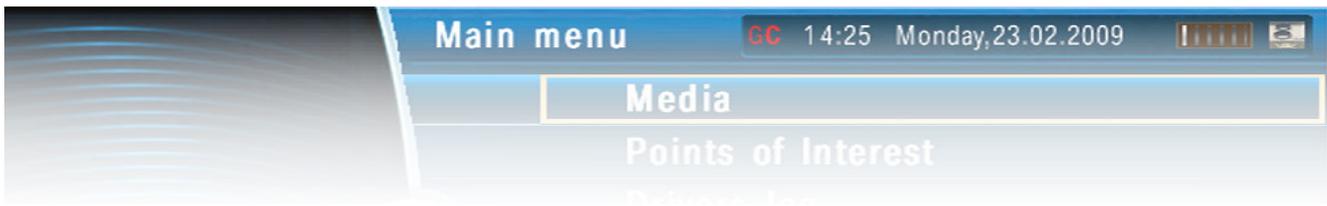CarX/B7 (for I-drive BMWs)

Frequently Asked Questions

Version 1.1

Is there a User Manual available ?

Is there anyone out there who really reads print media full of screenshots ? I never do ☺

Seriously: no - just install the software on your desktop PC – use the mouse wheel, play with the keys SPACE, ENTER, and you will see how it works pretty soon.

On the main screen click the image and follow the instructions in the options dialogs regarding settings (MP3 directory, COM ports etc.)

How does the GPS POI stuff work ?

If you want speed trap warning (POI) you will need the radar.bin file (for Germany you can get it from http://www.radarfalle.de/software/carx.php) and a USB GPS mouse (NMEA standard).

In case you want to be sure: CarXA preocesses the standard NMEA gsv, rmc, gga, and rmb sentences. Pls note that typically with a USB-GPS mouse you will have to install a virtual COM port and tell CarX which one it is. In most cases it ships with all needed drivers.

If you want to make your own POI's: send me a mail, I can provide a tool to create your own bins, or tell me where a list with GPS coordinates of speetraps in your country is, and I will send you the bin-file.

Additional radar.bin files for other countries are available at
http://www.bmwpc.de/portal/dload.php?action=viewall

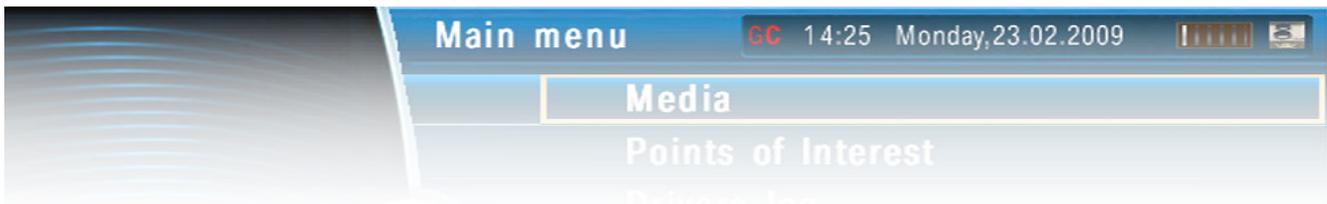## What do I get from CarX24 ?

Today CarX24 can only offer you the software CarX/B7 that will run smoothly on your CarPuter. We recommend to have the physical installation in the car done by an expert. I had it made myself in this garage:

http://www.soundundservice.de/

How much does the license cost and what does it include?

The price for the software is 299€. It includes free updates as they become available on our website. Updates include bug fixes as well as new functionality as we explore new features and functions.

Exit
Restart

What are the System requirements?

PC: Windows 98, 2000 and XP have been tested. USB2.0 is recommended if you connect a disk drive, the GPS mouse and the CAN-interface to it.

12V PC - small - recommend one with Pentium 1,4 Ghz or more - NOT a "VIA Eden" or so CPU !! –

Make sure it has good sound (on board or USB-sound card) and USB 2.0 and min 512 MB and Windows XP
USB Cables and Hub

Disk Drive (either only the one in the small PC - but if you want to refresh your MP3, you may want to connect an external USB drive (cause you can easily take it out of the car and load it on your home desktop)

Mouse in the glove box during the first days when you set up the PC is a good idea too

VideoLanClient (VLC) Version 0.8.5 (!) needs to be installed on the system http://www.videolan.org/vlc/. Do not install a newer version, because some changes have taken place that CarX has not yet implemented.

