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MFD2 OEM VW GPS navigation FAQ

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Introduction

The MFD2 is the second generation in dash GPS navigation system from VW. This article shows some of the features, part number, and specifications of the system.

There were silver and black button versions found in the Jetta/Golf and a CD version found in the Touareg that is a different size. A CD based version must use regional CDs for map data. DVD based versions cover a much larger region (all of Canada/US). If your start up screen shows "DVD navigation" you know you have a DVD version (shown below). There were also Euro MFD2 CD based versions that will work in North America. The main advantage vs. a handheld portable GPS is that it came with a 6 CD changer in the armrest, displays street names, turn arrows, distance information, and other GPS data on the MFD+, and speaks through the car stereo system. If you want OEM GPS, the price is low enough so that it's something to consider.

MFD2 is plug-play (with an antenna) for any mk5/mk6 car but unless you also install the armrest CD changer or you won't be able to use the GPS at the same time because map data is on the CD or DVD. Since it's CAN BUS it will not work in a mk4 car without extensive retrofitting and modification. The DVD navigation headunit plays audio CD but the software version must be above 47 (current is at least 50). See [1000q: MFD2 firmware update](#) to see how to check your version. The headunit or 6 cd changer cannot play mp3 disks so the ipod aux in cable is a good alternative if you don't have the CD changer.

The basic specs are:

6.5" color LCD in 16:9 aspect ratio

CD-R, CD-RW compatibility for all units and mp3 compatibility if you have the CD version (I'm pretty sure)

RDS radio receiver

4x 20w

GALA (this increases volume with faster speed)

The CD versions have an external diversity switcher and the DVD versions have an internal one. Diversity antenna is a dual radio antenna which instantly switches to the one with the better signal. If you have a CD version and swap the radio to something else with an internal diversity switcher, you have to bypass the module (under the passenger seat).

Remember that if you buy a new/used MFD2 GPS system or remove it from the center console, you must have the security code to reinstall it or else you've got an expensive brick. If you didn't get the manual, here is a [pdf scan of a European manual](#).

My main complaint about the DVD is that it has copy protection even against making backups for your own personal use! I've heard that you may be able to make a legal backup if your DVD-DL burner can do DVD-ROM as a booktype burning method.

As a side note, European maps are from Teleatlas. North American maps are from Navteq.

Here is what you see on the MFD+ (full screen multifunction display). Once you get close to a turn, the arrow shows up and a "distance until turn" bar shows up. The closer you are, the higher the dashed line moves.



Here is a shot of how it looks in the center console showing various roads, lakes, and the highway. To remove it, just pry off the black trim around the radio and remove the 4 screws holding it down. Make sure you have a radio code or else you have an expensive paperweight!



Add ons or updates like aux-in, video in motion, bluetooth, and firmware updates

There are some updates like video in motion (demo is shown below on a Euro unit), aux in for ipod input under the CD changer screen, and other aftermarket plug ins. The 3.5mm aux-in cable is VW# 000 051 444 m (000051444m). This can plug into a standard headphone jack and as such, will not charge your ipod battery or let you control the mp3 using the steering wheel or radio controls. That part is only for cars with the navigation radio MFD2 GPS. It will not remove the satellite or CD changer.

If you wish to have full ipod integration you can use the ipod cable kit VW# 1k0051444 (1k0 051 444) but you lose the CD changer. It doesn't affect sat radio. This cable works on all mk4 and newer cars since it substitutes the CD changer. It treats the first 5 playlists as the first 5 CD and treats all other playlists as the 6th cd. It can also only do 12V charging (newer ipods use 5V) so you could get an aftermarket unit or the 3.5mm aux-in over this.

There are OEM bluetooth modules that will work, see [1000q: mk5, mk6 bluetooth FAQ](#) for more details. There may also be updates to the firmware available at the dealer. The current firmware is version 50. It also removes the initial "Accept" screen when you turn on the radio.

