

Clarion

Owner's manual & Installation manual

用户手册和安装手册

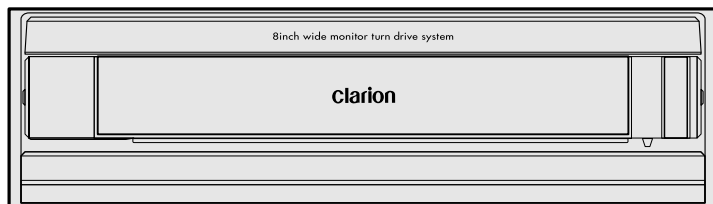
사용 설명 및 설치 설명서

TB851P/ TB853W

8-INCH WIDE COLOUR LCD TV

8 英寸宽荧幕彩色液晶电视机

8인치 와이드 컬러 LCD TV



Thank you for purchasing this Clarion **TB851P/TB853W**.

- * This owner's manual is for the **TB851P/TB853W**.
- * Please read this owner's manual completely before operating this equipment.
- * After reading this manual, be sure to keep it in a handy place (e.g., glove compartment).
- * Check the contents of the enclosed warranty card and keep it carefully with this manual.

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1. FEATURES

- **8" Wide-Screen Colour LCD**
- **Full Auto Mechanism**
- **Multi 12/8 Frames Selection Mode**

2. PRECAUTIONS

⚠ WARNING

For your safety, the driver should not watch the TV or operate the controls while driving. Watching the TV while driving is prohibited by law in some countries. Also, while driving, keep the volume to a level at which external sounds can still be heard.

1. This unit is a precision mechanism. Even if trouble occurs, never open the case, disassemble the unit, or lubricate the rotating parts.
2. TV broadcast reception
When receiving TV broadcasts, the strength of the signals changes since the car is moving, so receiving a clear picture may be impossible in some cases.
 - TV signals travel by line of sight, so reception is affected by buildings, mountains and other obstacles.
 - External factors such as electric train lines, high voltage lines, and signal devices may disturb the picture or cause noise.

* If the reception is poor, switch to a station with good reception.

INFORMATION FOR USERS:
CHANGES OR MODIFICATIONS TO THIS PRODUCT NOT APPROVED BY THE MANUFACTURER WILL VOID THE WARRANTY.

LCD panel/General items

For longer product service life, be sure to read the following cautions.

- Be sure to store the LCD panel inside the main unit when parking the car outdoors for long period of time. The LCD panel will operate properly in a temperature range of 0 to 60°C.
- Don't allow any moisture or liquid from items such as drinks or umbrellas to get on the unit. Doing so may damage the internal circuitry.
- Do not disassemble or modify the set in any way. Doing so may result in damage.
- Do not let cigarettes burn the display. Doing so may damage or deform the cabinet.
- If a problem should occur, have the set inspected at your store of purchase.
- Do not insert objects or poke into the space between the LCD panel and the main unit when the panel is tilted.
- Do not place anything on the display when the panel is tilted.
- The remote controller might not work if the remote control sensor is exposed to direct sunlight.
- In extremely cold weather, the display operation may slow and the display may darken, but this is not a malfunction. The display will work normally when the temperature rises.
- Small black and shiny spots inside the LCD panel are normal on LCD products.
- The LCD panel may stop temporarily when it opens or closes, when the engine stops or when it is cold.

Cleaning

• Cleaning the cabinet

Use a soft, dry cloth and gently wipe off the dirt. For tough dirt, apply some neutral detergent diluted in water to a soft cloth, wipe off the dirt gently, then wipe again with a dry cloth.

Do not use benzene, thinner, car cleaner, etc., as these substances may damage the cabinet or cause the paint to peel. Also, leaving rubber or plastic products in contact with the cabinet for long periods of time may cause stains.

• Cleaning the LCD panel

The LCD panel tends to collect dust, so wipe it off occasionally with a soft cloth. The surface is easily scratched, so do not rub it with hard objects.

Concerning the wide screen

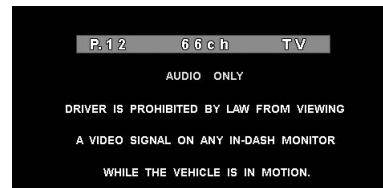
- A wide-screen TV comes with a function for selecting various screen modes. If you select a screen mode that differs from the picture ratio of the TV program or other software media, you will not be able to view the original pictures as was originally intended. Bear this point in mind when selecting the screen mode.

Ensuring safe driving

To ensure driving safety the TV video images are only shown when the car is stopped (parking brake engaged). Always make sure the vehicle is stopped before watching the TV.

(A screen image as shown in the figure appears while the vehicle is moving and only the TV audio can be heard.)

(screen while vehicle is moving)



System check

This unit has a system check function.

The system check display for this unit is displayed in the following cases. After this appears, press the [POWER] button 1 times to return to normal operating mode.

System check appears:

- when power is turned on right after this unit was installed
- when external equipment was connected or removed
- when the power was cut off due to battery replacement, etc.

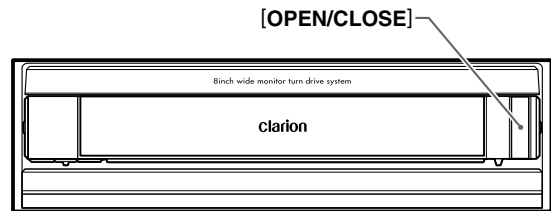
Be sure to unfold and read the next page.

请务必展开并阅读下一页。

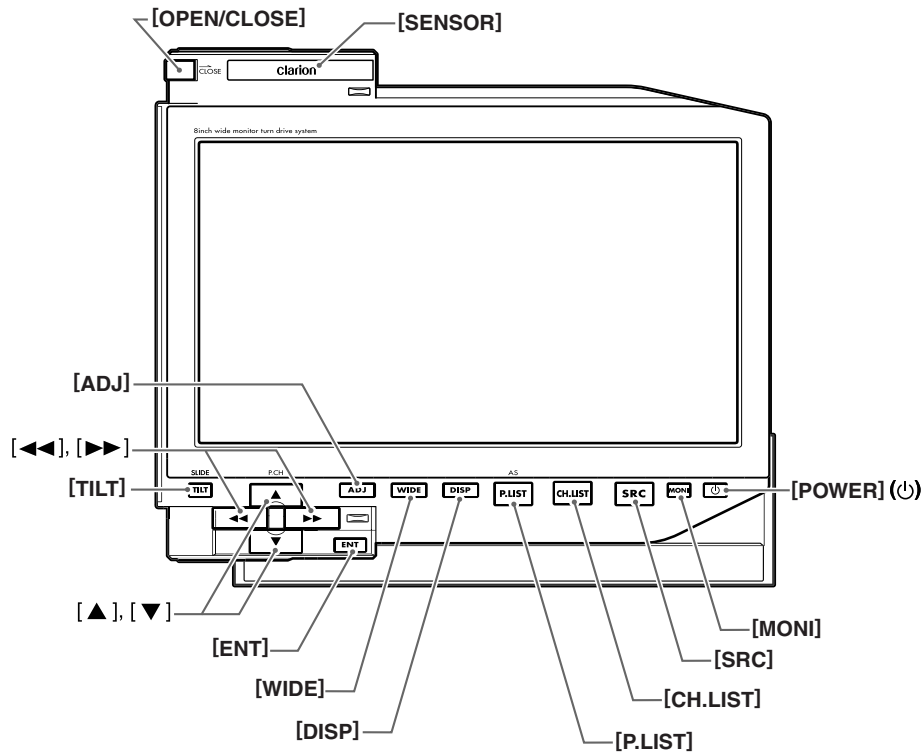
반드시 다음 페이지를 펴서 읽으십시오.

