Troubleshooting Guide

Carkit does not start up. Check if there is 12V between the black and the red wire and also between the black and blue wire, in the 16 pin connector when the car engine is running. If there is not 12v on both wires please check the following:

- **No power on RED Constant 12V wire:**
  1. Check that the bullets on the supply wires are properly connected. The constant supply wires are the red and black wires.
  2. Check for a blown fuse on the Audio2Car harness or in the cars fuse-box.
- **No power on BLUE Ignition wire and DIP Switch 1 is OFF:** Internal IGNIBOX circuitry is active and a switch On delay of 0-30 seconds after engine is started should be expected. If the switch On delay is unacceptable please connect the blue wire in the 24 pin connector to a real ignition source and set DIP switch 1 ON.
- **No power on BLUE Ignition wire and DIP Switch 1 is ON:** Ignition input in 24 pin connector is used to switch On and Off the carkit.
  1. Check that the bullets on the supply wires are properly connected. The Ignition supply wires are the blue and black wires.
  2. Check for a blown fuse on the Audio2Car harness or in the cars fuse-box.
  3. The car may require an alternative ignition source. See installation step 4.

The carkit does not turn off when the key is removed from the ignition barrel. Troubleshooting this issue depends on the state of DIP switch 1:

- **DIP switch 1 is OFF:** Internal IGNIBOX circuitry is active and a switch off delay of 0-4 minutes should be expected. Extended to 5-9 minutes if DIP switch 2 is ON. See installation step 4. If the switch off delay is unacceptable please connect the blue wire in the 24 pin connector to a real ignition source and set DIP switch 1 ON.
- **DIP switch 1 is ON:** Ignition input in 24 pin connector is used to switch On and Off the carkit. Please check if a real ignition source is connected to the blue wire in the 24 pin connector. There should be no voltage on the blue wire when there is no key in the ignition. See installation step 4.

Not all speakers are muted. The MAI box should always be Box 1 on the Audio2Car cable. Please make sure the MAI box is connected to the 24 pin connector with the Green, White, Gray and Purple wires. For further troubleshooting please see the instruction sheet for the Audio2Car cable.

No radio sound due to MAI box constantly muting. The MAI box may constantly be sensing sound on the input in 4 pin connector causing the box to mute constantly. Please check the following:

1. If DIP switch 6 is ON try setting it OFF to lower the sensitivity of the audio sense.
2. If the lineout from carkit is not connected to the 4 pin connector on the MAI box please remove the 4 pin connector from the box to avoid sensing noise.
3. The carkit may be defective. Please try another carkit.

Carkit speech is chopped or falling out. The chosen volume setting may be activating the amplifiers overload protection. Please turn down volume on carkit or select a lower base volume on the MAI box using DIP switch 7 & 8.

Carkit music is chopped or falling out.

1. Try increase volume of carkit to ensure activation of Audio sense.
2. Try increase audio sense sensibility by switching DIP switch 6 ON.
3. The chosen volume setting may be activating the amplifiers overload protection. Please turn down volume on carkit or select a lower base volume on the MAI box using DIP switch 7 & 8.

Excessive noise when using carkit. Please check the following:

1. Check all connections between MAI box and carkit. Any bad connection will give excessive noise.
2. Check volume setting on MAI box. Always select the lowest acceptable base volume on the MAI box.

Radio sound is muted but there is no carkit speech. Please check the setting of DIP switch 5.

- DIP switch 5 is ON: Your carkit may not send out carkit speech trough the line out. Set DIP switch 5 OFF.
- DIP switch 5 is OFF:
  1. Check connections between MAI box and carkit.
  2. Check that the MAI box is connected to the 24 pin connector with the Green, White, Gray and Purple wires.
  3. Try a known good carkit.

Carkit sound is in the wrong speakers or there is no carkit sound. See the instruction sheet for the Audio2Car cable.

Radio will not turn on or not working properly after installation. See the instruction sheet for the Audio2Car cable.

