clarion

Owner's manual & Installation manual
Mode d'emploi et manuel d'installation
Manual de instrucciones y manual de instalación
Manuale dell'utente e manuale di installazione
Bedienungsanleitung und Installationshandbuch
Bruksanvisning och installationsmanual

EA-2182E

📄 CONTENTS

1. SAFETY INSTRUCTIONS

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 of damage associated with the misuse of the product.

🚨 **WARNING**	This information is for preventing bodily harm or even death and user should follow these safety rules.
🚫 **CAUTION**	This information is for preventing damage or shortening the life time of the products.
⚠️ **ATTENTION**	This information is for user's reference for better usability.

⚠️ WARNING

● **Do not install the monitor in effective range of air bags.**

It may cause malfunction of air bag or injury in the event of an accident deploying the air bag.

● **Do not use if smoke is seen or unit emits burning smell.**

It may cause fire. Discontinue use and contact place of purchase.

● **Do not disassemble, repair or modify.**

It may cause malfunction or injury and may void warranty.
Make inquiries to place of purchase for repair and checkup.

● **Do not reverse vehicle while relying only on the monitor image.**

● **Drive slowly when reversing.**

⚠ **CAUTION**

● **Disconnect battery before installation. Re-connect once installation is complete.**

Prevents electric shock or short circuit.

● **Do not use for long periods without engine running.**

It may cause battery to go flat.

● **The rear-view monitor image has the same right-left inversion as your vehicle's rearview mirrors. Depending on the vehicle, the field and angle of view may differ.**

● **Do not use multi socket or extended adaptor.**

It may cause unexpected overheating, fire and malfunction.

● **Unplug product when not in use for a long time.**

It may case fire by short circuit due to overheating.

● **Do not place near magnet.**

It may cause malfunction or picture distortion.

● **The battery for remote controller is not rechargeable and should be replaced by the same or similar model. Used battery may cause environmental pollution, so trash it carefully.**

Incorrect battery may cause malfunction or damage.

2. BEFORE USE

Precautions (when you use the monitor)

● Use the product at the temperature range of -10° C ~ 60° C.

● Screen may be a little dark when the product is operated in low temperature areas. Screen will show normal luminosity after a few minutes.

● Do not disassemble and modify the product in any way. This may cause fire and/or electric shock.

● When you install the product in a vehicle and watch the monitor, the car engine should be running to avoid flattening the battery.

● Any liquid leaking into product may cause malfunction.

### Precautions (when you use the product in a vehicle)

● The driver should not use the product while he/she is driving.

● Be cautious of humidity and shock when you use the product in a vehicle.

● Cover the product when exposed to direct rays of the sun for a long period of time. (You should keep the product at a temperature range of -20° C ~ 70° C.)

3. FEATURES

◆ DC 12V/24V

◆ 7 language display Selection

◆ Camera input (4 systems), camera linkage 1 - 4

◆ User can choose split screen (2/3/4 Split screen)

◆ Camera input screen inversion (Normal / Mirror mode)

◆ A/V input (Video / Mono Audio)

◆ The cameras can be operated on the monitor side when the CJ-7600 monitor is connected.

◆ Output can be sent to an external monitor (via a remote control receiver sold separately and operated by the remote control)

◆ The images of Camera 1 - 4 can be automatically switched in all the screens.

◆ Opening and closing of the shutter camera can be fully controlled using the B/U cable

4. CONTENTS

※ **When opening the gift box, please check the contents listed below. If you find parts are missing, please contact place of purchase.**

Body (1)

Cable (1)

Manual (1)

[Separately sold products]

Remote control receiver (CCA-712-500)

Remote control (RCB-211-100)
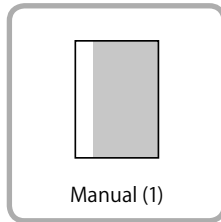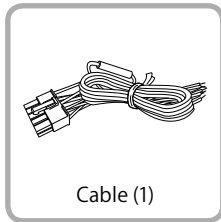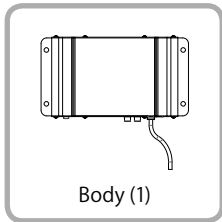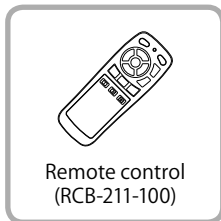
5. FUNCTION OF EACH PART

[Connection terminal]
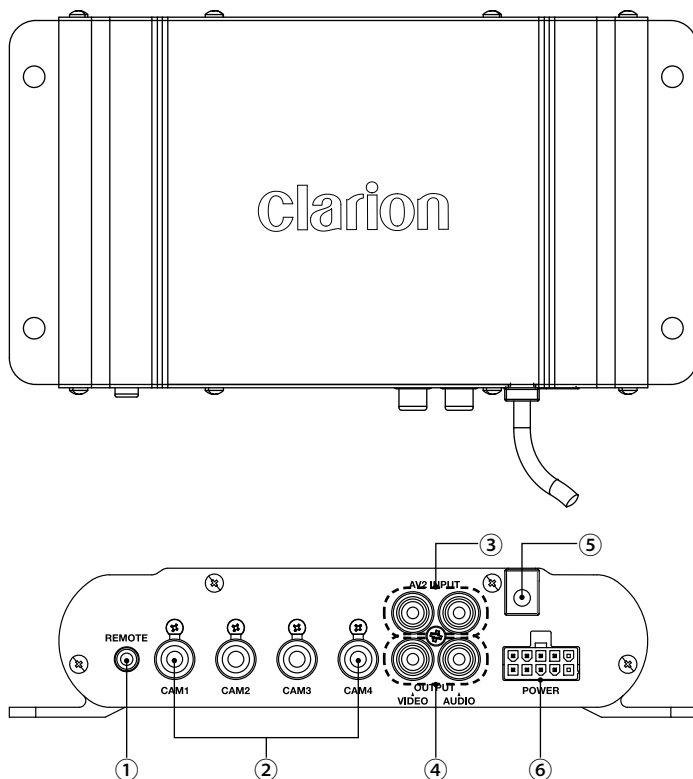
① External remote control input terminal	Operations can be carried out remotely by connecting an external remote control receiver sold separately.
② Camera input terminal	Camera 1 - 4 input terminals
③ AV2 input terminal	Audio visual input terminal for AV2 display
④ Audio visual output terminal	Camera/AV2 image output terminal for connecting to external monitor
⑤ Dedicated monitor connection terminal	Dedicated connection terminal for CJ-7600
⑥ Power/signal input	DC12/24V input terminal, TRIGGER 1 - 4 terminal, parking input terminal, remote out terminal