3. CONTROLS / 控制键 / 컨트롤

LCD panel closed / 液晶面板关闭 / LCD 패널 닫힘



LCD panel open / 液晶面板打开 / LCD 패널 열림



Note: Be sure to unfold this page and refer to the front diagrams as you read each chapter.

注意：阅读各章时请务必展开此页并阅读前面的图。

주: 이 페이지를 펼치고 각 장을 읽을 때 전면 그림을 참조하십시오.

4. PART NAMES

Operating Buttons

Note:

- Be sure to read this chapter while referring to the front diagrams in chapter "3. CONTROLS" on page 5 (unfold).

[OPEN/CLOSE] button

- Use this button to open/close the LCD panel.
- Press and hold this button for about 2 seconds or longer so that the LCD panel is positioned horizontally when the LCD panel is open. Press the button again to return the panel to the original position. Even if this button is not pressed, the panel returns to the original position after about 10 seconds. The unit angle and the operating time until return to original position can be set on "Set the LCD panel operating time". (See page 17.)

[SENSOR]

- Remote control infrared sensor.

[POWER] button (⏻)

- Press this button to turn on/off the power.

[MONI] button

- Press this button to turn allow any moisture or liquid from items such as drinks or umbrellas to get on the unit.

[SRC] button

- Use to switch to a media source such as TV or VISUAL.

[CH.LIST] button

- Displays a list of channels that can be received.

[P.LIST] button

- Displays a list of channels stored in the preset memory.
- Press and hold for 2 seconds or longer to perform the auto store operation.

[DISP] button

- Press this button to show the information on the screen.

[WIDE] button

- Press this button to switch the display sizes.

[ENT] button

- Use to enter the selected item in the unit memory when making settings.
- Press in TV mode to store as a preset station. Hold down button for at least 2 seconds to store the station.

[▲], [▼] buttons

- Press to select the preset channel.
- Press to select the desired menu on the adjustment menu screen.

[TILT] button

- Use this button to adjust the angle of the LCD panel in 5 steps.
- Each time this button is pressed and held for about 2 seconds or longer, the LCD panel moves forward/backward in 3 steps.

[◀◀], [▶▶] buttons

- Press to perform the Manual tuning.
- Press and hold for 1 second or longer to perform Seek tuning operation.
- Press to select the desired mode on adjustment menu screen.

[ADJ] button

- Shows the adjustment menu to change the settings.

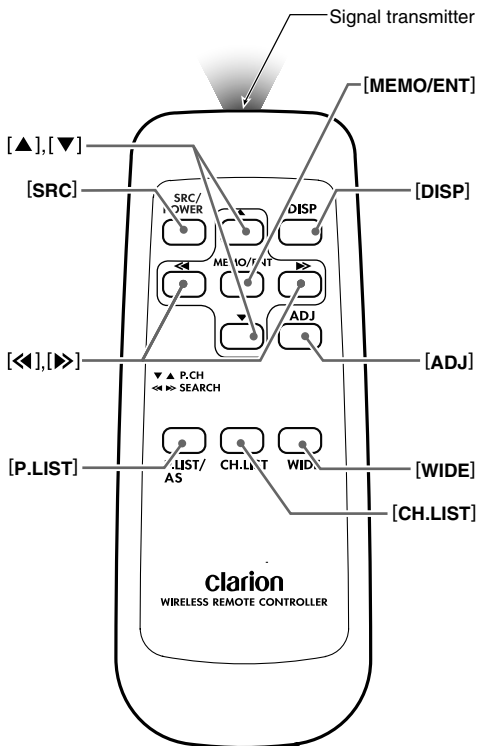
Remote Control

Note:

- Except for the following buttons, the remote control button names are the same as the buttons on the main unit.

[SRC] button

- Press to turn on the power.
- Press and hold for 2 seconds or longer to turn off the power.



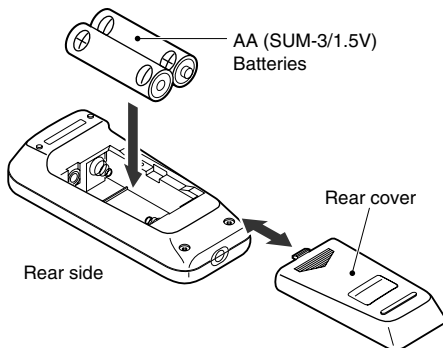
Inserting the Battery

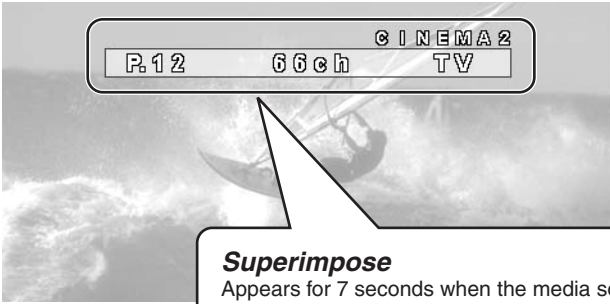
1. Turn the remote control unit over, then slide the rear cover in the direction of the arrow.
2. Insert the AA (SUM-3, IECR-6/1.5V) batteries that came with the remote control unit to face in the directions shown in the figure, then close the rear cover.

Notes:

Inserting the batteries the wrong way can cause them to explode. Take note of the following points:

- When replacing batteries, replace both batteries with new ones.
- Do not short-circuit, disassemble or heat the batteries.
- Do not dispose of batteries into fire or flames.
- Dispose of spent batteries properly.





Superimpose

Appears for 7 seconds when the media source was switched to TV mode.

CINEMA2: Screen size display

This was set to **"FULL WIDE"** prior to shipping. Besides Full Wide, you can also select **"CINEMA1"** (cinema 1), **"CINEMA2"** (cinema2), **"NORMAL"** (normal), and **"WIDE"** (wide).

- P.12** : Preset channel
66ch : Receivable channels
TV : Displays the media source name

Other displays

- **AUTO STORE** : Appears during auto store operation in TV mode.
- **PRESET MEMO** : Appears during preset memory operation in TV mode.
- **VTR1, 2** : Appears in VTR mode 1 or 2.
- **VISUAL1, 2** : Appears in Visual mode 1 or 2.

● List screen display

You can use the [P.LIST] button or [CH.LIST] button to display the preset channel list or the receivable channel list.

Either 8 or 12 screens can be set on this multiscreen. See **"Set the number of multiscreens"**. (See page 17.)



5. OPERATION

Basic Operation

Note: Be sure to read this chapter referring to the front diagrams in chapter "3. CONTROLS" on page 5 (unfold).

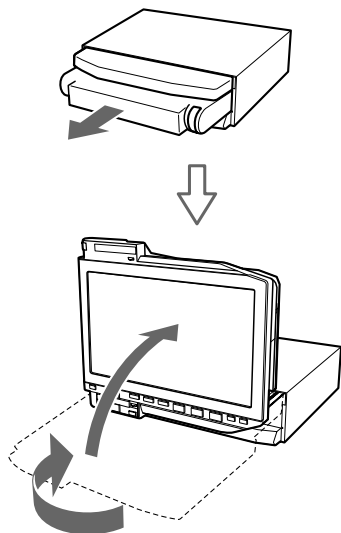
Opening and adjusting the LCD panel

⚠ WARNING

- To prevent the battery from going dead, operate this unit with the engine running if possible.
- When the LCD panel is operating, be careful not to get your hands or finger caught between the panel and main unit or the vehicle instrument panel.
- Do not move the LCD panel by hand.