See our complete Drive & Talk mute-box program on www.kram.dk

Audio2Car
The professional mute

UK/US

Installation instruction

"MAI" 3G Drive & Talk Amplified mute-box upgrade for Audio2Car
Including IGNIBOX circuitry

EN026-V01

Drive & Talk
The professional mute

Product description
"MAI" 3G Drive & Talk Amplified mute-box upgrade for Audio2Car Including IGNIBOX circuitry

The 3G Drive & Talk Amplified Mutebox item no. "MAI" is the perfect solution for music carkits without stereo amplifier. It upgrades an Audio2Car solution to a Drive & Talk solution. This enables the use of Audio2Car cables for carkits without build in mute relays. The build-in stereo amplifier enables Music output in 4 speaker channels with carkits that only have an Line-out for music playback. The "MAI" box also includes the artificial Ignition circuitry known from the Kram IGNIBOX.

Speaker-function: This is achieved by using the relays in the mute-box, the radio sound is muted and the sound from the carkit is sent via the build-in amplifier through the cars speakers. This way you will achieve a perfect hand free sound without interference from the car radio.

Power supply of the carkit: All 3G mute-boxes are supplied directly from the Audio2Car cable. The carkit supply is available in the 16 pin connector on the carkit side of the mute-box. If the chosen Audio2Car harness does not include an ignition source the "MAI" box build in artificial ignition circuitry can be used. This way you can easily supply the carkit and cutting of the cars wiring loom is minimized.

Mute function: The mute from the carkit it connected, through internal circuitry and protected FET, to the yellow mute wire in the Audio2Car cable.

Audio inputs: The "MAI" box has two audio inputs. A High level input in the 16 pin connector for input from Carkit amplifier and a Low level input in 4 pin connector for input from Carkit Aux output or external source. The input in the 4 pin connector also includes a audio sense circuitry. Both inputs are fully balanced for maximum noise rejection.

Aux integration:
The 4 pin connector on the "MAI" box is used as a second input to the build in amplifier and includes a music sense circuit. It does not have a direct connection to the 4 pin AUX connector on the Audio2Car harness. If you do not want music to be played by the build-in amplifier then a Kram Aux solution should be connected directly to the carkit adaptor. This will allow the use of the car sound system amplifier for Music playback and thereby achieving higher sound quality.

Technical Specifications

General Description:	CE approved, Amplified 3G Drive & Talk mute-box with 5 DPDT relays, Protected FET Mute & Ignition outputs, Audio sense, IGNIBOX circuitry and holes for zip-ties.
Amplifier Description:	Highly efficient 2x15W Class D amplifier with 4 step volume control and overload protection. One Low level and one High level fully balanced input circuits.
Voltage supply range:	10-16V DC. Protected against reversed power supply. Value below are based on a 12V DC supply.
Load dump protection:	Load dump protected according to ISO 7637-2:1990 Pulse 5.
Current usage:	<2 mA (passive) / 25 mA (stand by) / 5 A (peak power)
Mute activation voltage:	Active : < +1,75VDC Passive : > +3,25VDC
Max source current by Ignition output:	1 Amp. Overload protected.
Max source current for Mute-input:	0,3 mA. (39k pull up) Mute active when grounded.
Max sink current for Mute-output:	700 mA. Short circuit protected.
Minimum Fuse size:	5 Amp for constant supply, 1 Amp for Ignition supply
Maximum Fuse size:	7 Amp for constant supply, 5 Amp for Ignition supply
Maximum radio output pr. speaker:	90 Watt RMS / 125 Watt music power @ 4 Ohm (3 Amp relays)
IP class:	IP51
Size :	L 130 x W 85 x H 9 mm

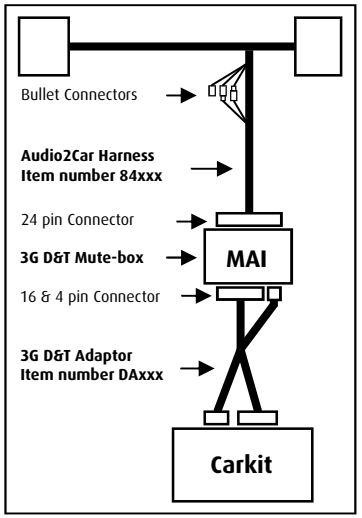
Configuration chart for 16 & 4 pin connector:

Line in Right -	Line in Left -		Input LF+	Input RF+				12V Ign.	12V Const.
Line in Right +	Line in Left +		Input LF-	Input RF-			Mute in		Gnd

Connectors seen from cable entry side

Drive & Talk
The professional mute

Installation description



1st: Install the Audio2Car cable according to the Audio2Car instruction sheet.