[Remote Controller(Separately sold products)]
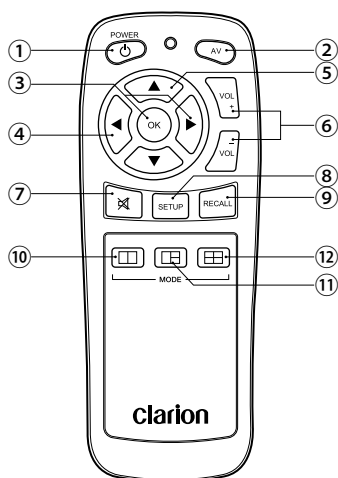
① POWER ⏻	POWER ON/STAND-BY
② AV	Switch AUX
③ OK／▶	Confirm button
④ ◀	Return button
⑤ ▲▼	Switch camera inputs / Set SUB-MENU
⑥ VOL +/-	Volume control(Works only when CJ-7600 is connected)
⑦ ⊠	Not in use
⑧ SETUP	Switch main menu
⑨ RECALL	Display actual settings
⑩ ▭	Go into 2 split screen and change split form
⑪ ▤	Go into 3 split screen and change split form
⑫ ▦	Go into 4 split screen and change split form

6. FUNCTION

⊡ Power On/Stand-by
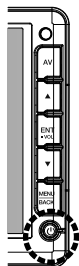
① Press POWER 「⏻」 button on monitor then the picture of the camera will be shown on the monitor.

※ 「⏻」 **Lamp is used when connected to the CJ-7600 monitor.**
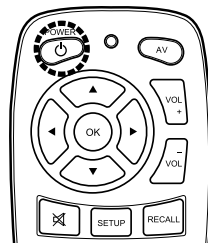
CJ-7600 connection

⊡ Volume control (CJ-7600 connection)
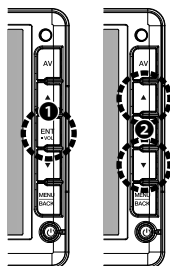
① Press and hold the ENT(VOL) button on the monitor to display the set volume and ② adjust the volume with the ▲／▼ buttons.

When using the remote control, the volume can be adjusted with the VOL+/- buttons.

※**The volume cannot be adjusted on the Sub. display screen.**

※**The volume is not displayed when an external monitor is connected. Adjust the volume on the external monitor side.**

CJ-7600 connection

⊡ Switch input video

1) Basic screen switching
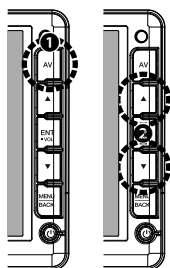
① Press the AV button to switch to the AV (external input) screen and press it again to return to the previous screen.

② Press the ▲／▼ buttons in the AV (external input) screen to switch to the AV1/AV2 screen.

③ Press the ▲／▼ buttons in the camera mode to switch the camera input. (The camera input is switched in the reverse order with the ▼ button.)

※**The AV1 and Sub. display screen is displayed only when the CJ-7600 monitor is connected.**

※**The AV (external input) or screen for non-connected cameras will turn blank.**

CJ-7600 connection

Camera 1 → Camera 2 → Camera 3 → Camera 4 → Sub.

2) Sprit screen switching

① Press the ENT(VOL) button (OK or ▶ button on the remote control) to switch between full screen, 2-split, 3-split or 4-split screen display.

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

CJ-7600 connection

2Split screen
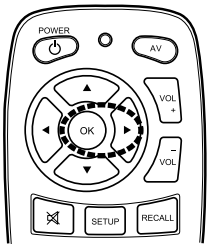
3Split screen
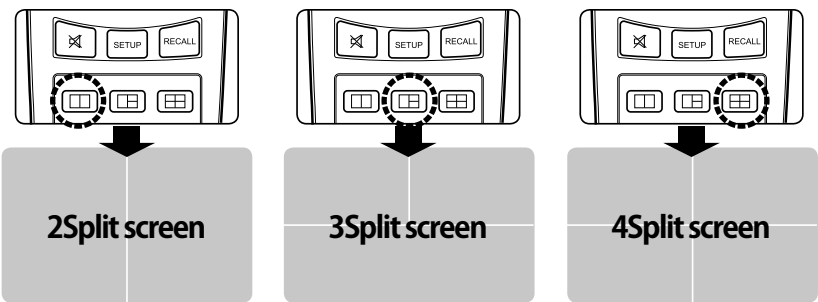
4Split screen

※**The split screen display differs from the remote control.**

② Each split screen has two options. In split mode, press ▲/▼ button on the monitor or split screen button on the remote control then the screen switches between both options.

