7" WIDE LCD MONITOR
AFFICHEUR À CRISTAUX LIQUIDES (LCD) COULEUR LARGE DE 7"
PANEL LCD A COLOR PANTALLA ANCHA DE 7"

clarion®

VMA8582

Owner's manual & Installation manual
Mode d'emploi et manuel d'installation
Manual del usuario y de instlactión

Thank you for purchasing the **Clarion VMA8582.**
Nous vous remercions d'avoir acheté le **Clarion VMA8582.**
Muchas gracias por la adquisición del **VMA8582 Clarion.**

clarion® Co., Ltd.

English

Owner's Manual

Français

Mode d'emploi

Español

Manual de instrucciones

English

* Please read this Owner's manual & Installation manual in its entirety before proceeding with wire connection and installation.

* After reading this manual, be sure to keep it in a handy place (e.g., glove compartment).

  If you sell the motor vehicle, please leave the manual in it so that the new owner can use it.

* Read the contents of the enclosed warranty card and keep it with this manual.

Français

* Veuillez lire entièrement le mode d'emploi et le manuel d'installation avant de procéder aux connexions et à l'installation.

* Après avoir lu ce mode d'emploi, prenez soin de le conserver dans un endroit pratique (par ex: la boîte à gants).

  Si vous vendez votre véhicule à moteur, laissez-y le manuel de façon que le nouveau propriétaire puisse l'utiliser.

* Lisez le contenu de la carte de garantie comprise et conservez-la avec ce manuel.

Español

* Antes de pasar a la conexión de los cables y a la instalación, lea detenidamente este manual del usuario y de instalación.

* Después de haber leído este manual, guárdelo a mano (p. ej., en la guantera).

  Cuando venda su automóvil, deje en él el manual de instrucciones a fin de que pueda utilizarlo el nuevo usuario.

* Lea el contenido de la tarjeta de garantía adjunta, y guárdela con este manual.

Français

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1. PRECAUTIONS

1. This set is for use in DC 12V, negative ground vehicles. Be sure to consult your store of purchase or a Clarion-designated service outlet before installing it on DC 24V cars.

2. Do not operate the set in ways other than described in this guide. Doing so may damage it.

3. **Safety first! For rear seat use only. Do not install on dashboard or anywhere else that would permit monitor to be viewed by the driver.** Monitor must not be located in the motor vehicle at any point forward of the back of the front seats. Monitor must never be used in any manner that will distract driver or interfere with driver's safe operation of the motor vehicle.

4. Be careful not to run down the car battery while using the set with the car stopped.

5. For safety, install the set in a position at which it cannot be seen by the driver.

6. Do not disassemble or modify the set. Doing so may damage it.

7. Keep drinks and drops from umbrellas away from the set. Water may damage the internal circuitry.

8. Do not let lit cigarettes or other hot objects touch the set. Doing so may damage or deform the cabinet.

9. Do not let the set become hot. If the temperature in the car is high or if the set has been exposed to direct sunlight and is hot, lower the temperature before using it.
(The LCD panel will work properly within a temperature range of 0 to 40 ˚C.)

10. In extremely cold temperatures, the movement of the picture may be slow and the picture may be dark, but this is not a malfunction. The set will work normally once the temperature increases.

11. Small black and shiny dots inside the liquid crystal panel are normal for liquid crystal products.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to consult the dealer or an experienced radio/TV technician for help.
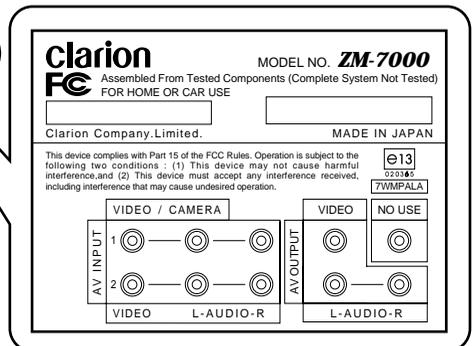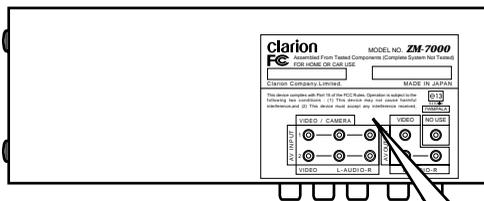
⚠ CAUTION

USE OF CONTROLS, ADJUSTMENTS, OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN, MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
THE COLOR LCD MONITOR SHOULD NOT BE ADJUSTED OR REPAIRED BY ANYONE EXCEPT PROPERLY QUALIFIED SERVICE PERSONNEL.

INFORMATION FOR USERS:

CHANGES OR MODIFICATIONS TO THIS PRODUCT NOT APPROVED BY THE MANUFACTURER WILL VOID THE WARRANTY AND WILL VIOLATE FCC APPROVAL.

⚠ WARNING

MONITOR AND TUNER MUST BE INSTALLED AND USED ONLY IN ACCORDANCE WITH THESE INSTRUCTIONS. FAILURE TO DO SO MAY CAUSE DAMAGE TO THE VEHICLE OR THE MONITOR, MAY RESULT IN AN ACCIDENT, AND MAY VIOLATE THE LAW. CLARION DISCLAIMS ANY LIABILITY FOR ANY DAMAGES THAT MAY RESULT FROM A FAILURE TO INSTALL AND USE THIS UNIT AS STATED IN THESE INSTRUCTIONS.

2. FEATURE

● **7" wide-screen color LCD panel**
The 7" TFT active matrix color LCD panel delivers striking images.

● **Bright, clear screen**
The color LCD panel has 336,960 pixels for superior image resolution.

● **Switchable screen size**
The display can be switched between four screen sizes: normal, full-wide, wide and cinema.

● **Video input terminal**
The display can be used to enjoy video images even if no TV tuner is connected.

● **Built-in auto dimmer**
Automatically adjusts the screen brightness according to the ambient brightness.

● **Expansion AV output terminal**
Enables the installation of another monitor in the rear seat.

3. CAUTION ON HANDLING

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

• Don't allow any liquids on the set from drinks, umbrellas etc. 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 hold on the LCD panel when adjusting the angle of the LCD panel. Doing so may damage it.

