c.LOGiC-Interface

C2-C20

For navigation systems
Mercedes Benz
Comand 2.0
Comand APS CD
Comand APS 220

Product features

• full plug and play multimedia interface
• 2 AV-inputs with separate IR-control channel
• control of after-market devices, e.g. DVB-T tuner, DVD-player, DVD-changer, ...
• after-market rear-view camera input activation
• automatic switching to rear-view camera input (only from interface mode)
• rear-view camera power (+12V max. 1A)
• rear-seat-entertainment AV-output
• power on remote out trigger signal (+12V max. 1A) to switch on connected devices
• video-in-motion
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Legal Information

By law, watching moving pictures while driving is prohibited, the driver must not be distracted. We do not accept any liability for material damage or personal injury resulting, directly or indirectly, from installation or operation of this product. This product should only be used while standing or to display fixed menus or rear-view-camera video when the vehicle is moving, for example the MP3 menu for DVD upgrades.

Changes/updates of the vehicle’s software can cause malfunctions of the interface. We offer free software-updates for our 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.

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

Take down the SW-version and HW-version of the interface boxes, and store this manual for support purposes.

If remote function for the connected devices shall be used, additionally an IR-remote cable and Y-adapter are needed, see chapter AV-source(s).
1.2. Check compatibility of vehicle and accessories

| Requirements | Mercedes Benz C-Class (W203) til 04/2004, CL-Class (C215) from 09/2002 til 09/2003, CLK-Class (C208 W208) all years, CLK-Class (C209 W209) til 05/2004, E-Class (W210) all years, G-Modell (W463) til 03/2007, ML-Class (W163) all years, S-Class (W220) from 09/2002 til 09/2003, SL-Class (R230) til 06/2004 |
| Navigation | Comand 2.0, Comand APS CD |
| Limitations | Factory-TV-tuner Must NOT be installed. |
| After-market rear-view cam | Automatic switching to camera only works from c.LOGiC mode |

1.3. Setting the dip switches of the Interface-box C2C-M200

The default dip switch settings of the Interface-box need to be changed ONLY if an after-market rear-view camera shall be connected or if the AV2 of the c.LOGiC shall be deactivated. The dip switches are located inside the Interface-box. For changes it is necessary to open the box. Default settings are:

dip1 = ON, dip2 = OFF, dip3 = OFF

**Note:** Instead of dip switches, there might be jumper 1 to 3.

1.3.1. Automatic switching to rear-view camera

If an after-market rear-view camera shall be connected, in order for the c.LOGiC to automatically switch to its camera input on engaged reverse gear, set dip2 = ON (up).

1.3.2. Deactivating c.LOGiC AV2-input

If only one AV-source shall be connected to the c.LOGiC, we recommend to disable the AV2-input, to avoid customers switching by mistake to black/no picture of the AV2-input. In order to disable the AV-input of the c.LOGiC, set dip1 = OFF (down).
2. Connection schema

3. Installation

Switch off ignition and disconnect the vehicle’s battery! If according to factory rules disconnecting the battery has 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.
3.1. Connections to the Comand

Place of installation is behind the Comand. Remove the head-unit from the dash-board.

1. Remove shell from female 18pin AMP connector of C2C-MB20.

2. Transfer pins 2 (pink), 11 (yellow) and 3 (black) from female 18pin AMP connector of C2C-MB20 to corresponding slots of female 18pin AMP connector of factory harness. If occupied remove and isolate factory wires (take notes before removing).

   Transfer pins 17 (blue) and 18 (yellow) from female 18pin AMP connector of C2C-MB20 to corresponding slots of female 18pin AMP connector of factory harness. If occupied connect additionally to the factory wires.

3. If existing transfer pins 5 and 6 from female 8pin C1 connector of factory harness to corresponding slots of female 8pin C1 connector of C2C-MB20. If existing, other pins remain in the factory connector.

4. Connect loose red wire of C2C-MB20 to pin 5 of chamber A (+12V battery power).

   Connect loose black wire of C2C-MB20 to pin 1 of chamber A (ground).

5. Plug female 18pin AMP connector of vehicle harness into C2 slot of Comand’s male system connector.

6. Plug female 8pin C1 connector of harness C2C-MB20 into C1 slot of Comand’s male system connector.
3.2. Interconnecting Interface-box and harnesses


3.3. Connecting peripheral devices

It is possible to connect up to 2 after-market AV-sources, after-market rear-view camera and rear-seat-entertainment to the c.LOGiC-Interface.

Before final installation of the peripheral devices, we recommend to test-run the c.LOGiC functions to detect incompatibility of vehicle, navigation, factory accessories or peripheral devices as soon as possible.
3.3.1. AV-source(s)

The c.LOGiC has the possibility to connect and remotely control by navigation buttons two pre-programmed devices. The device list in the device control table (appendix A) shows the pre-programmed remote channels and the related IR-remote cables STA-xxx which must be ordered separately for the control of the device.

