

## LCD COLOR MONITORS

Introducing high-quality Clarion monitors that deliver superior cost performance in a sophisticated original design with dual camera connectivity.

### 7" WIDE COLOR LCD MONITOR

Large 7-inch screen delivers sharp, clear images in a sleek, stylish design that fits attractively in your vehicle interior.

## CJ7100E

7" Wide Color LCD Monitor (Compatible with both DC 12V and 24V)

- Camera power supplies and a two-camera switcher are built in.
- Convenient true/mirror image switching function.
- Automatic video switching with reverse gear and turn signal link.
- Manual dimmer function.
- Image sources other than those from a camera can be displayed via video input and audio input.
- Seven language display selection.
- Wireless remote control is included.



### 5.6" COLOR LCD MONITOR

Good cost-to-performance ratio from a practical 5.6-inch color LCD monitor.

## CJ5600E

5.6" Color LCD Monitor (Compatible with both DC 12V and 24V)

- Camera power supplies and a two-camera switcher are built in.
- Convenient true/mirror image switching function.
- Automatic video switching with reverse gear and turn signal link.
- Seven language display selection.



Note: The CJ7100E and CJ5600E are not provided with marker, camera zoom, IRIS and timer functions.

# clarion



CCD CAMERAS	CC2001F	CC2000E/CC2003E	CC2002E	CC1030E	CC2011E/CC2015E/CC2012E	CC3000E
Dual chamber design	Y	Y	Y	N	N	N
Motorized lens shutter	Y	N	N	N	N	N
Digital zoom (x 1.4)	Y	Y	Y	N	N	N
IR LED	N	N	N	N	N	Y
Microphone	N	N	N	N	N	Y
Low light rating (lux)	1	1	1	3 or less	3 or less	0.01 (6 LED ON)
Iris function	Y	Y	Y	N	N	N
CCD pixels	250,000	250,000	250,000	250,000	250,000	250,000
View angle(horiz./vert.)	118/97	118/97	40/30	115/88	130/97	95/70
Operating temperature range	-30°C to +70°C	-30°C to +70°C	-30°C to +70°C	-30°C to +70°C	-30°C to +70°C	-10°C to +60°C
CCD size	1/4"	1/4"	1/4"	1/4"	1/4"	1/3"
Power voltage (camera)	9Vdc.neg connection	9Vdc.neg connection	9Vdc.neg connection	9Vdc.neg connection	9Vdc.neg connection	12Vdc.neg connection
Current consumption (camera)	Less than 150mA	Less than 150mA	Less than 150mA	Less than 150mA	Less than 120mA	Less than 200mA
Power voltage (shutter)	DC12V	N/A	N/A	N/A	N/A	N/A
Current consumption (shutter)	Less than 300mA	N/A	N/A	N/A	N/A	N/A
Vibration rating (G-force)	10	10	10	10	6.8	6.8
True/Mirror image select	Mirror	Mirror(CC2000)/True(CC2003)	True	Mirror	Mirror(CC2011/CC2015)/True(CC2012)	Mirror
Size (W x H x D mm)	80 x 40.5 x 57.4	80 x 40.5 x 53	80 x 40.5 x 53	48 x 35 x 32.5	27 x 25 x 28.3	70 x 44 x 57
Weight	300g	260g	260g	100g	72g (CC2011/CC2012), 86g(CC2015)	238g
Signal system	NTSC	NTSC	NTSC	NTSC	NTSC	NTSC

