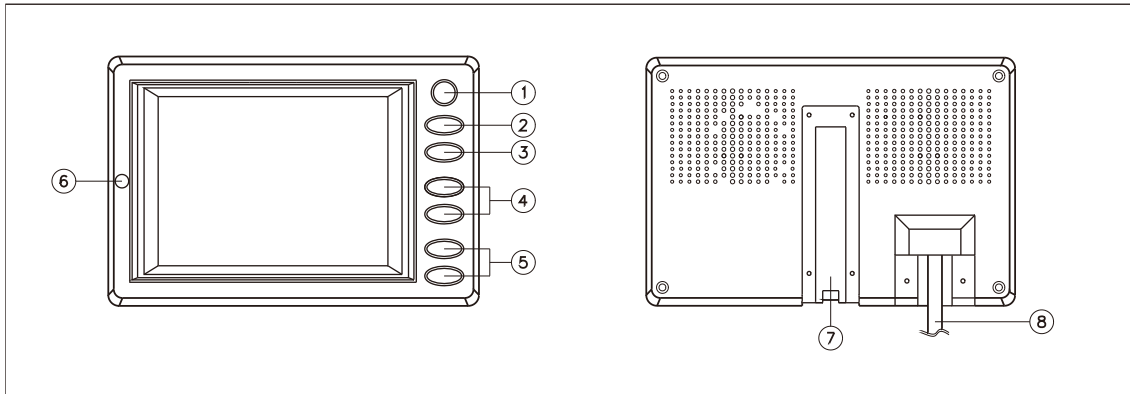
FUNCTION

1) POWER ON Button and Stand-by Lamp
 - When the RED lamp is turned on, the monitor indicates power on and stand-by mode.
 - When the POWER ON button is pushed, the lamp color changes to GREEN and the monitor goes into RUN mode.

⊂ FUNCTIONS

2) CA.SEL button

- The cameras can be selected as CA 1 or CA 2.

- The OSD indicates which camera is operating now.

3) MENU button

- This button shows main MENU OSD.
- The main Menu list disappears within 5 seconds automatically if there is no new input signal.
- Main MENU explanation

* Use BRIGHT UP/DOWN buttons to select an item.

* Use the CA.SEL button to change the contents.

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SCALE (CA1)
CA1 (MIRROR)
CA2 (MIRROR)
AUTO SCAN (ON)
COLOR
CONTRAST
SUB MENU
```

PAL system

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SCALE (CA1)
CA1 (MIRROR)
CA2 (MIRROR)
AUTO SCAN (ON)
COLOR
CONTRAST
TINT
SUB MENU
```
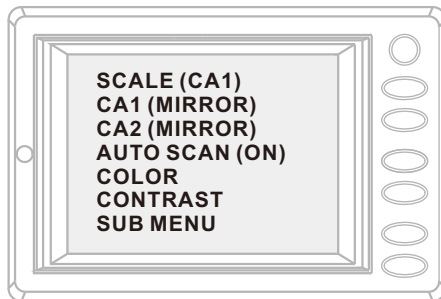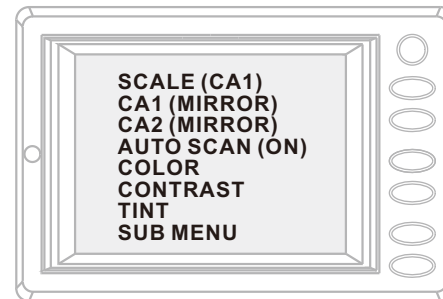
NTSC system

↺ FUNCTIONS

▸▸ SCALE (CA1)

- This item is just electronic scale that is measuring distance behind vehicle.
- This scale is available only when trigger signal is inputted.
- This item has four details as CA1, CA2, ALL and NONE.
- Use the CA.SEL button for choosing one of details.

▸▸ CA1 (MIRROR)

- This item selects a normal or mirror image of the CA1.
- Use the CA.SEL button for selecting the image.

▸▸ CA2 (MIRROR)

- This item selects a normal or mirror image of the CA2.
- Use the CA.SEL button for selecting the image.

▸▸ AUTO SCAN (ON)

- The monitor has an automatic scan operation.
- The monitor can run or stop the AUTO SCAN function as setting ON or OFF.
- Use the CA.SEL button for selecting ON or OFF.

