

Coach Multimedia Solutions

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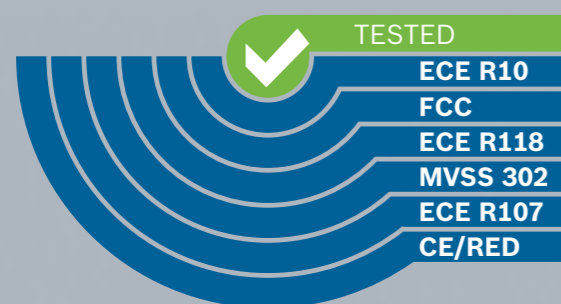
Invented for life





On tour with innovative technology from the market leader – Bosch Coach Multimedia Solutions

Mobile communication, future-proof products, and professional system solutions – Bosch Car Multimedia provides all of this for coaches, intercity buses, city buses, and minibuses too. We supply commercial vehicle OEMs with the full range of multimedia and infotainment solutions. With smart systems, we boost convenience and safety while at the same time enhancing entertainment capabilities. Technology from Bosch turns driving into an experience and makes the passenger cabin become the 3rd living space, where all the benefits of modern travel are made available for passengers to enjoy. It enhances quality of life – which is what today's customer expects.



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Enhanced functionality for the driver and passengers – Coach Audio

The user-friendly audio systems from Bosch incorporate the latest technologies and have been specially developed for the requirements in coaches and buses. Our multimedia system with its high-performance infotainment feature set, the robust radio technology, and the highly adjustable microphones, provide the driver and passengers with enhanced functionality. The technology and design complement one another perfectly and are easy to integrate into any interior.

Professional Line 3

Professional Line 3 is high-end infotainment from Bosch. The Coach Cabin Selector head unit is the central HMI interface for the driver. It is used for controlling all audio, video and navigation components. The concept of “independent audio zones” makes it possible to play the same or different media in the driver and passenger zones.



COACH CABIN SELECTOR PROFESSIONAL PREMIUM

The Coach Cabin Selector (CCS) Professional Premium offers multiple connection options for a convenient user experience with a variety of media. The three microphone inputs, USB, AUX-IN, various connectors, and integrated DVD drive can be controlled conveniently using the remote control.

- ▶ Display: night design in green or red
- ▶ CD/DVD drive with 8x oversampling
 - Available regional codes: RC1, RC2, RC4, RC5
 - Formats: DVD±R (not DL), DVD±RW (not DL), DVD-MP3/WMA, SVCD, VCD, JPEG, audio CD (CCDA), CD-R, CD-RW, MP3-/WMA-CD
- ▶ Door monitoring function through automatic display of the camera images on the 7" cockpit display or the Videobox Monitor when the doors are opened.
- ▶ Radio: FM, SW, AM/MW, LW, WB
- ▶ USB slot
- ▶ Bluetooth telephony
- ▶ Connectivity/CE connectivity
- ▶ CAN connectivity
- ▶ Class-D output stage with 80 watts and 200 watts
- ▶ Operating button with manual on/off for passenger monitors
- ▶ Integrated video switch and connection option for an external video source
- ▶ Control of the DVB-T-Tuner in the Professional Line 3
- ▶ Separate tone settings for driver and passengers
- ▶ MAP: Display of navigation map on passenger monitors
- ▶ CAM: Display of the camera pictures on the driver monitor
 - Switching between four optionally connected cameras possible
- ▶ NAV: Display of navigation on the 7" cockpit display or Videobox monitor
- ▶ Three microphone inputs with priority switching for the driver microphone
- ▶ Integrated IR receiver
- ▶ MAS output for DVD changer and other external sources
- ▶ Tuner frequency ranges (depending on region):
 - FM: 87.5 to 108.0 MHz
 - SW: 5,800 to 6,300 kHz
 - AM/MW: 530.0 to 1,710.0 kHz
 - LW: 153.0 to 279.0 kHz
 - WB: 162.40 to 162.55 MHz
- ▶ Operating voltage: 12 V via CPA
- ▶ Operating temperature: -20 °C to +70 °C
- ▶ Format: 1 DIN
- ▶ Weight: 1,000 g
- ▶ Standards: CE, E1, FCC, RoHS, MVSS 302, ECE R118, WEEE

Professional Line 3



COACH CONTROL DISPLAY PROFESSIONAL

The Coach Control Display (CCD) Professional is the information and display medium of the Professional Line 3 system and is equipped with an integrated CD MP3 drive. It displays the audio files and videos selected for the driver and passengers in addition to other system information.