CJ-7600 connection

| Camera2 | Camera1 |

| Camera2 | Camera3 |
| Camera1 | |

| Camera1 | Camera4 |
| Camera2 | Camera3 |

| Camera2 | |
| Camera1 | |

| Camera1 | |
| Camera2 | Camera3 |

| Camera2 | Camera4 | Camera3 |
| | Camera1 | |
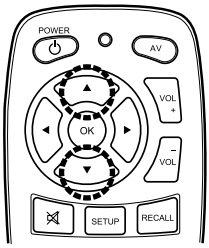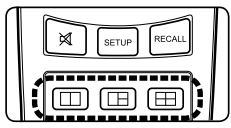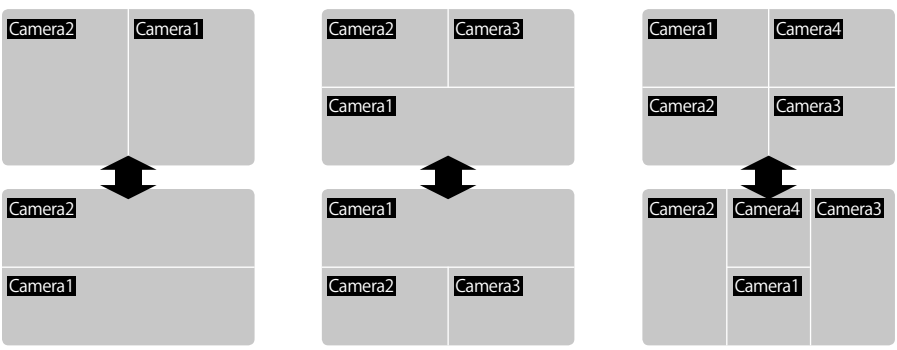
7. SETTINGS

※**When CJ-7600 is connected, changes in the settings can be made on the monitor side.**
※**When an external monitor is connected, connect an external remote control receiver (sold separately) to enable changes to be made to the settings with the remote control (sold separately).**

Common buttons when changing settings
① MENU/BACK button (SETUP button on the remote control):
　Menu screen display
② ▲／▼ buttons: Selection/adjustment of each item
③ ENT(VOL) button (OK or ▶ button on the remote control): Confirm button
④ MENU/BACK button(◀ button on the remote control):
　Return to previous screen button
※ **If the buttons are not pressed for 5 seconds, the settings will be saved even if they have not been completed and the menu screen will disappear automatically.**

CJ-7600 connection

<When an CJ-7600 monitor is connected>

MENU

General
Color tone
Marker
Normal／mirror
▼

MENU

▲
Split type
Camera when split
Sound   Camera1
Camera linkage

<When an external monitor is connected>

MENU

General
Marker
Normal／mirror
Split type
▼

MENU

▲
Split type
Camera when split
Sound   Camera1
Camera linkage
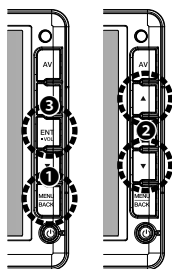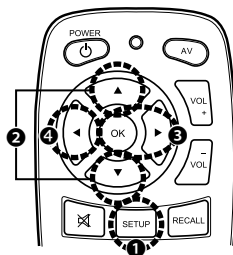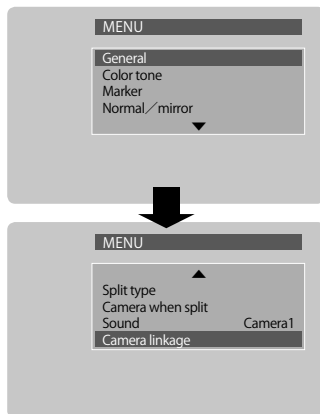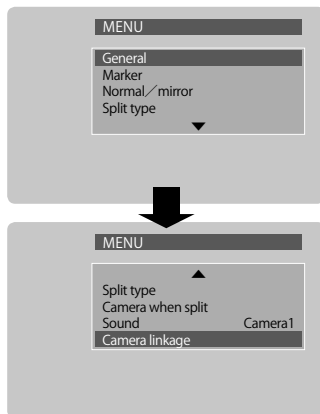
General

1) Volume control (Applicable only when CJ-7600 is connected)

① Select "Volume" in the "General" menu and press the ENT(VOL) button (OK or ▶ button on the remote control).

② Press the ▲／▼ buttons to adjust the volume.

※ **The volume can be adjusted between 0 and 15. The initial setting is 5.**

General	
Volume	5
Language	English
Switch time	OFF
Video system	NTSC
To initial settings	

General	
Volume	
Language	Eng
Switch time	
Video system	N
To initial settings	
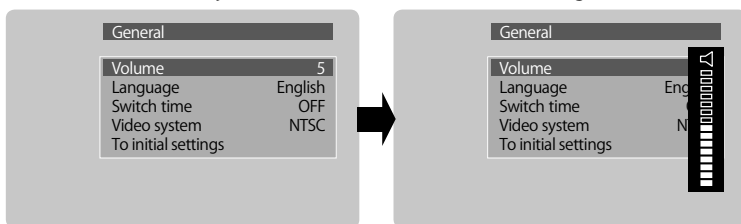
2) Language settings

① Select "Language" in the "General" menu with the ▲／▼ buttons and press the ENT(VOL) button (OK or ▶ button on the remote control).

② Select 日本語/English/Français/Español/Italiano/Deutsch/Svenska with the ▲／▼ buttons and press the ENT(VOL) button (OK or ▶ button on the remote control) to change the language.

※ **It is set "English" from the factory.**

General	
Volume	5
Language	English
Switch time	OFF
Video system	NTSC
To initial settings	

General	
Volume	5
Language	日本語
Switch time	English
Video system	Français
To initial settings	Español
	▼
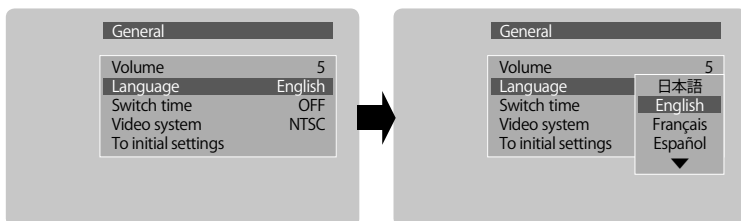
3) Switching time settings (Automatic screen switching)

The images of Camera 1 - 4 can be automatically switched in full screen.

① Select "Switch time" in the "General" menu with the ▲／▼ buttons and press the ENT(VOL) button (OK or ▶ button on the remote control).

② Select with the ▲／▼ buttons, and press the ENT(VOL) button (OK or ▶ button on the remote control) to set the time.

