

# Installation Guidelines

Nokia Multimedia Car Kit CK-20W  
and Nokia Navigation Pack LD-2



Please note: car accessories must be installed or repaired by qualified professionals only. Carefully read the User Guide and Installation Guide for each system to be installed.

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Please note: car accessories must be installed or repaired by qualified professionals only. Carefully read the User Guide and Installation Guide for each system to be installed.

## Purpose of these guidelines

To provide the technical background information needed for carrying out professional installation.

Only a qualified service technician should install or service the car kit using the approved original Nokia parts supplied in the sales package. Faulty installation or service may be dangerous and may invalidate any warranty which may apply to the car kit. End users should remember that the car kit comprises complex technical equipment that requires professional installation using special tools and expert know-how.

Instructions given in this guide are general guidelines which apply for the installation of the car kit in an automobile. However, due to the wide variety of car types and models available on the market, this guide cannot consider the individual technical requirements relevant for any particular vehicle. Contact the vehicle manufacturer for detailed information about the vehicle in question.

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# Product overview



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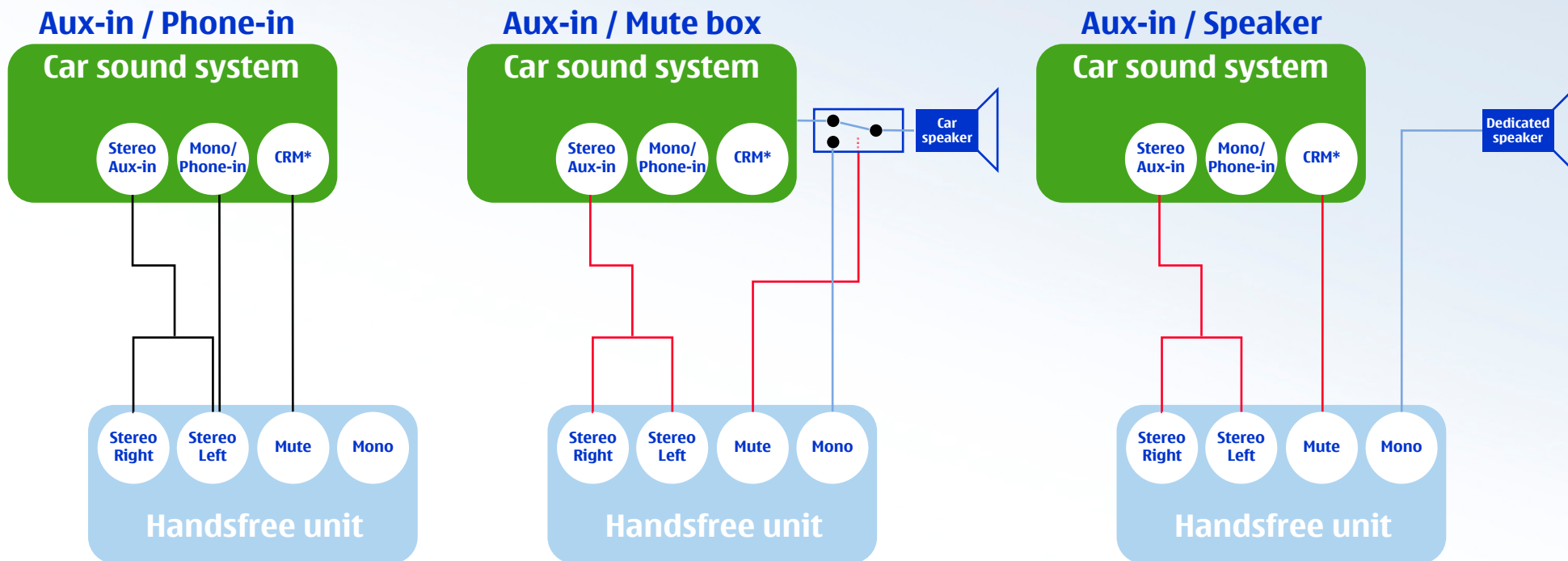
# Connectors