Raising the LCD panel

1. Press the [OPEN] button. The LCD panel then ejects and rises automatically.



* While the LCD panel is opening or closing, the blue LED of the [OPEN] button will flash.

Notes:

- If the LCD panel stops in the middle of this operation, press the [OPEN] button to house the panel and then press the button again to stand it up. The unit will be in the same display mode as when last turned off.

Panel calibration function

The LCD panel's maximum angle of tilt can be adjusted to match the installation configuration within the automobile.

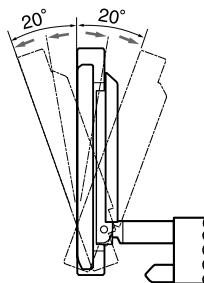
- Perform this with the LCD panel closed.
1. Press and hold the [OPEN] button for 5 seconds or longer, until the electronic beep is heard.
 2. The beep will sound twice, the panel will rise and the calibration function will begin.
 3. After completion of calibration, the panel will close automatically.
 - * If the panel does not strike the instrument panel or other parts of the car during calibration, then the maximum tilt is 110°.
 - * If the panel comes in contact or strikes a car part during calibration in a range of 70° then the maximum downward tilt is 70°.

Adjusting the angle, etc. of the LCD panel

The angle of the LCD panel or amount the panel protrudes from the mounting surface can be adjusted depending on the mounting angle of the unit or light coming into the vehicle.

● To adjust the angle

1. Every time the [TILT] button is pressed, the LCD panel tilts forward or backward at up to about 20 degrees. The adjusted angle is stored in the memory.



Note:

- Do not move the LCD panel by hand.

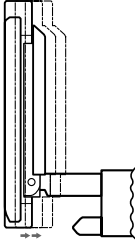
Basic Operation

● To adjust the slide position

1. Hold down the [TILT] button and release it when a beep is heard.

The LCD panel slides forward or backward. This adjusted slide position is stored in memory.

- * There are 3 adjustable positions available on this panel.



Housing the LCD panel

1. Press the [OPEN] button and the LCD panel is housed automatically.

Note:

- When leaving this unit unused for a long period of time or leaving your car, be sure to house the LCD panel into the main unit.

Turning the LCD panel horizontal (Air conditioner operation mode)

When the way the LCD panel is mounted hinders air conditioner operation, the panel can temporarily be turned to a horizontal position.

1. Press and hold the [OPEN] button when the LCD panel is upright, and release the button when a beep is heard.
2. The LCD panel turns horizontal.
 - * Press the [OPEN] button again when the LCD panel is in the horizontal position, and the panel returns to the original position.
 - * Alarm sounds and returns to original position if the button is not operated after about 10 seconds in horizontal state.
 - * The unit can also be set so that the panel returns to its original angle after a preset time in the horizontal position (See page 17).

Turning power ON or OFF

1. Press the [POWER] button.
Use to turn the power on or off.

Note:

- The LCD panel does not store away even if the power is turned off. If not using for a long period of time, press the [OPEN] (open/close) button on the LCD panel to store it away.

Select a media source

1. Press the [SRC] button. The source settings switch in the following sequence each time you press the button.
TV → VTR1 → VTR2 → VISUAL1 → VISUAL2 → TV → ...
 - The media source you select appears on the screen (superimpose) for 7 seconds.

Changing settings on the TB851P model

The factory settings on this model may sometimes have to be changed according to usage conditions.

● Select the country (See page 17.)

- * The factory setting is "STANDARD".

● Changing the FM modulator frequency (See page 16.)

- * The factory setting is "88.1 MHz".

⚠ WARNING

For your safety, the driver should not watch or operate TV while driving. Viewing and operating the TV while driving are prohibited by law in some countries.

Watching TV

Note:

• For your safety, the TB851P/TB853W has a safety function which turns off the picture when the car is moving, so only the audio can be heard. The picture can only be watched when the car is stopped and the parking brake is applied.

1. Press the [SRC] button and select the TV mode.
2. Press the [◀◀] or [▶▶] button to tune in the desired TV station.

Manual tuning

Press the [◀◀] or [▶▶] button to select the channel.

The channel number appears at the top right of the screen.

* Each time the [◀◀] or [▶▶] button is pressed, the channel number increases or decreases by 1.

Seek tuning

Press and hold the [◀◀] or [▶▶] button for 1 second or longer.

The seek tuning mode is now selected. Tuning will stop automatically at a channel where a broadcast is received.

* If seek tuning stops before or after a broadcast channel, then press the [◀◀] or [▶▶] button again.

Recalling a preset station

A total of 12 TV stations can be stored. This allows you to select your favorite TV stations and store them in memory for later recall.

1. Press the [▲] or [▼] button to select a preset channel.
You can now view the channel you stored in the memory.

Select a station from the list

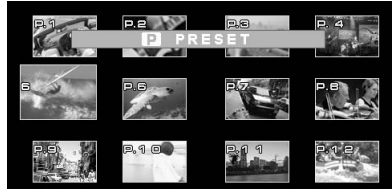
Two types of lists can be displayed. One is the preset list and the other is the channel list.

- The preset list is a list of channels already stored in the memory.
- The channel list is a list of receivable channels.

● Selecting a station from the preset list

1. Press the [P.LIST] button shown on the main screen of the TV.

Preset list screen appears.



2. Select a channel by pressing the [◀◀], [▶▶], [▲], or the [▼] button.

3. Press the [ENT] button for that channel.

● Selecting a station from the channel list

1. Press the [CH.LIST] button shown on the main screen of the TV.

A list of receivable channels appears on the channel list screen.

2. Select a station from the preset list using steps 2 and 3 above.

Notes:

- Either 8 or 12 screens can be displayed.
 - * The factory setting is "12 Stations".
- To change the number of broadcast stations displayed on the list screen, see "Set the number of multiscreens". (See page 17.)

TV Operation

Auto store function

This function automatically stores a received broadcast as a preset channel.

1. Press the [P.LIST] button for 2 second or more. The broadcast stations are automatically stored in the memory in order starting from the currently received station.
2. To cancel, press the [P.LIST] button again.

Notes:

- Poor signal conditions might cause a channel with no station to be stored in the memory.
- Some stations might not be stored if their signals are too weak.
- When a station cannot be stored or a channel without a station was stored in the memory, refer to the following on the manual memory function, and redo the settings.

Store channels in the preset memory

1. Press the [ENT] button to switch to the preset memory mode. "PRESET MEMO" is displayed on the top of the screen.
2. Press the [◀◀], [▶▶] buttons to select a TV channel you want to store as a presetting.
3. Press the [▲], [▼] buttons to select a preset channel to which the selected TV channel is stored.
4. Press and hold the [ENT] button for 2 seconds or longer to store in the memory.
The new channel currently received is stored in the memory.

Note:

- The memory is reset to initial settings if power is cut off such as when changing the battery.

To just hear audio (monitor off)

1. Press the [MONI] button.
- The screen display turns off so you can enjoy just the audio.
- Press the button once again to return to the original state (screen display).

