OWNER'S MANUAL

* **PLEASE READ CAREFULLY BEFORE USING AND KEEP WELL.**

7" TFT LCD COLOR
Rear Vision Monitor

Model: ECL-700

* Design and Specifications are subject to change without notice.

INDEX

FEATURES

- ECL-700 (7" TFT LCD monitor) is designed for the automotive rear vision system.

- High Resolution 7 "TFT LCD panel

- Free Input Voltage (DC 10V ~ DC 32V)

- NTSC / PAL Compatibility

- 2 Camera Inputs

- Automatic Picture Display (2 Triggering functions)

- Automatic Brightness Sensor (DAY/NIGHT)

- Built-in Speaker

- OSD with μ-com

TFT LCD Color Monitor

- Safety

  - Use only DC 10V 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.

- 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 solvents such as thinner or benzine as they might damage the finish of the unit.

OPERATIONS

SPEAKER

⑥ ⑤④ ③ ②①

BRACKET RAIL   INPUT CABLE
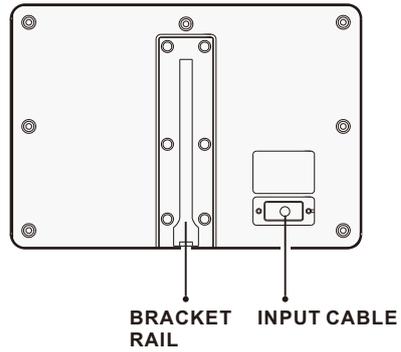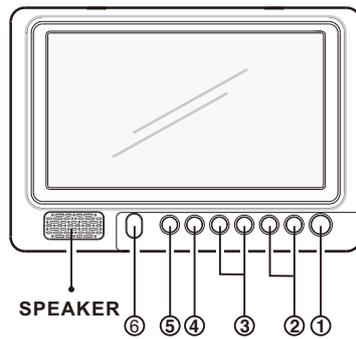
1. POWER

- **STAND-BY mode**

  - When Red LED is turned on, it indicates the power is applied and it is on stand-by mode.
  - The monitor is not turned off until the ignition key is at off position.

- **POWER-ON mode**

  - Press POWER button to turn the monitor on.
  - When the monitor is on, all buttons are backlit (Green LED).
  - Press POWER button to turn the monitor off.

  * When the trigger signal is activated, the selected source's image will be displayed on the monitor screen automatically.

2. - / +

- **Use + / - button to adjust speaker volume.**

  - Press - to decrease speaker volume.
  - Press + to increase speaker volume.

- **Use + / - button to select the options in SETUP MENU mode.**

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⬭ OPERATIONS

3. UP/DN

DN

UP

- **Use UP/ DN button to adjust Brightness, Contrast, Color or Tint level.**

  - Press UP button to increase Brightness, Contrast, Color or Tint level.
  - Press DN button to decrease Brightness, Contrast, Color or Tint level.

- **Use UP/ DN button to move cursor upward or downward in SETUP MENU mode.**

4. SOURCE

SOURCE

- **Use SOURCE button to select the display image.**

  (CAM1 ➡ CAM2 ➡ CAM1 ➡ CAM2….)

