

• Mk4 Navigation Upgrade Notes

Model & year: **95-01 7-Series, U.S.**

Expertise level: **Beginner > Intermediate > Advanced**

Date: **January, 2016** (Updated: July 9, 2017)

Estimated time to complete: **varies**

Tools Required

- Basic hand tools

Facilities Needed

- None

Parts Required



- (1) Mk4 Nav Computer, p/n varies, price (used): \$350 - \$450.

Getting Started

"Why upgrade with old stuff?"

Because swapping your navigation computer from an early CD-based system (Mk1, Mk2, and Mk3) built from 2000-2002, to the more recent DVD-based system (Mk4) built from 2003-2008, offers advantages for E38 7-series owners who wish to keep their cars factory-like. Yes, the last map update for the Mk4 was in 2015, but it's still very usable and certainly much better than CD-based maps whose updates ended in 2008.

The main benefit is integration.

Installing an aftermarket nav (if you can find one that fits an E38) will result in loss of control over systems such as DSP sound, Check Control, On-Board Computer, Aux Ventilation, and other settings such as date/time and metric/imperial units (to display in Check Control). This is also the reason to keep factory navs in other BMW types.

If installing a [factory Bluetooth system](#), a Mk4 integrates beautifully by displaying [phone info screens](#). On road trips, many people use nav apps on their phone or separate GPS units. With a Mk4, the continuous display of map info, ETA and distance remaining for all passengers to see makes a long journey much more pleasant and informative (with fewer "Are we there yet?" questions).

And nothing looks as nice as a factory nav.

There are many Internet resources describing the Mk4 upgrade. For many years, bimmernav.com was the premier source for this purpose. But they no longer specialize in the Mk4 nav, and Mk4 prices are dropping. That's most likely because map updates are no longer available.

With this void, I feel aftermarket companies will step-up and offer new DVD maps for the numerous Mk4 systems still in use. Alternatively, electronics companies like Dynavin may soon develop an E38-compatible unit to eclipse the Mk4 entirely. But both scenarios remain to be seen.

Nevertheless, Mk4's offer integration advantages and others outlined below. It's mostly a plug-n-play process. The following notes are a collection of the finer points of this upgrade, which I learned the hard way.

Upgrade Notes

Mk4 Advantages

Many features distinguish this system from earlier ones, but the highpoints are:

- New(er) maps.
- DVD media stores much more info on a single disc (two discs for all of USA).
- Much faster processor (renders map graphics faster).
- Better graphics for maps and menus, including "perspective" map view and split screen.
- Moving maps: car icon stays centered on screen while maps move underneath (previously opposite).
- Legal disclaimer ("lawyer") screen disappears automatically after 8 seconds (see Operating Systems below).

The Mk4 Purchase

Upgrading to the Mk4 nav is more affordable than ever. As of this writing, used prices (on eBay, for example) range from about \$350-\$450, versus \$799 a few years ago. After the purchase, sell your old system to help offset your costs. For example, Mk3 navs seem to fetch about \$150. This results in a net cost of about \$200.

Maps

A good source from which to purchase the 2-disc set of 2015 DVD maps is eBay (about \$25).

Operating Systems

Be mindful of the nav's operating system, or software version. This determines the nav features available to you.

The best summary of official OS versions can be found in table form here: xOutpost. Note the last Mk3 update was in 8/03 while Mk4 updates ran thru 3/08. The most desirable OS is version 27-on, which ran from 3/06-on. These will have the "perspective" map view and auto-disappearing "lawyer" screens. No significant changes were introduced after 3/06.

OS Updates

It's true that any nav can be updated to the most recent OS with an update disc. The catch is, this process can be slightly risky for the DIY'er. Some have "bricked" (crashed) their navs while trying to update. Using a reliable update disc is key.

Probably the safest way to update your nav's OS is thru the local dealer. But this can be an additional \$100-\$200 expense.

Unless revealed by the seller, knowledge of the nav's OS will be unknown. However it can be deduced by reading the production date on the label. Note the production date of "04-07" in image below. This corresponds to OS version 27.1. Also note a software identifier is explicitly stated on the label ("SW:9.1"), but I have not found a cross-reference for this identifier anywhere.



Configuration

While Mk4 software is fully compatible with the E38 7-series, it may come configured for other BMW models, leaving some features non-functional in the E38. Of interest are the following settings:

- Region
- Language
- Radio Type

Of course, buying a Mk4 nav from a US-based car will ensure that Region is set to "US" (so U.S. maps will be readable) and Language is set to english.

But late build Mk4 units (from about 2006-on) may come from cars with newer radio types (BM53/BM54). This will cause loss of some radio features in the E38, such as Random and Scan, and cause difficulty with DSP settings. (Ask me how I know.) In this case, the nav unit needs to be configured for the standard C43 radio of the E38.

On the other end of the date spectrum, early Mk4 navs (thru 9/03) may come from cars with a setting which causes the arrival time display to fail. This is a minor issue, but some find it annoying. Again, it's a configuration issue.

Configuring the Mk4 nav can be accomplished using NavCoder software, freely available over the Internet. See [Using NavCoder](#) for more.

Summary

It's likely the Mk4 nav you purchase will need either a software update or configuration, or both.

Some sellers offer custom configuration and/or updated software. This service usually costs extra (about \$150) and is often reflected in the price of the unit. Alternatively, you could have your local dealer perform both services for you.

If you're a die-hard DIY'er, see [Using NavCoder](#).

Mk4 Tips

1) The "perspective" map view must be enabled from the nav's service menu in order to be functional:

- From main menu, select "Settings".
- Press and hold MENU button for 8 seconds.
- Using left scroll knob, scroll down to PERSPECTIVE and turn it on.

Now, when in map view, pressing the right scroll knob will bring up the "perspective" view option.

2) Using voice commands such as "gas stations at current location" or "restaurants at destination" (or selecting same thru the menu) will populate your maps with icons reflecting the request. Soon, you will want to remove these icons, since they tend to clutter the map display:

- From INPUT DESTINATION menu, select *Information > Travel Information > Hide Map Icons*.

This is not in the Mk4 User Manual.

3) A great way to use map functions is in split-screen mode. This will display maps on the left half with travel directions on the right. Enable split screen from the Settings menu.

4) There are two display color schemes (blue/brown and grey/black) selectable in *Settings > Color Set*.

5) Using voice command, speak "route map" to instantly display the map at any time. See *Voice Control User Manual* below for more great features. (Did you know there's a "Notepad" function?)

6) I found *Settings > Nav Volume* useless. To set volume of spoken nav instructions, use voice command "volume up" and "volume down". Again, see *Voice Control User Manual* below. If spoken nav directions become annoying, use voice command "instruction off".

7) The *Destination Input Map* allows you to visually input a destination if you don't have the address or, if you know geographically where to go but it's not on the map (ex: a newly constructed home). Cool.

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