AVS USER MANUAL

Around View System

AVS User Manual

Around View System

Contents

1. Caution

1.1. Precaution

* Please be fully aware of user manual before use.
* Please install and use the product properly as specifies on this following manual
* Please place this manual at easily reachable location.
* The term of guarantee is till 1 year after purchase.
   (Please refer to contained Product Warranty)
* Even under the term of guarantee, we make no warranties for damages resulted from user's negligence.

1.2. Driving Caution

* Do not control the product while driving.
* The object might be closer than as shown from the view, so please be cautious while driving.
* Surround view of blind-spot might have lower picture quality, so please be cautious while driving.
* Stop operating the product when it is suspicious of malfunctioning. Please contact to A/S center for product.

1. Caution

1.3. Operation Caution

  * Do not use other companies peripheral unless it has specified on this following manual.
  * Do not attempt to disassemble or alter any part of the device.
  * Do not allow the device come into contact with, or become immersed in, water or other liquids.
  * Do not use cut or damaged cable.
  * Do not handle the device or power cord with watery hands.
  * Please contact to A/S center for the suspicious malfunction or breakdown.
  * Stop operating the device immediately if it emits smoke or noxious fumes.
  * Use the device at the temperature specified on the "4. Product Specification" from this following manual.
  * Contained 4 sides of camera has IP-67(Waterproof CE) certification, so please handle the products under certified range.

2. Configuration & Installation

2.1. Product Features

AVS is an Intelligent Parking Assistance System that processes images from 4 super wide-angle lens cameras, providing a top-view of the vehicle and surroundings as if looked from above.

Use super wide 190 degree of FOV.

Provide the intuitive view of the vehicle and surrounding by high performance from ECU.

Total elimination of blind-spot.

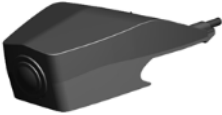Complete the certification relate to technology implementation.
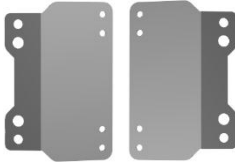
Provide parking lines and vehicle with accurate ratio.

Assist the driver while driving for lane-departure.

2. Configuration & Installation

2.2. Product peripheral

AVS ECU	Front Camera	Left, Right Camera	Rear Camera
Remote Extension	Camera Extension(4ea)	Video Export Cable	USB Cable x 2 (host & device)
Remote Controller	Power cable	Send to E-mail User Manual	Install Bracket

