

# CARK112 Installation Guide

**NOKIA**  
CONNECTING PEOPLE

## Introduction

This installation guide has been prepared to provide the basic information necessary to install the car kit. This guide is not intended to be definitive, because different types and models of vehicles will require different installation work. The information given is for general guidance only.

The terms of warranty demand that this car kit be installed by an experienced installer and only genuine Nokia parts are used. An end user should never attempt to install this car kit without professional assistance as the installation requires special tools and knowledge.

All installations should take into account any special requirements of the customer. However, should the customer require an installation that is illegal or unsafe these facts must be pointed out to the customer and a policy of non-compliance adopted.

Please refer to the phone's User's Guide for instructions on the phone's operation, care and maintenance, including important safety information.

Note: Read the warnings below before beginning the installation procedure.

## **WARNINGS**

- 1. ENSURE THAT THE VEHICLE'S BATTERY IS DISCONNECTED BEFORE YOU START THE INSTALLATION PROCEDURE, AND THAT IT REMAINS DISCONNECTED DURING THE PROCEDURE.**
- 2. DO NOT SMOKE OR USE OPEN FLAMES WHEN WORKING NEAR THE VEHICLE'S FUEL SYSTEM.**
- 3. ENSURE THAT THE VEHICLE'S ELECTRICAL CABLES, HYDRAULIC LINES, FUEL LINES, AND SAFETY EQUIPMENT ARE NOT DAMAGED DURING INSTALLATION.**
- 4. ENSURE THAT NORMAL CONTROL AND OPERATION OF THE VEHICLE IS NOT IMPAIRED BY THE INSTALLATION, PARTICULARLY THE BRAKES AND STEERING. ENSURE THAT AIRBAG OPERATION IS NOT OBSTRUCTED.**
- 5. ELECTRONIC AND OTHER SOPHISTICATED SYSTEMS (e.g. SPEED CONTROL, ABS ANTI-LOCK BRAKE, FUEL INJECTION-, NAVIGATION-, AND AIR-BAG SYSTEMS) ARE RELATIVELY IMMUNE TO MALFUNCTION CAUSED BY NEARBY RADIO TRANSMISSIONS. HOWEVER, SHOULD YOU EXPERIENCE FALSE OPERATION OF THESE SYSTEMS OR ARE IN ANY DOUBT WHATSOEVER AS TO THEIR FUNCTIONALITY, PLEASE CONSULT THE VEHICLE'S DEALER.**
- 6. THE CAR KIT IS SUITABLE FOR USE ONLY IN VEHICLES WITH A 12 V NEGATIVE GROUNDING. USE ON OTHER SUPPLY VOLTAGES OR ALTERNATIVE POLARITY WILL DAMAGE THE EQUIPMENT.**
- 7. THE PHONE SHOULD NOT BE LEFT SWITCHED ON FOR EXTENDED PERIODS WITHOUT RUNNING THE VEHICLE'S ENGINE. FAILURE TO COMPLY COULD DRAIN THE VEHICLE'S BATTERY.**

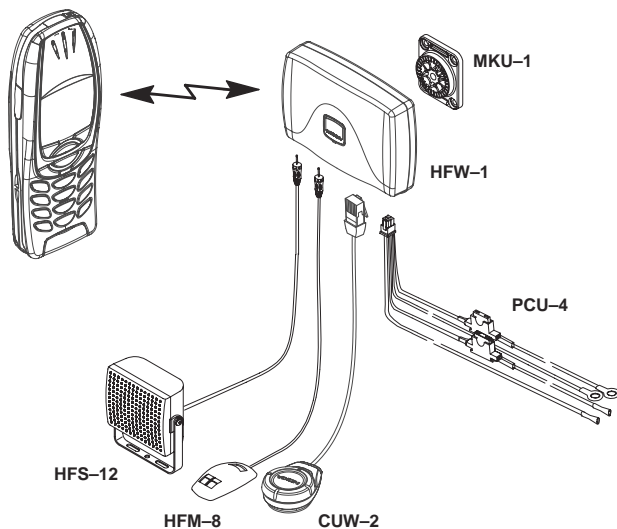
# Unpacking

Carefully unpack the equipment and ensure that the following items are present.