- ▶ Display: Night Design in green or red
- ▶ CD drive with 8x oversampling
Formats: Audio CD (CCDA), CD-R, CD-RW, MP3/WMA CD
- ▶ Radio: FM, SW, AM/MW, LW, WB
 - 36 station presets on 6 storage levels
 - Digital signal processing (DigiCeiver)
 - Optimized digital channel separation (SHARX®)
 - Travelstore and Traffic Announcement

OPTIONAL FOR THE CCD PROFESSIONAL BLUETOOTH

- ▶ Bluetooth telephony
- ▶ Automatic synchronization of contacts and call lists
- ▶ Private mode via CDM 08 GSM driver microphone
- ▶ Tuner frequency ranges (depending on region):
 - FM: 87.5 to 108.0 MHz
 - SW: 5,800 to 6,300 kHz
 - AM/MW: 530.0 to 1,710.0 kHz
 - WB: 162.40 to 162.55 MHz
- ▶ Operating voltage: 12 V via CPA
- ▶ Operating temperature: -20 °C to +70 °C
- ▶ Format: 1 DIN
- ▶ Weight: 1,300 g
- ▶ Standards: CE, E1, FCC, RoHS



COACH POWER AMPLIFIER CPA 811

The CPA 811 class-D coach amplifier is a strong performer with its high signal strength for audio and video frequencies and the intercom connection. The CPA 811 is integrated into the Professional Line 3 system via a CAN connection.

- ▶ Two separate output stages, each with 2 x 20 watts for the driver and the passenger cabin
- ▶ Central power supply for all system components
- ▶ Trouble-free telephone use due to automatic muting of all other sound sources when a call comes in
- ▶ Connection option for other external sources via 12 V
- ▶ Intercom connection
- ▶ Operating voltage: 24 V
- ▶ Operating temperature: -20 °C to +70 °C
- ▶ Dimensions (W x H x D): 170 x 50 x 214.2 mm
- ▶ Weight: 1,800 g
- ▶ Standards: CE, E1, FCC, RoHS, WEEE

COACH POWER AMPLIFIER CPA 2011

The CPA 2011 class-D coach amplifier provides the foundations for perfect sound quality within the Professional Line 3 system. With its three output stages and cascading function, the CPA 2011 is ideally suited to installation in double-decker coaches.

ADDITIONAL FEATURES TO THOSE OF THE CPA 811

- ▶ Three separate output stages with 2 x 20 watts of power for the driver area and 4 x 40 watts of power for the passenger cabin
- ▶ Line-out to connect an additional amplifier in a cascaded system

Coach smartInfotainment series

As a market leader for connected media functions, Bosch offers OEMs systems that make traveling more pleasant: Our smartInfotainment series supports DAB+ and is Bluetooth-enabled for streaming and telephony. Media playback in the passenger cabin is taken to the next level with a wide variety of audio and video sources, individually accessible content, and first-rate picture quality. smartInfotainment is in essence a state-of-the-art gateway to experiences for the driver and passenger alike.



Coach smartRadio

The Coach smartRadio provides several inputs for various media. Bluetooth audio streaming and the ability to use a hands-free function safely and conveniently make the Coach smartRadio a popular multimedia companion. With its CAN connection and smartphone integration capabilities, it fits in perfectly in the vehicle environment.

- ▶ Display color: red
- ▶ Single-line dot matrix display
- ▶ Integrated class-D amplifier with 2 x 40 watts of output power (can be optionally set to 2 x 20 watts)
- ▶ Radio: FM, AM, SW, DAB+
- ▶ USB port (type A)
- ▶ 2 x AUX-IN connections on the front panel and on the rear panel
- ▶ SD card (mini)
- ▶ Bluetooth telephony and media streaming
- ▶ Private mode function and USB charging
- ▶ 2 microphone connections
- ▶ Connection of the Coach smartPanel via tandem output
- ▶ CAN link
- ▶ Software updates via USB
- ▶ Tuner frequency ranges (depending on region):
 - FM: 87.5 to 108.0 MHz
 - AM: 531 to 1602 kHz
 - DAB (Band III) 174.928 to 329.200 MHz
 - Software: 3900 to 4000 kHz
 - 5850 to 6300 kHz
 - 7095 to 7500 kHz
 - 9325 to 9950 kHz
- ▶ Operating voltage: 24 V
- ▶ Operating temperature: -20 °C to +70 °C
- ▶ Standby current consumption: < 0.5 mA
- ▶ Format: 1-DIN
- ▶ Weight: 1,070 g
- ▶ Standards: CE/RED, UN ECE R10, UN ECE R118



Coach smartPanel

The panel is easy and intuitive to use in the driver's cockpit, thus also making it safe to operate. The understated design blends in harmoniously with the cockpit interior. Through the tandem function, the Coach smartPanel together with the Coach smartRadio create a complete coach system that leaves nothing to be desired.