- |  |                        |
|--|------------------------|
| 1 = Power cable                          | 2 = speaker-out (mono) |
| 3 = Data cable or audio & charging cable | 4 = Input device       |
| 5 = GPS receiver                         | 6 = line-out           |
| 7 = Microphone                           |                        |



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# Installation modes: hands-free and music (1)

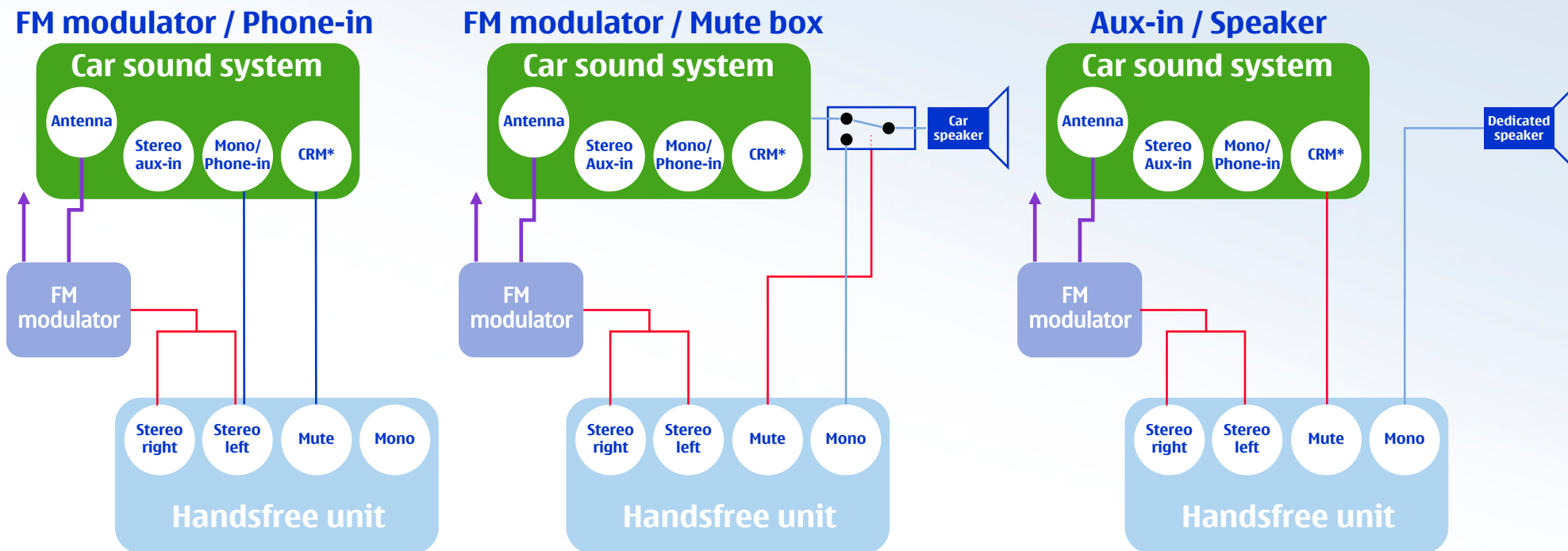


**Required configuration:** set the car kit to **stereo mode**. Please read the Installation Guide provided in the sales package for further information.

\* Please note: CRM can be left open in the event that the car sound system does not support the connection.