If you want drivers log, you will also need **Microsoft MapPoint for Europe** (that is what I use to resolve a GPS position into town and street info) and a USB Mouse (magnet below it is good) - can be placed under the windshield, cable hidden in the side fissure

For use of **Google Earth** you will have to have that installed on the PC as well. Download here:
http://earth.google.de/download-earth.html

Do NOT use the professional version of Google Earth – it does not work with CarX!

In order to have GE collect the right images and store them in the GE cache there is a tool available called **GEVoyager.exe** that you will find on the web if you search for it.

CAR: that's a different story and we will answer in detail later.

Exit
Restart

Does CarX24 recommend any PC?

No – I am using CALU Intel-based 12V PC from CarTFT.com with a Pentioum 1.4 Ghz CPU – it works pretty nicely, but there other systems out there. Make sure your PC can either run on car power (12V), or you install an inverter (Wechselrichter) in the car, that turns 12V DC into 240V or 120V AC, to use the original power supply that may come with the PC, especially if it is a laptop. The nice thing about the laptop is its battery that keeps the PC alive during power drains (e.g. engine start).

What is the overall cost ?

We can only give a rough estimate of what you will pay – here is our best guess:

CarX software	299 €
Car PC	300 €
Garage doing the cabling for you	500 €
USB Soundcard	30 €
Connexx Multimedia Interface	400 €
USB Cables and hubs	50 €
TOTAL	**1.579 €**

All prices are rough estimates and do not mean anything related to prices that any shop may or may not offer. Also you may have to buy a Windows Operating System license and Microsoft Mappoint in addition. You may also already own some of the needed stuff, or try to build the kit in yourself. So: your price will vary.
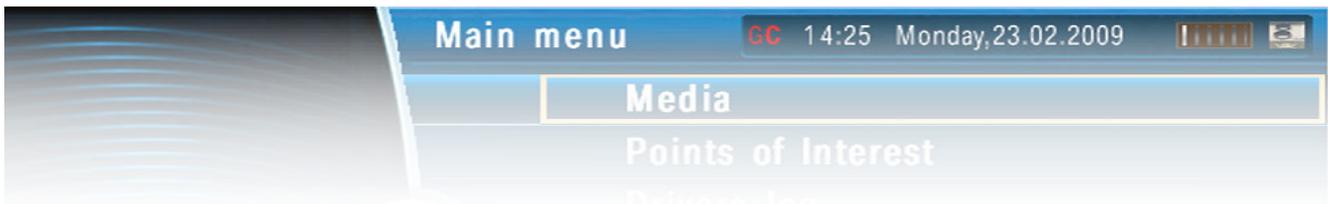
How about the CAN-bus connection ?

I use the CANUSB-interface from Lawicel

http://www.canusb.com

It is generally available and will cost around 100 to 150 €.
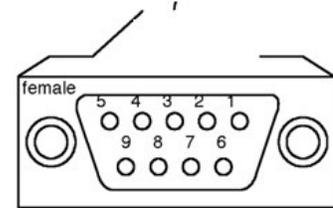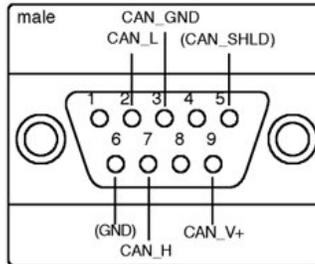
Exit

Restart

When I have the CAN-bus Interface – How do I install it ?