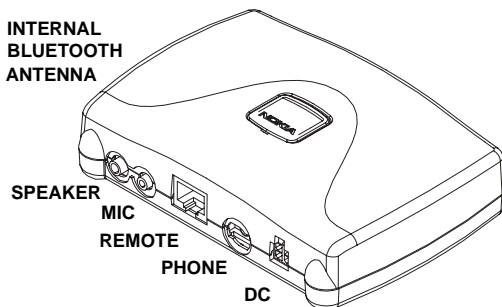
---

Wireless Hands Free Unit	HFV-1
Remote Control Button	CUW-2
Power Cable	PCU-4
Mounting Plate	MKU-1
HF Microphone	HFM-8
HF Speaker	HFS-12

---



## Wireless HF Unit HFW-1



The HFW-1 is used in a fixed car installation and it offers a wireless handsfree function, a fast charging function when a phone is connected into it by a charging cable (phone specific, not supplied with CARK-112) and a wireless connection to external devices.

The HFW-1 unit is attached to the vehicle interior using the mounting plate MKU-1. HFW-1 is secured to MKU-1 with a screw (included with MKU-1).

Power is supplied to DC socket from the vehicle's battery via the power cable PCU-4.

The HF microphone HFM-8, connects to the MIC socket. And the HF speaker HFS-12, connects to the SPEAKER socket.

PHONE socket is for the charging of the phone (charging cable phone specific - not included with car kit).

The HFW-1 is always connected to a car battery. To save the car battery the HFW-1 goes to a sleep mode. Sleep mode is activated if: 1. the car is not running and a phone is not connected by a charging cable and there is no wireless traffic or 2. charging of the phone has been stopped.

### Installation

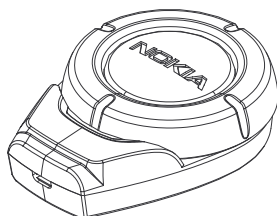
After tightening the MKU-1 screws, secure HFW-1 installation to the MKU-1 mounting plate with the screw going through HFW-1. The Nokia logo lid is placed on the HFW-1 to cover the recess.

Do not install the HFW-1 unit in a metal casing (or similar location) that can prevent the unit from transmitting radio frequencies. Aim the internal Bluetooth antenna (see picture) towards the user (Bluetooth phone).

## Mounting Plate MKU-1

MKU-1 is a fixed position mounting plate. It is used to attach Wireless HF Unit (HFW-1) to the vehicle.

## Remote Control Button CUW-2



The Remote Control Button (CUW-2) allows convenient operation of the phone. The car installation includes a Remote Control Button CUW-2, which is connected to the HFW-1 with a cable (REMOTE socket). The speaker volume of the HFW-1 can be controlled with a ring (rotary switch) in the CUW-2. It is possible to receive a call or to dial by pressing a send/end push button in the CUW-2 (also voice dialing).

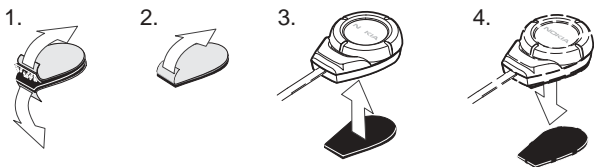
To read more about the use of CUW-2, see CARK112 User's Guide.

## Installation

The positioning of the Remote Control Button CUW-2 is important, to achieve the most comfortable position for the user. The location of the CUW-2 should be selected so that the visibility of the Remote Control Button is good under all lighting conditions, but not so that the driver's attention is easily distracted. The CUW-2 should be located so that the driver can easily reach it. Under no circumstances should the CUW-2 prevent the driver from controlling or operating the vehicle in any way or observing traffic.

To attach the Remote Control Button:

1. Detach the two grip pads from each other.
2. Peel off the protective sheet (pad with soft fabric) from the adhesive side and attach the pad to the desired location in the car. Make sure the surface where you attach this pad is dry and clean from dirt and dust.
3. Peel off the protective sheet (pad with rugged fabric) from the adhesive side and attach the pad to the bottom of the Remote Control Button.
4. Press the Remote Control Button against the pad in the car until button is firmly in place.