Selecting the screen size

Five screen size are supported: normal, wide, full wide, cinema1 and cinema2.

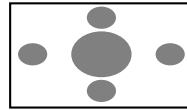
Note:

- The screen size cannot be selected while the vehicle is in motion.
1. Press the [WIDE] button to select the screen size.
Each time this button is pressed, the screen size changes in the sequence shown below.

■ To view a normal 4:3 picture

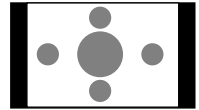
The picture might sometimes appear distorted due to the mode that was set.

• FULL WIDE mode



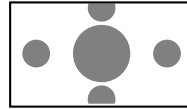
Entire picture is stretched sideways.

• NORMAL mode



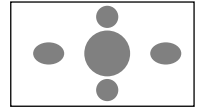
Black borders appear on the right and left.

• CINEMA1 mode



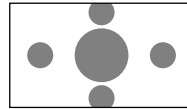
The picture is off the screen at top and bottom.

• WIDE mode



The picture at the left and right of the screen is stretched sideways.

• CINEMA2 mode



The picture is slightly off the screen at top and bottom.

Note:

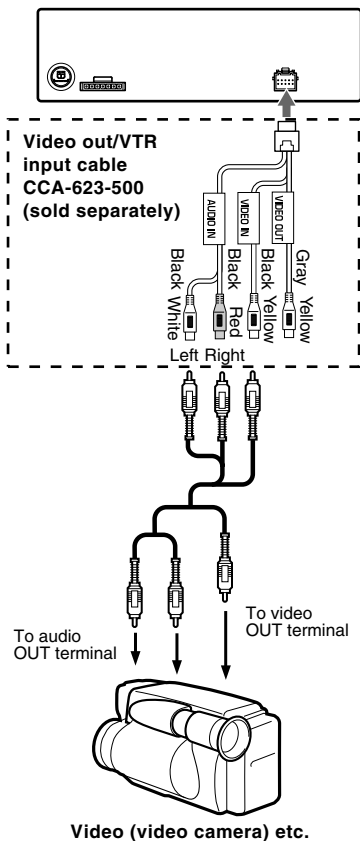
- If wide mode or full mode is used to view a 4:3 picture, it will fill the entire screen and parts of the picture will be off the screen or the picture will distort. If this happens use normal mode to view the image as originally intended.

Operating with an external device

To view video images:

● How to connect to video

Use the VTR mode to transfer output audio or images such as video.



Notes:

- Always turn off the power on this unit and the video (video camera, etc.) when connecting.
- Before connecting, always check the instruction manual of the device for connection.
- To ensure driving safety, just as with the TV images, even when the VTR is connected, video images will not appear on the display while the vehicle is moving and only the sound can be heard. The VTR images are viewable only when the vehicle parking brake is engaged.
- Video from external devices connected to VTR1 or VTR2 can be viewed on a rear monitor sold separately.

● Select the video mode

1. Press the [SRC] button to select VTR1 or VTR2. The setting shifts in the sequence shown below, each time the [SRC] button is pressed.

TV → VTR1 → VTR2 → VISUAL1 →
VISUAL2 → TV →

Notes:

- See the instruction manual for the connected device to learn how to operate the video equipment.
- Press the [SRC] button to return to TV mode.

To view other images:

● Connecting to other video

Video images from external devices can be viewed on this unit by connecting the video output terminals on the external device to the video in terminals (visual input 1 or visual input 2) on this unit.

Notes:

- Always turn off the power on this unit and the external devices when connecting.
- Before connecting, always check the instruction manual of the device for connection.
- To ensure driving safety, video images will not appear on the screen while the vehicle is moving. The VTR images are viewable only when the vehicle parking brake is engaged.
- Audio cannot be heard in VISUAL mode.

Operating with an external device

● Viewing video images

1. Press the [SRC] button to select VISUAL1 or VISUAL2.

The setting shifts in the sequence shown below, each time the [SRC] button is pressed.

TV → VTR1 → VTR2 → VISUAL1 →
VISUAL2 → TV → ...

Video from the external device connected to the video in terminal (visual input 1 or visual input 2) appears on the screen.

Notes:

- See the instruction manual of the external device to be connected to find out how to operate that external device.
- Video from external devices connected to visual input 1 or visual input 2 can be viewed on a rear monitor sold separately. To view on that rear monitor, connect the rear monitor to the VIDEO OUT (video output) terminal on this unit.

Viewing CCD camera images

Connect the CCD camera to this unit correctly

When the CCD camera is correctly connected to this unit and set, the following functions are activated.

- Automatically displays CCD camera images when the gear is set in reverse.

Note:

- Connect the reverse gear signal wire from the power supply box of the CCD camera to the positive (+) backlamp wire.
- A caution message appears during display of the camera images.

See “**Setting the caution message for use during CCD camera operation**”. (See page 18.)

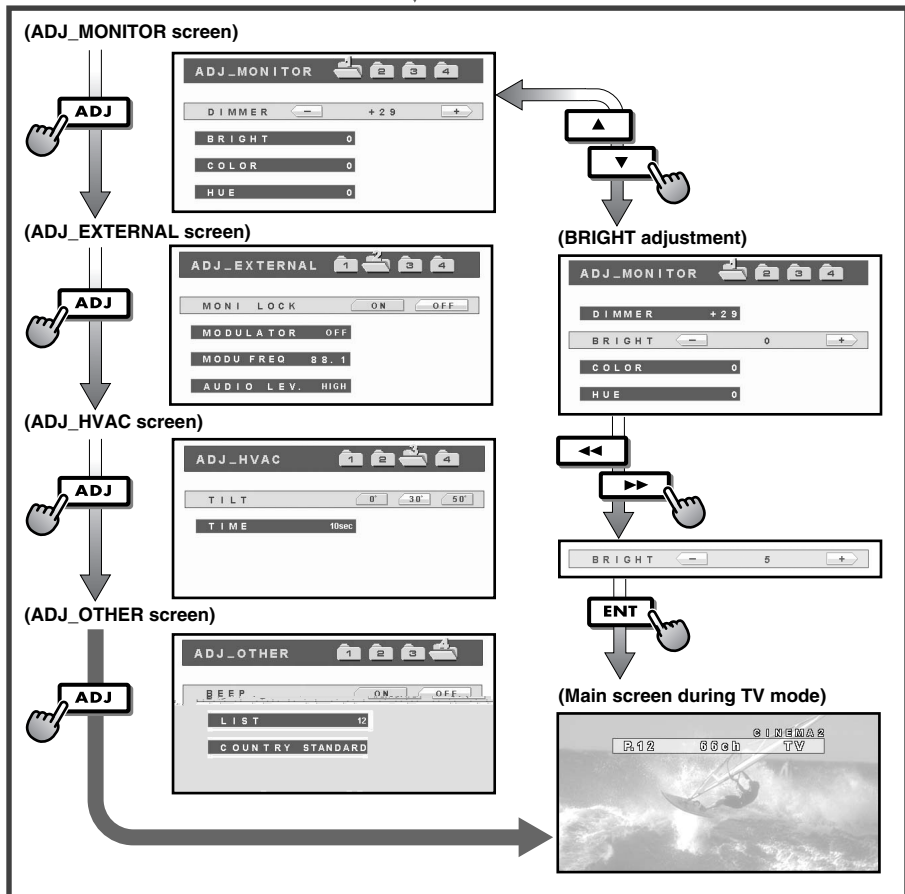
Changing the settings (ADJUST mode)

How to set

(Main screen during TV mode)



1. Press the [ADJ] button to display the ADJUST mode screen.
Each press of the [ADJ] button switches the ADJUST mode screen.
2. Press the [▲] or [▼] button to select the item to set.
3. Press the [◀] or [▶] button to select the setting value.
4. Press the [ENT] button to return to the original screen.