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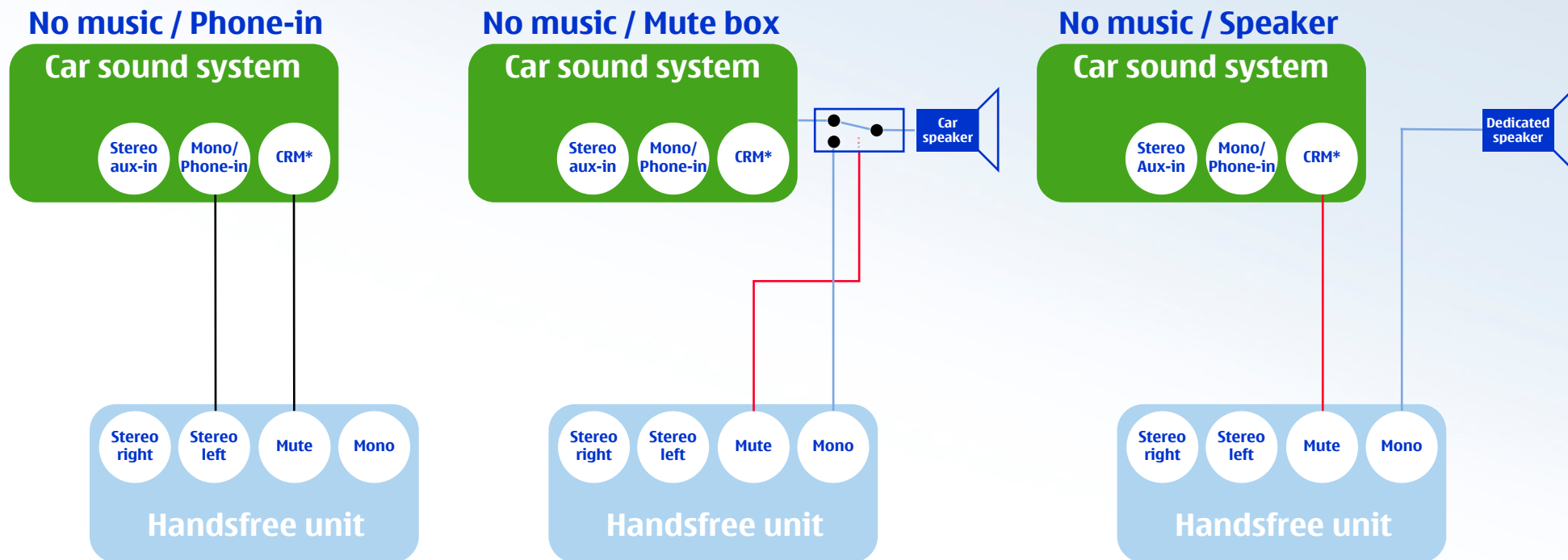
## Installation modes: hands-free and music (2)



**Required configuration:** set the car kit to **stereo mode**. Please read the Installation Guide provided in the sales package for further information.

\* Please note that CRM can be left open in the event the car sound system does not support the connection.

# Installation modes: hands-free only



**Required configuration:** set the car kit to **mono mode**. Please read the Installation Guide provided in the sales package for further information.

\* Please note: CRM can be left open in the event that the car sound system does not support the connection.



### Connection options for music and voice



### Installation and placement of components in the car



### Connection options for phone and music player



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# Connection options

In order to ensure correct car sound system mute and audio volume behavior, voice and music must be handled differently.

Various connection options – which can be freely combined – are available for each.

## Overview of connection options:

- **Voice:**
  - Phone-in
  - Mute box (i.e. relay to switch car speakers between sound system and car kit)
  - Speaker
- **Music:**
  - Aux-in
  - CD changer port
  - FM modulator (wired or wireless)

## Voice

Phone-in



Mute box



Speaker



## Music

Aux-in



CD changer port



FM modulator



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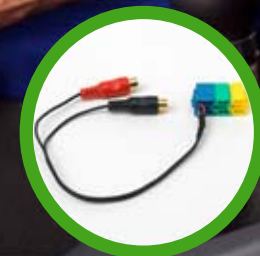


## Car sound system aux-in

- Audio signals: from Nokia Multimedia Car Kit CK-20W line-out to aux-in of car sound system