LCD COLOR MONITORS	CJ5600E	CJ7100E	CJ981E
Diagonal screen size (inches)	5.6	7	6.5
Power supply	DC12V/24V	DC12V/24V	DC12V/24V (requires power box)
Power consumption	550mA (DC12V, monitor set only)	450mA (DC12V, monitor set only)	Less than 2A (with EA1246A)
Picture element pixel	320 (W) x 3 (RGB) x 234 (H)	480 (W) x 3 (RGB) x 234 (H)	112,320 pixels (234 x 480)
Built-in speaker	N	Y	Y
Volume control	N/A	Y	N
Day/Night dimming	MAN	MAN	AUTO (requires power box) / MAN
Image:True/Mirror	Selectable	Selectable	True
Reverse gear on trigger	Y	Y	Y ( requires power box)
Camera switcher	Y (2 cameras)	Y (2 cameras)	Y (3 cameras with EA1246)
Auto triggering for 2nd camera	Y	Y	Y (with EA1246A)
Auto triggering for 3rd camera	N	N	Y (with EA1246A)
Separate video input	N	Y	Y ( requires power box)
Separate video output	N	N	Y (requires power box)
Separate audio input	N	Y (MONO INPUT)	N
Separate audio output	N	N	N
Electronic distance markers	N	N	Y
Operating temperature range	-10°C to +60°C	-10°C to +60°C	-20°C to +60°C
Size (W x H x D mm)	163 x 112 x 30	187 x 113.5 x 26.6	194 x 116 x 28.3
Weight	300g	450g	500g
Signal system	NTSC (switch between NTSC/PAL)	NTSC (switch between NTSC/PAL)	NTSC (switch between NTSC/PAL)

POWER BOX FOR CJ981E	EA1232A	EA1246A
Camera input	1	3
AV In terminal (RCA)	1 (video)	1 (video)
AV Out terminal (RCA)	1 (video)	1 (video)
RGB connection terminal	N	(DIN 13P) 1
Power consumption	Less than 2A (with CJ981E)	Less than 2A (with CJ981E)
Power supply	DC12V/24V	DC12V/24V
Temperature range	-20°C to +60°C	-20°C to +60°C
Size (W x H x D mm)	155 x 37.5 x 115	200 x 37.5 x 100
Weight	580g	660g

Specifications and design are subject to change without notice.

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## SAFETY CAMERA & MONITOR SYSTEMS

# clarion

A NEW VISION OF SAFETY AND SECURITY



**Protect your investment with advanced in-car surveillance equipment from the world's leading provider of automotive media systems**



Headquarters and Technical center building

As a world leader in the development and production of in-car media equipment, Clarion has always been at the forefront of technological evolution. Our years of experience — including more than four decades of development of in-vehicle camera systems — have given us an expertise that none can match. And nowhere is that expertise more important than in designing safety camera and monitor systems.

Our reliability is backed up by one of the world's most rigorous production line quality assurance systems because we know that our in-vehicle equipment must perform consistently and reliably no matter where it's being used — whether it's the hot tropics, a parched desert, a wet rainforest, or the freezing cold of the far north.

Our state-of-the-art computer design system simulates various climatic conditions and every product goes through a wide range of quality control tests. Only when products pass these tests, are they entitled to bear the Clarion insignia and be delivered to our customers around the world. And thanks to advanced automation, our factories produce 50,000 in-vehicle CCD cameras for both commercial and private vehicles in countries around the world each and every month. So when it comes to in-car surveillance — leave it to Clarion. Because if it's "in-car," it's Clarion.



Waterproof test

Assuming vehicles are washed by a car wash and exposed to the weather, we check for water penetration inside the camera and determine how watertight the equipment is.



Vibration test

Assuming our products are used in commercial vehicles, we confirm durability by subjecting them to severe vibrations.



Temperature test

Reliability under rapid temperature change is checked, including performance confirmation under high and low temperatures.



Repetition durability test (to check camera's shutter release and monitor's controls)

We check the durability of movable parts such as shutter opening/closing and monitor controls by conducting more than 50,000 operation tests.

## CCD CAMERAS

Based on the concept of safety and reliability, Clarion's heavy-duty CCD cameras utilize state-of-the-art technology and deliver high performance even under tough conditions.

### HEAVY DUTY COLOR CCD CAMERAS

Thanks to the digital CCD image sensor, these heavy-duty cameras have exceptional picture quality.