- **Use SOURCE button to select the items that have sub-menus in SETUP MENU.**

5. MENU

MENU

- **HOT KEY Function**

  - Press MENU button to adjust Bright, Contrast, Color or Tint

| MENU | Short Key (less than 0.5sec) | ➡ | DN / UP | Change the level |

BRIGHT	➡	−	BRIGHT	32	+
CONTRAST	➡	−	CONTRAST	41	+
COLOR	➡	−	COLOR	48	+

PAL MODE

NTSC MODE

| TINT | ➡ | R | TINT | 41 | G |

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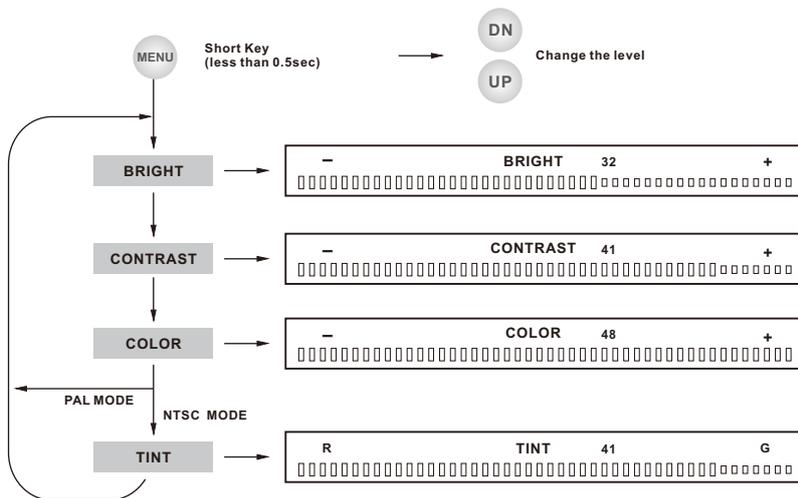
OPERATIONS

▪ **SET UP MENU**

- PRESS MENU BUTTON FOR A WHILE (OVER 2 SEC.) TO ENTER
  SETUP MENU.
- SELECTABLE OSD MENU DISAPPEARS WITHIN 5 SECONDS IF
  THERE IS NO NEW BUTTON PRESSED.

```
-- SETUP MENU --
١.MIRROR/ NORMAL
٢.TRIGGER DELAY
٣.CAMERA NAME
٤.SCALE MODE
٥.ADVANCED MENU
```

1. NORMAL / MIRROR

```
1. NORMAL / MIRROR
CAM1 :[NORMAL;MIRROR]
CAM2 :[NORMAL;MIRROR]
```

MENU ➡ DN UP ➡ SOURCE ➡ — + ➡ MENU

enter　up / down move　select　option setting　exit
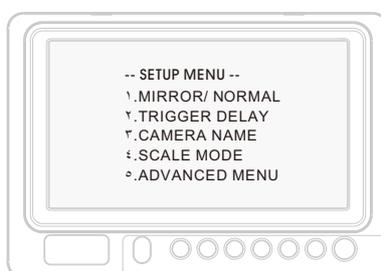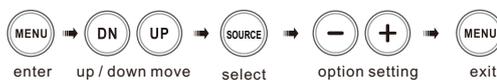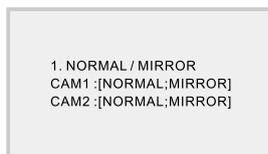
- Each camera's Normal / Mirror view can be selected.

2. TRIGGER DELAY

```
2. TRIGGER DELAY
TRIGGER 1 :[0 SEC TO 20 SEC]
TRIGGER 2 :[0 SEC TO 20 SEC]
```

MENU ➡ DN UP ➡ SOURCE ➡ — + ➡ MENU

enter　up / down move　select　option setting　exit

- 2 Trigger signals can be connected and each trigger source (1CAM,
 2CAM(can be selected.

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- When the trigger signal is activated, the selected source's image will be displayed on the monitor screen.
- Each trigger's delay time can be adjusted from 0 sec to 20 sec.

3. CAMERA NAME

```
3. CAMERA NAME
CAM 1 :[_____]
CAM 2 :[_____]
```

MENU ➡ DN UP ➡ SOURCE
enter up / down move select

⬇

[− + ➡ SOURCE ...] ➡ MENU
option setting select exit
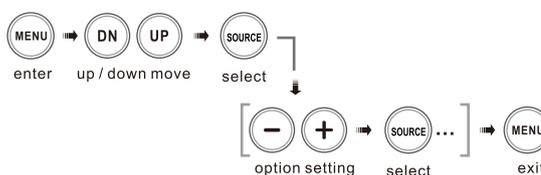
- Each camera can be named and the selected camera name is displayed via OSD.