First of all we have to understand which pin gets which kind of connection:

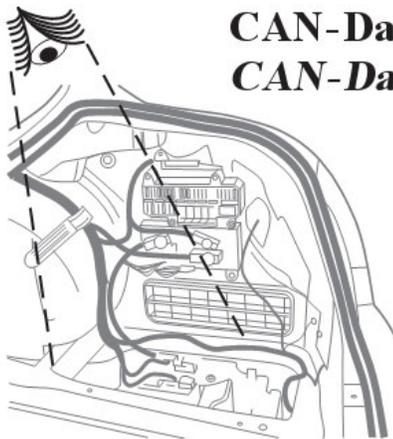| Pin	Signal	Description
1	-	
2	CAN_L	CAN_L bus line dominant low
3	CAN_GND	CAN Ground
4		
5		
6		
7	CAN_H	CAN_H bus line dominant high
8		
9	CAN_V+	CAN external supply

CAN high	am Fahrzeug:	5er, 6er: schwarz 1er, 3er, 7er, MINI, X5: grün/orange
CAN low	am Fahrzeug:	5er, 6er: gelb 1er, 3er, 7er, MINI, X5: grün

Where will I find the CAN-bus in the car (7 series BMW, E65)
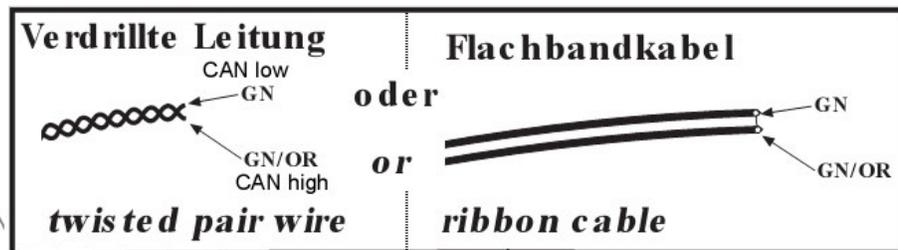
Please note the color notations:
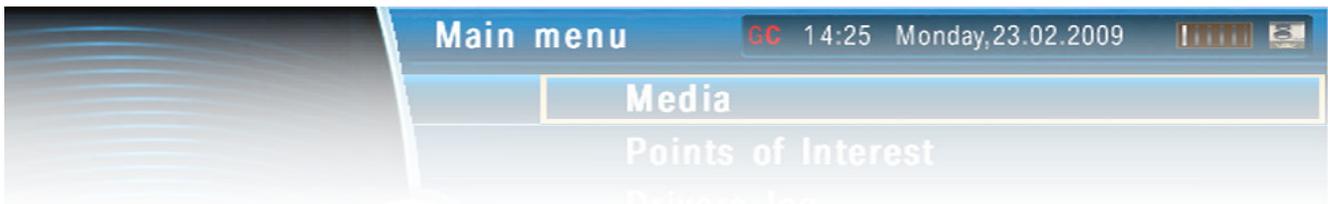
GELB=YELLOW
GN=GRUEN=GREEN
OR=ORANGE
GN/OR = GREEN/ORANGE

CAN-Datenleitung
CAN-Data Wire   **E65/66**

Verdrillte Leitung   Flachbandkabel
CAN low
GN   oder
GN

GN/OR   or
CAN high   GN/OR

twisted pair wire   or   ribbon cable

Other BMW may have different locations and colors – you will have to investigate this carefully.

Will tampering with the CAN-bus lead to losing my BMW guarantee ?

I do not know – but I would not be surprised if that is the case. CarX24 takes no responsibility for any situations of that kind.

Will unlocking the TV (allow screen content while car in motion) lead to losing my BMW guarantee?

CarX24 takes no responsibility for that either. Honestly I never asked – and will not
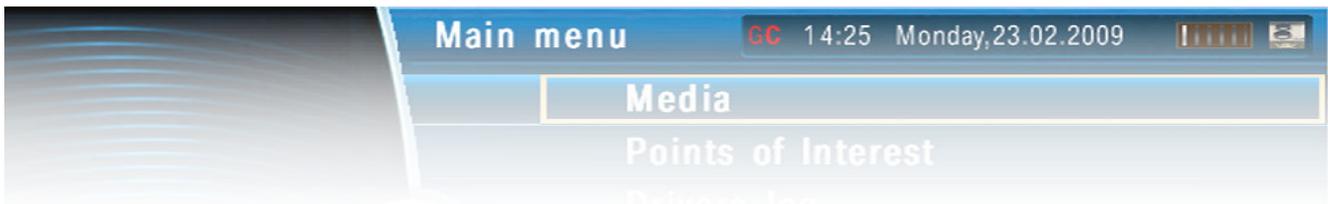
Is unlocking the TV illegal ?