2. Configuration & Installation

2.3. Camera Installation
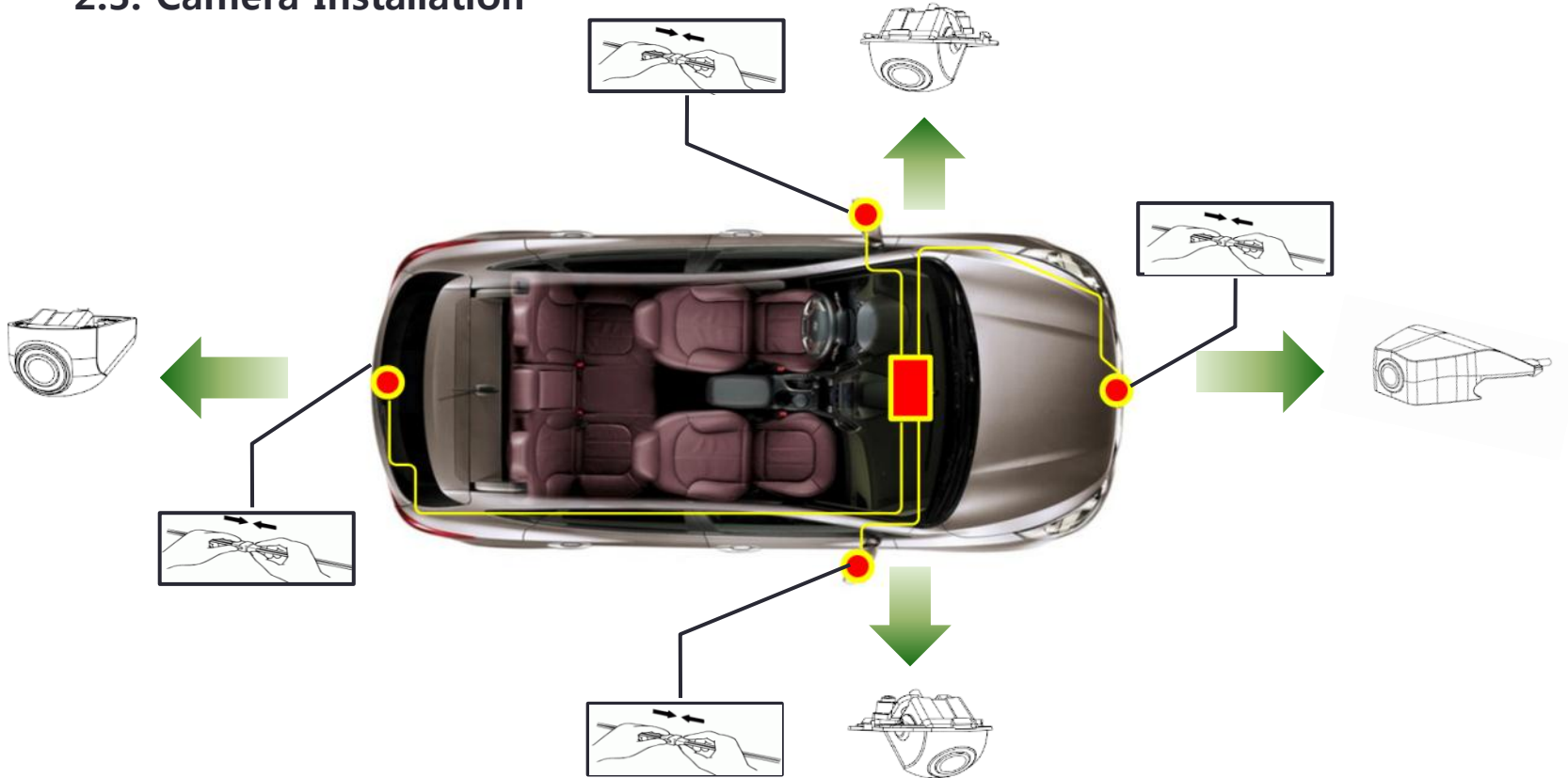
2. Configuration & Installation

2.3. Camera Installation

- Install cameras between 0° ~ 80° on the ground level.

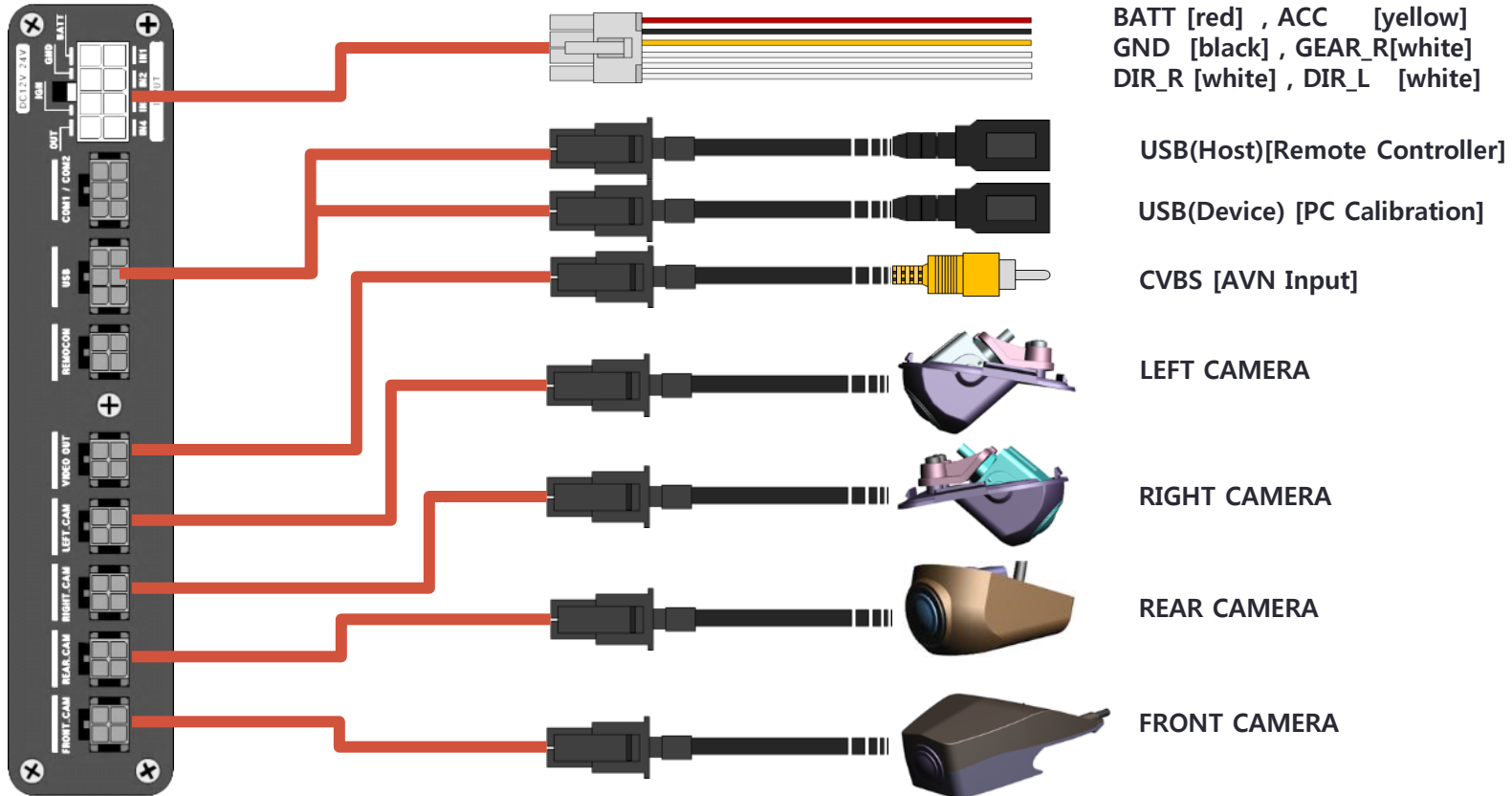   (We recommend to installing cameras at 45° angle.)