⊃ FUNCTIONS

⏩ COLOR
- • This item changes the color depth of image.
- • Use the CA.SEL button to choose this item.
- • Use the BRIGHT UP/DOWN buttons to control the color depth.

⏩ CONTRAST
- • This item changes the contrast of image.
- • Use the CA.SEL button to choose this item.
- • Use the BRIGHT UP/DOWN buttons to control the contrast level.

⏩ TINT (NTSC system only)
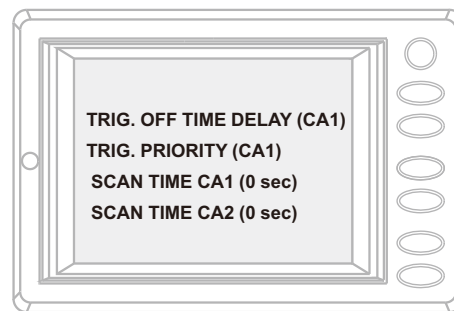- • This item changes the color coordination of image.
- • Use the CA.SEL button to choose this item.
- • Use the BRIGHT UP/DOWN buttons to control the position between R and G.

⏩ SUB MENU
- • This function has a sub-menu
- • Sub menu explanation

   * Use the MENU button to quit this menu.

TRIG. OFF TIME DELAY (CA1)
TRIG. PRIORITY (CA1)
SCAN TIME CA1 (0 sec)
SCAN TIME CA2 (0 sec)

⊏ FUNCTIONS

⋈ TRIG. OFF TIME DELAY (CA1)

• This item has four sub details as CA1, CA2, ALL and NONE
• This function is useful for triggering connection to the direction signal lamp.
  (Delay time 2.5 seconds)
• Use the CA.SEL button for choosing one of the details.

⋈ TRIG. PRIORITY (CA1)

• User can select camera priority.
  When two triggers are inputted at the same time, the image of selected camera is shown
  on the screen.
• Use the CA.SEL button to select the camera priority, CA1 or CA2.

⋈ SCAN TIME CA1(0 sec), SCAN TIME CA2(0 sec)

• This scan time is maximum 10 seconds.
• Use the VOL UP/DOWN buttons to select the time.
• When the AUTO SCAN function which is in main MENU is ON, the monitor shows each image
  during the scan time.

⊏ FUNCTIONS

4) VOL buttons

- This buttons control sound level of built in speaker.

5) BRIGHT buttons

- This buttons control brightness level on the screen.

6) BRIGHTNESS SENSOR (Automatic Brightness Control)

- The brightness of the monitor will be adjusted automatically according to the circumstances.

- The light-sensor automatically turns on back-light for buttons at night.

7) BRACKET RAIL

- Mounting bracket is adjustable.

8) INPUT CABLE

- Cameras, Power and trigger wires are connected to the end of this cable assembly.

⊂ CONNECTIONS

CAUTION

● Do not supply the electric power to the monitor before making the connection.

to **POWER**
Power cable(supplied)

to the   12V or 32V power terminal
which is energized with the ignition key   Power input lead(red)
in the accessory position

To a metal point of the car   Ground wire
(black)

Trigger 1 — input
lead(green)

Trigger 2 — input
lead(white)

CAMERA 1.
(Not supplied)