Part numbers (click links to compare current pricing)

-MFD2 GPS system (CD version) VW# 1t0 035 194 (1t0035194) from [MFD3.com](#)

-MFD2 GPS system (DVD version, North America): VW# 1k0 035 197 [b, c, or d] (1k0035197b, 1k0035197c, or 1k0035197d) from [MFD3.com](#) (note - version b was equipped sometime around 2006. Version c and d are newer (up to 2009) but I'm not sure the exact differences in functionality. Some had silver buttons. For more on VW part numbers, see [1000q: VW part numbering system](#) explained.)

Map versions and data

The maps are made by navteq and you'll find that you cannot make copies of the CD or DVD map data due to something in the headunit. I'm not aware of the CD versions but generally speaking, the higher the map version the newer the map. Here are the map versions and Navteq part numbers for North America that will work for the MFD2. Although the Touareg has different DVD part numbers from the Jetta/Golf/Passat for some DVD maps, I'm pretty sure they are interchangeable.

DVD version only

- map 2b - 2004 #S0022-0070-412 (Jetta/Golf/Passat) or #S0022-0070-509 (Touareg)
- map 3b - 2005 #S0022-0070-509
- map 4b - 2006 #S0022-0070-608
- map 5b - 2007 #S0022-0070-707
- map 6b - 2008 #
- map 7b - 2009 #U0022-0072-908 or U0022-0070-908 (Touareg)

CD version only

map 2b - 2004 #S0022-(0001,0002,0003., etc. up to 0010)-411

map 7b - 2009 #U0022-0020-001

Coding

To the right are sample codes for a DVD based MFD2 system. These are codes for use through a VCDS to set radio settings, not the radio code to unlock the stereo!

Comparison to newer RNS 510 GPS navigation.

The RNS adds SD card mp3 support, a touchscreen, higher resolution graphics and colors, DVD video capability, plug-play bluetooth support and phone book/dialing from the touchscreen, updated GPS logic, and a 30 GB harddrive to store data and music. The RNS color scheme can be changed by code through VCDS. A portable dash mount GPS won't have in dash directions or such a large screen but you can place them close to your line of sight, are much cheaper, and the newer models should have better GPS logic and new maps. For more information on the RNS 510 GPS, see [1000q: RNS 510 GPS FAQ](#). The MFD2 will not show ipod or mp3 player track info on screen.