2. Configuration & Installation

2.4. Cable Configuration

BATT [red] , ACC   [yellow]
GND [black] , GEAR_R[white]
DIR_R [white] , DIR_L   [white]

USB(Host)[Remote Controller]

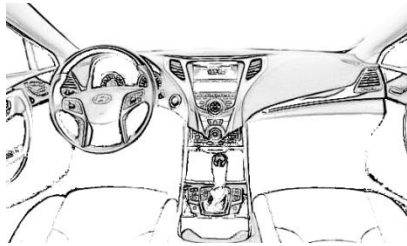USB(Device) [PC Calibration]

CVBS [AVN Input]

LEFT CAMERA

RIGHT CAMERA

REAR CAMERA

FRONT CAMERA

2. Configuration & Installation

2.4. Cable Configuration

Please use the contained cable only.
Do not attempt to disassemble or alter any part of the device.

Vehicle ignition & signal connection

BATT	BATT [red]
ACC	ACC [yellow]
BATT	GND [black]
GEAR	GEAR_R [white]
OUT2	OUT2 [white]
DIR-L	DIR_L [white]

❖ **Cable connection example for Reverse gear shift**
(Navigation monitor with Trigger Signal)

1. **Connect AVS's Video Out at CA1 of monitor**
2. **Connect AVS's Out2 at Trigger1 of monitor**
3. **Connect AVS's GEAR_R at Reverse signal of vehicle.**

AVS — Video OUT → CA2 — Monitor
AVS — OUT2 → TRIGGER1 — Monitor
AVS — GEAR_R → Reverse — Vehicle
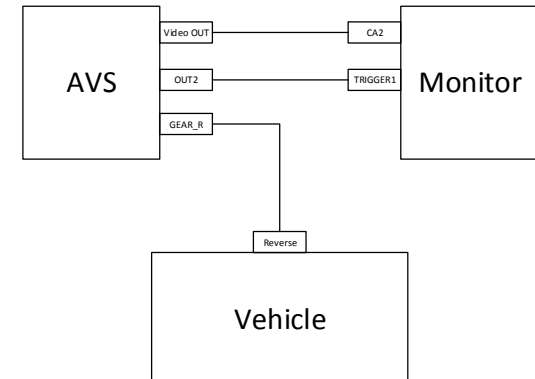
3. Product Manual