※ **Time can be selected from OFF/1 - 5 sec. (in 1 sec unit). The default setting when shipped is "OFF".**

※ **When the screen switching time is set between 1 to 5 sec., it is not possible to switch to a split screen display.**

General	
Volume	5
Language	English
Switch time	OFF
Video system	NTSC
To initial settings	

General	
Volume	5
Language	English
Switch time	ON
Video system	1sec.
To initial settings	2sec.
	3sec.
	▼
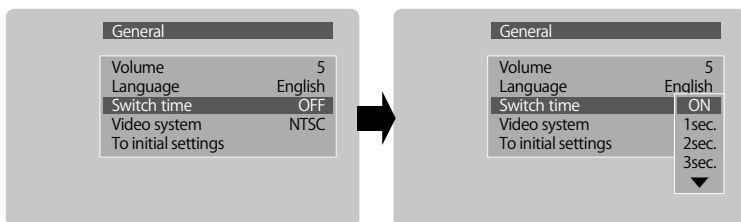
4) Video signal when split screen

Full screen(AV1/AV2): Automatically selected NTSC or PAL.

Split screen: Select manually.

① Select "Video signal" in the "General" menu with the ▲／▼ buttons and press the ENT(VOL) button (OK or ▶ button on the remote control).

② Select "NTSC" or "PAL" with the ▲／▼ buttons and press the ENT(VOL) button (OK or ▶ button on the remote control).

※ **You can not use both NTSC and PAL signals, in the one split screen.**

General	
Volume	5
Language	English
Switch time	OFF
Video signal	NTSC
To initial settings	

➡

General	
Volume	5
Language	English
Switch time	OFF
Video signal	NTSC
To initial settings	PAL
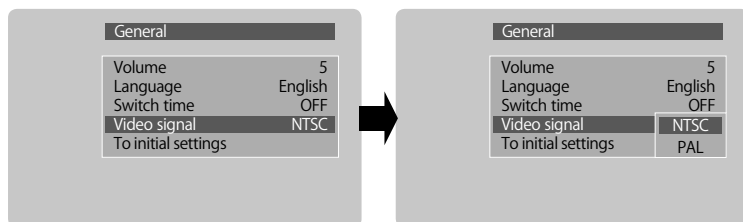
5) To initial settings

① Select "To initial settings" in the "General" menu with the ▲／▼ buttons and press the ENT(VOL) button (OK or ▶ button on the remote control).

② Select "Reset" with the ▲／▼ buttons and press the ENT(VOL) button (OK or ▶ button on the remote control) to automatically turn the power OFF and initialize the system to the default state when shipped.

※ **With "Reset" selected, initialization will not carried out even if the menu screen disappears when the buttons are not pressed for 5 seconds.**

General	
Volume	5
Language	English
Switch time	OFF
Video system	NTSC
To initial settings	

➡

General	
Reset settings to factory default.	
Reset	
Cancel	

Color tone (Display only when CJ-7600 is connected)

① Select "Brightness", "Tone", "Vividness" and "Dimmer" in the "Color tone" menu with the ▲╱▼ buttons and press the ENT(VOL) button (OK or ▶ button on the remote control). Press the ▲╱▼ buttons to adjust the "Brightness", "Tone" and "Vividness".

② Select "Daytime", "Night", "Auto" and press the ENT(VOL) button(OK or ▶ button on the remote control) to change the "Dimmer" setting.

1) Brightness

Color tone	
Brightness	5
Tone	5
Vividness	5
Dimmer	Daytime

➡

Color tone	
Brightness	5
Tone	
Vividness	
Dimmer	Dayt

2) Tone

Color tone	
Brightness	5
Tone	5
Vividness	5
Dimmer	Daytime

➡

Color tone	
Brightness	5
Tone	5
Vividness	
Dimmer	Dayt

3) Vividness

Color tone	
Brightness	5
Tone	5
Vividness	5
Dimmer	Daytime

➡

Color tone	
Brightness	5
Tone	5
Vividness	5
Dimmer	Dayt
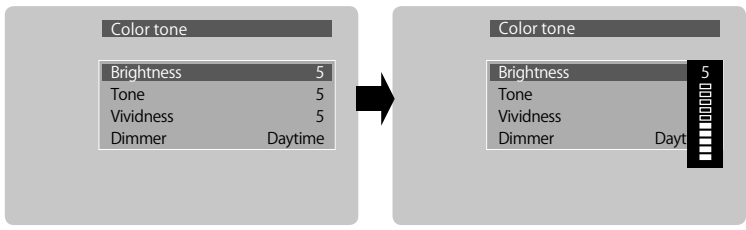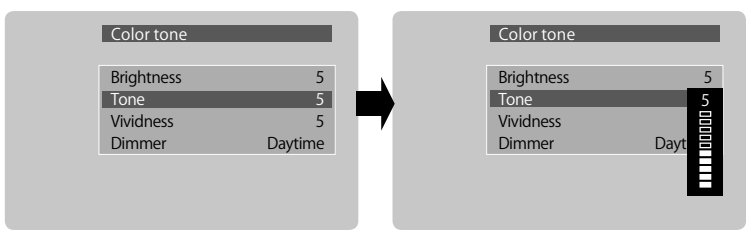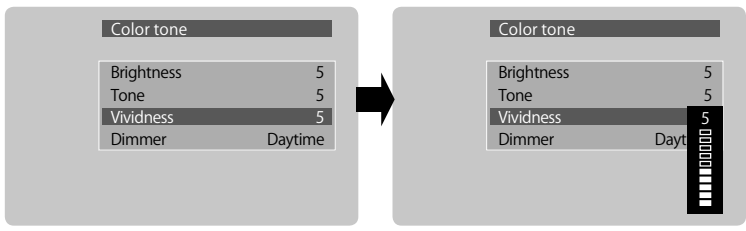
4) Dimmer sensor setting

※ **User can choose "Daytime"/"Night"/"Auto". (Factory default setting is "Daytime")**

Color tone	
Brightness	5
Tone	5
Vividness	5
Dimmer	Daytime

➡

Color tone	
Brightness	5
Tone	5
Vividness	5
Dimmer	Daytime
	Night
	Auto
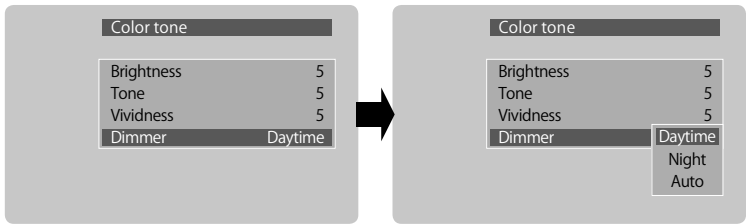
Marker

⚠ **Warning**

- The onscreen distance markers should be considered as a general reference to assist the driver in assessing the distances depicted on the screen. The distance markers have been designed based on the "back camera installation conditions" listed in the next section, but differences in vehicle design and construction may result in the actual installation condition or location being different from the conditions listed. In such cases, the display location should be set at the closest marker No.
- Distance markers cannot be set if non Clarion cameras are used.