Note:

- The description for making settings does not include selecting the setting item or returning to the previous screen. Proceed to the next item after you fully understand this description.

Changing the settings (ADJUST mode)

Adjust the screen image quality

Screen image quality

Adjust the screen luminance, brightness, hue and color level to view video at your own preferred image quality.

- You can only make this adjustment in TV/VTR/VISUAL modes while the vehicle is stopped.
- Only the screen luminance and brightness can be adjusted in modes other than TV/VTR or when driving in TV/VTR mode.
- Only the screen luminance and brightness can be adjusted during an interrupt (break-in) by the rear camera.

● DIMMER adjustment

1. Select "DIMMER" on the ADJ_MONITOR screen.
2. Press the [◀◀] or [▶▶] button to adjust the dimmer.
 - ◀◀ : Darkens the screen
 - ▶▶ : Brightens the screen

● BRIGHT adjustment

1. Select "BRIGHT" on the ADJ_MONITOR screen.
2. Press the [◀◀] or [▶▶] button to adjust the brightness.
 - ◀◀ : Lowers the screen luminance.
 - ▶▶ : Increases the screen luminance.

● COLOR adjustment

1. Select "COLOR" on the ADJ_MONITOR screen.
2. Press the [◀◀] or [▶▶] button to adjust the color.
 - ◀◀ : Decreases the color density.
 - ▶▶ : Increases the color density.

● HUE adjustment

1. Select "HUE" on the ADJ_MONITOR screen.
2. Press the [◀◀] or [▶▶] button to adjust the hue.
 - ◀◀ : Adds green.
 - ▶▶ : Adds red.

Note:

- Can be adjusted on the NTSC system. Cannot be adjusted on PAL system.

Rear monitor lock

* The factory setting is at "OFF".

1. Select "MONILOCK" on the ADJ_EXTERNAL screen.
2. Press the [◀◀] or [▶▶] button to select ON or OFF.

Switching the FM modulator audio output (only on TB851P)

FM modulator is a system for temporarily converting audio signals on this unit to FM signals and playing them back as FM stereo on the car audio radio section.

* The factory setting is at "ON".

1. Select "MONILOCK" on the ADJ_EXTERNAL screen.
2. Press the [◀◀] or [▶▶] button to select ON or OFF.
 - ON : To use the FM modulator to output stereo sounds from car radio peaker.
 - OFF : If not using the FM modulator.

Changing the FM modulator frequency (only on TB851P)

* The factory setting is at "88.1MHz".

1. Select "MODUFREQ" on the ADJ_EXTERNAL screen.
2. Press the [◀◀] or [▶▶] button to select the FM modulator frequency.
 - Settable frequency range is 88.1 to 89.9MHz. Frequencies outside this range cannot be set.

Select the FM modulator and RCA audio output levels

* The factory setting is at "HIGH".

- In TV mode, the FM modulator output is at "HIGH", even when set to "LOW" during TV mode.
 - Not displayed during VISUAL mode.
1. Select "AUDIO LEV" on the ADJ_EXTERNAL screen.
 2. Press the [◀◀] or [▶▶] button to select the "HIGH" or "LOW".
 - **HIGH** : Outputs signal at same level as the audio from the car radio.
 - **LOW** : Lowers the output level to -6dB. (Set to LOW when audio is distorted when set at HIGH.)

Set the LCD panel angle (in airconditioning mode)

* The factory setting is at "0°".

1. Select "TILT" on the ADJ_HVAC screen.
2. Press the [◀◀] or [▶▶] button and select "0°", "30°" or "50°".

Set the LCD panel operating time (in airconditioning mode)

* The factory setting is at "10 sec".

1. Select "TILT" on the ADJ_HVAC screen.
2. Press the [◀◀] or [▶▶] button to select "5sec", "10sec" or "30sec".

Set the beep tone used for button operation

The beeping sound heard when pressing the keys is called the beep tone.

* The factory setting is at "ON".

1. Select "BEEP" on the ADJ_OTHER screen.
2. Press the [◀◀] or [▶▶] button and select "ON" or "OFF".

Set the number of multiscreens (list screen)

* The factory setting is at "12".

1. Select "LIST" on the ADJ_OTHER screen.
2. Press the [◀◀] or [▶▶] button and select "8" or "12".

Select the country (only on TB851P)

Setting the country name here, automatically sets the video standard and audio frequency band for that country.

Select the country name from:

- STANDARD
- CHINA
- NEW ZEALAND
- AUSTRALIA
- HONG KONG

1. Select "COUNTRY" on the ADJ_OTHER screen.
2. Press the [◀◀] or [▶▶] button and select the country.

Changing the settings (ADJUST mode)

Select PAL or NTSC

This setting allows you to select the video system for input to the VTR.

This can be separately set for VTR 1, VTR 2, VISUAL 1 and VISUAL 2.

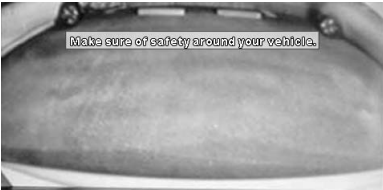
The factory setting is at "AUTO".

- This setting can be made in the VTR and VISUAL modes.
1. Select "PAL/NTSC" on the ADJ_OTHER screen.
 2. Press the [◀◀] or [▶▶] button and select "PAL", "NTSC" or "AUTO".

Setting the caution message for use during CCD camera operation

This setting can be made while the CCD camera image is displayed.

The factory setting is at "ON".



1. Select "CAUTION" on the ADJ_OTHER screen.
2. Press the [◀◀] or [▶▶] button and select "ON" or "OFF".

6. TROUBLESHOOTING

- If you think that something is wrong with your unit, check the following points before requesting servicing.

Problem	Cause	Action
No image display.	The parking brake is not set.	Check that the parking brake is set.
	Vehicle is moving.	No video is displayed on the unit while driving. Park the vehicle before playing this unit. (Set the parking brake.)
	No TV mode (function).	To watch TV, press the source button and check that the TV screen is now set.
	Monitor is at OFF.	Press the power button or another button to turn on the monitor.
Poor or blurred image.	Poor antenna receiving conditions.	Reception is blocked by mountains or buildings. Check reception again at a place where radio waves can be received properly.
Display is too dark.	The brightness control is too low.	Adjust the brightness properly.
	Poor operating conditions.	The temperature inside the vehicle might be 0°C or lower. Set to an appropriate temperature (25°C or so) and check it again.
	Vehicle headlights are on.	The display is designed to darken at night to prevent glare from headlights. Display also darkens if the headlights are used in the daytime.
Display color is weak or poor face color.	The color is not adjusted adequately.	Check that COLOR and HUE are adjusted properly.
The TV tuner has a double or triple image.	Bad receiving conditions.	Possible poor antenna reception due to mountains or buildings, etc. Check again in a different location and position.
Spots or stripes in image.	Other signals are interfering with reception.	Possible signal interference from other vehicles, power lines, streetcars, etc. Check reception later after changing your location.
No sound.	Volume is too low.	Volume level might be set at minimum. Adjust once more.