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 benzine, thinner, car cleaner, etc., as these substances may damage the cabinet or cause the paint to peel. Also, leaving rubber of plastic products in contact with the cabinet for long periods of time may cause stains.
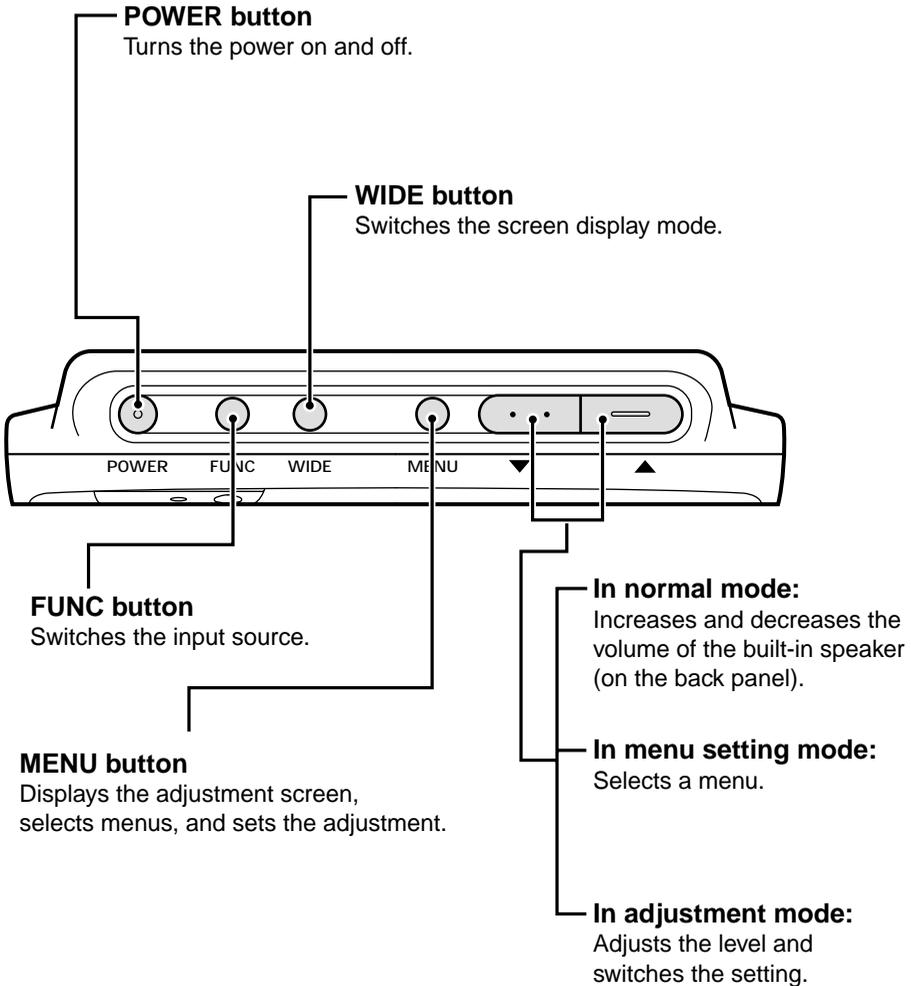
• **Cleaning the LCD panel**

The LCD panel tends to collect dust, so wipe it off occasionally with a soft and dry cloth.

The surface is easily scratched, so do not rub it with hard objects.

4. Names of the Parts and their Functions

Display Unit

POWER button
Turns the power on and off.

WIDE button
Switches the screen display mode.

POWER   FUNC   WIDE   MENU   ▼   ▲

FUNC button
Switches the input source.

MENU button
Displays the adjustment screen,
selects menus, and sets the adjustment.

In normal mode:
Increases and decreases the
volume of the built-in speaker
(on the back panel).

In menu setting mode:
Selects a menu.

In adjustment mode:
Adjusts the level and
switches the setting.

FUNC button

Switches the input source.
Each time this button is pressed, the video mode changes in the following sequence.
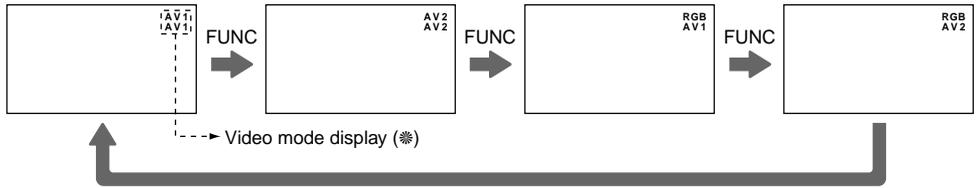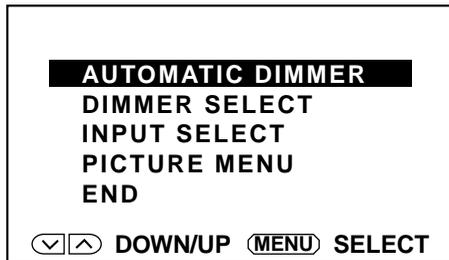

---- ▶ Video mode display (※)

Note:

● The on screen display disappears after 3 seconds.
※ Upper part of the video mode display (pink color): Input source appearing on the screen of this monitor.
※ Lower part of the video mode display (yellow color): Input source outputting to the expansion AV output terminal (second monitor).
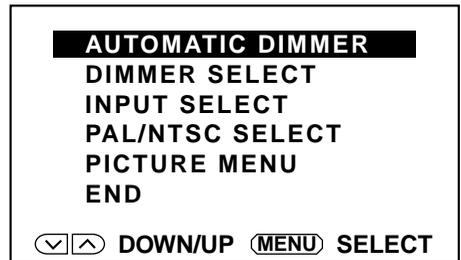
MENU button

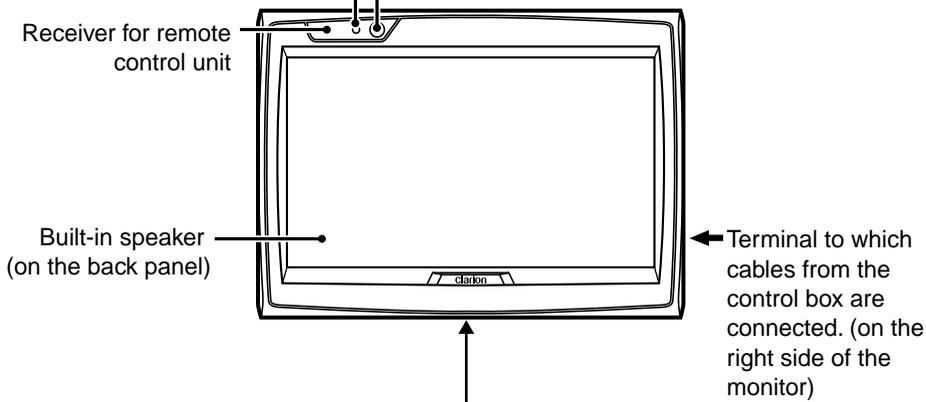Displays the adjustment screen, selects menus, and sets the adjustment.

<In $^{RGB}_{AV1}$ and $^{RGB}_{AV2}$ mode>

AUTOMATIC DIMMER
DIMMER SELECT
INPUT SELECT
PICTURE MENU
END
⌄ ⌃ **DOWN/UP** (MENU) **SELECT**

<In $^{AV1}_{AV1}$ and $^{AV2}_{AV2}$ mode>

AUTOMATIC DIMMER
DIMMER SELECT
INPUT SELECT
PAL/NTSC SELECT
PICTURE MENU
END
⌄ ⌃ **DOWN/UP** (MENU) **SELECT**

※ In menu setting mode: Selects a menu and sets an adjustment.

STAND BY (R), ON(G)
When the power is
turned off..........red color
When the power is
turned on..........green color

Dimmer sensor
When AUTOMATIC DIMMER is selected in
dimmer setting, the brightness of the screen is
adjusted automatically according to the
ambient brightness.

