



BEELINE Series

BEBMW-42

**for BMW Vehicles
with fiber optics**

**Bluetooth® hands-free phone kit
fully integrated with
vehicle infotainment systems**

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Information

Changes of the vehicle software can cause malfunctions of the interface. We offer free software updates for interfaces for one year after purchase. To receive a free update, the interface must be sent in at own cost. Labor cost for and other expenses involved with the software-updates will not be refunded.

Product features

- Integration in and controls through the telephone port of the factory infotainment
- Updatable Parrot chipset with best audio quality and high phone compatibility
- Automatic radio mute
- Caller audio through vehicle sound-system
- External microphone with amplification adjustment through infotainment
- A2DP audio streaming through CD-changer emulation (requirement: mobile phone supports function, factory CD-changer coded but no factory CD/DVD-changer installed)
- up to 10 mobile phones can be paired simultaneously
- Use of factory/vehicle buttons to control phone functions
- Mobile phone book integration (about 1000 call numbers)
- Audio adjustment and settings through vehicle infotainment
- SMS reading and writing if supported by mobile phone

1. Prior to installation

Read the manual prior to installation. Technical knowledge is necessary for installation. The place of installation must be free of moisture and away from heat sources.

1.1. Delivery contents



HW _____ SW _____

Write down the HW-version and SW-version of the interface in the spaces provided above, and store this manual for future reference and technical support purposes.

1.2. Checking the compatibility of vehicle and accessories

Requirements

Vehicle BMW vehicles with iDrive and fiber optics, Mini

Navigation/Radio Professional Navigation
Business Navigation
Professional Radio
Champ MP3 Radio
Mini Radio Boost

Limitations

Vehicle **NOT Compatible with 7-Series (E65/66) and (F01/02)**

Factory telephone kit Must be removed if installed.

Factory-CD/DVD-changer Must be coded but **NOT** installed if A2DP is to be used.

Factory-combox The phone function of the factory-combox must be uncoded if installed.

2. Installation

Switch off ignition and disconnect the vehicle's battery! The interface needs a permanent 12V source. If according to factory rules disconnecting the battery is to be avoided, it is usually sufficient to put the vehicle in sleep-mode. In case the sleep-mode does not show success, disconnect the battery with a resistor lead.

If power source is not taken directly from the battery, the connection has to be checked for being start-up proven and permanent.

2.1. Removal of the navigation computer/radio

The interface is installed on the backside of the navigation computer or radio unit. The following chapters show some removal examples of various navigation computers.

2.1.1. Removal navigation computer BMW E60/E61/63/64 with Professional Navigation

Remove the cover with the middle air vents;
it is only fitted, not fixed into place.



Unscrew the two screws at the side ends of air conditioning control panel and remove the panel;
the lower part is also only fitted.



Remove lower plastic cover; it is only fitted, as well.



Unscrew the 4 screws and pull out
the navigation computer.



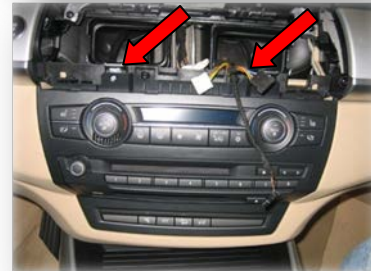
Continue from chapter [2.2. Connections](#) .

2.1.2. Removal navigation computer BMW E70/71 with Professional Navigation

Remove the middle air vents.



Unscrew the two screws at the side ends of air conditioning control panel and remove it; the lower part is only fitted, not fixed into place.



Unscrew the 4 Torx screws and pull out the navigation computer.



Continue from chapter [2.2. Connections](#).

2.1.3. Removal navigation computer BMW E90/91/92/93 with Professional Navigation

Remove the air conditioning control panel; it is only fitted, not fixed into place.



Remove the cover of the navigation computer; it, too, is only fitted.



Unscrew the 6 screws and pull out the navigation computer.



2.2. Connections

Unplug the Quadlock socket from the rear of the navigation computer.

Unplug the connector with the fiber optics from the Quadlock socket.

Exchange the shells of the vehicle harness' fiber optical connector and interface harness' fiber optical connector with each other.



Connect the vehicle harness' fiber optical connector to the female fiber optical socket of the interface harness.

Connect the interface harness' fiber optical connector to the Quadlock socket of the vehicle harness.

Plug the Quadlock socket back into the navigation computer.



Vehicles without fiber optical components -- which means without CDC, without phone or other fiber optical components -- have optical wires at the navigation computer, but it can be possible that the ring is not connected to diagnostic connector in the glove compartment. In this case, a connector bridge for optical wires is necessary.

Connect red and black wire to permanent +12V source.
 Connect blue to +12V to enable CD-changer emulation for A2DP. A2DP requirement is that the navigation system is coded to CD-changer but factory CD-changer must NOT be installed.

Wire color	Definition
● Black	Ground
● Red	+12V DC (permanent)
● Blue	to +12V = CDC-emu on

Install the microphone close to the driver. Connect the microphones 2-Pin AMP jack to the 2-Pin AMP jack bush of the CRUX harness.

2.3. Activation of the Interface

After first installation the vehicle must go into sleep-mode in order to recognize the newly attached hardware. After re-connecting the battery, lock the vehicle and wait for 5 -10 minutes.