7. SPECIFICATIONS

LCD Monitor

Screen size:

7-inch wide type
(176.4 mm Width × 99.2 mm Height)

Display method:

Transmission type TN LCD

Drive method:

TFT(thin-film transistor) active matrix driving

Pixels: 336,960 (1440 × 234)

TV Tuner

Tuning system: PLL synthesizer system

Reception channels:

- TB851P

VHF: CCIR	2 to 12 ch (47 to 230 MHz)
NEW ZEALAND	1 to 11 ch (44 to 230 MHz)
AUSTRALIA	0 to 12ch (45 to 230 MHz)
CHINA	1 to 12ch (48.5 to 223 MHz)
UHF: CCIR	21 to 69 ch (470 to 862 MHz)
NEW ZEALAND	21 to 69 ch (470 to 862 MHz)
AUSTRALIA	28 to 69ch (526 to 820 MHz)
CHINA	13 to 57ch (470 to 870 MHz)
HONG KONG	21 to 69 ch (470 to 862 MHz)

- TB853W

VHF: 2 to 13 ch (54 to 216 MHz)
UHF: 14 to 69 ch (470 to 806 MHz)

Antenna input: 75 Ω unbalanced

Input/Output

Video input:

1.0 ± 0.2 Vp-p (input impedance 75 Ω)

Audio input:

130 ± 60 mVrms
(input impedance 45 kΩ or greater)

Video output:

1.0 V ± 0.2 Vp-p
(output impedance 75 Ω)

Audio output:

HIGH 230 ± 100 mV (at VTR Input 130 mV rms)
LOW 125 ± 50 mV (at VTR Input 130 mV rms)
(Load resistance 10 kΩ)

General

Power source voltage:

DC13.2 V (10.8 to 15.6 V)

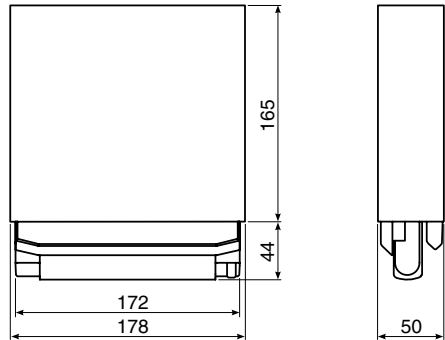
Ground: Negative

Current consumption:

Less than 2.0 A

Weight: 2.2 kg

Dimensions: 178 mm Width ×
50 mm Height ×
209 mm Depth



Remote Control Unit dimensions:

44 mm Width ×
27.2 mm Height ×
110 mm Depth

Remote Control Weight: 50 g

Note:

- Specifications and design are subject to change without notice for further improvement.

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1. BEFORE STARTING

1. This set is exclusively for use in vehicles with a negative ground 12 volt power supply.
2. Read these instructions carefully.
3. Be sure to disconnect the battery “⊖” terminal before starting. This will prevent short circuits during installation. (Figure 1)

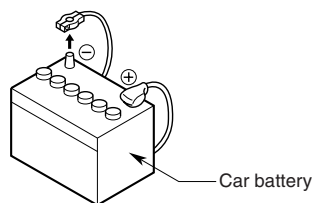


Figure 1

2. PACKAGE CONTENTS

- | | |
|--|--|
| <ol style="list-style-type: none"> ① Main unit ② Manuals
Owner's manual & Installation manual
Warranty card ③ Power supply lead wires ④ Bag for accessories (No. 1)
Flat head screw (M5 × 8) 4
Sems hexagonal bolt (M5 × 8) 5
Electro tap
Machine screw (M4 × 3) 4 | <ol style="list-style-type: none"> ⑤ Bag for accessories (No. 2)
Hook plate 2
Cord clamp
Rubber cap
Special screw ⑥ Universal mounting bracket ⑦ Remote control unit ⑧ Battery
(for remote control unit) ⑨ Outer Escutcheon |
|--|--|

3. GENERAL CAUTIONS

1. Do not open the case. There are no user serviceable parts inside. If you drop anything into the unit during installation, consult your dealer or an authorized CLARION service centre.
2. Use a soft, dry cloth to clean the case. Never use a rough cloth, thinner, benzine, or alcohol, etc. For tough dirt, apply a little cold or warm water to a soft cloth and wipe away the dirt gently.

4. CAUTIONS ON INSTALLATION

1. Prepare all articles necessary for installing the main unit before starting.
2. This model is used with the LCD panel slid forwards (shell loading system). On some types of cars, the LCD panel may touch the dashboard or shift lever, in which case it cannot be installed. Check that the set will not hamper operation of the shift lever before choosing where to install it.(Figure 2)
5. Use the enclosed screws for installation. Using other screws can cause damage. (Figure 4)

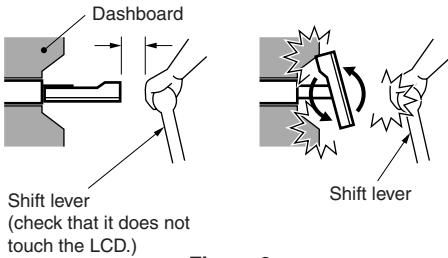


Figure 2

3. Install the unit within 30° of the horizontal plane. (Figure 3)

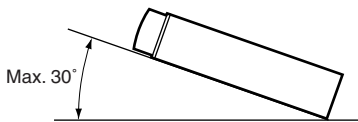


Figure 3

4. If you have to do any work on the car body, such as drilling holes, consult your car dealer beforehand.

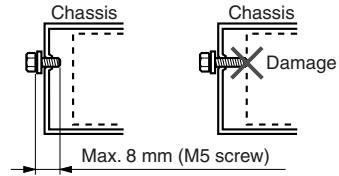


Figure 4

6. The source unit has mounting screw holes for NISSAN (N marks) and TOYOTA (T marks) vehicles.

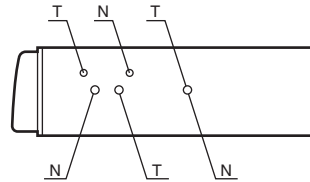


Figure 5

5. INSTALLING THE MAIN UNIT

■ Universal Mount

1. Place the universal mounting bracket into the instrument panel, use a screwdriver to bend each stopper of the universal mounting bracket inward, then secure the stopper as shown in Figure 6.
2. Wire as shown in Section 8.
3. Insert the main unit into the universal mounting bracket until it locks in place.
4. Mount the outer escutcheon so that all the hooks are locked.

Notes:

- 1) Some car models require special mounting kits for proper installation. Consult your Clarion dealer for details.
- 2) Fasten the front stopper securely to prevent the main unit from coming loose.