Comparison of US spec and Euro spec systems

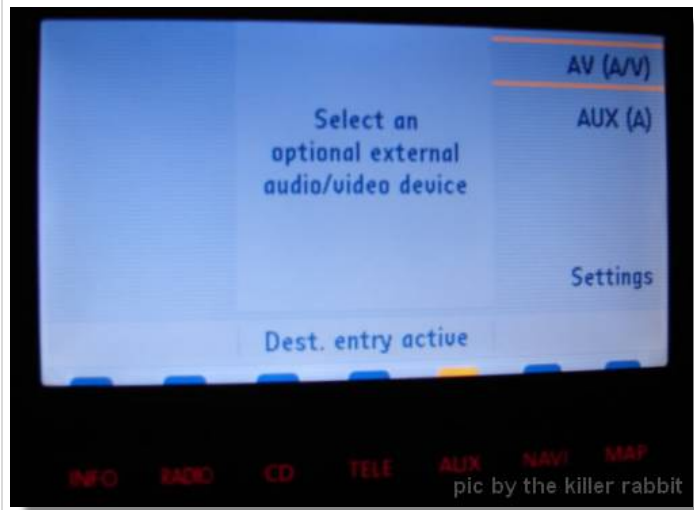
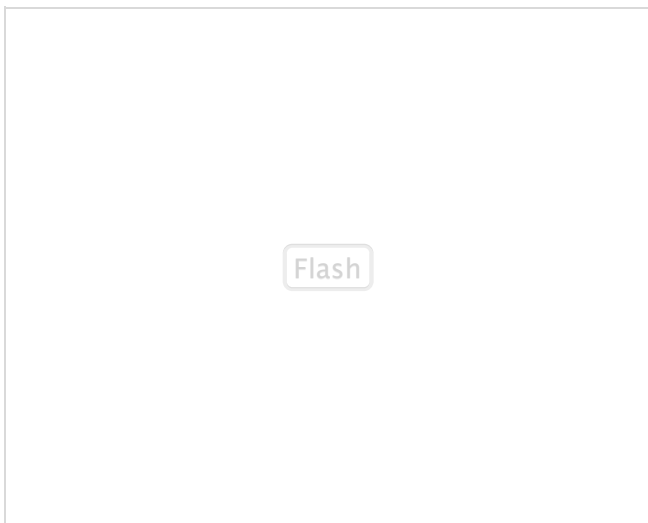
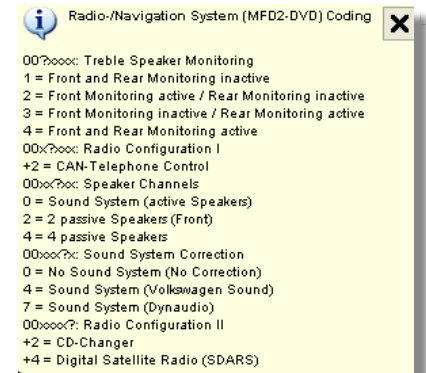
The cd based Euro systems will work in the US but not the DVD based Euro systems. The AM/FM radio stations may also be slightly off. The biggest difference is the tele and aux buttons. Aux can display video with a multimedia adapter. US units have "Aux" show up in the contextual buttons when you are looking at the CD screen but I'm not sure of its full capabilities. Pictured below is a CD based Euro navigation system and a video demo of video of motion (using an override to play video while driving).



pic by
the killer rabbit



pic by
the killer rabbit



pic by the killer rabbit

How to use the functions of the MFD2 GPS nav system

The US spec unit greets you with a splash screen. The Euro unit is shown above.



There's also a Euro screen.

Most buttons are self explanatory. When entering new destinations, press the "Dest" button. If you stopped guidance earlier and want to resume, or want to change the navigation settings, press the "Nav" button. Even if you aren't going somewhere, you can view your current map position by pressing "Map". The two buttons on the upper right will flag (bookmark) the current location and open the alternate route (traffic jam) menu.

If your software version is at least 47, pressing the CD button after it's already selected will let switch between playing a music CD from the headunit or from the CD changer.

Under nav settings (contextual button will show up on the bottom left spot), you can set the minimum nav volume.

To adjust the VW GPS navigation volume, press the "Voice" button and then turn the left knob from the minimum you set before up to the maximum volume. After a second or two, the volume bar disappears and the left knob goes back to adjusting the radio volume.

Radio and satellite radio tuner (when equipped with the separate tuner in the trunk or under the passenger side seat) can be controlled by pressing "Band". You can store 12 FM and 6 AM stations and switch to Satellite radio.

To shut the display off, press and hold the day/night button. Below are the night colors. You cannot customize the color scheme.





The button labeled "radio setup" changes audio settings.



6 CD changer control

Press the CD button and then press one of the contextual buttons to the side to select a CD. If you have a multifunction steering wheel (MFSW see [1000q: MFSW or paddle shifter retrofit](http://www.myturbodiesel.com/1000q/a5/mfd2-GPS-FAQ-VW.htm) for more details) you can control CD track or radio station through the steering wheel or the upper left buttons even if the screen is off.

To load all empty slots, press and hold the "Load" button. To eject all CDs, press and hold the "Eject" button (not the one on the MFD2, the one on the CD changer). Here you can see the contextual button labelled "AUX". Euro units have a dedicated aux button on the bottom.