⚠ **Caution**

- The markers may not indicate the exact position of the bumper, the vehicle's width or the distance to the rear. Use as a reference only.

1) Marker
① Select "Marker" in the "Marker" menu and press the ENT(VOL) button(OK or ▶ button on the remote control).
② Select "ON", "OFF" with the ▲／▼ buttons and press the ENT(VOL) button(OK or ▶ button on the remote control).
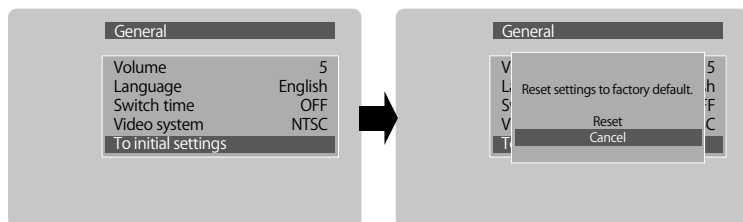※ **Only when the distance marker is "ON", the camera type and marker setting can be selected.**

Marker	
Marker	OFF
Camera type	1 1 8°
Marker type	Type 1
Up/down	0
L/R	0

➡

Marker	
Marker	OFF
	ON
Camera type	
Marker type	Type 1
Up/down	0
L/R	0
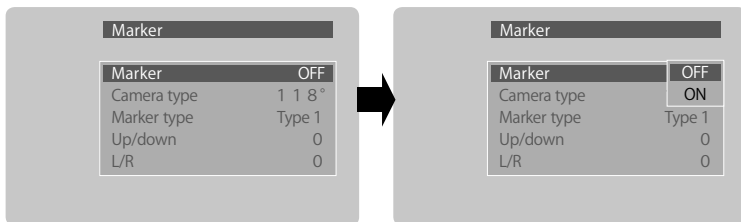
2) Camera type
① Select "Camera type" in the "Marker" menu and press the ENT(VOL) button(OK or ▶ button on the remote control).
② Select "118°", "130°", "160°" with the ▲／▼ buttons and press the ENT(VOL) button(OK or ▶ button on the remote control).
※ **If the camera angle of view is not in "Camera type", select an object near the field of view to adjust it.**

Marker	
Marker	ON
Camera type	1 1 8°
Marker type	Type 1
Up/down	0
L/R	0

➡

Marker	
Marker	ON
Camera type	1 1 8°
Marker type	1 3 0°
Up/down	1 6 0°
L/R	0

16

3) Marker type (set the marker pattern)
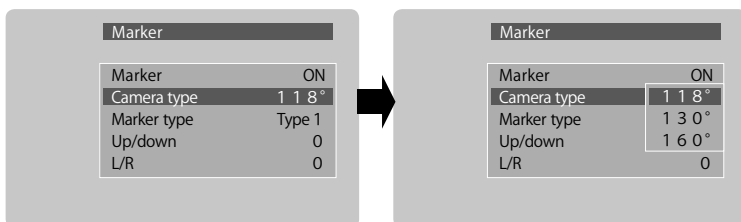
① Select "Marker type" in the "Marker" menu and press the ENT(VOL) button(OK or ▶ button on the remote control).

② Select "Type 1" to "Type 7" with the ▲／▼ buttons and press the ENT(VOL) button(OK or ▶ button on the remote control).

Marker	
Marker	ON
Camera type	1 1 8°
Marker type	Type 1
Up/down	0
L/R	0

Type 1
Type 2
Type 3
Type 4
▼
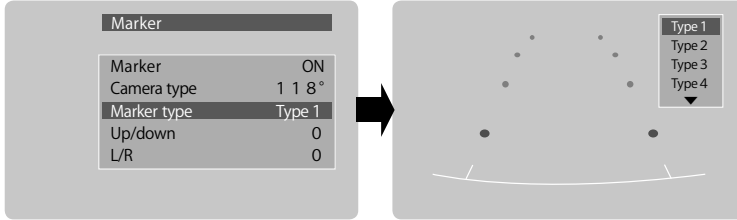
◆ **Installation condition of back camera(distance marker input conditions)**

Camera type：118° ,130°　　　　　　Unit: m

Marker No. (Pattern)	Camera Install Height	Vehicle Width
Type1	2.0	
Type2	2.5	
Type3	2.8	2.3
Type4	3.0	
Type5	3.0	
Type6	3.2 5	2.5
Type7	3.5	

Camera type：160°　　　　　　Unit: m

Marker No. (Pattern)	Camera Install Height	Vehicle Width
Type1	0.5	2.3
Type2	0.7	
Type3	0.7	2.5
Type4	0.9	2.3
Type5	0.9	2.5
Type6	2.5	2.3
Type7	3.0	2.5

Vehicle Width

(From bumper toward rear)
7m

5m

3m

1m
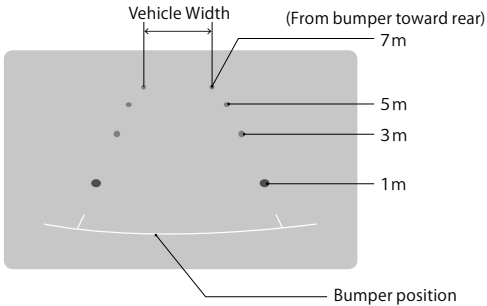
Bumper position

4) Up/down, Left/Right adjustment (adjust the bumper position of the car)

① Select "Up/down" in the "Marker" menu and press the ENT(VOL) button (OK or ▶ button on the remote control).