Receiver for remote
control unit

Built-in speaker
(on the back panel)

Terminal to which
cables from the
control box are
connected. (on the
right side of the
monitor)

The screw hole is provided to install a TV stand at the bottom of this monitor.
(1/4 inch unified screw thread, 4.5 mm of maximum length)

CAUTION

Precautions on handling of the LCD panel

• Do not leave the monitor on the dashboard with the LCD panel facing upwards. (Range of storage temperature: -20˚C to +80˚C)
When the temperature is high or low, chemical changes occur in the LCD panel, resulting in damage to the monitor.

• Since the LCD panel has been specially processed, the fingerprints will remain on the panel and stand out if you touch the panel. Avoid touching the panel as much as possible. Also avoid pushing the panel.

• When temperature becomes low, the picture does not appear or sometimes it takes time to appear. On occasion, the picture motion seems to be different from that at normal temperature and the picture quality deteriorates. These phenomena are not a malfunction. (Range of operating temperature: 0˚C to +40˚C)

• On the panel red dots, blue dots and green dots are found. This is peculiar to the LCD panel and it is not a malfunction.
[The LCD panel has been designed and manufactured using a highly developed precision technology and has a 99.99 % or more effective pixels. However, note that 0.01 % of pixels are defective and always light.]
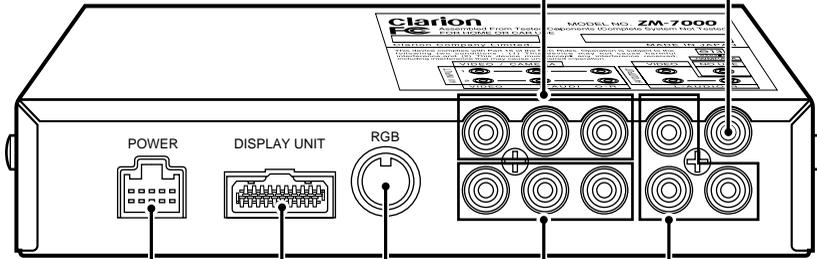
Control Box

Note:
The characters other than "POWER", "DISPLAY
UNIT" and "RGB" are not marked on the control
box. They are printed on the label located on the
top of the unit.

AV INPUT (AV1) terminal
This is used to connect a car video player,
video camera or rear view camera, etc.

This terminal is not used currently.

POWER   DISPLAY UNIT   RGB

Expansion AV output terminal
This is used to connect a
second monitor.

AV INPUT (AV2) terminal
This is used to connect a TV tuner, car video
player or video camera, etc.

Expansion terminal (RGB)

Display unit connector (DISPLAY UNIT)
This is used to connect a display unit.

Power connector (POWER)
This is used to connect the power source cord.

5. OPERATION

Adjusting the volume

Adjusting the volume of the built-in speaker

POWER   FUNC   WIDE   MENU   ▼   ▲

Decreases the volume.   Increases the volume.

SPEAKER VOLUME
30 ||||||||----------------------------
                                    Screen display

Sound volume (0 to 60 level)
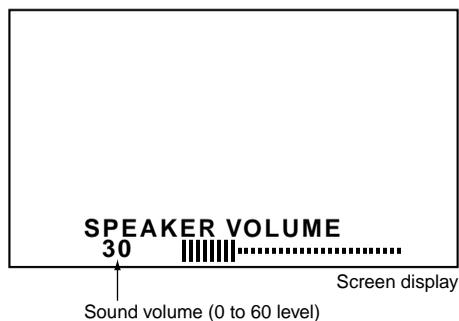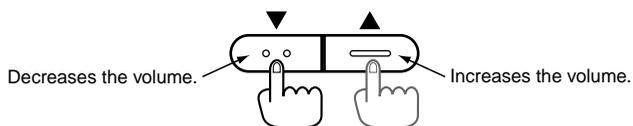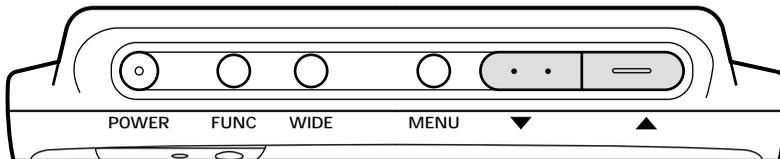
Selection of the screen mode (size)

The following screen display modes are supported: normal, full wide, wide and cinema.

Notes:
• Various screen display modes are available on this monitor.
  If you select the screen display mode which is different from the image ratio of software, such as a TV program, it differs in appearance from the original image. Please keep this in mind and select the appropriate screen display mode.

• If you reduce or enlarge an image using the screen display mode switching function (full wide, cinema, etc.) of this monitor with profit in mind or for any purpose of making the public watch it or listen to it, it may infringe the rights of the author who is protected under the copyright law.

Selecting a screen display mode
Pressing the WIDE button switches the screen display mode as follows: NORMAL→F•WIDE→WIDE-→CINEMA→NORMAL→
❈ The screen display mode can be set for each video source.
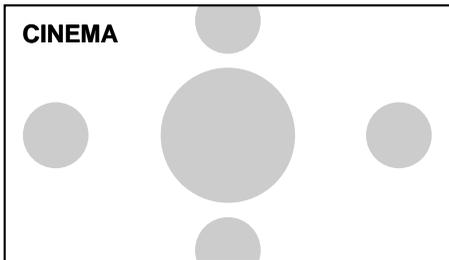
●**Normal mode**
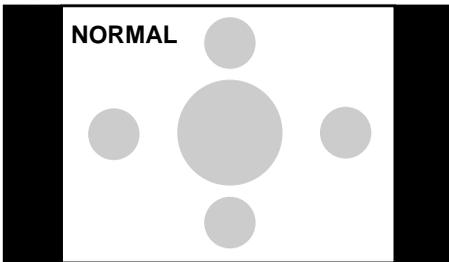
NORMAL

Picture of a normal TV program (4:3)

●**Full wide mode**

F·WIDE
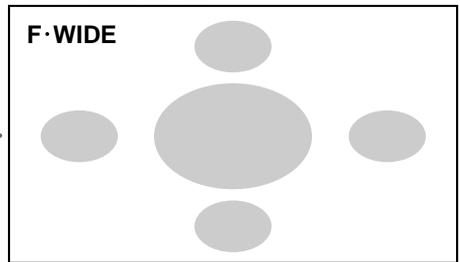
This mode enlarges a picture only horizontally and fully to the screen edges in a balanced manner.