### Cables/Adapters needed:

- Cable between Nokia Multimedia Car Kit CK-20W (3.5 mm jack) and aux-in
- Not standardized, but adapter cables for most aftermarket and OEM sound systems available



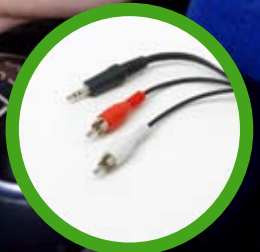
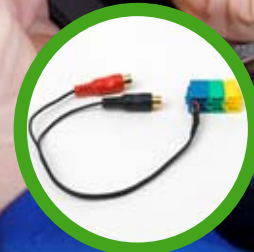
## Car sound system CD changer port

- Audio signals: from Nokia Multimedia Car Kit CK-20W line-out to CD changer port of car sound system\*

### Cables/Adapters needed:

- Cable between Nokia Multimedia Car Kit CK-20W (3.5 mm jack) and the CD changer port
- Not standardized but adapter cables for most aftermarket and OEM sound systems available

- \* The CD changer port and aux-in of the car sound system are similar, with the exception of the connection jack arrangement.





## FM Modulator (wired)

- Audio signals from Nokia Multimedia Car Kit CK-20W stereo line-out to audio-in port of FM modulator
- Radio frequency signals from FM modulator to one of the radio channels

### Cables/Adapters needed:

- Cable between Nokia Multimedia Car Kit CK-20W (3.5 mm jack) and audio input of modulator
- Adapter for antenna connector may be required





### FM transmitter\*)

- Audio signals from Nokia Multimedia Car Kit CK-20W line-out to audio-in port of FM modulator
- Radio frequency signals from FM modulator are transmitted to car radio antenna

#### Cables/Adapters needed:

- None (adapter for 3.5 mm jack may be required)

\* Availability of individual products may vary by region. Check and comply with national/local laws regarding the use of a radio transmitters.



## Car sound system phone-in

- Audio signals: stereo left from Nokia Multimedia Car Kit CK-20W line-out to phone-in port of the car sound system
- Mute signal from power cable to car sound system

### Cables/Adapters needed:

- Adapter cable from line-out (3.5 mm jack) to the phone-in of car sound system (caution: do not use speaker-out, as it carries a mono signal only)
- Splitter may be required to simultaneously connect music signal



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### Mute box

- Mute box overrides front speakers; car kit feeds speakers directly
- Audio signals from Nokia Multimedia Car Kit CK-20W speaker-out (mono) to mute box
- Mute signal from power cable to mute box

#### Cables/Adapters needed:

- Adapter from ISO to proprietary connector for car sound system and speaker may be required
- Speaker connectors not standardized (ISO, VDA etc.), but adapter cables for most aftermarket and OEM sound systems available
- Cable from 3.5 mm jack to the mute box





# Speaker

## Dedicated speaker

- Voice signals from Nokia Multimedia Car Kit CK-20W speaker-out (mono) to speaker (cable permanently attached to speaker)
- Mute signal from power cable to car sound system

### Cables/Adapters needed:

- Connector to transmit mute signal to car sound system may be required (e.g. mini-ISO, Fakra)



### Recommended placement of components



**Input device**

Best place is on the center console within reach.



**Microphone**

Best place is near the rear mirror pointing to the driver's mouth.