1. Using the respective STA-xxx IR-control cable, interconnect the blue (yellow) female 3pin AMP connector of harness C2C-MB20 and the IR-port of the AV-source 1 (AV-source 2).


3. The pink ACC-output wire (+12V max 1A) of harness C2C-MB20 can be connected to the ACC-input wires of the connected device to switch it on. It carries +12V when the head-unit is running.
3.3.2. Installing AV-source’s IR-sensor additionally

Additionally to the control via OEM navigation, it is possible to install the original IR-sensor of a connected device. By using the respective Y-adapter (e.g. STA-Y35MM or STA-RJ12) for the IR-Port of the connected device, the controls of navigation AND device’s IR-sensor can be connected and used simultaneously. Installation of the IR-sensor is recommended as the controls via navigation are limited, and not all functions may be covered.

3.3.3. After-market rear-view camera

1. Connect the video RCA of the after-market rear-view camera to female RCA connector R-CAM IN of Interface-box C2C-M200.

2. Connect the green wire of C2C-MB20 to the camera power supply (max. 1A)
   The green wire is high (+12V) when reverse gear is engaged.

   Note: Automatic switching to camera only works from c.LOGiC mode.
3.3.4. After-market rear-seat-entertainment

![Rear-seat-entertainment diagram]


   **Note:** As the output is a full output, not shared with the video signal for the navigation system, splitting the video with an RCA Y-cable might give a good enough picture for two rear-seat-entertainment monitors. If not, or if connecting more than two monitors, use a video splitter.

4. Operation

4.1. Activation of the video-in-motion function

   The video of the c.LOGiC is displayed also in motion.

   **Note:** On vehicles with previously installed factory TV-tuner an extra video-in-motion interface might be necessary. It is not possible to determine this prior to testing.

4.2. Selecting the c.LOGiC as current AV-source

   Push TV button of Comand to choose the c.LOGiC as current AV-source.

4.3. Switching between AV1 and AV2

   After selecting the c.LOGiC as current AV source, longpress the right knob or the "5"-button 3 seconds to switch between AV1 and AV2. Repeat to switch back.

   **Note:** If AV2 is deactivated (see chapter Deactivating c.LOGiC AV2-input), it is not possible to switch to the c.LOGiC’s AV2.
4.4. Assigning device controls

After selecting the c.LOGiC as current AV source, longpress the number “1”-button or shortpress the “RET”-button. The display in the instruments will show “TV 1” and “RC01”. Turn right knob until the device-related IR-code for AV1 as described in device control table (appendix A) is reached. Press right knob to switch to “TV2” and repeat the procedure for AV2. Push right knob to confirm the assignment.

If the vehicle has no MFD display in the instrument panel, you must count the notches when turning the knob (to the right +1, to the left -1). At the same time, remember that the starting point is channel RC01 (the first notch to the right is then already RC02).

Note: The IR-control channel TV1 is preset to RC-Code 41 compatible DVB-T tuners and TV2 is preset to RC-Code 09 for the usbLiNK. If the AV2 is deactivated (see chapter Deactivating c.LOGiC AV2-input), it is not necessary, nor possible to assign device controls for AV2.

4.5. Button assignment table

The button assignment table shows which functions of the connected devices can be executed by Comand buttons. Once an AV-input is activated, the Comand button in the left column will execute the function described in the corresponding device column. The function description equals the remote control buttons of the optional c.LOGiC remote control or the additional device. On the additional device the writing may vary (e.g. AV instead of Source).
Additionally to the head-unit buttons, the steering-wheel buttons UP and DOWN can be used for remote functions. DOWN-button has the same function as 17 on the head-unit and UP-button has the same function as 18 on the head-unit.

4.6. Picture settings

By pressing the button 10, it is possible to switch between 4:3 and 16:9 picture format (Only possible on Comand APS CD/220). To enter the picture settings menu longpress button 13.

The picture settings menu always starts with the brightness settings. The respective current picture value is displayed on the instrument panel.

Press the right knob to change from brightness to colour and contrast (after contrast, the interface starts again with brightness).

Turn the right knob to change the current picture value. To quit the settings menu press button 13.
4.7. Audio settings

To enter the Comand’s audio settings menu press button 12.

5. Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation voltage</td>
<td>10.5 – 14.8V DC</td>
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<tr>
<td>Stand-by power drain</td>
<td>&lt;1mA</td>
</tr>
<tr>
<td>Operation power drain</td>
<td>240mA</td>
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<tr>
<td>Power consumption</td>
<td>3W</td>
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<td>Temperature range</td>
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<td>Weight</td>
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<tr>
<td>Measurements (box only)</td>
<td>90 x 30 x 105mm</td>
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6. Technical Support

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