●**Cinema mode**

CINEMA

This mode enlarges a normal picture in all, and allows you to enjoy the picture in a larger size.
However, the upper and lower parts of the picture, or the right and left parts of the picture will be missed.
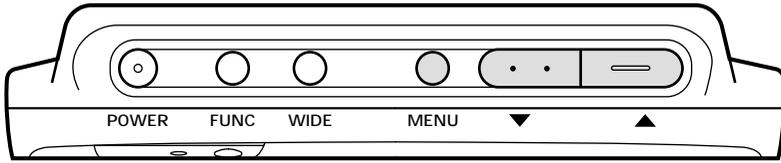
●**Wide mode**

WIDE
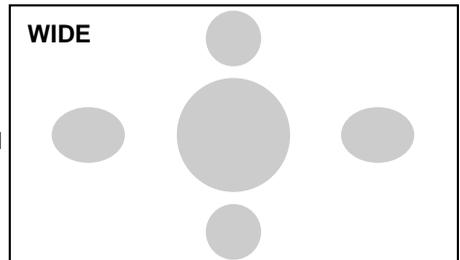
This mode enlarges a normal picture only horizontally and fully to the screen edges.
(This enlarges the picture in a small area in the center, and in a large area in the proximity of the right and left side of the screen. This enlarges the picture in a natural manner with a lesser feeling of being out of harmony.)
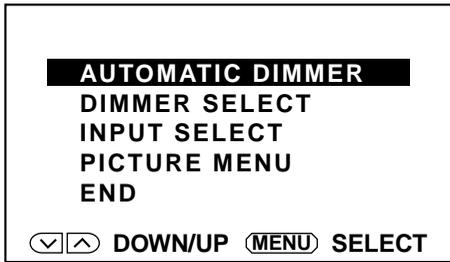
Dimmer

In case of auto mode
The factory default setting is auto mode.
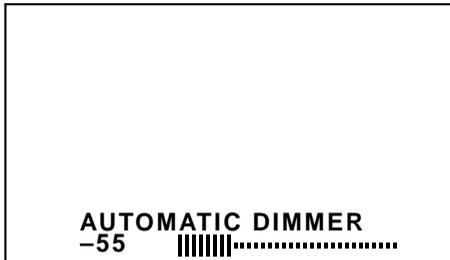This mode adjusts the screen brightness automatically according to the ambient brightness.

| POWER | FUNC | WIDE | MENU | ▼ | ▲ |

1. Press the MENU button.
   Confirm that "AUTOMATIC DIMMER" is se-
   lected.

   AUTOMATIC DIMMER
   DIMMER SELECT
   INPUT SELECT
   PICTURE MENU
   END

   ⌄ ⌃ **DOWN/UP** (MENU) **SELECT**

   MENU

2. Press the MENU button again.
   The auto dimmer (dark level) display appears.

   AUTOMATIC DIMMER
   −55 ‖‖‖‖‖‖·················

   MENU

3. Adjust the screen brightness using the ▼ and
   ▲ buttons so that you can see the screen with
   great ease at night time. (-60 to ±0)

   AUTOMATIC DIMMER
   −55 ‖‖‖‖‖‖·················
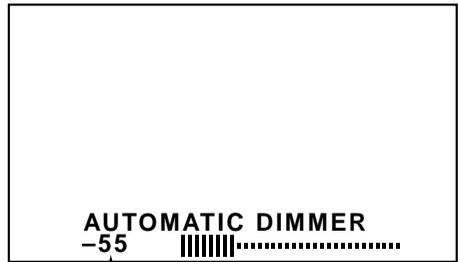
   If you set the AUTOMATIC DIMMER level to ± 0,
   the screen brightness does not change.

   Notes:
   • When the menu screen is displayed and "END"
     is selected in step 1 or a further operation is
     not performed for 10 seconds, the menu dis-
     play disappears automatically.
   • If you adjust the screen brightness so that the
     screen can be seen with great ease at night-
     time, the screen brightness will be adjusted
     automatically from the maximum luminance to
     the minimum luminance (the brightness at
     which the screen can be seen with great ease
     at nighttime).
     (It is recommended to set the AUTOMATIC
     DIMMER level at -40 to -60.)
   • If you set the AUTOMATIC DIMMER level to
     ±0, the screen brightness level will be fixed to
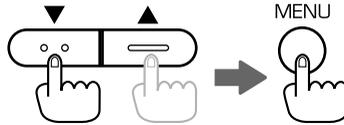   the maximum luminance and the screen bright-
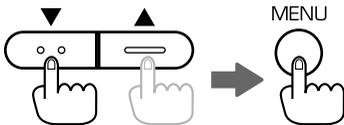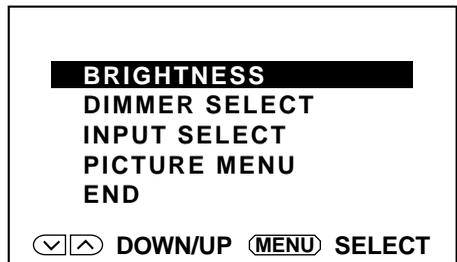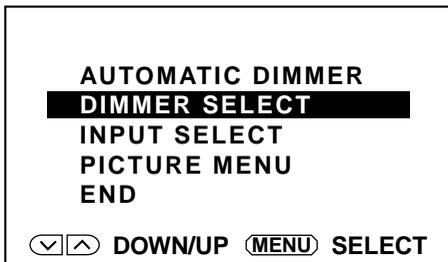   ness will not change.

In case of manual mode
The screen brightness can be adjusted manually.
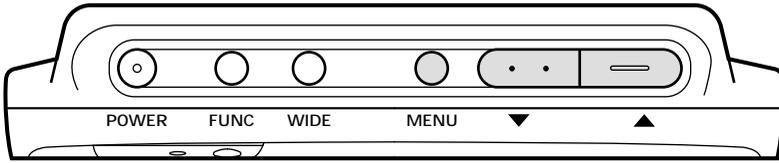
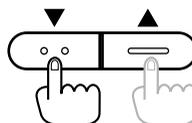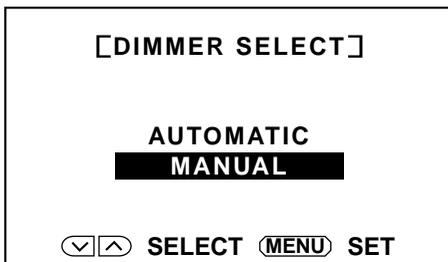1. Press the MENU button.
   Select "DIMMER SELECT" using the ▼ and ▲ buttons.
   Press the MENU button to execute the setting.

```
   AUTOMATIC DIMMER
   DIMMER SELECT
   INPUT SELECT
   PICTURE MENU
   END

   ⌄ ⌃  DOWN/UP  MENU  SELECT
```


2. Select "MANUAL" using the ▼ and ▲ buttons.
   Press the MENU button to execute the setting.

```
      ［DIMMER SELECT］


        AUTOMATIC
        MANUAL

   ⌄ ⌃  SELECT  MENU  SET
```

3. Select "BRIGHTNESS" using the ▼ and ▼ buttons.
   Press the MENU button to execute the setting.

```
   BRIGHTNESS
   DIMMER SELECT
   INPUT SELECT
   PICTURE MENU
   END

   ⌄ ⌃  DOWN/UP  MENU  SELECT
```


4. Adjust the screen brightness to the desired level using the ▼ and ▲ buttons. (-60 to ±0)

```



   BRIGHTNESS
   −10  ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖·········
```

Dimmer

When switching the dimmer mode from manual mode to auto mode

POWER　　FUNC　　WIDE　　　MENU　　▼　　　　▲

1. Press the MENU button.
   Select "DIMMER SELECT" using the ▼ and
   ▲ buttons.
   Press the MENU button to execute the set-
   ting.