2nd: Connect the MAI box. Between the 24 pin connector from the Audio2Car cable with the green, white, gray, and purple speaker wires and the 16 pin and 4 pin connector from the 3G Drive & Talk adaptor.

3rd: Connect the carkit to the carkit adaptor. If the carkit does not have a Aux output or Aux input is not connected to the carkit adaptor please remove the 4 pin connector from the MAI-box to avoid noise issues.

4th: Check ignition source.
- If the Audio2Car cable has a useable ignition source then set DIP switch 1 = On to disable IGNIBOX circuitry and go to step 7.
- If the Audio2Car cable does not have a useable ignition source then set DIP switch 1= Off to activate IGNIBOX and go to step 5.

5th: Make a function check. (Only when using IGNIBOX circuitry) The carkit should turn on within 5-30 sec. after the engine is started and should turn off 0-4 minutes after the engine is turned off and key is removed. Extended to 5-9 minutes if the dip switch 4 is set to On. See step 6. If the carkit does not turn ON please recheck connection of Constant 12v and ground supply. **Note: If a call is in progress when the car is turned off the ignition source will be kept ON until the call has ended.**

6th: Choose switch off delay. (Only when using IGNIBOX circuitry) The ignition switch off delay can be extended by setting dip switch 2 to On. An extended switch off delay is used for cars with automatic engine start/stop system to avoid the IGNI-BOX turning off the ignition source when the car is stopped at a red light with the engine turned off. When Dip switch 2 is switched On the turn off delay is extended by 5 minutes. (DIP switch 2 has similar function to Orange wire Loop on standard IGNIBOX)

7th: Choose appropriate dip switch settings.
The MAI box includes 8 dip switches to choose preferred function. Always choose the lowest volume setting of the MAI box where the carkit can reach distortion to avoid excessive noise. Dip switch function can be seen at the bottom of the page.
Recommended settings for carkits:

- **Bury carkit:** Dip 5 = Off, Dip 6 = On, Dip 7 = On, Dip 8 = On and switch OFF Audio feedback in the carkit menu. Music volume setting on carkit should be at least 20%.

- **FWD Flash/Look/Drive/2010 carkit:** Dip 5 = On, Dip 6 = On, Dip 7 = Off, Dip 8 = On.

- **Motorola T605 carkit:** Dip 5 = On, Dip 6 = Off, Dip 7 = On, Dip 8 = On.

- **Nokia CK100, CK300 & CK600 carkit:** Dip 5 = On, Dip 6 = On, Dip 7 = On, Dip 8 = On.

- **Parrot Mki carkit:** Dip 5 = On, Dip 6 = On, Dip 7 = Off, Dip 8 = On and switch ON "Mute on streaming" in the carkit menu.

8th: Test the carkit. When the carkit, adaptor cable and Audio2Car cable is installed correctly carkit speech should be heard in the two front speakers channels and carkit music should be heard in 4 speaker channels.
For troubleshooting see troubleshooting guide on last page.

Function of DIP switches:

DIP 1 = IGNIBOX circuitry On/Off.	On: Ignition wire input is used	Off: IGNIBOX circuit is used
DIP 2 = IGNIBOX switch off delay Long / Short:	On: Long delay	Off: Short delay
DIP 3 = No function		
DIP 4 = No function		
DIP 5 = Audio input used when Mute is Active:	On: Audio input in 4 pin	Off: Audio input in 16 pin.
DIP 6 = Audio sensitivity for input in 4 pin:	On: High sensitivity	Off: Low sensitivity.
DIP 7 = Amplifier volume:	On: + 5 dB	Off: No dB is added.
DIP 8 = Amplifier volume:	On: + 10 dB	Off: No dB is added.

Always choose the lowest volume setting on MAI box where the carkit can reach distortion to avoid excessive noise.