② Adjust the V (vertical movement) value with the ▲／▼ buttons (▲: Up, ▼: Down) and press the ENT(VOL) button (OK or ▶ button on the remote control). (V= －10～＋10, Default setting: V=0)

Marker	
Marker	ON
Camera type	1 1 8°
Marker type	Type 1
Up/down	0
L/R	0

➡ V : ＋１０ H : 0
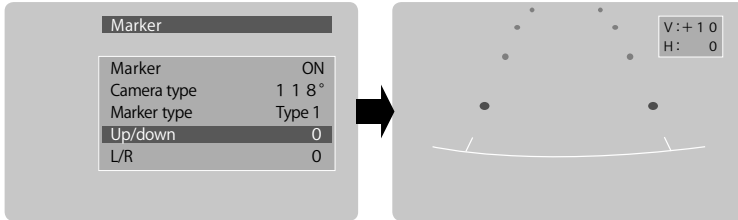
① Select "L/R" in the "Marker" menu and press the ENT(VOL) button.

② Adjust the H (horizontal movement) value with the ▲／▼ buttons (▲: Right, ▼: Left) and press the ENT(VOL) button (OK or ▶ button on the remote control). (H = －10～＋10, Default setting: H=0)

Marker	
Marker	ON
Camera type	1 1 8°
Marker type	Type 1
Up/down	0
L/R	0

➡ V : 0 H : ＋１０

※ **If there is no button operation, set up screen disappears even during set up process.**

Camera Nomal/Mirror mode setting

① Select "Camera 1 - 4" or "Sub." in the "Normal/Mirror" menu and press the ENT(VOL) button (OK or ▶ button on the remote control).

※ **The sub-display screen is displayed only when the CJ-7600 monitor is connected.**

② Select "Normal" or "Mirror" with the ▲／▼ buttons and press the ENT(VOL) button (OK or ▶ button on the remote control) to invert the screen left to right.

※ **It is set "Normal" mode from the factory.**

Normal/Mirror	
Camera1	Normal
Camera2	Normal
Camera3	Normal
Camera4	Normal
Sub	Normal

➡

Normal/Mirror	
Camera1	Normal
Camera2	Mirror
Camera3	Normal
Camera4	Normal
Sub	Normal
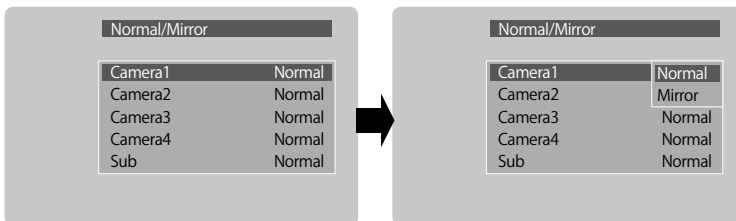
Split type

① Select the "2 - 4 Screen" in the "Split type" menu with the ▲／▼ buttons and press the ENT(VOL) button (OK or ▶ button on the remote control).

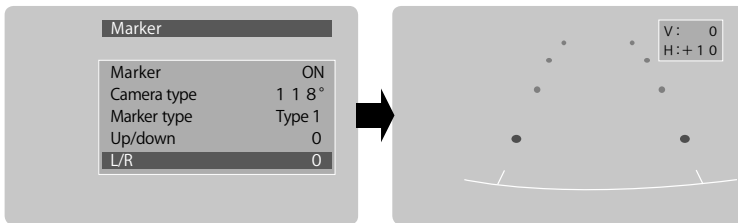② Select the image layout with the ▲／▼ buttons, and press the ENT(VOL) button (OK or ▶ button on the remote control) to set the screen display when split.

※**The 2 - 4 split screen display when the cameras are linked is displayed in this setting screen.**
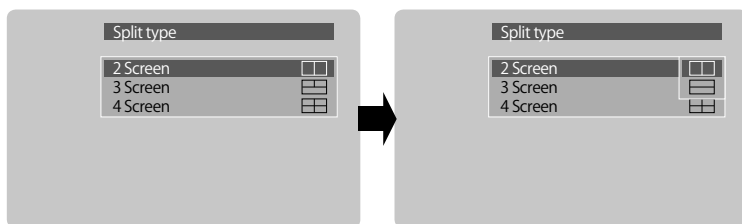
Camera when split

① Select the "2 - 4 Screen" display that you wish to change (shaded screen) with the ▲／▼ buttons in the "Camera when split" screen and press the ENT(VOL) button (OK or ▶ button on the remote control).

② Select "Camera 1 - 4" or "AV2" with the ▲／▼ buttons, and press the ENT(VOL) button (OK or ▶ button on the remote control).

※ **An icon matching the screen set in the "Split type" display settings is displayed.**
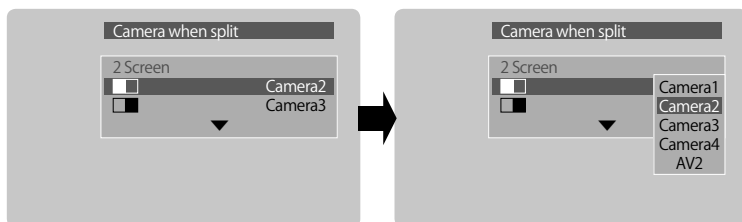
When set to ▭▭ in "Split type"
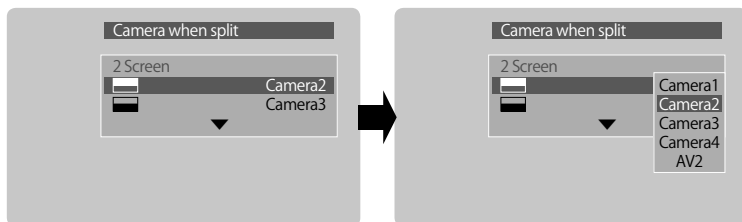
When set to ▤ in "Split type"

Sound

The audio output in the 2 - 4 split screen display can be specified. (when a camera with a built-in microphone is connected, and when AV2 audio input is selected)

1) When an CJ-7600 monitor is connected

Select the audio of the "Camera 1 - 4" that you wish to output in the split screen or "AV2" with the ▲／▼ buttons in the "Sound" menu and press the ENT(VOL) button (OK or ▶ button on the remote control).

