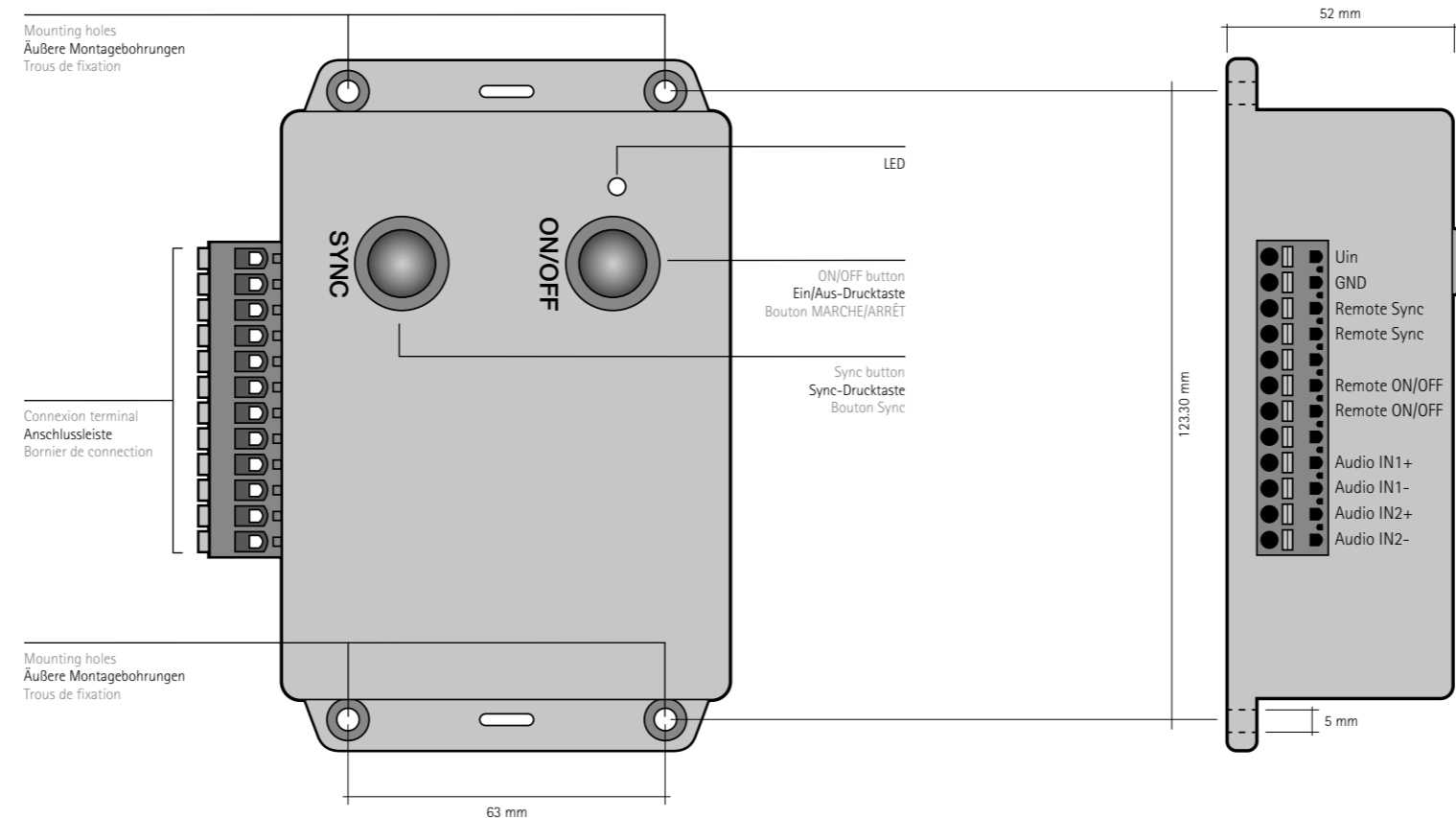


CarKit DM

Installation and operation guide
Installations- und Benutzerhandbuch
Guide d'installation et d'opération

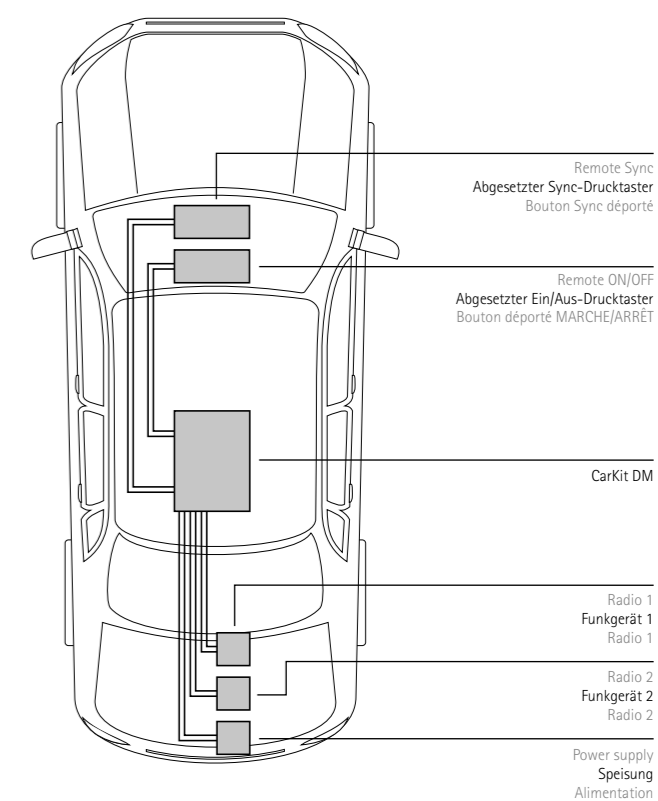
General information Allgemeine Hinweise Informations générales