CarX24 takes no responsibility for that either. I am not sure. In case of an accident there may be discussions. I recommend not watching movies while driving. On the other hand, it is possible to select a CD track or a radio station using the original BMW screens. Doing the same with MP3 while driving appears to be the same thing to me. Use common sense. If you owned a Jaguar you would have to stop the car even to enter a new address into the Navigation system. That can not be right either.

Will my harddisk(s) survive in the car?

I have driven with a car PC for 3 years now, and never lost my 2.5 " Disk, once lost a 3.5" disk in a USB enclosure – lost more on the home machine in the same time. We are no longer in IBM 3380 days – so: No problem today!
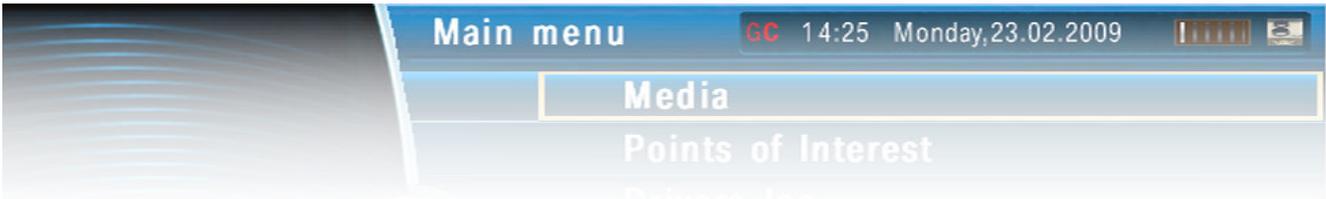
Will temperature be an issue?

Things worked out well in both German summers (up to 35 Celsius) and winters down to –12 or so. No problems seen with my PC, only the BIOS battery seems to get empty quicker in cold days – had to replace it every winter. That's all.
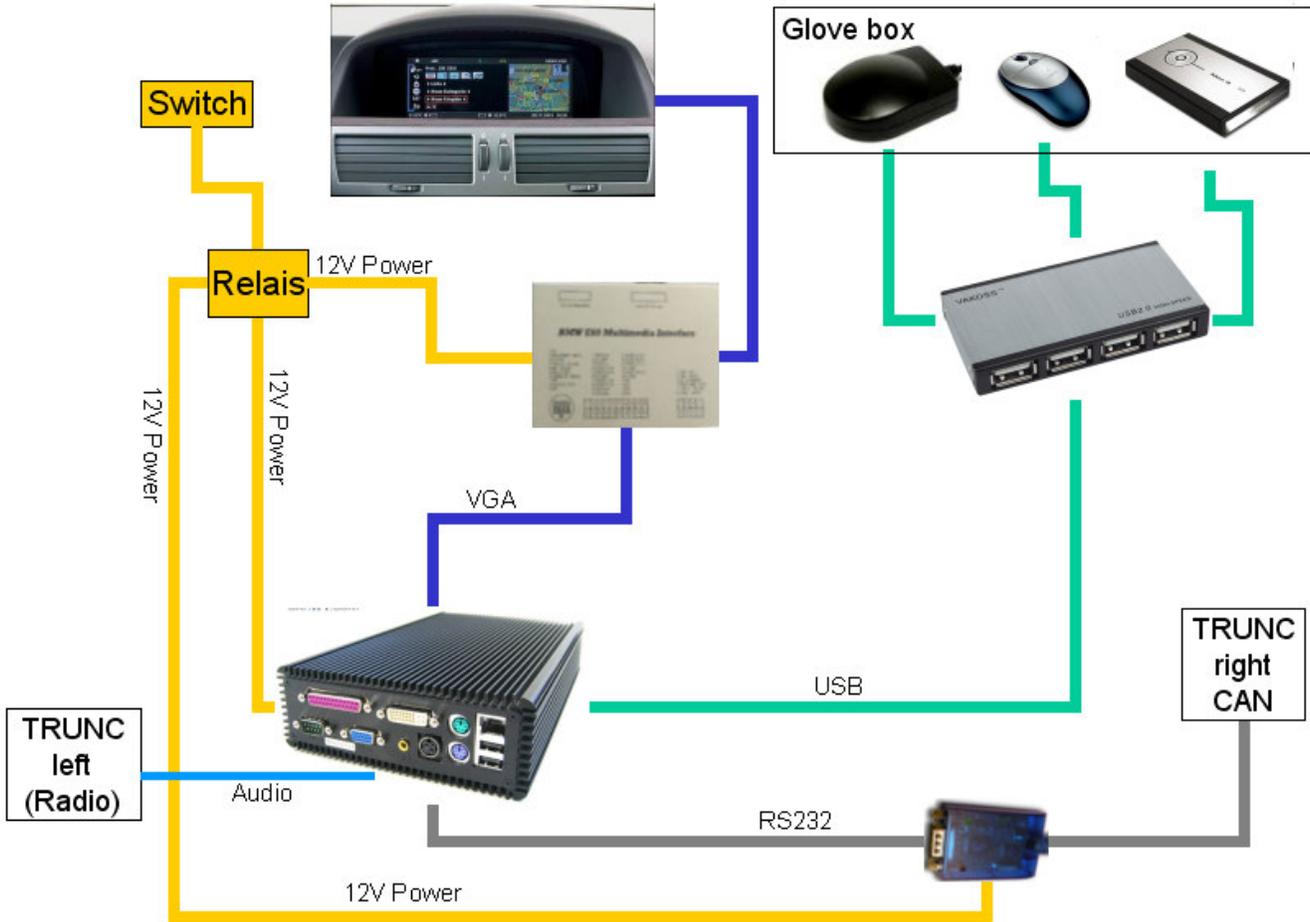
Is using a speed trap warning mechanism illegal?