2. Select "AUTOMATIC" using the ▼ and ▲ but-
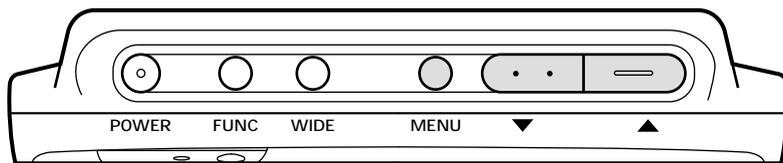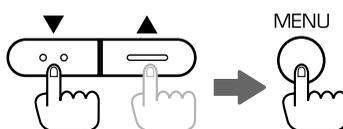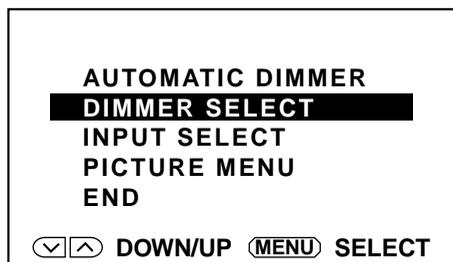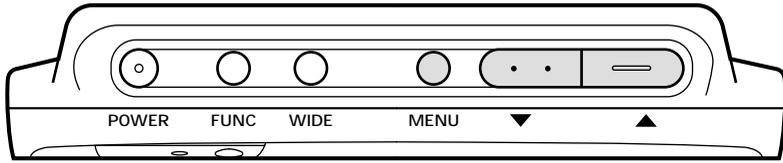   tons.
   Press the MENU button to execute the set-
   ting. Refer to the section "In case of auto
   mode".

AUTOMATIC DIMMER
DIMMER SELECT
INPUT SELECT
PICTURE MENU
END

▽△ **DOWN/UP** MENU **SELECT**

〔**DIMMER SELECT**〕

AUTOMATIC
MANUAL

▽△ **SELECT** MENU **SET**
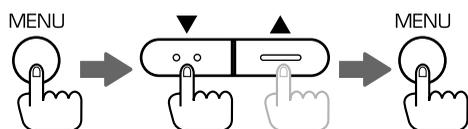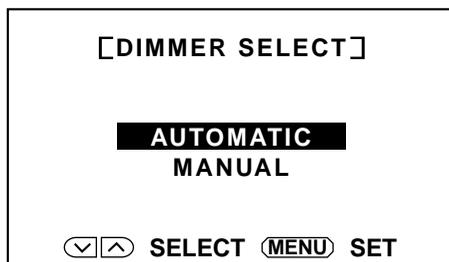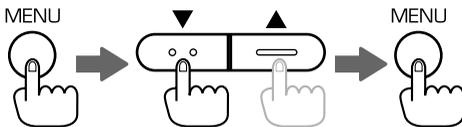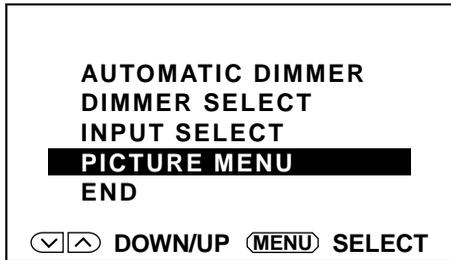
Picture Adjustment

Note:
The picture adjustments such as "black level", "contrast", "color" and "tint" are available on this monitor. The adjustable items differ depending on the video modes. (Refer to page 17)


Example: Adjusting the black level

1. Press the MENU button.
   Select "PICTURE MENU" using the ▼ and ▲ buttons.
   Press the MENU button to execute the setting.

```
AUTOMATIC DIMMER
DIMMER SELECT
INPUT SELECT
PICTURE MENU
END
⌄ ⌃ DOWN/UP  MENU  SELECT
```


2. Select "BLACK LEVEL" using the ▼ and ▲ buttons.
   Press the MENU button to execute the setting.

```
BLACK LEVEL
CONTRAST
END
⌄ ⌃ DOWN/UP  MENU  SELECT
```


3. Adjust the black level using the ▼ and ▲ buttons.

```
BLACK LEVEL
+15  ▪▪▪▪▪▪▪▪▪▪▪▪▪|▪▪▪▪▪|▪▪▪▪▪▪
```
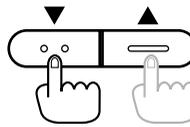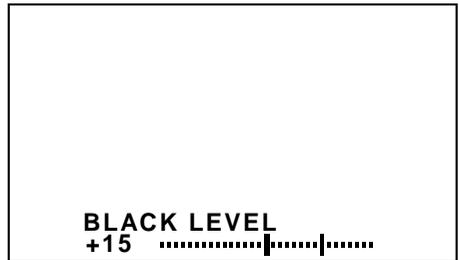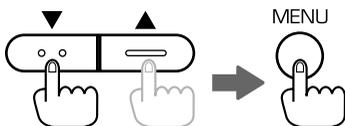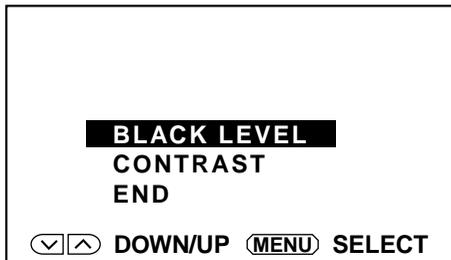

Notes:
• In the RGB screen, the "BLACK" and "CONTRAST" items are only displayed.
• If a further operation is not performed for 10 seconds, the menu display disappears automatically.
• The adjustment procedure for contrast, color and tint is the same as that for the black level.

VMA8582(U) **15**

Selecting picture adjustment items
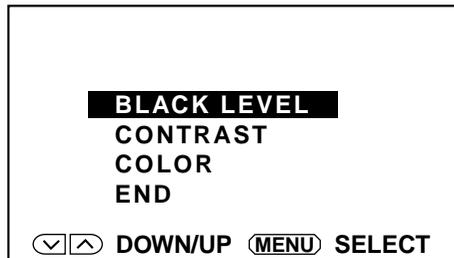
The picture adjustments available on the monitor differ depending on each video mode. Press the FUNC button to select the video mode.

<In $^{RGB}_{AV1}$ and $^{RGB}_{AV2}$ mode>

BLACK LEVEL
CONTRAST
END

⏷⏶ **DOWN/UP** (MENU) **SELECT**
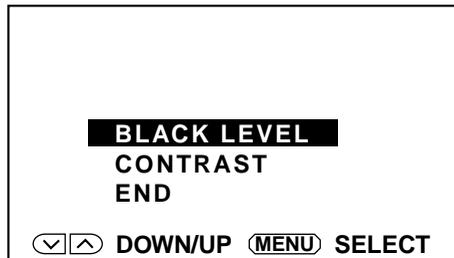
The "black level" and "contrast" adjustments are possible.

<In $^{AV1}_{AV1}$ and $^{AV2}_{AV2}$ mode>

BLACK LEVEL
CONTRAST
COLOR
END

⏷⏶ **DOWN/UP** (MENU) **SELECT**

<PAL mode>

The "black level", "contrast" and "color" adjustments are possible.