3.1. Start and Finish

❖ **Operation**

- 14 view modes
- Able to control with remote controller after booting
- Unable to control before complete the booting
- Takes about 30 seconds to complete the booting
- Fixed to [1. Front + TOP] view mode during the booting

❖ **View Modes Index**

Rear	Front
▪ 1 : Front + TOP	▪ 8 : Rear+ TOP
▪ 2 : Front Full	▪ 9 : Rear Full
▪ 3 : Front + Left	▪ 10 : Rear + Left
▪ 4 : Front + Right	▪ 11 : Rear + Right
▪ 5 : Front + 2.5D Front	▪ 12 : Rear + 2.5D Rear
▪ 6 : Front + x2	▪ 13 : Rear + x2
▪ 7 : Front 3D Full	▪ 14 : Rear 3D Full

3. Product Manual

3.2. Remote Controller

❖ **How to make Pairing with Remote Controller**

1. Connect the USB Receiver and AVS ECU with USB cable.

2. Place the Remote Controller and USB Receiver within 15cm.

3. press and hold the 🔲 and 🔲 buttons at the same time for 5 seconds.

4. After pairing is completed, view mode will change to "x2 TOP"(refer 3.3. View Modes) mode.

5. Once connected as a pairing, it is recognized as a Pairing after re-ignition.

USB Receiver

Remote Controller

3. Product Manual

3.2. Remote Controller

❖ **Video On/Off**

▪ **Reverse gear shift (Navigation monitor with Trigger Signal)**

    1. AVS video output after shift to rear gear

    2. Video output turn off after release the rear gear shift.

▪ **Remote Controller (Regular Monitor)**

    1. AVS video output after press both ▣ button 3 times.

    2. Video output turn off after press both ▣ button 3 times.

3. Product Manual

3.2. Remote Controller

❖ **Buttons**

- Full View "Front" : Change to "Front Full" view mode

- Full View "Rear" : Change to "Rear Full" view mode

- : Change Live View to Front view mode

- : Change Live View to Rear view mode

- : Change Top view to Right view mode

- : Change Top view to Left view mode

- : Change to "Front + TOP" view mode

- : Change to "Rear + TOP" view mode

- 2.5D   : Change Top view to 2.5D view mode

- x2 Top : Change Top view to x2 view mode

- 3D   : Change to 3D Full view mode

3. Product Manual

3.2. Remote Controller

❖ **Buttons**

 ▪ **Enter Backlight Setup : Slide down the two fingers on the Direction Section.**

 ▪ **Backlight +: Press "Rear" button of Full View**
 ▪ **Backlight -: Press "Front" button of Full View**

 ▪ **Exit Backlight Setup : Slide up the two fingers on the Direction Section.**

❖ **Note**

 ▪ **Saved Backlight value after "Exit Backlight Setup" will still applied after rebooting.**
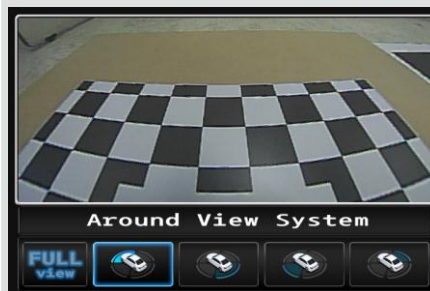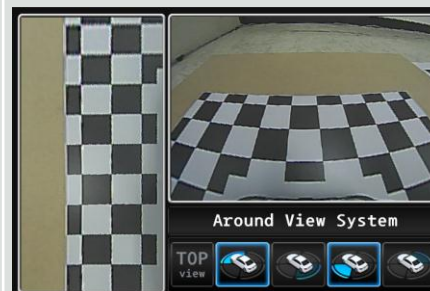
3. Product Manual
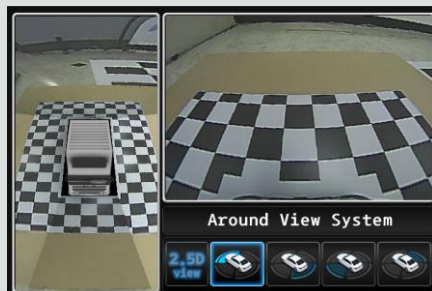
3.3. View Modes