## CC2001F



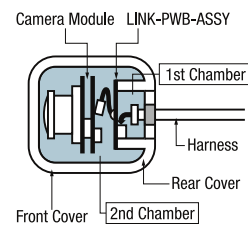
**Heavy Duty Color CCD Camera with Shutter**  
(Mirror Image/Wide Angle)

- Clarion's flagship CCD camera delivers both high image quality and high durability no matter what the operating conditions are.
- Front gate shutter prevents visibility from being obstructed by mud, grit, water, etc, ensuring you always have a clear view.
- Dual chamber design keeps any moisture or water that may leak from the harness from getting inside in the camera.
- Sturdy aluminum die-cast housing ensures the durability of the camera body.



CCD camera mounted on vehicle.

#### Dual chamber design



Opening and closing of shutter is coupled with camera operation (CC2001F only).



The connector can be tightened securely with a wrench to ensure watertightness.

## CC2000E



**Heavy Duty Color CCD Camera**  
(Mirror Image/Wide Angle)

## CC2003E



**Heavy Duty Color CCD Camera**  
(True Image/Wide Angle)

## CC2002E



**Heavy Duty Color CCD Camera**  
(True Image/Narrow Angle)



#### On-screen distance markers

On-screen markers are displayed at 1 m, 3 m, 5 m, and 7 m for reference to support proximity verification.



Rear camera with verification screen (1 m)



Rear camera with verification screen (3 m)



Rear camera with verification screen (7 m)

#### Low-distortion lens

The distortion typical of wide-angle lenses has been corrected in this ultra-wide-angle lens to provide a wider and more natural-looking view.



#### Improved low-light visibility

Delivers even brighter, clearer images than black-and-white cameras, enabling reliable rearview monitoring in low-light situations.



## LCD COLOR MONITOR

Safety confirmation is supported by a wide range of functions, while the monitor's high image quality helps make you aware of potentially dangerous situations.

### 6.5" WIDE COLOR LCD MONITOR

6.5-inch high brightness TFT liquid crystal panel features high visibility, while cameras can be controlled using the front buttons.



## CJ981E

**6.5" Wide Color LCD Monitor**

- Markers that help to provide a more accurate indication of distance are displayed on the monitor screen.
- Camera selection, ZOOM, IRIS ON/OFF can be performed with the front buttons or via optional wired remote control (RCB174).
- With IRIS function (backlight compensation function).
- Compatible with both DC 12V and DC 24V.
- Image sources other than those from a camera can be used via the auxiliary image input. NTSC or PAL can be selected in VTR mode.
- Equipped with a timer to automatically switch the power OFF in manual mode.

Note: An additional power box is necessary when using the CJ981E.

## EA1232A

**Power Box for CJ981E**

- For connecting 1 camera.
- Includes wired remote control.



## EA1246A

**Power Box for CJ981E (with Three-Camera Switcher)**

- Connects up to 3 cameras.
- Additional RGB input.
- Hazard light trigger function.
- Wired remote control is an optional extra.(RCB-174).



## RCB174

**Optional Wired Remote Control for EA1246A**

- Buttons provide Zoom/Iris/Camera select functions.



#### 1.4X digital zoom function

Switch to magnified center area view with the touch of a button. The digital zoom delivers a detailed view when you need it for extra safety.



#### Iris function (backlight compensation function)

The iris function corrects the camera's exposure by making the dark sections lighter and therefore easier to see.



The dark sections are made brighter without any adverse effect on the bright sections.

## CCD CAMERAS

With a lineup that ranges from a model with infrared LED illumination to sleek, ultra compact models and more, there's a Clarion CCD camera to meet your needs.

### IR ILLUMINATED COLOR CCD CAMERA

Designed to meet a wide range of conditions with infrared LED light, microphone, pre-heater, and more.

