

## Introduction

**Warning! Always make sure that your vehicle's battery is disconnected before beginning installation and that you have your head unit's (radio's) security code (if applicable).**

The Dension AVR will enable you to access audio and visual data from a separate, aftermarket source (iPod, DVD etc.) and view it on your vehicle's original head unit (radio) via a Gateway (GW) 500 module.

Please note that TV-Tuner activation may be required to enable the AV input. Contact your dealer for more information. There are also various options that will allow you to connect your aftermarket source that would not be possible with the OE system (cameras/rear seat entertainment etc.). Check the user guide for all functions.

*All photos/illustrations are for representation purposes only and may differ visually from the equipment in your vehicle. Information correct at time of going to print E. & O. E. Dension Audio Systems Ltd. and its registered partners cannot be held liable for any damages caused by the incorrect installation of any Dension product.*

## 1 Car compatibility

	HU	Class	Type Code	MY	Loom required	Product Part number
Porsche	PCM2.1	Cayenne	n/a	2005-2008	Standard	AVRG5P1
Mercedes	Comand NTG1	CL	C215	2005-2006	Standard	AVRG5M1
		CL	C216	2006-	Standard	
		CLS	W219	2004-	Universal Harness	
		E	W211	2003-	Universal Harness	
		S	W220	2003-2005	Standard	
		S	W221	2006-	Standard	
		SL	R230	2005-	Standard	
	SLK	R171	2004-	Universal Harness		
	Comand NTG2	A	W169	2005-	Standard	AVRG5M2
		B	W245	2005-	Standard	
		C	W203	2004-2007	Standard	
		CLK	W209	2005-	Standard	
		G	W463	2005-	Standard	
		M	W164	2005-	Standard	
R		V251	2006-	Standard		
BMW	i-Drive CCC,8.8" Professional	1 Series	E87	2004-	Standard	AVRG5B1
		3 Series	E90/E91	2005-		
		5 Series	E60/E61	2004-		
		6 Series	E63/E64	2004-		
		7 Series	E65/E66	2004-		

## 2 Porsche and Mercedes

- Carefully remove your vehicle's head unit as per the factory instructions and using the correct tools.
- Connect the AVR interface loom between the head unit and the vehicle harness.

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- Connect the 12-way microfit connector from the interface loom to the CAR port of AVR.
- Insert the 9 pin male DIN from the AVR into the GW500 iPod port.
- Connect the iPod loom from the GW500 to the female 9 pin DIN port on the AVR.
- Remove the cable from the green Video-In Fakra connector of the radio and connect it to the yellow Video-In phono of AVR using the given Fakra-RCA converter cable.
- Then connect the Video cable of "AV OUT TO HU" video output from the 6-way microfit back into the radio using the other Fakra-RCA converter cable.
- Connect all remaining connections (Rear Seat displays, DVD, Cameras, handbrake detect etc.) as per section 4.
- In some cases with the NTG1 vehicles there may not be a Quad lock style connector on the rear of the head unit. In this case you will need to use the universal harness for connectivity. (Universal harness)
- This 12 way micro-fit connector consists on a 4 wire installation.
- Red -12V permanent power in, Black - Ground, Green - Reverse gear detect (12v trigger), Red/White - Hand brake (neg trigger)



## 3 BMW

- Carefully remove your vehicle's head unit as per the factory instructions and using the correct tools.
- Connect the AVR interface loom between the head unit and the vehicle harness.
- Connect the 12-way microfit connector from the interface loom to the AVR.
- Insert the 9 pin male DIN from the AVR into the GW500 iPod port.
- Connect the iPod loom from the GW500 to the female 9 pin DIN port on the AVR.
- On the 12-way microfit harness there is a break out for the video input in the vehicle. The Vehicle side will connect into the (yellow) Video-In phono RCA input of AVR. The return video must be then connected into the head unit harness. All connections are on the supplied harness.
- Connect all remaining connections (Rear Seat displays, DVD, Cameras, handbrake detect etc.) as per section 4.



## 4 Options

If you wish to use the factory TV-Tuner, please set the Gateway 500 to bypass mode. In this case all Gateway and AVR functionalities will be disabled.