※ **Audio is output only when the camera whose audio you selected in the split screen or AV2 is displayed.**
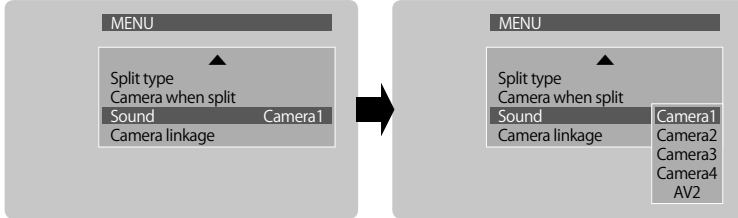
2) When an external monitor is connected

Select the audio of the "Camera 1 - 4" that you wish to output in the split screen or "AV2 ON" with the ▲／▼ buttons in the "Sound" menu and press the ENT(VOL) button (OK or ▶ button on the remote control).

※ **If "Camera 1 - 4" is selected, audio is output only when the camera whose audio you selected for the split screen is displayed.**

※ **If "AV2 ON" is selected, audio is output even when AV2 is not displayed for the split screen.**
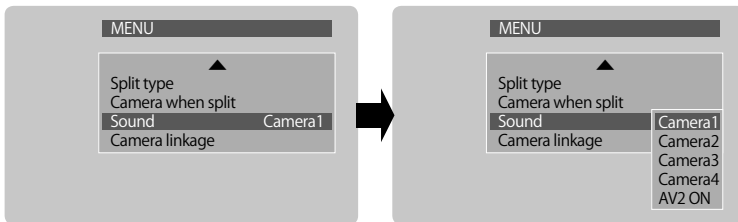
Camera linkage

1) The camera image to be displayed can be set in the Link (TRIGGER terminal) 1 - 4.
① Select "Link 1 - 4" or "Link 2+3" with the ▲／▼ buttons in the "Camera linkage" menu, and press the ENT(VOL) button (OK or ▶ button on the remote control).
② Select the screen when linked with the ▲／▼ buttons, and press the ENT(VOL) button (OK or ▶ button on the remote control).
※ **The 2 - 4 split screen display will be the screen set in the "Split type" display settings.**

Camera linkage	
Link1	Camera1
Link2	Camera2
Link3	Camera3
Link4	Camera4
Link2+3	3 Screen

Camera linkage	
Link1	Camera1
Link2	2 Screen
Link3	3 Screen
Link4	4 Screen
Link2+3	3 Screen
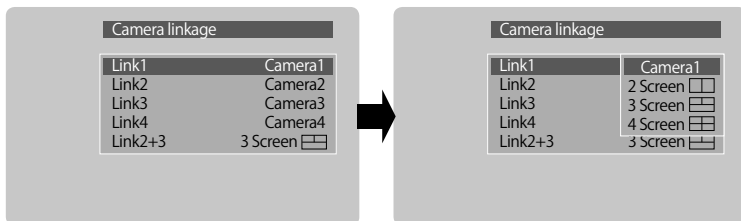
2) When a signal is input to the TRIGGER 1 - 4 terminal, the camera image corresponding to this (screen set in "Camera linkage") is displayed. When the signal is terminated, the display returns to the previous screen (4 seconds later for Link 2 and 3).
※ **The image can be switched even with the TRIGGER(Link) 1 - 4 signal image displayed but the display will return to the previous screen upon the signal being terminated.**

① Default condition when shipped

Camera4	Camera1	Camera4
Former screen	TRIGGER 1 signal: Input	TRIGGER 1 signal: Off

AV2	Camera2	AV2
Former screen	TRIGGER 2 signal: Input	TRIGGER 2 signal: Off ※AV2 screen 4 seconds later
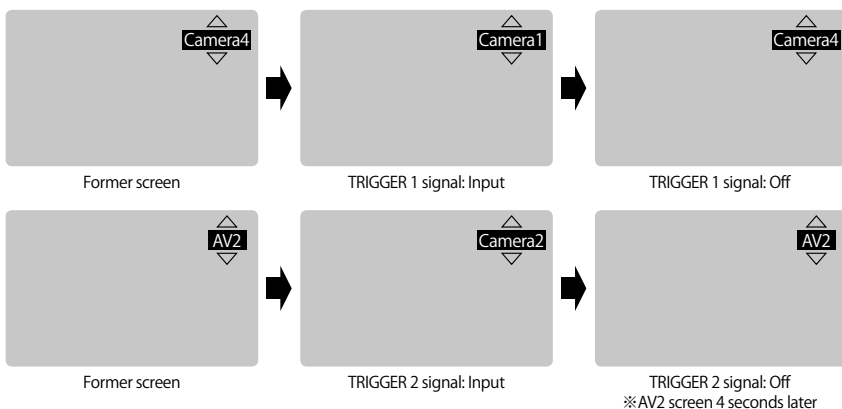
② When Link 1 is set to 4 screen display in the "Camera linkage" settings

Camera4	Camera1 / Camera4 / Camera2 / Camera3	Camera4
Former screen	TRIGGER 1 signal: Input	TRIGGER 1 signal: Off
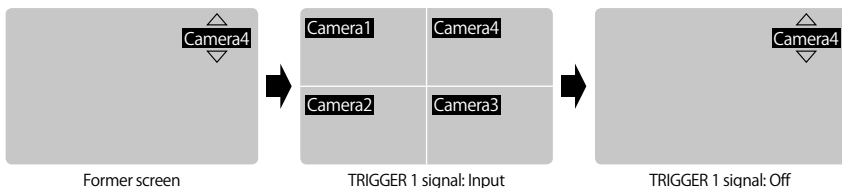
③ When there is an input signal from more than 2 TRIGGER(Links), the camera image corresponding to this is displayed.If the signal is terminated, the display returns to the previous screen.