4. SCALE MODE

```
4. SCALE MODE
DISPLAY MODE : [CAM1;CAM2;ALL;NONE]
CAM1 SCALE : [SCALE1;SCALE2;SCALE3;SCALE4]
CAM2 SCALE : [SCALE1;SCALE2;SCALE3;SCALE4]
                SCALE1
                SCALE2
                SCALE3
                SCALE4
```

MENU ➡ DN UP ➡ SOURCE ➡ − + ➡ MENU
enter up / down move select option setting exit

➡ SCALE 1.2 setting DN UP ➡ − +
move cursor option setting
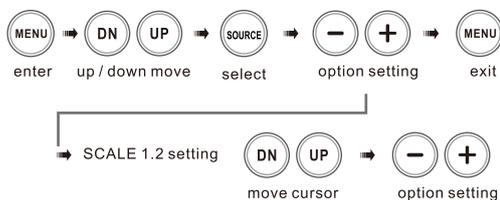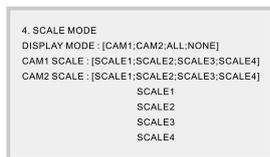
- Different scale modes (SCALE1, SCALE2, SCALE3, SCALE 4) can be selected for CA1 ~ CA2.
- SCALE 1 and SCALE 2 can be adjusted.
- When the trigger signal is activated, the selected scale is displayed on the monitor screen.
  * This is the just electrical scale that is measuring distance from the vehicles.