• Console opening dimensions

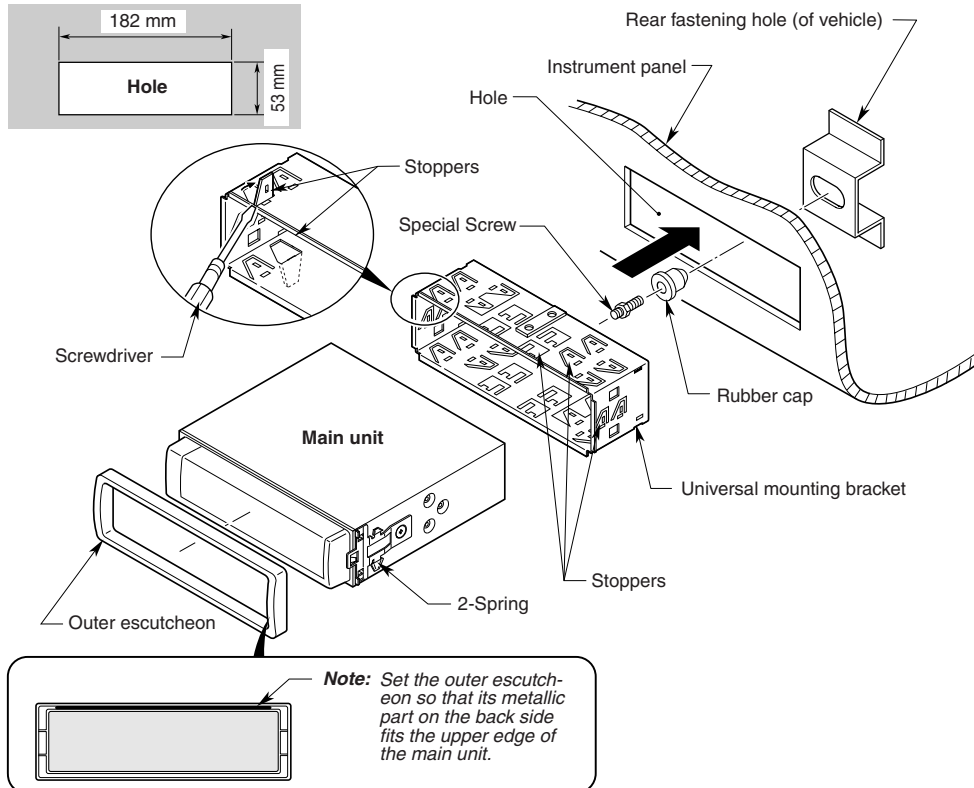
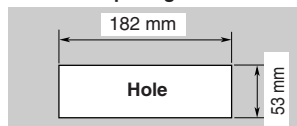


Figure 6

■ Fixed Mount (TOYOTA, NISSAN and other ISO/DIN equipped vehicles)

This unit is designed for fixed installation in the dashboard.

If the vehicle is equipped with a factory-installed radio, install the main unit with the parts and screws marked (*). (Figure 8)

If the vehicle is not equipped with a factory-installed radio, obtain an installation kit to install the main unit with the following procedure.

1. Remove the screws from both side of the main unit. Then, at either side, lift the leaf spring until the engaging claws are released from the holes, and slide the spring to the

direction of arrow to remove it. Repeat the same for the other side to remove the springs from the both sides. (Figure 7)

2. Secure the mounting brackets to the chassis as shown in Figure 8. Holes are pre-tapped
f

6. REMOVING THE MAIN UNIT

1. After the rear of the main unit has been secured by the method shown in Figure 6 unfasten the special screw.
2. Remove the outer escutcheon.
3. Insert the hook plate between the spring and the universal mounting bracket, fit tab (B) of the spring into hole (A) of the hook plate, then

pull the main unit out by the hook plate. (Insert both the right and left edges of the hook plate.) (Figure 9)

Note: Do not dispose of the hook plate. You cannot remove the main unit without disengaging the hook plate.

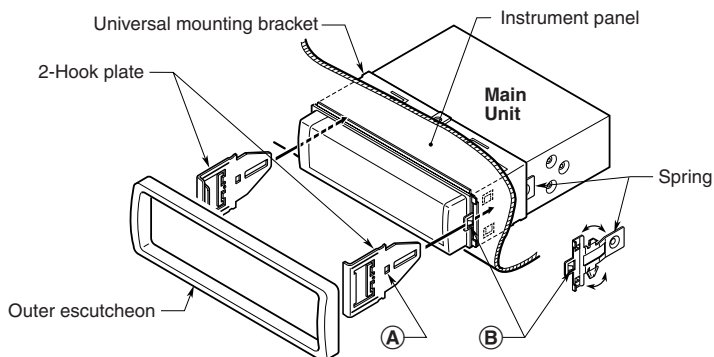


Figure 9

7. CAUTIONS ON WIRING

1. Be sure to turn the power off before wiring.
2. Be particularly careful where you route the wires.

Keep them well away from the engine, and exhaust pipe, etc. Heat may damage the wires.

3. If the fuse should blow, check to see if the wiring is correct.

If it is correct, replace the fuse with a new one with the same amperage rating as the original (15A FUSE).

4. To replace the fuse, remove the old fuse of the power supply lead and insert the new one. (Figure10)

Note: There are various types of fuse holders. Do not let the battery side touch other metal parts.

CAUTION

After connecting, secure the lead with a clamp or insulation tape for protection.

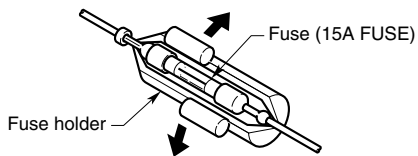
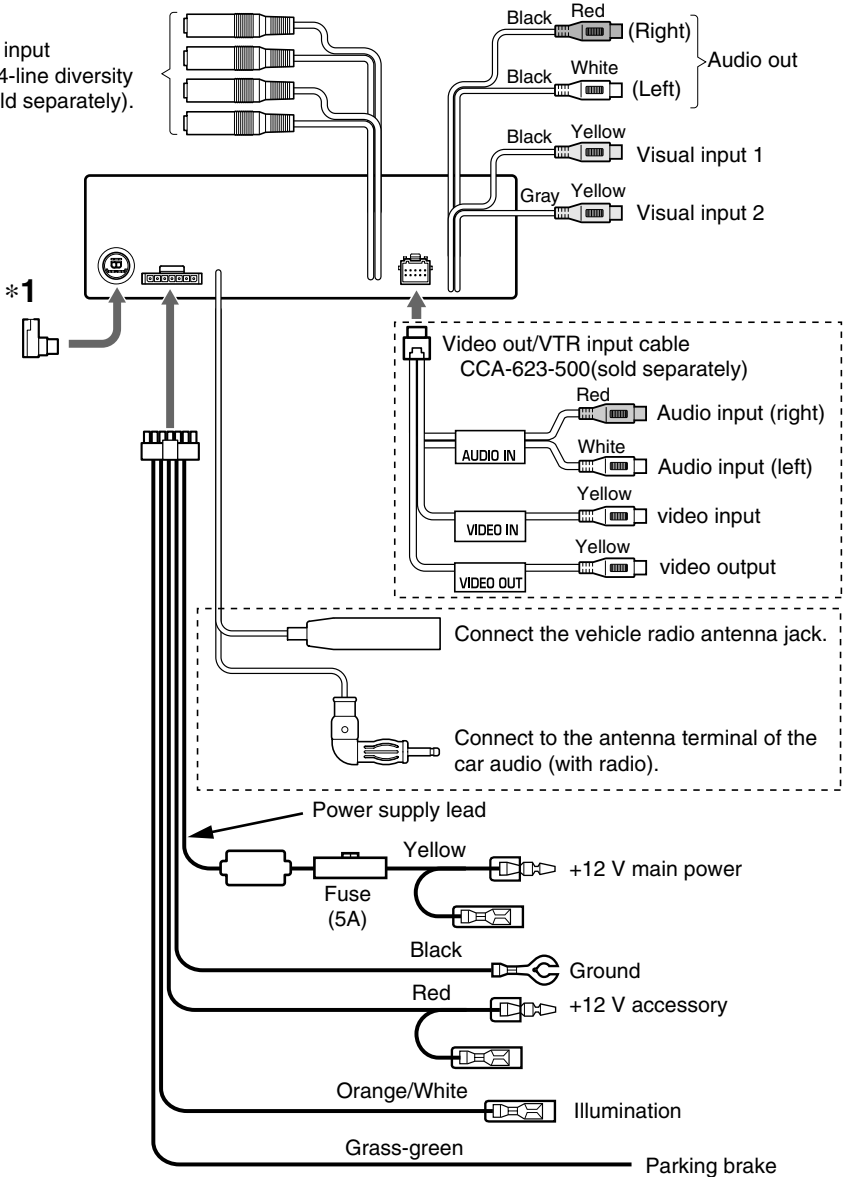


Figure 10

8. WIRE CONNECTION

TV antenna input
Connect to 4-line diversity
antenna (sold separately).