- ▶ Display color: red
- ▶ Single-line dot matrix display
- ▶ Integrated class-D amplifier with 4 x 40 watts of output power (can be optionally set to 4 x 20 watts)
- ▶ USB port for audio and video (type A)
- ▶ 2 x AUX-IN connections (one on the front panel and one on the rear panel) for connecting an external audio/video source to each one
- ▶ SD card (mini) for audio and video
- ▶ 2 x microphone connections for announcements
- ▶ Control of the Coach DVB-T2 Tuner via CAN
- ▶ Tandem mode with Coach smartRadio
- ▶ CAN link
- ▶ Software updates via USB
- ▶ Operating voltage: 24 V
- ▶ Operating temperature: -20 °C to +70 °C
- ▶ Weight: 1,040 g
- ▶ Standards: CE/RED, UN ECE R10, UN ECE R118

Coach Radio

Besides their use in coaches, Bosch radios are also tailored to the requirements of city buses and intercity buses. Solutions developed in-house for 12 V and 24 V vehicle electrical systems are used here. USB devices can be connected via the front panel. An integrated DVD player (CAD 12) rounds off the feature set.



COACH RADIO CR 24

For use in 24 V vehicle electrical systems, Bosch offers the CR 24, a radio unit that has been designed to satisfy the highest requirements. The wide variety of connection and playback options for external sources make the CR 24 a multifunctional travel companion. Personal configurations ensure the optimum sound output.

- ▶ Display color: red
- ▶ Integrated amplifier with 2 x 20 watts of output power
- ▶ Connection option for a subwoofer and an additional amplifier
- ▶ CD MP3 drive for audio-CD, CD-R, CD-RW with WMA/MP3 files
- ▶ Radio: FM, AM/MW, LW, WB
- ▶ USB and AUX-IN slots on the front panel
- ▶ Microphone input
- ▶ The CR 24 can be switched on by using the microphone or the telephone
- ▶ Tuner frequency ranges (depending on region):
 - FM: 87.5 to 108.0 MHz
 - AM/MW: 530.0 to 1,710.0 kHz
 - LW: 153.0 to 279.0 kHz
- ▶ Operating voltage: 24 V
- ▶ Operating temperature: -20 °C to +70 °C
- ▶ Quiescent current consumption: <0.5 mA
- ▶ Format: 1 DIN
- ▶ Standards: CE, E1, EMC, FCC, RoHS, WEEE



COACH AUDIOAMPLIFIER 12.24

The Coach Audio Amplifier 12.24 microphone amp is suitable for all coaches with a 12 V or 24 V electrical system. It is equipped with two inputs and produces a rich and powerful sound for microphone announcements. To adjust the output quality further, both of the connected microphones can be matched by adjusting the levels. The integrated priority circuit makes it possible to prioritize announcements.

- ▶ 2 x 20 watt output power
- ▶ Any installation position
- ▶ Operating voltage: 12 V / 24 V
- ▶ Operating temperature: -20 °C to +70 °C
- ▶ Dimensions (W x H x D): 167 x 55 x 97.5 mm
- ▶ Weight: 670 g
- ▶ Standards: CE, E1, RoHS

Coach Radio



COACH DVD RADIO CAD 12

The CAD 12 multimedia system offers a great many connection options and functions in the accustomed original-equipment quality. Despite its very compact size, it includes a great many functions that benefit both the driver and passengers, like radio, CD, MP3, DVD, USB, and AUX-IN.

- ▶ Display color: red
- ▶ Integrated amplifier with 2 x 20 watts of output power
- ▶ DVD drive with available regional codes: RC1, RC2, RC4, RC5
- ▶ Radio: FM, SW, AM/MW, LW, WB
- ▶ USB and AUX-IN slots on the front panel
- ▶ Microphone input
- ▶ Convenient remote control via separate IR receiver (optionally available)
- ▶ Tuner frequency ranges (depending on region):
 - FM: 87.5 to 108.0 MHz
 - SW: 5,800 to 6,300 kHz
 - AM/MW: 530.0 to 1,710.0 kHz
 - LW: 153.0 to 279.0 kHz
 - WB: 162.40 to 162.55 MHz
- ▶ Operating voltage: 12 V
- ▶ Operating temperature: -20 °C to +70 °C
- ▶ Quiescent current consumption: <1 mA
- ▶ Format: 1 DIN
- ▶ Standards: CE, E1, FCC, MVS S302, RoHS



MINIBUS RADIO MR 12

Specially designed for use in bus systems with a 12 V electrical system, the MR 12 is equipped with an integrated tuner and all the popular connections for further external CE sources. This makes the MR 12 a solid entertainment solution that you can depend on.