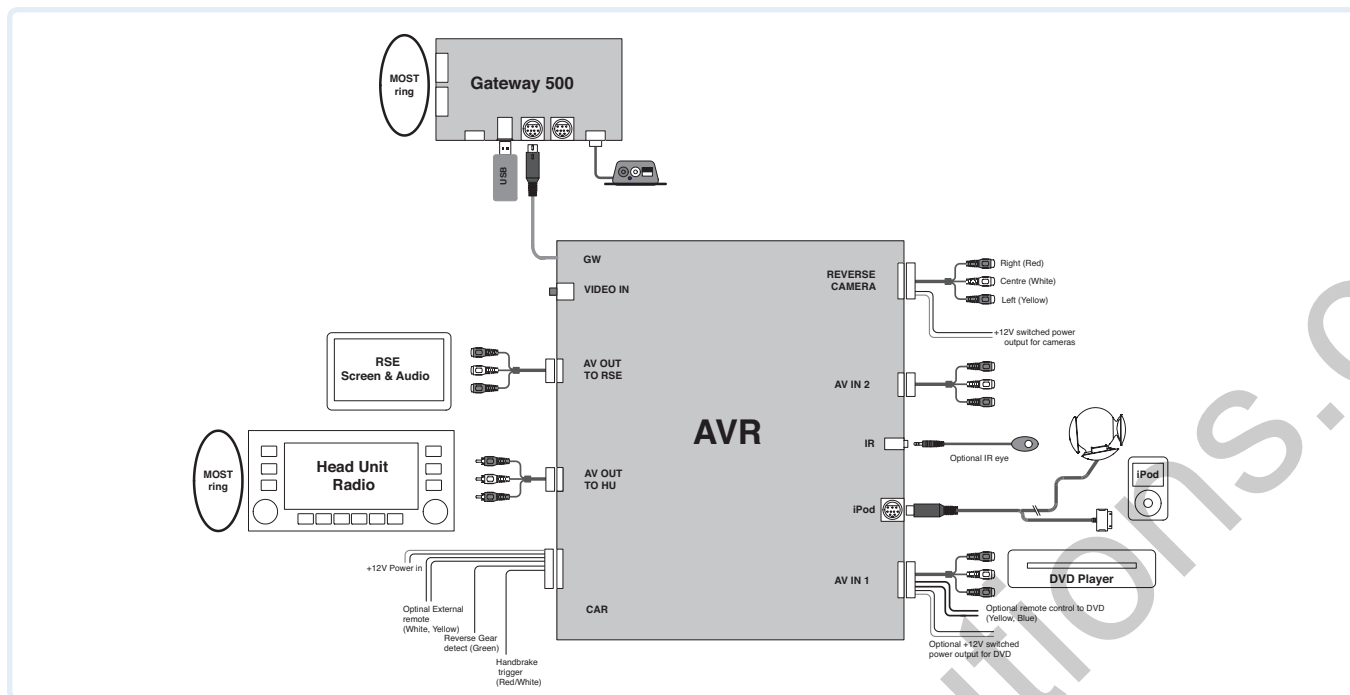
Depending on headunit capabilities the Video format of input/output signals can be set to NTSC or PAL using a USB config file.

In most countries when the car is moving video is not permitted by law on the head unit (this is the default, recommended configuration of AVR).

Pending local regulations and user liability, the Video in Motion support may be enabled on AVR using a USB config file.

Please see more details on the USB configuration files on the Dension website.

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**AV out to HU:** Connects to the Video input on the OE head unit. Audio outputs are left unconnected in case of Gateway 500.

**Video In:** The original video signal from factory TV-Tuner or factory rear view camera is connected here. This signal is routed to the head unit when the Gateway is in Bypass mode.

**AV out to RSE:** This is an output for rear seat entertainment, i.e. an extra screen. This is to be connected as per the manufacturer's guidelines. The input can alternate between DVD, iPod and AUX inputs.

**Handbrake trigger:** This must be connected to the control switch of the handbrake (a relay may be required if the switch has a positive trigger).

**Reverse Camera:** This camera video input allows three aftermarket cameras to be connected to your OEM system. If one camera is used, the connector labelled as Center is used. In case of BMW only one camera is supported.

**Reverse Gear detect:** If rear view cameras are connected usually the AVR can detect reverse gear through CAN bus. In this case this wire is left unconnected.

If for some reason the reverse gear cannot be detected this wire should be connected to the reverse gear switch (positive trigger).

**AV IN 1 input:** Allows you to connect an aftermarket DVD source to the OEM system. The connections consist of an Audio Left / Right with a Video input. An IR remote output is available if your aftermarket equipment supports this.

**Optional IR eye:** Enables you to control a DVD player via the original remote control (model specific).

**AV IN 2 input:** Allows you to connect any media source with composite video output to your vehicle's OEM system, for example a digital camera or a gaming console. Connections: Female phono Audio Left / Right with a Video input.



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