#### CC3000E



##### IR Illuminated Color CCD Camera

- Illumination is provided by the camera's infrared LED light, making it especially convenient when backing up at night or in a dark garage.
- Built-in microphone so you can hear, not just see, what's going behind your vehicle.
- Built-in pre-heater ensures the camera is ready for use at all times.
- Combines cost performance and multi-functionality in a single unit.



Note: Microphone function is available only in combination with the CJ7100E.

### ULTRA COMPACT COLOR CCD CAMERAS

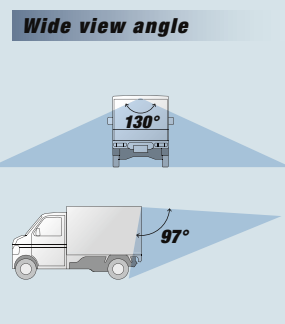
Incorporating high-performance CCDs in ultra-compact bodies, these small CCD color cameras are ideal for smaller vehicles.

#### CC2011E / CC2012E



##### Ultra Compact Color CCD Camera

- Wide 130° viewing angle provides the field of view you need even at low mounting positions.
- Small, light design allows for easy mounting.



CC2011E with PQE-033

#### CC2015E



##### CC2011E with Heavy Duty Mounting Bracket and Metal Shroud

- Heavy-duty version of the CC2011E with strengthened mounting bracket and metal shroud.



### COMPACT COLOR CCD CAMERA

#### CC1030E



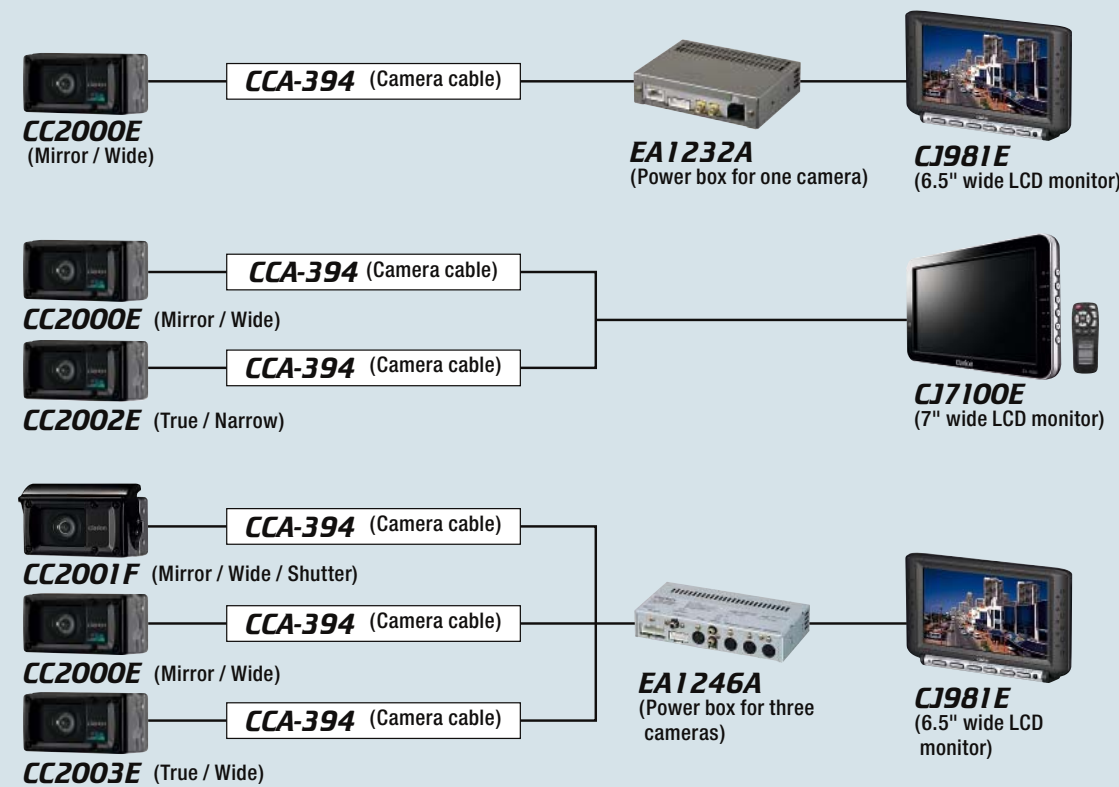
##### Compact Color CCD Camera (Mirror Image/Wide Angle)

- Compact size and light weight.
- Wide-angle view.