OPERATIONS

5. ADVANCED MENU

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٥. ADVANCED MENU
[NORMAL;FULL: [DISPLAY .١
[DOWN;UP:[DOWN/UP.٢
NIGHT CONTROL/ DAY .٣
[OFF;ON: [AUTO POWER .٤
```

MENU ➡ DN UP ➡ SOURCE ➡ − + ➡ MENU
enter   up / down move   select   option setting   exit
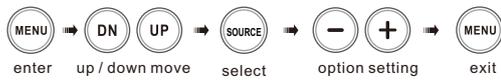
5.1 DISPLAY

- FULL

- Display the image in the ratio of 16:9.

◄◄ **FULL DISPLAY**

- NORMAL

- Display the image on the screen in the ratio of 4:3.

◄◄ **NORMAL DISPLAY**

5.2 UP/DOWN

- Converted image display (top and bottom)

5.3 DAY/NIGHT CONTROL

- DAY/NIGHT : Select DAY/NIGHT ON / OFF / AUTO
- DAY/NIGHT LEVEL: Adjust the sensitiveness of DAY/NIGHT LEVEL.
- DAY/NIGHT BRIGHT: Adjust the BRIGHTNESS level.

5.4 AUTO POWER

- When "ON" is selected, turning the ignition key on leads the monitor to POWER-ON mode.

- When "OFF" is selected, turning the ignition key on leads the monitor to STAND-BY mode.

6. DAY/NIGHT SENSOR

▪ Automatic Brightness Control

- The brightness of the monitor is adjusted automatically with the CDS accordingly to the circumstance.

(It works only when DAY / NIGHT option is set as "AUTO" in menu.)

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INSTALLATION

- Install the monitor on a place which can stand more weight Kg°than)b۱۰٬۱(.

   - 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 floor, console, etc.

Mounting on the ceiling

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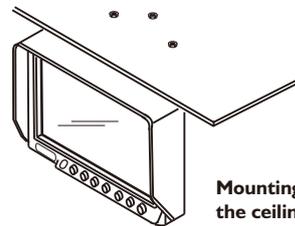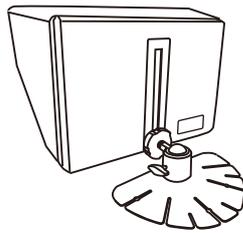
Mounting on the ceiling

Mounting on the floor, console, etc.

SYSTEM CONNECTIONS

to POWER
Power cable (supplied)

to the 12V or 24V 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)
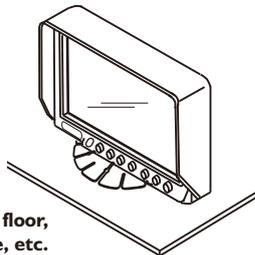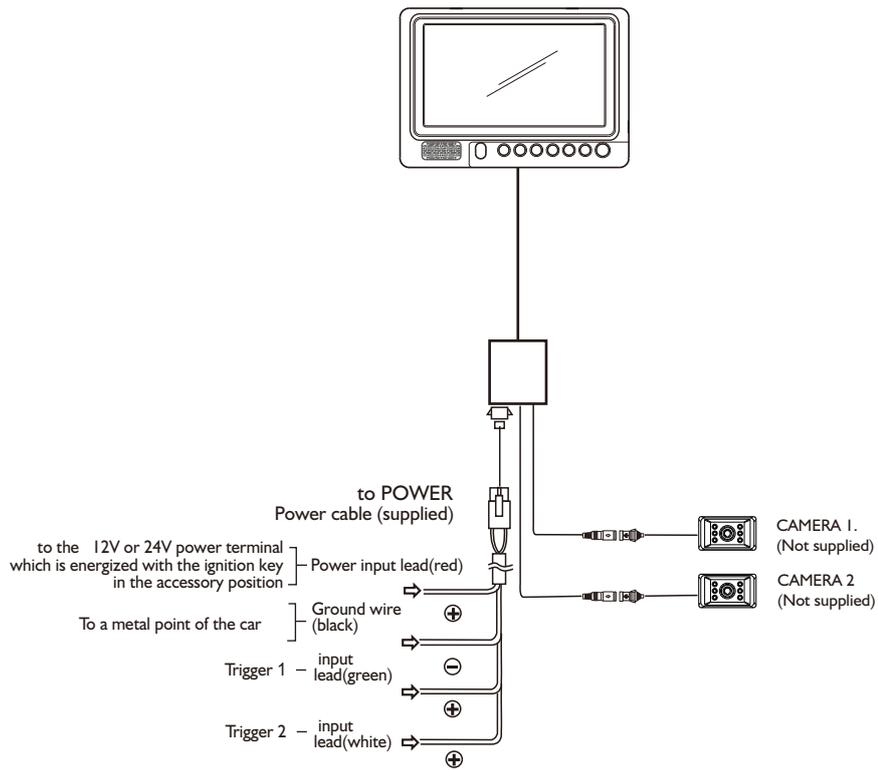
POWER/TRIGGER WIRE FUNCTIONS

REF #	WIRE COLOR	DESCRIPTION
1	RED	POWER IN DC (10V to 32V)
2	GREEN	TRIGGER 1
3	WHITE	TRIGGER 2
4	BLACK	GROUND

SPECIFICATIONS

- **ECL-700**

Power input	: **DC 10V~32V**
Power cons.	: **Max 15 Watt.**
Video system	: **NTSC, PAL signal Compatible**
Sync. System	: **Internal**
LCD panel size	: **7 inch diagonal color**
Field of view	: **Top: 35°, Bottom: 15°, Left: 50°, Right 50°**
Screen size	: **154(W) X 87(H)mm**
Resolution	: **1440(W) X 234(H)**
Color configuration	: **R.G.B. Stripe**
Auto con./bright.	: **Day & Night sensor**
O.S.D control	: **Bright, Contrast, Color, Tint, CA select (CA1/CA2)**
	Mirror/Normal, Scale on/off, Volume
	Day/Night mode selector
Power connecter	: **Red – Positive DC 10V~DC 32V**
	Black – Ground
	Green – Trigger 1 (CA1) DC 12V or DC 24V
	White - Trigger **2** (C**A2**) V٢٤V or DC ١٢DC
Speaker	: **Approx. 40 x 20mm, impedance:8Ω, 0.2 watt max.**
Finish	: **Dark Gray (Heat resistant–ABS)**
Operating temp.	: **−10°C ~ +50°C(14°F ~ 122°F)**
Storage temperature	: **−25°C ~ +80°C(−13°F ~176°F)**
Ambient condition	: **Indoor use only**
Vibration	: **5.5G**
Dimensions	: **197(W) X 138(H) X 32.2(D) mm**
	7.75(W) X 5.43(H) X 1.3(D) inch
Weight	: **Approx. 650g**
Supplied acc'y	: **Mounting bracket (1)**
	Screw kits (1)
	Power cord (1)
	Instruction **manual** (1)