<In $^{AV1}_{AV1}$ and $^{AV2}_{AV2}$ mode>

BLACK LEVEL
CONTRAST
COLOR
TINT
END

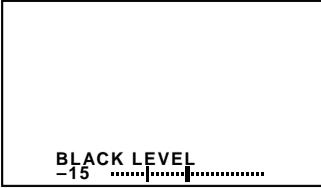⏷⏶ **DOWN/UP** (MENU) **SELECT**

<NTSC mode>

The "black level", "contrast", "color" and "tint" adjustments are possible.
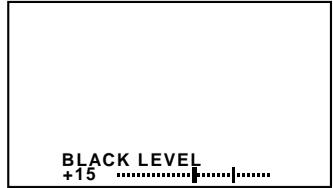
Note:
The selection between "PAL mode" and "NTSC mode" is performed by the "PAL/NTSC SELECT" setting. (Refer to page 18.)

Points of adjustment (The picture adjustment can be performed in each screen.)
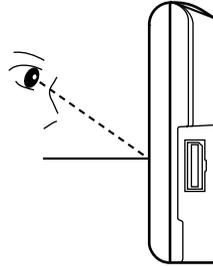
```
BLACK LEVEL
-15
```

BLACK LEVEL

This adjustment is performed to allow the dark portion of the screen to be seen with ease (picture in the night and hair, etc.)
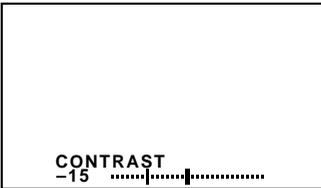
```
BLACK LEVEL
+15
```

❊ In connection to the installation location of the display unit and the eye level, when the light and darkness of the screen is reversed or the screen becomes whitish, adjust the black level.
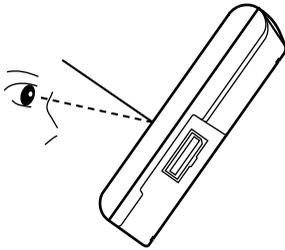
Set the black level to the "–" side.   Set the black level to the "+" side.

```
CONTRAST
-15
```

CONTRAST

Normally set this adjustment to the center. In order to exhibit the difference between the lightest and the darkest portion of the screen, set the contrast to the "+" side.

```
CONTRAST
+15
```

```
COLOR
-15
```
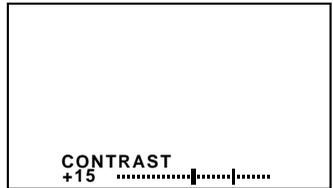
COLOR

Set the color to the slightly dark color.

```
COLOR
+15
```

The color becomes paler.   The color becomes darker.

```
TINT
-15
```
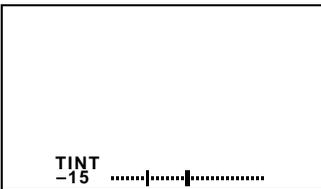
TINT

Set the color so that the flesh color appears refined.
Note:
Only in PAL mode

```
TINT
+15
```

The flesh color becomes red-purplish.   The flesh color becomes greenish.

VMA8582(U)   **17**

Television Broadcast System: PAL/NTSC Setting

When a car video player, video camera or TV tuner is connected to the AV INPUT terminal (AV1 or AV2) of the control box to input video signal, you can select the broadcast system (PAL/NTSC).
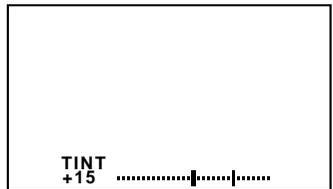
Note:
Since the factory default setting is "NTSC", use the following procedure to set the broadcast system to PAL.

POWER   FUNC   WIDE   MENU   ▼   ▲
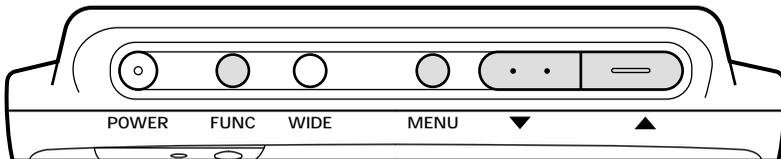
1. Press the FUNC button to switch the video mode to $_{AV1}^{AV1}$ and $_{AV2}^{AV2}$.
Press the MENU button.
Select "PAL/NTSC SELECT" using the ▼ and ▼ buttons.
Press the MENU button to execute the setting.

2. Select "PAL" or "NTSC" using the ▼ and ▲ buttons.
Press the MENU button to execute the setting.

AUTOMATIC DIMMER
DIMMER SELECT
INPUT SELECT
PAL/NTSC SELECT
PICTURE MENU
END

⌄ ⌃ **DOWN/UP** (MENU) **SELECT**

FUNC   MENU   ▼   ▲   MENU

〔PAL/NTSC SELECT〕

PAL
NTSC

⌄ ⌃ **SELECT** (MENU) **SET**

▼   ▲   MENU
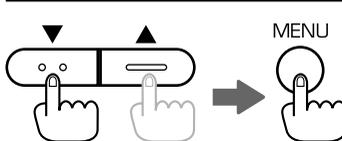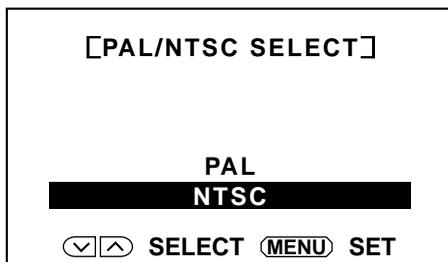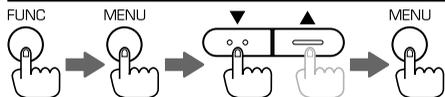
6. CONNECTION OF EXTERNAL EQUIPMENT

Connection Example

Note:
The characters other than "POWER", "DISPLAY UNIT" and "RGB" are not marked on the control box. They are printed on the label located on the top of the unit.