**External/ Separate speaker**

(for handsfree voice audio in mono quality only)



**GPS receiver**



**Handsfree unit**

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# Wired connection of phone and music player

- Position mobile holder for optimum accessibility and visibility for the driver; avoid all possible interference with vehicle operation and airbag function\*
  - **Select the right cable for the device:**
    - Data cable for a mobile phone with Pop-Port™ connector
    - Audio and charging cable to connect a mobile music player with 3.5 mm jack connector and to charge mobile phone
  - **Note:** the audio and charging cable can be connected to two devices; a clip is included to secure the cable while not in use
- \* Additional antenna couplers are standard equipment or available options for some Nokia mobile holders



### Installing the microphone close to the rear mirror

- Best place for installation is near the rear mirror
- Use the Velcro tape to properly fix the microphone
- Optimum performance is gained when the microphone points to the driver's mouth



## Alternative ways of installing the external microphone

### Alternatives

- Best place for installation is close to the rear mirror
- It is also possible to install the microphone at the A-pillar (when driving with open window noise might be disturbing the phone conversation at the other side)
- In both situations best performance is reached when the microphone points to the speaker's mouth
- To avoid echoes microphone should point to a different direction rather than to the loudspeaker





## Setup and check

- Set audio mode of the car kit: stereo or mono
- With the car kit not yet switched on, press the Navi™ wheel, then hold down the end key for ten seconds
- Check all cable connections using a mobile phone – possibly customer's phone

Check all functions by placing and receiving calls and playing music

Functions to check	How to check?
Power, IGNS	Switch on/off
Car sound system mute	Place call while playing radio/ CD
Audio connections to car	Place call/ play music via car kit
Cable connection to phone	Place call
Microphone	Place call – listen at other end
Input device	Re-dial or accept phone call

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## Troubleshooting – audio problems

- Check to ensure that phone is connected to car kit. A good test: is audio routed to phone's speaker and microphone?
- For phone-in, check that mute signal is connected properly
- Check that the car sound system is set to receive audio through the stereo input
- Make sure the mono/stereo mode setting matches the selected installation option
- Determine whether the phone model is included in the compatibility list in the support area for the car kit at [www.nokia.com](http://www.nokia.com)
- Ensure that the car kit uses the left channel of the stereo output connector. The mono output of the car kit is designed for use with a dedicated speaker and does not work properly when connected to a car sound system.
- Check that the car kit microphone is not muted.

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## Troubleshooting – problems with connecting via Bluetooth technology

- Ensure that phone's Bluetooth feature is activated
- Make sure no other phone is connected to the car kit via cable
- Initiate search from phone, after the LED of the input device stops flashing
- Ensure that phone is set to connect to the car kit automatically when the car kit is switched on

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# Backup

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## Power supply 1

- Power cable

Identify the terminals for connecting the four wires that make up the cable harness of the car kit



Some vehicles do not come equipped with an IGNS connection. This connection is not necessary for operation of the Nokia Bluetooth Display Car Kit CK-15W. The blue wire can be left unconnected.

### Main supply (red) wire:

The main supply wire must be connected to a main supply terminal. To do so, locate a main supply terminal/wire with a constant +12 V power supply. These are available at the:

- Car battery
- Fuse box
- Car sound system

### Ignition-sensing (blue) wire:

To activate the ignition-sensing functionality, the ignition-sensing wire must be connected to either of the following:

- The ignition-sensing wire/terminal in the fuse box
- The sound system position-sensing terminal/wire located behind the sound system

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### Power supply 2

- Power cable

Identify the terminals for connecting the four wires that make up the cable harness of the car kit



If the radio does not support the mute feature, use a relay to provide the feature (with the customer's consent). Read the car sound system manual before touching any wires behind the unit.

#### Ground (black) wire

The system must be connected to a ground point on the chassis of the car. Generally, a ground point can be found:

- Near the battery
- Near the fuse box
- Under the glove compartment

#### sound system mute (yellow) wire:

Nokia Car kits offer a feature that mutes the car sound system automatically during phone calls. To activate this feature, connect the mute wire to the mute terminal on the car sound system, if available.

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Many jurisdictions have laws regarding the use of a phone in a vehicle environment. Obey all local laws. Always keep your hands free to operate the vehicle while driving. Your first consideration while driving should be road safety.

The Nokia Multimedia Car Kit CK-20W should be installed by a qualified professional.

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