⚠ **Signal priority order：** TRIGGER(Link) 1 > TRIGGER(Link) 2 > TRIGGER(Link) 3 >
TRIGGER(Link) 4 > TRIGGER(Link) 2 + 3 terminal

AV2

Former screen

Camera1

TRIGGER 1and 4 terminal: Input

Camera4

TRIGGER 1terminal: Off

Camera4

TRIGGER 4 terminal: Input

Camera2   Camera3
Camera1

TRIGGER 2 + 3 terminal: Input
※When set to 3 screen display

AV2

TRIGGER 4 terminal: Off

Camera2   Camera3
Camera1

TRIGGER 4 terminal: Off

Camera3

TRIGGER 2 terminal: Off

AV2

TRIGGER 3 terminal: Off
※AV2 screen 4 seconds later
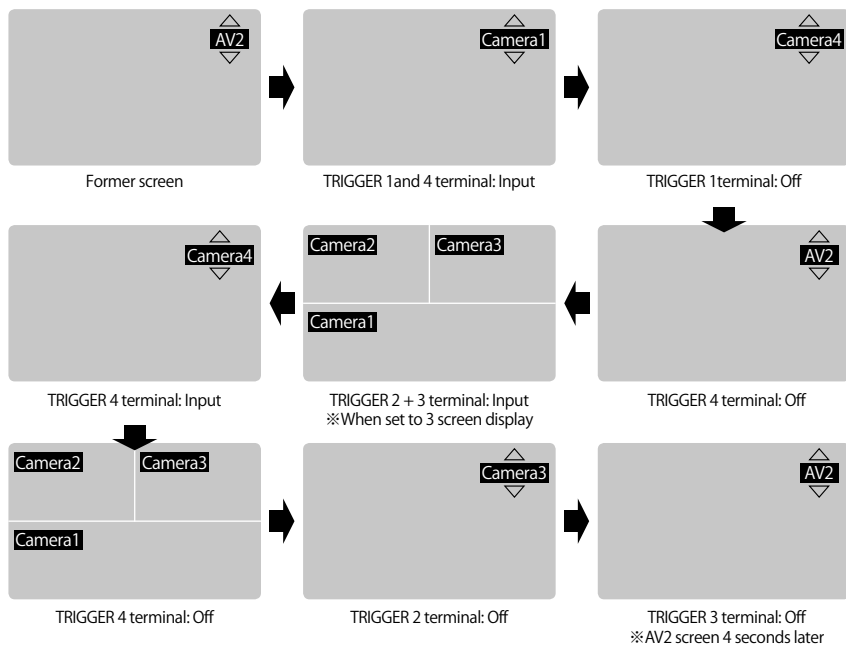
※ **If there is trigger signal input in power off (Stand-by) status, the screen switches on and displays chosen trigger line (camera). And the screens turns off when the trigger signal switches off.**

8. CONNECTIONS

※The monitor/camera/external remote control receiver shown in the drawing are sold separately.

CJ-7600 Monitor

Monitor connector

External remote control receiver (CCA-712-500)

Connect to the main camera terminal

AV2 (Video・Audio) Input terminal

REMOTE

CAM1 CAM2 CAM3 CAM4

AV2 INPUT

OUTPUT
VIDEO AUDIO

POWER

Recommended screws: Use φ5 tapping screws (4 units) that are sold commercially.

Camera1

Camera2

Camera3

Camera4

CAM/AV2 output terminal (To external monitor input terminal)

Yellow(B/U): DC12/24V

Black(GND): Ground

Red(ACC): DC12/24V

Green (PARKING):
Connect to the earth line of the the parking brake lamp

Violet/White (TRIGGER 1):
Connect to the "+" terminal of the back gear lamp

Blue (TRIGGER 2):
Connect to the "+" terminal of the winker lamp

White (TRIGGER 3):
Connect to the "+" terminal of the winker lamp

Gray (TRIGGER 4): Connect to the "+" terminal of the mode you wish to link to

Violet (REMOTE OUT):
Do not take away the insulation except during use.

※ 1 Use Clarion Cameras only.
※ 2 A camera connecting cable, sold separately, is required for connecting the camera.

■When the B/U terminal is connected to the car's B/U :
 ・When ACC is OFF, the shutter of the shutter camera closes automatically.
■When the B/U terminal is connected to the car's ACC (car with no B/U) :
 • Even when ACC is OFF, the shutter of the shutter camera will not close automatically.
 • To close the shutter, turn ACC OFF after setting the monitor to "Standby".
 • Make sure the B/U terminal is connected to the car's ACC together with the ACC terminal.

9. TROUBLESHOOTING

Problem	Cause	Measure
No image is displayed.	Is camera connected properly?	Check the wiring to the camera and the camera connection.
Power does not turn on.	Is power cable connected properly?	Check the wiring.
	Is a fuse blown out?	Replace with a fuse of the same amperage (5A)
Color is washed-out.	Operating environment is inappropriate.	Temperature in the vehicle is below -10°C or over 60°C. Check to see that the temperature in the vehicle is appropriate (around 25°C).

10. SPECIFICATION

Power Supply	Voltage	DC12V ~ DC24V (10.8V~31.2V)
	Current	Approx.200mA (DC24V、in case of connecing four sets of camera CC-6500)
Frequency	Horizontal	15.734KHz (NTSC), 15.625KHz (PAL)
	Vertical	60Hz (NTSC), 50Hz (PAL)
Video Signal		Composite video signal
Audio Signal		MONO
Language Display Selection		7 Language
Operating Temperature		-10°C to +60°C / 14°F to +140°F
Storage Temperature		-20°C to +70°C / -4°F to +158°F
Dimension		208(W) x 110(H) x 45(D) (mm) / 8.19(W) x 4.33(H) x 1.77(D) (inch)
Weight		Approx. 630g / 22.22oz (Body only)

※ The design and specifications are subject to change without notice.

Clarion Co., Ltd.