Rear view camera (back-eye camera), car video player or video camera

Second monitor

Video

Expansion AV output

clarion MODEL NO. ZM-7000

POWER   DISPLAY UNIT   RGB

TV tuner, car video player or video camera
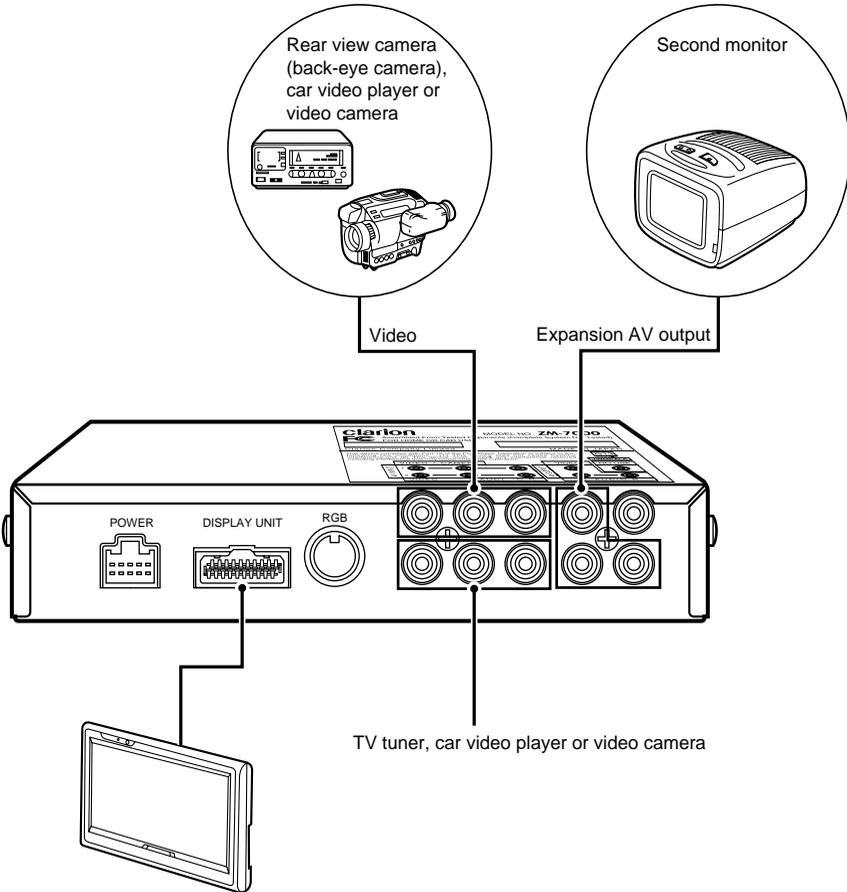
Notes:
- For the connection method, refer to page 29 of the "Installation / Wire Connection Manual".
- When a video camera monitor is connected to the control box and a howling noise is heard, one of the following countermeasures should be taken.
  ❊ Lower the volume of this unit.
  ❊ Use earphones (if the earphones terminal is provided with the camera).
  ❊ Put the camera microphone away from this unit.

Setting Example

The "INPUT SELECT" item must be set depending on external equipment connected to the RGB terminal or the AV INPUT terminal (AV1 or AV2) of the control box.

POWER   FUNC   WIDE   MENU   ▼   ▲

1. Press the MENU button.
   Select "INPUT SELECT" using the ▼ and ▲ buttons.
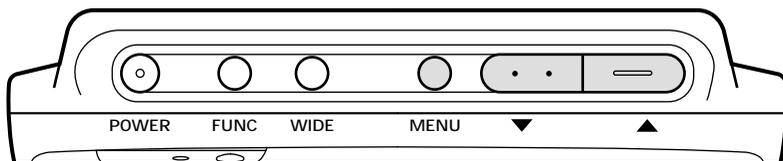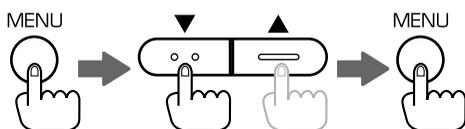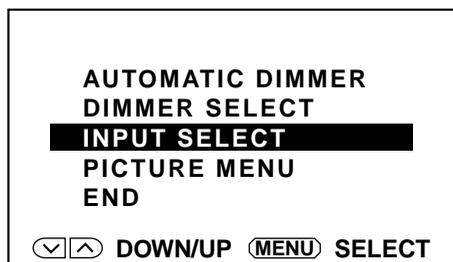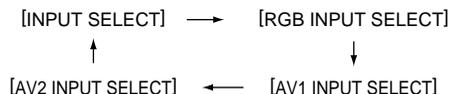   Press the MENU button to execute the setting.

```
    AUTOMATIC DIMMER
    DIMMER SELECT
    INPUT SELECT
    PICTURE MENU
    END
  ⌄ ⌃  DOWN/UP  (MENU) SELECT
```

MENU   ▼   ▲   MENU

Note:
Each time the MENU button is pressed, the menu screen for setting "INPUT SELECT" changes as follows:

[INPUT SELECT] ⟶ [RGB INPUT SELECT]

[AV2 INPUT SELECT] ⟵ [AV1 INPUT SELECT]

[RGB INPUT SELECT]
2. Select "NAVIGATION" or "OTHER" using the ▼ and ▲ buttons.
   Press the MENU button to execute the setting.

[When a car navigation system is connected]

```
   [RGB INPUT SELECT]
      NAVIGATION
        OTHER


  ⌄ ⌃  SELECT  (MENU) SET
```
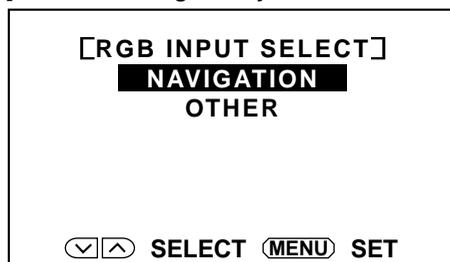
[When any equipment other than a car navigation system is connected]

```
   [RGB INPUT SELECT]
      NAVIGATION
        OTHER


  ⌄ ⌃  SELECT  (MENU) SET
```

Note:
• The factory default setting is "NAVIGATION". When you want to use the car navigation system, use this factory default setting.
  If you set the RGB INPUT SELECT item to OTHER, the car navigation system does not work properly.

[AV1 INPUT SELECT]

3. Select "VIDEO" or "CAMERA" using the ▼ and ▲ buttons.
   Press the MENU button to execute the setting.

[When a rear view camera (back-eye camera) is connected]

```
〔AV1 INPUT SELECT〕



        VIDEO
        CAMERA

⌄ ⌃ DOWN/UP MENU  SET
```

[When a car video player or video camera is connected or when no equipment is connected]

```
〔AV1 INPUT SELECT〕



        VIDEO
        CAMERA

⌄ ⌃ DOWN/UP MENU  SET
```

Notes:
- The rear view camera (back-eye camera) must be connected to the AV INPUT terminal (AV1 only) of the control box.
- When the gear of the car is shifted to the "back" position, the monitor shows the image of the rear view camera (back-eye camera).
- If "CAMERA" is selected for the AV1 INPUT SELECT item, the monitor always shows the image of the rear view camera (back-eye camera).
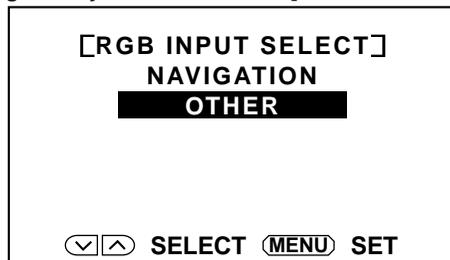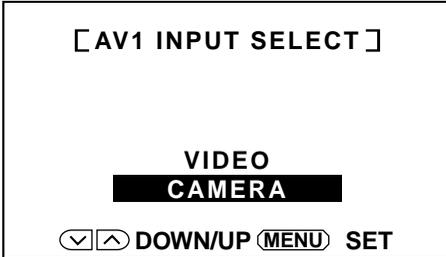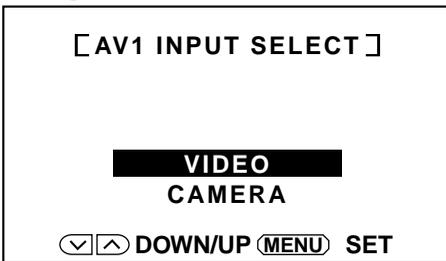
[AV2 INPUT SELECT]