CarX24 takes no responsibility for that either. There are other tools out there (Tom Tom navigator with radarfalle.de plug-in etc.) that do the same. In Germany I am afraid it is. Common sense tells me that it should be in other countries as well. For myself I can say, that I simply do not care and take the risk of being caught. You decide on your own if you do ☺
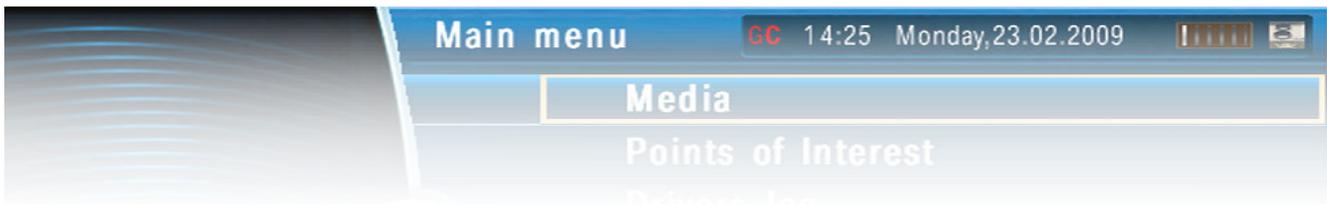
How do I connect all the components?

Diagram labels: Switch, Relais, 12V Power, Glove box, 12V Power, 12V Power, 12V Power, VGA, USB, TRUNC right CAN, TRUNC left (Radio), Audio, RS232, 12V Power

How about all the cabling ?

CarX24 recommends to have this done by professionals. In an E65, the Connexx interface will only provide video. To also get Audio into the car, some welding on the radio is required, but it can be done.

Restart

Media

Points of Interest

What components do I need and where do I get them?

CarX24 will not recommend any, but I am ready to outline what I have:

PC – for example
http://www.cartft.de

Video LAN Client software
http://www.videolan.org/vlc/

Multimedia Interface
http://shop.conexx-video.de/artikel_id_1286_a_Car-Multimedia-Multimediaadapter-BMW-DVD-Multimedia-Interface-Adapter-zu-BMW-7er-E65.html

GPS mouse:
Recommend any USB model with a driver that emulates a Virtual COM port.