How to use your MFD2 VW GPS navigation system

Disclaimer: All responsibility for route planning and safe driving is on the driver. Always double check the planned route against a current map and current traffic/road conditions. There are plenty of people who ended up making turns into impassable roads or dangerous routes! The driver's first priority should always be on safe driving so minimize any "head down" time to when you are stopped or have a passenger enter the data. Not concentrating on safe driving could result in you being killed or you killing someone else!

To enter a destination, press the "Dest" button. First make sure you have the correct state. Some older systems use multiple CDs for data. Newer systems use DVD that cover all of the US/Canada on 1 disc. The dial on the right scrolls through the choices. If you get stuck press the "back" button.

To select a new destination, press the contextual button labeled "New dest." There are also buttons for points of interest to the right.



Most of the time you will enter an address. To do this, first enter then house number and then press "OK" or press the scroll button forwards. Then enter the street. My one complaint is that you have to know if the address is circle, drive, road, or whatever because you will be selected with all of these choices before given the chance to select the town/city. After you select each letter, the menu blanks out letters that aren't relevant, making scrolling faster. After that you are given the chance for selecting the town.



It will then plan the route. If you stopped guidance or want to go to the last destination, press the "Nav" button. It will already have the last destination there and all you have to do is press "Guidance".



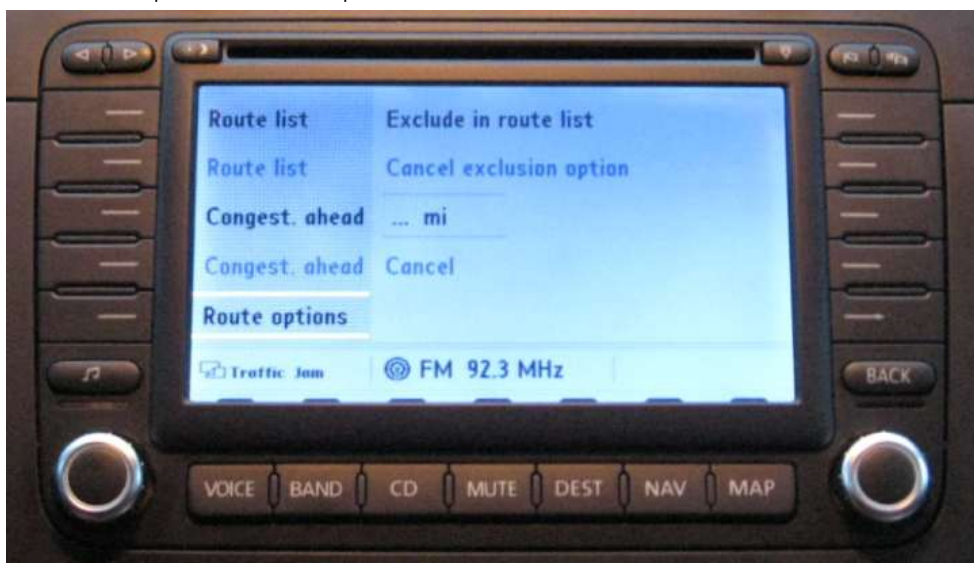
There are route setting options to take the fastest/avoid freeways, ferrys, tolls, etc. I've found that the fastest route and using freeways is normally the best way but review your route with a current map to double check the route yourself! Your GPS could take you into an impassable or dangerous road so all responsibility for route planning and driving is up to the driver.



You can also change the language that the GPS speaks to you and the other settings shown below.



Here is an example of how to avoid part of a route:



Here is the map screen. If you press the "Map" button after the map screen shows up it will display what's shown on the MFD+ (full screen instrument

cluster multifunction display) as well. This is useful for cars without MFD+.



Here is the crosshair map scroll function showing a variety of roads, rivers, and highways. The only point of interest that I have set to show up here is gas stations.



Under the "Map" screen you can also change the alignment of the map, time display, and map content.



The screens above shows gas stations. You can change it to show other points of interest as well.



From the "Map" screen you can also select the compass which tells you lat/long, elevation, current heading, and straight line bearing/distance to destination.



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