CAMERA 2
(Not supplied)
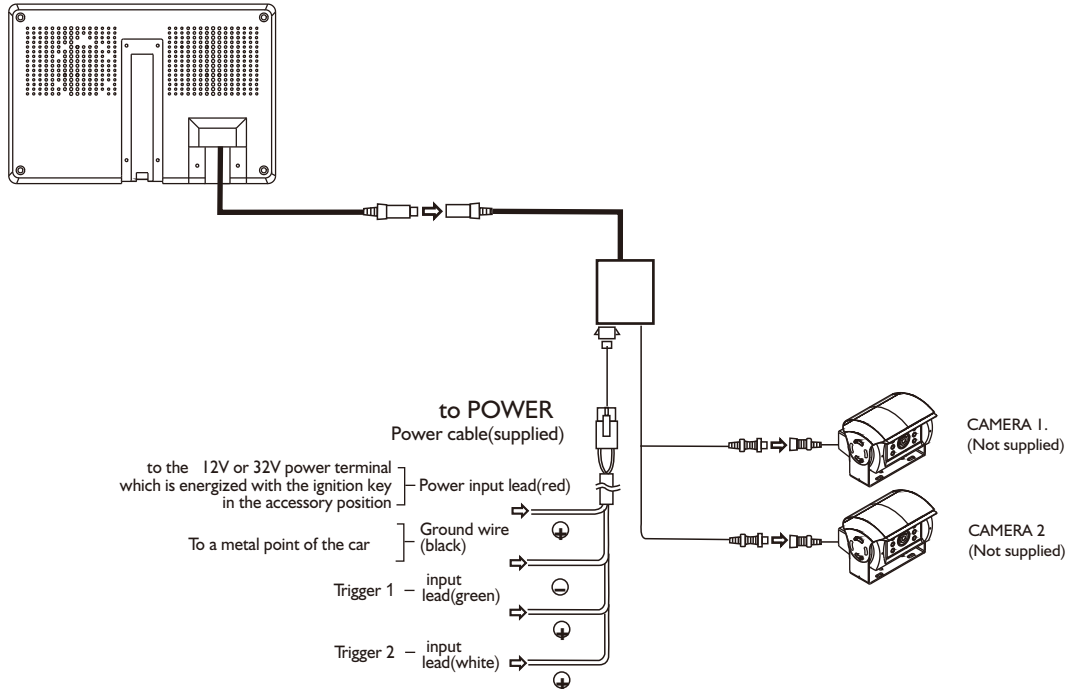
ㄹ PIN CONNECTIONS

- Power connector pin description

(ECL500)
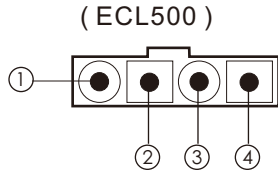
Pin No.	Description
4	12V/24V DC via Ignition (RED)
3	12V/24V DC via Reverse gear or Direction Light for CA1 (GREEN)
2	12V/24V DC via Reverse gear or Direction Light for CA2 (WHITE)
1	Ground (BLACK)

- Camera input connector pin description.

(Camera)
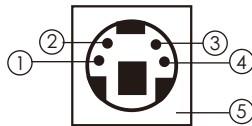
Pin No.	Description
1	Power (DC 12V Output)
2	Audio Input
3	Heater Function (DC 9V~ 12V Output)
4	Video Input
5	Ground

(Camera)
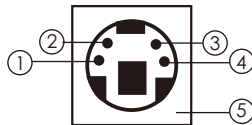
Pin No.	Description
1	Power (DC 12V Output)
2	Audio Input
3	Shutter Control Power (DC 9V Output)
4	Video Input
5	Ground

SPECIFICATIONS

Model No : ECL-500
Power input   : DC 12 ~ 32 V
Power consumption   : Max 10 Watt
 Video signal   : NTSC, PAL standard system
Sync. System   : Internal
LCD panel size   : 5 inch diagonal
Angle of view   : Top: 35°, Bottom: 15°, Left: 55°, Right: 55°
Screen size   : 106(W) ×78(H)mm
Screen resolution   : 225,000 Pixels (960(W) × 234(H))
Dimmer   : Automatic
Color configuration   : R, G, B Stripe
OSD control   : Volume, Brightness, Scale on/off, Image select (Mirror/Normal)
                                 Auto scan on/off, 2 Auto trigge , Color, Contrast, Tint(NTSC Only)
Power connector   : 4 Pin wire
Camera connection   : 2 mini-DIN
Speaker   : 8 ohm, 0.2 watt max
Finish   : Light Black (ABS)
Operating Temperature   :-25°C ~ +75°C (-13°F~+167°F)
Storage Temperature   : -30°C~ +80°C (-22°F~+185°F)
Ambient condition   : Indoor use only
Vibration   : 5G
Dimension   : 170(W)x115(H)x28(D) mm
Weight   : Approx. 1.0kg gross

Supplied Acc'y   : Mounting Bracket (1)
                                  Screw kits   (1)
                                  Power Cord   (1)
                                  Sun Visor   (1)

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