On some vehicles, it may happen that the CRUX interface is not recognized by the head unit. If the phone option is not available, after the activation as described above, take the following steps:

1. Switch on ignition
2. After system start, connect pin 7 for 2 seconds to +12V
3. Switch off ignition, lock the vehicle and wait for 5-10 minutes



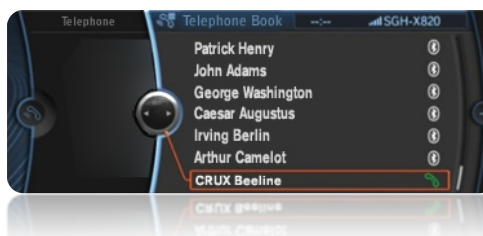
3. Interface operation

The interface enables the telephone function of the factory navigation/radio system; therefore, the operation is analog, as described in the manual of the corresponding navigation/radio system.

Navigation Professional (CCC)



Navigation Professional (CIC)



Business Navigation



3.1. Pairing the CRUX Interface with a mobile phone

Up to 10 mobile phones can simultaneously be paired with the CRUX interface. If an eleventh phone is paired, the oldest entry is automatically deleted. In some cases, it becomes necessary to put the vehicle in sleep mode to enable correct function of the 11th phone.

For pairing, enable the pairing mode of the mobile phone (see the manual for the mobile phone). Search with the mobile phone for "**BEELINE**" or "**CK5050N**" and connect with activation code "**1234**". Some mobile phones may need to connect to the CRUX interface with other than "hands-free" function. Check for this feature and adjust to "hands-free" mode if necessary (see the manual for the mobile phone).

If a mobile phone had been paired to the CRUX interface (requirement is an occurred pairing with a mobile phone, see above), a connection will be automatically established as soon as the mobile phone is in reach. If multiple paired mobile phones are simultaneously in reach, the CRUX interface will be connected to the first phone.

If you have connection problems between mobile phone and the CRUX interface, first check at the parrot website whether an update for the parrot chip is available. The part number of the parrot chip can be found in the specifications at the end of the manual.

3.2. Loading of phone book

After each establishment of connection to the mobile phone, the phone book of the mobile phone will be loaded to the vehicle infotainment.

Depending on the mobile phone, the phone book will either be loaded from the phone's memory or from the SIM card. This process can take a few minutes or more, depending on the number of contacts in the phone. **If the phone book is not loaded or not completely loaded, it might be necessary to copy the contacts from the SIM-card to the mobile phone memory.**

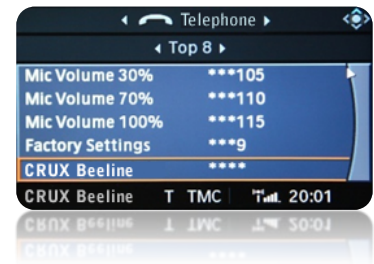
Some mobile phones do not automatically load the phone book, so the sending must be manually initiated (the procedure varies depending on the mobile phone, e.g., "send phone book to Bluetooth").

The manual procedure must be repeated if the mobile phone's contacts have been edited.

The memory of the CRUX interface can save about 1,000 call numbers.

3.3. Setup, factory defaults, updates

Settings of the CRUX interface can also be changed by dialling setting codes in the vehicle telephone mode. In vehicles with navigation system it is possible to change it in the vehicle infotainment's menu under "Top 8", too. Caller audio volume, Ringing tone volume and microphone sensitivity can be adjusted separately. The interface can be reset to factory defaults and updates of the Parrot chipset can be initiated. To execute a function, just dial the corresponding code from the below table like a phone number and confirm with "pick-up".



Function	Code no.	Min	Max
Microphone sensitivity	+001xx	01	15
Caller audio volume	+0021xx	01	15
Ringing tone volume	+0022xx	01	15
Factory defaults	+009		
Parrot Update Mode	+000		

To the codes for volume and sensitivity it is necessary to add two digits for the desired value (01 min. to 15 max.). For example dial "+002112" to set the caller audio volume to level 12.

After dialing a code, the navigation will confirm with "call failed".

System updates of the Parrot chipset are possible through Bluetooth® via PC.

3.4. A2DP audio streaming through CD-changer emulation

When the CD-changer emulation of the CRUX interface is entered, it is possible to listen to music files on the factory sound system which are played by the mobile phone. The available options to control the play functions of the mobile phone depend very much on the mobile phone. Some phones do not support all of the below described functions, for example iPhones® do not support any track skipping.

Full functions are starting and stopping the playback, next track and previous track.

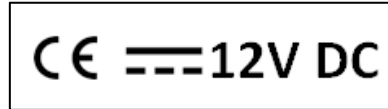
If the vehicle CD-changer mode of the vehicle's navigation/radio system is activated, the A2DP playback is automatically started (while a virtual CD 1 is shown). When the CD-changer mode is exited, the A2DP playback is stopped. The playback is paused during phone call activity. Track skipping is possible with the "next" and "back" keys of the head-unit or the steering wheel.

If during playback, Track 1 of the virtual CD is confirmed, a menu opens. Use the option "random" of this menu to stop playback or "SCAN" to start playback.

The volume level of the A2DP can be adjusted in the mobile phones settings.

4. Specifications

Integrated Bluetooth® Chip	Parrot CK5050new
Operation voltage	10.5 – 14.8V DC
Stand-by power drain.....	<1mA
Operation power drain.....	120mA
Power consumption	1.8W
Temperature range	-22°F to +176°F
Weight.....	3.35 oz
Dimensions (<i>box only</i>)	
L x H x W.....	4.2" x 1.2" x 2.8"



5. Technical Support

CRUX INTERFACING SOLUTIONS

6860 Canby Avenue, Suite 116
Reseda, CA 91335

Hours: Monday - Friday, 9am - 5pm (Pacific Time)
Phone 1-818-609-9299 / 1-855-822-1348 (toll free)
Fax 1-818-996-8188

Tech Support: support@cruxinterfacing.com

Website: <http://www.cruxinterfacing.com>

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