4. Select "VIDEO" or "TV TUNER" using the ▼ and ▲ buttons.
   Press the MENU button to execute the setting.

[When a TV tuner is connected]
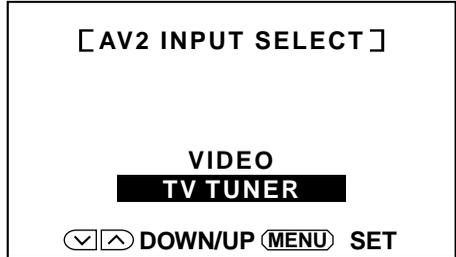
```
〔AV2 INPUT SELECT〕



        VIDEO
        TV TUNER

⌄ ⌃ DOWN/UP MENU  SET
```

[When a car video player or video camera is connected or when no equipment is connected]

```
〔AV2 INPUT SELECT〕



        VIDEO
        TV TUNER

⌄ ⌃ DOWN/UP MENU  SET
```
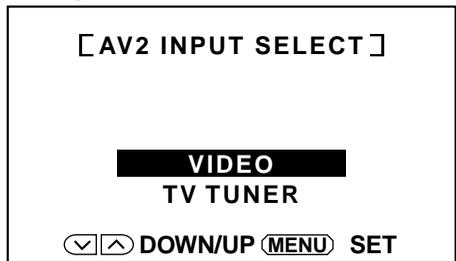
Notes:
- The TV tuner must be connected to the AV INPUT terminal (AV2 only) of the control box.
- If "TV TUNER" is selected for the AV2 INPUT SELECT item, the video system is fixed to NTSC.

Troubleshooting

Please recheck the following points.

| Symptom	Remedy	Reference page
Red dots, blue dots or green dots are found on the panel.	This symptom is peculiar to a LCD panel. This is not a malfunction.	8
	The LCD panel has been designed and manufactured using a highly developed precision technology and has a 99.99 % or more effective pixels. However, note that 0.01 % of pixels are defective and always light.	
Sound is heard but no picture appears.	• Did you connect the parking brake input lead (orange color)? • Did you pull up the parking brake?	30, 31
No sound heard and no picture appears.	[FUNC button] • Is the unit engaged in video input screen mode?	6, 7
No sound heard from the speaker.	[Adjustment of the speaker volume] Is the volume set to minimum?	10
Dark screen. The light and darkness of the screen are reversed. Whitish screen.	[Brightness and black level] Are they adjusted properly?	15~17
Pale color Bad tint	[Color depth and tint] Are they adjusted properly?	15~17
The picture flows. The picture becomes black and white (monochrome).	• Check the sub-section "Setting Example" in the section "6. CONNECTION OF EXTERNAL EQUIPMENT". • Check the sub-section "Television Broadcast System: PAL/NTSC Setting".	20~21 18

8. SPECIFICATIONS

General

Model No.: VMA8582 (with TV stand)
Type: Liquid crystal color monitor unit
Power supply voltage: DC 13.2V (exclusively for a 12-volt car)
Power consumption: 12 W (1.3 W at stand-by)
Operating temperature range: 0˚C to +40˚C
Storage temperature range: -20˚C to +80˚C

Control Box

Connection terminals : ACC power source input
: Rear view camera (back-eye) interrupt input
: Parking brake signal input
: RGB input terminal
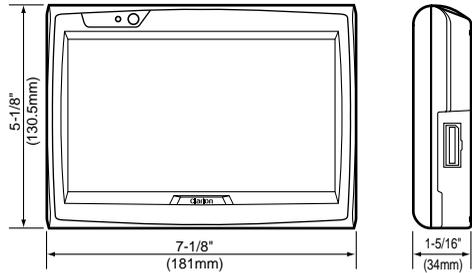: AV input 1, 2 terminal
: AV output terminal
External dimensions : 7-11/16" (W) ✕ 2-13/16" (H) ✕ 1-1/2" (D)
196mm✕71.2mm✕37.5mm
Mass : 1.03 ±0.11lb (470 ±50g)
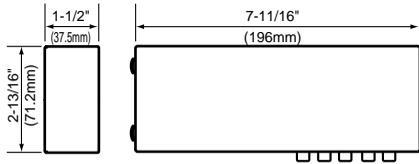
Display Unit

Liquid crystal panel : 7"
Screen dimensions : Width: 6-1/8" (156mm)
Height: 3-7/16" (87mm)
Diagonal display size: 7" (178mm)
Number of pixels : 336,960 pixels
234 (vertical) x
480 (horizontal) x 3
Effective pixel ratio : 99.99 % or more
Display method : Transmission type TN liquid crystal display
Video system : Compatible with NTSC, PAL-50 and PAL-60
Display method : TFT (thin-film transistor) active matrix
Applied light source : U-type cold-cathode tube (edge light system)
Audio output : 1 W
Speaker : 4 cm cone type........1
External dimensions : 7-1/8" (W) ✕ 5-1/8" (H) ✕ 1-5/16" (D)
181mm✕130.5 mm✕34 mm
Mass : 1.25 ±0.11lb (570 ±50g)

1-1/2"
(37.5mm)
7-11/16"
(196mm)
2-13/16"
(71.2mm)

5-1/8"
(130.5mm)
7-1/8"
(181mm)
1-5/16"
(34mm)

9. WARRANTY CERTIFICATE AND AFTER-SERVICE

• First consult the store of purchase about the repair, handling and maintenance of this product.

• When you encounter problems because you have just relocated or this product was received as a gift, consult the "repair service center" on its repair. For other inquiries, consult the "customer service center".

■ **Warranty card (attached separately)**
You should ensure that the store of purchase filled required items such as the date of purchase, name of the store, etc. After reading in detail, the warranty card should be stored away carefully.

Warranty period: 1 (one) year from the date of purchase

■ **When repair is required**
Recheck the product to see if it has a breakdown, according to the table on page 22. If breakdown persists, switch off the power and call the store of purchase.

• During the warranty period, the store of purchase will repair the defective product within the limits of warranty. You should deliver the defective product with the warranty card.

• If the warranty expires, performance can be maintained through repair. Repairs can be done for a fee if the customer so desires. However, the shortest storage period of performance parts for repair is 8 (eight) years after the end of manufacturing. (Performance parts are the critical parts which are required for maintenance of the product functioning.)

On fluorescent tubes
The fluorescent tubes used for this product have an expected life span. Beyond the life span, the fluorescent tubes do not function. In this case, they should be replaced with new ones.

Expectancy of life span: about 6 (six) to 7 (seven) years (about 10, 000 hours) with use of 4 hours per day

When the fluorescent tubes do not function and require replacement, expert skills are necessary. You should consult the store of purchase.