12V Power:
Recommend to built in a switch that gives you control over the boot process (manual reboot possible). Also do not connect directly to the battery, but ask the garage to connect to the BMW power management
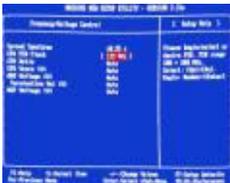
Restart

Are there any Windows guidelines?

Some ! If you know your way around a Window PC, you can do this on your own – otherwise ask a friend. Install the PC on your home desktop once and configure it completely !

BIOS setting: State after Power failure: BOOT

(makes sure the PC boots automatically as soon as it has power ! No need to tamper with an extra switch just to boot the PC)

Windows Start:
Setup Windows to boot without any passwords to be entered, make sure it wakes up from Standby or Hibernate without password too - Play with Boot screens and desktop wallpaper at will

You will have to install the GPS USB mouse driver and assign it a virtual COM-port in its settings (e.g. COM4) or so - it can happen that windows thinks it is a MSFT Speedball - that device needs t be disabled in the windows hardware settings, otherwise you can get mad behavior of the mouse pointer.

CarX Start:
Make sure CarX start automatically as well – autostart folder or registry
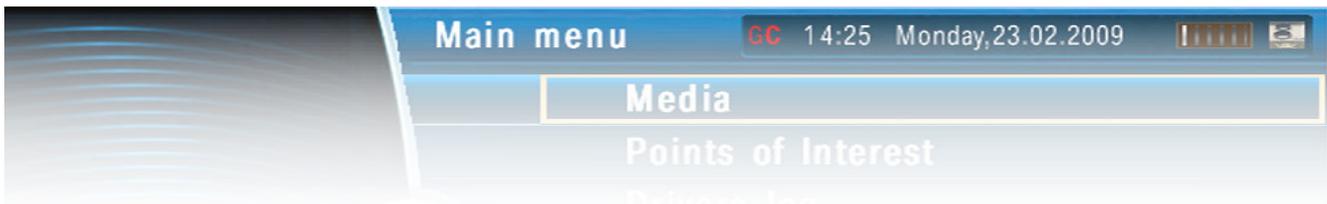[HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Run]

Codecs:

Do not install extra codecs, just install Video Lan Client 0.8.5 (http://www.videolan.org/vlc/)

Other windows issues
You may want to look into anything that allows fast boot and shutdown; you may also want to disable unneccessary services. This is an art of its own, ask a friend or read PC magazines for details

Exit

Restart

GPS Mouse

Most mouses come with a driver that sets up a virtual com port. Make sure you pick the right one and make sure you know its number, e.g. COM3 or COM7….

CANUSB

You will have to install the RS232 driver (the one that emulates a virtual com port) In the CarX seetings dialog you will have to tell CarX which virtual port to listen to in order to get CAN data.

CarX Setup

CarX has an inbuilt menue with detail information as to what to enter there. Things like "MP3 directory" or "movie directory" are pretty self explanatory.

You will also have to enter the COM ports under which the CAN Interface or a GPS mouse can be found. You will be able to enable or disable them here as well.

How do I get the full version?

Registering CarX:

By default CarX is unregistered and will stop running after 15 minutes. If you want to purchase a license, go to the HELP/REGISTER tab. You will find a number like this "00000F33-007CAF50-0000041D".

Send it to faltinek_andreas@gmx.de, and we get the license and payment process going. I accept cash or PayPal payments. Good luck – and please send mail if I can be of any further help. Check the website for additional support.

http://www.carx24.de

Other more or less usefull links

http://www.cartft.de (a good point to start looking for 12V CarPCs)

http://www.tragant.de (another dealer of VIA Eden CPU based small PC)

http://www.casetronic.com (another manufacturer of small PC)

http://www.travla.com (another manufacturer of small PC)

http://www.mini-itx.com (general information on small form factor board related stuff)