1. Front + TOP	2. Front Full	3. Front + Left	4. Front + Right

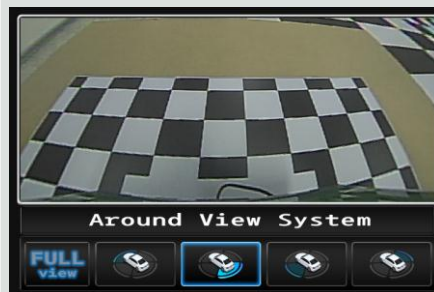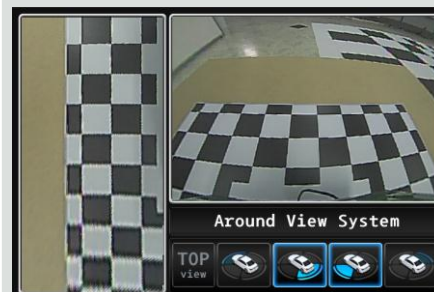| 5. Front + 2.5D Front	6. Front + x2	7. Front 3D Full
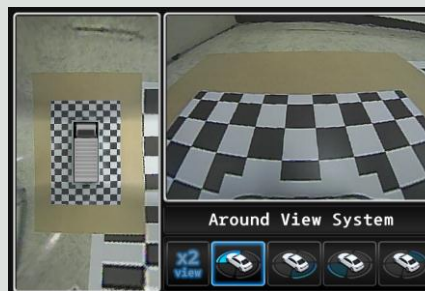
3. Product Manual

3.3. View Modes

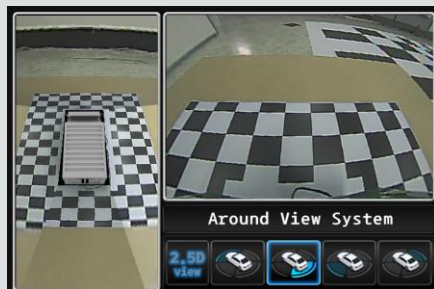| 8. Rear + TOP	9. Rear Full	10. Rear + Left	11. Rear + Right
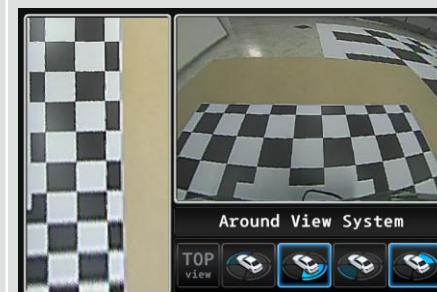
12. Rear + 2.5D Rear	13. Rear + x2	14. Rear 3D Full
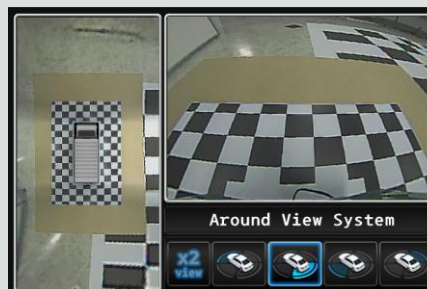
4. Product Specification

Category	Specification
Model Name	A.V.S(Around View System)
Product No.	PMA-A1004
Video Input	4CH(front/rear/left/right)
	1.0Vp-p,75Ω,VGA NTSC
Video Output	1CH(Monitor Input)
	1.0Vp-p,75Ω,VGA NTSC
Output resolution	720 x 480
Camera	Horizontal angle of view 190°
Operating Temperature	-30°C ~ +75°C
Storage Temperature	-40°C ~ +85°C
Operating Power	DC12V(9~20V)
Power Consumption	9.55Watt(camera included 4EA)
Weight	650g(ECU standard)
ECU Dimension	155(W)x100(D)x32(H)

5. Q&A

Question	Answer
Manual view modes are not working	Please contact to provider or Customer Service Center.
Automatic view modes are not working	Please contact to provider or Customer Service Center.
Quality of certain camera is blurry.	Please wipe the lens with soft cotton.
Device turning off after 60 seconds of vehicle start.	Please contact to provider or Customer Service Center.
Camera has moved from original location.	Please contact to provider or Customer Service Center.
Camera has removed from vehicle.	Please contact to provider or Customer Service Center.
The line of surround view is asymmetrical.	The line of surround view is might be asymmetrical depends on the certain side of camera has moved from original location or the deformity of car body. Please contact to provider or Customer Service Center.