1



Example of fully equipped car Beispiel eines komplett ausgestatteten Fahrzeugs Exemple de voiture entièrement équipée

3



CarKit DM installation – configuration options 3

For basic operation, your CarKit DM must be connected to a power supply and an audio signal. The ON/OFF and the Sync buttons are used to operate the device. If the device is installed in such a way that the buttons cannot be reached, both functions can be operated using remote buttons. To enable this, the buttons must be wired in line with the instructions number 2.

Positioning the CarKit DM in the vehicle

In order to achieve the best range, the CarKit DM should be installed in a position that is as central as possible. Please remember that metallic structures and objects will obstruct the radio waves between the CarKit DM transmitter and the receiver worn on the body, which means they can interfere with reception.

Mounting the CarKit DM

To cushion knocks and minimise vibrations, the CarKit DM unit should be mounted securely. Attach it using the external mounting holes on the unit or use Velcro to attach it to an appropriate surface.

Operation

See DM Wiring Operating Manual.

Troubleshooting

Problem	Error/Solution
DM receiver not receiving an audio signal	<ul style="list-style-type: none"> Check battery in receiver. Repeat synchronisation – Synchronisation – button > press for 2 seconds Reception confirmation must be audible Check audio input and power supply to CarKit DM Check volume control on audio stream source (e.g. mobile radio unit)
LED on CarKit DM not illuminated	<ul style="list-style-type: none"> Check power supply Push and hold ON/OFF button for at least 0.5 seconds

Audio signal to DM receiver being interrupted	<ul style="list-style-type: none"> DM receiver is outside of the transmission range of the CarKit DM Synchronisation was started and is running (~5 sec) Audio signal to the CarKit DM is being interrupted
Beeps in DM receiver	<ul style="list-style-type: none"> If the DM receiver was outside of the CarKit DM transmission range for more than 45 seconds, a beep will be generated when a connection to the network is established again

Fact & figures

Operating temperature	-15 to +60 °C
Storage temperature	-20 to +60 °C
Encryption	AES 128bits
Current consumption ON	35 mA
Current consumption OFF	1 mA
Audio streaming range	Full coverage inside car
Synchronization range	Full coverage inside car
Working frequency	2.4GHz
Technology	Proprietary protocol - frequency hopping
Size	137mm x 103mm x 52mm

Standards

The CarKit DM was tested against the following standards:

- UN E/CE/324/Add.9: Regulation No.10 | EN300328 | EN301489-1 | EN301489-9 | EN301489-17 | EN301489-18 | EN60950-1
- E14 – certificate in accordance with UNECE regulation No10, which deals with electromagnetic compatibility in vehicles (this certificate applies for all countries participating in the "UNECE Regulation").

CarKit DM terminal block

Pin	Signal	Function	Range	Remark
1	Uin	Power supply	6-26V	
2	GND	Ground power supply		
3	Remote Sync	Connection for remote Sync button		Connect a push button (momentary action) between pins 3 and 4
4	Remote Sync			
5				Internally connected to power GND
6	Remote ON/OFF	Connection for remote ON/OFF button		Connect a push button (momentary action) between pins 6 and 7
7	Remote ON/OFF			
8				Internally connected to power GND
9	Audio IN1+	Audio source 1, balanced input with Audio IN1-	Max 7.8Vrms Min 25mVrms*	
10	Audio IN1-	Audio source 1, balanced input with Audio IN1+	Max 7.8Vrms Min 25mVrms*	Connect to GND if Audio IN1+ is single ended
11	Audio IN2+	Audio source 2, balanced input with Audio IN2-	Max 7.8Vrms Min 25mVrms*	
12	Audio IN2-	Audio source 2, balanced input with Audio IN2+	Max 7.8Vrms Min 25mVrms*	Connect to GND if Audio IN2+ is single ended

*Only applies when used with DM fittings.

Important information

Synchronisation should be carried out in a safe location. If one or more additional receivers are to be attached during an operation, an assessment of the operation area must be carried out beforehand. This simple measure is necessary to prevent undesired temporary access to the voice content by third parties.

General notice 1

- The CarKit DM (Digital Modulation) from Phonak is a unique, state-of-the-art, encrypted wireless transmitter, which has been designed especially for use during covert operations in vehicles.
- The CarKit DM has two symmetrical audio input. When receiving two audio signals at the same time, these are mixed and then sent together.
- The digital and encrypted signal can only be received by a DM-compatible device, which was synchronised with the transmitter beforehand.
- We recommend reading the instructions carefully before installing and using the CarKit DM.

Wiring the CarKit DM 2

- The CarKit DM is fitted with a terminal block, via which the required leads are connected.
- Leads with a cross section of up to 2.5 mm² should be used for these connections.
- The power supply for the CarKit DM can be taken directly from the electrical system of the vehicle, such as the cigarette lighter, for example.
- Important notice: the CarKit DM still draws around 1mA from the power supply even when switched off.