## HF Microphone HFM-8

The HF microphone should be installed according to the directions in the separate microphone installation guide. Ensure the microphone is as close to the driver's mouth as possible, and attached to a surface that is mechanically quiet. The microphone should be mounted at least 3 ft./1 m away from the handsfree unit speaker to avoid acoustic feedback.

Insert the HFM-8 plug into the MIC socket in HFW-1 and twist 90° clockwise to lock firmly in place.

## HF Speaker HFS-12

Install the HF speaker so that it is at least 3 ft./1 m away from the HFM-8 microphone to avoid acoustic feedback. Insert the HFS-12 plug into the SPEAKER socket and twist 90° clockwise to lock firmly in place. Under no circumstances should the HFS-12 prevent the driver from controlling or operating the vehicle in any way or observing traffic.

## Power Cable PCU-4

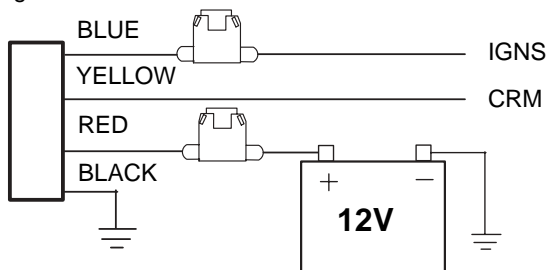
The power cable connects the wireless handsfree unit HFW-1 to the vehicle's power supply (DC socket).

The red wire must be connected to the + voltage on the vehicle's power supply via the supplied fused connector. The black wire must be attached to a good negative GND connection.

The blue ignition sense (IGNS) wire is connected to +12 V voltage controlled by the vehicle's ignition key via the supplied fused connector.

See section "Ignition Sense".

The yellow wire is used for car radio muting (CRM). The line goes down to 0 volts during a call. See section "Car Radio Muting".



### Cables

Ensure cables are routed as far away as possible from the vehicle's electronic systems (refer to WARNINGS)\*. Also, ensure that cables are not subjected to undue mechanical stress e.g. under seats or against sharp edges.

\* To prevent disturbance, cables should be routed as far away from the interference source as possible.

### Ignition Sense IGNS

The blue wire of the power cable PCU-4 is used for the ignition sense feature. The use of ignition sense is recommended to prevent accidental draining of the car's battery and making the automatic connection to the phone. The wire is connected via a 1 A fuse to a 12 volt potential that is controlled by the ignition

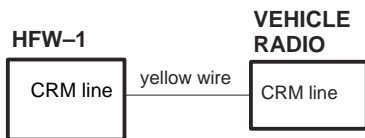


key. Do not connect it directly to the high voltage sections of the ignition circuit.

## Car Radio Muting CRM

The car kit offers a feature that can mute the car radio automatically during a conversation. The car radio muting feature is based on a grounded line, so it means that in standby, the yellow wire (CRM) is not grounded and car radio works normally, but during a call, line is grounded and car radio is muted.

Some radios have separate supplies for amplifiers and motors, and another for memory backup purposes. Very often these radios also have a secret code system, which activates itself if a break in the memory supply is detected. Be careful when installing the relay not to break the memory supply (usually marked ACC or +MEM)..



## Testing

Once installed, the equipment should be tested to ensure that it is operating satisfactorily and that the position of the units does not impair on the driver's ability to control and operate the vehicle in any way.

You can reset the car kit to the original settings, for example, to change the default user of the car kit.

To reset the car kit: Detach the microphone cable from HFW-1 unit for less than 5 seconds. After the car kit has been reset, the indicator light of the remote control button is shown for several seconds.

Use the phone to make a call when the vehicle is parked with the engine running. During the call, switch off the engine. Ensure that the phone is operational with the engine running and with the engine switched off.

For operating information refer to the CARK112 User's Guide or User's Guide supplied with the phone.