## System Examples

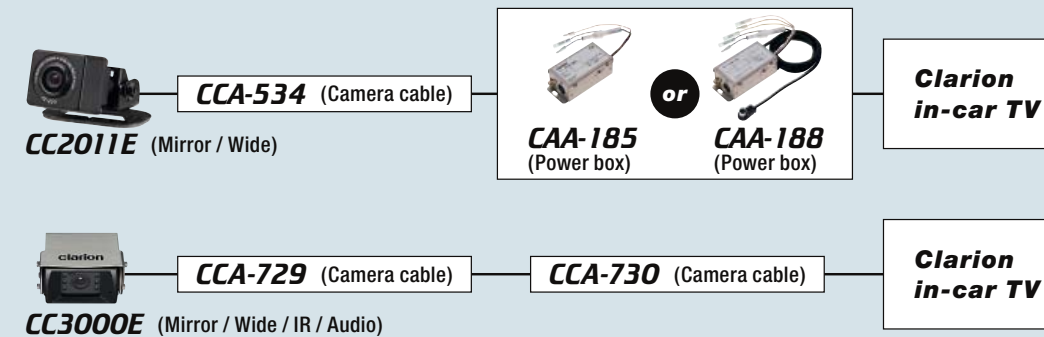
### Heavy Duty Color Camera System



### Color Camera System



### In-car TV System (only for 12V vehicles)



## Accessories

### Three CCD Camera Changeover Switch Box

#### RCA-223



### Power Box (only for 12V vehicles)

#### CAA-188

- DC12V power box.
- Connects Clarion cameras to Clarion in-car TV.
- 8pin mini Din.
- Manual on / off switch.



#### CAA-185

- DC12V power box.
- Connects Clarion cameras to Clarion in-car TV.
- Connects Clarion cameras to any monitor with composite video input.



### Optional Cover for CC2011E/CC2012E

#### PQE-033



### Water-resistant Specification Camera Cables for CC2000 Series Camera

- CCA-416 ( 5m / 16ft.)
- CCA-392 ( 7m / 23ft.)
- CCA-393 ( 10m / 33ft.)
- CCA-435 ( 13m / 42ft.)
- CCA-394 ( 15m / 49ft.)
- CCA-436 ( 18m / 59ft.)
- CCA-395 ( 20m / 65ft.)
- CCA-437 ( 23m / 75ft.)



### Water-resistant specification extension cables

- CCA-439 ( 0.9m / 3ft.)
- CCA-391 ( 5m / 16ft.)
- CCA-415 ( 10m / 33ft.)



### Water-resistant Specification Camera Cables for CC2011E Series / CC1030E Camera

- CCA-532 ( 7m / 23ft.)
- CCA-533 ( 10m / 33ft.)
- CCA-534 ( 15m / 49ft.)
- CCA-535 ( 20m / 65ft.)



### Cables & Installation Kit for Trailer

#### Trailer "break point" to camera cables

- CCA-452 ( 20m / 65ft.)
- CCA-453 ( 15m / 49ft.)



- CCA-451 ( 5m / 16ft.)

#### Cabin (monitor) to trailer break cable

- CCA-454 ( 15m / 49ft.)



### Water-resistant Specification Camera Cables for CC3000E Camera

- CCA-728 ( 20m / 65ft.)
- For connecting CJ981.
- CCA-729 ( 20m / 65ft.)
- For connecting CJ5600/CJ7100.



#### CCA-730

- Only for DC12V.
- For connecting general-purpose AV monitor with video input terminal.