*1: Connect the CCD camera power supply box.
VTR2 is connected to this connector using CCA-389-500
(AV adapter cable 8-Pin ↔ RCA 3-Pin).

■ Connecting the Accessories

• Connection to the CCD camera for vehicle

For detailed information, refer to the instruction sheet or manual for the CCD camera.

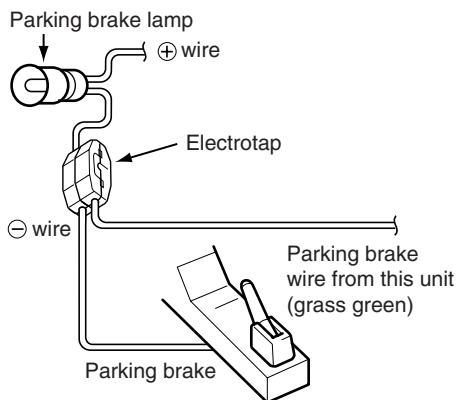
Notes:

- A power supply box (sold separately) is required for connecting the main unit and the CCD camera.
- The power supply box for camera CAA147 cannot be used. Please use the CAA188 instead.

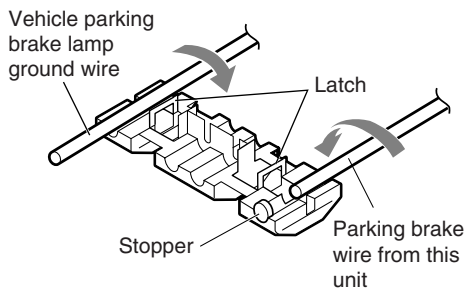
■ Connect the parking brake wire

Connect the parking brake wire (supplied with unit) to the parking brake lamp ground wire in the dashboard panel. Use the electrotap (comes supplied with this unit) when making the connection.

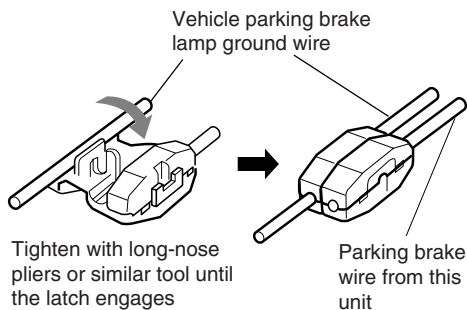
- Connecting this parking brake wire to the ground of the lamp allows you to watch video on this unit when the parking brake is on.
- No TV images will appear unless you connect this parking brake wire as shown below.



1. Press the parking brake wire (orange) from this unit against the (opened) stopper and fold the stopper towards the arrows as shown.

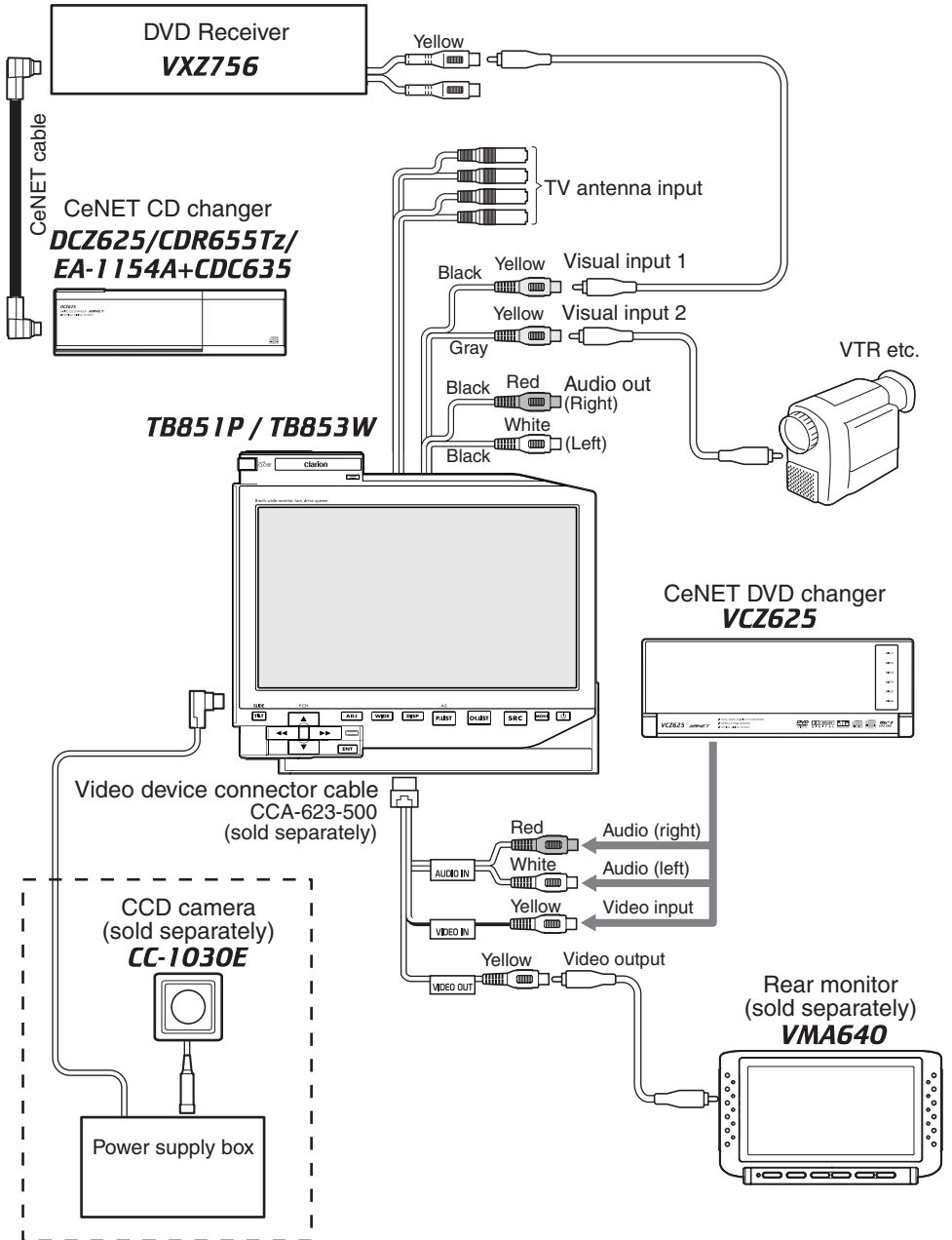


2. Lay the vehicle wire as shown and fold the stopper towards the arrows.



9. SAMPLE SYSTEMS

■ Sample System 1



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