- ▶ Display color: red
- ▶ Integrated amplifier with 2 x 20 watts of output power
- ▶ Radio: FM, AM/MW, LW, WB
- ▶ USB and AUX-IN slots on the front panel
- ▶ Microphone input
- ▶ The MR 12 switches on automatically when the microphone is used
- ▶ Tuner frequency ranges (depending on region):
 - FM: 87.5 to 108.0 MHz
 - AM/MW: 530.0 to 1,710.0 kHz
 - LW: 153.0 to 279.0 kHz
- ▶ Operating voltage: 12 V
- ▶ Operating temperature: -20 °C to +70 °C
- ▶ Quiescent current consumption: <0.5 mA
- ▶ Format: 1 DIN
- ▶ Standards: CE, E1, EMC, FCC, RoHS, WEEE

Microphones

Microphones from Bosch are tailored to the needs of the driver and tour guide. Ergonomic, user-centric design is coupled with a comprehensive range of functions and excellent audio quality.



COACH DYNAMIC MICROPHONE CDM 08/CDM 08 GSM

Making announcements during the journey is made easy thanks to the CDM 08 and CDM 08 GSM gooseneck microphones. The flexible design allows the microphone to be adapted to the ergonomic needs of the driver. The innovative microphone head prevents feedback and interference. The CDM 08 GSM additionally allows phone calls to be made in private mode. The conversation is heard only by the driver and caller and is not output over the cockpit loudspeakers.

- ▶ Dynamic microphone
- ▶ Safe and convenient due to reinforced microphone base and flexible microphone neck
- ▶ Mounting to the left or right of the driver's seat (with optional accessories)

OPTIONAL FOR THE CDM 08 GSM

- ▶ Telephone hands-free operation with conventional GSM hands-free device
- ▶ Operating temperature: -20 °C to +70 °C
- ▶ Frequency response: 100 to 12,000 Hz
- ▶ Gooseneck diameter: 6 mm
- ▶ Total length: 500 mm



BOSCH HANDHELD MICROPHONE BHM 09

The BHM 09 has been specially designed for professional use in a Bosch Coach Multimedia system. The BHM 09 enables the tour guide to easily make announcements at any time. The extensive range of accessories ensures the microphone can be stored safely in the cockpit and provides the speaker with ample freedom of movement.

- ▶ Dynamic microphone
- ▶ Integrated wind protection
- ▶ Operating temperature: -20 °C to +70 °C
- ▶ Frequency response: 100 to 10,000 Hz
- ▶ Total length: 138 mm

BOSCH GOOSENECK MICROPHONE BGM 09

With the sturdy BGM 09 gooseneck microphone, the driver can make announcements at any time, even when the multimedia system is switched off.

- ▶ Dynamic microphone
- ▶ Integrated wind protection

OPTIONAL FOR THE BGM 09 S

- ▶ Foot switch to activate the microphone
- ▶ Operating temperature: -20 °C to +70 °C
- ▶ Frequency response: 100 to 10,000 Hz
- ▶ Gooseneck diameter: 6 mm
- ▶ Total length: 800 mm

Microphones



COACH WIRELESS MICROPHONE SYSTEM E

This wireless microphone is specially designed for professional use in coaches. The microphone provides the tour guide with considerable freedom of movement and interference-free transmission.

THE MICROPHONE IS COMPATIBLE WITH THE FOLLOWING BOSCH MULTIMEDIA COACH SYSTEMS AND RADIO

- ▶ Coach Professional Line 3
- ▶ Coach smartInfotainment series
- ▶ CMS
- ▶ CR 24
- ▶ MR 12
- ▶ CAD 12
- ▶ Coach AudioAmplifier 12.24

- ▶ Operating voltage: 9 V to 36 V
- ▶ Operating temperature: -30°C to +70°C
- ▶ Frequency range EU: 863 to 865 MHz
- ▶ Audio frequency range:
 - Receiver station 150 Hz to 6,5 kHz
 - Hand microphone 50 Hz to 12,0 kHz
- ▶ Receiver station dimensions:
 - Approx. 188 x 82 x 126 mm
- ▶ Receiver station weight: 290 g
- ▶ Hand microphone weight:
 - Without batteries 240 g
 - With batteries 282 g
- ▶ Standards: CE, E1, MVSS 302, ECE R118

The Coach ChargingStation recharges your microphone quickly and automatically. The holder at the same time ensures the microphone is stored safely during the journey.



COACH CHARGINGSTATION D

The Coach ChargingStation D (dashboard) positions the Coach Wireless Microphone securely in the cockpit area. This charging station has been designed for mounting in the dashboard of coaches that have a 12 V or 24 V electrical system.

SCOPE OF SUPPLY

- ▶ Charging station (2-piece, pre-assembled)
- ▶ Connecting cable (preparation)



COACH CHARGINGSTATION W

The Coach ChargingStation W (wall) is an additional option for the Coach Wireless Microphone. This charging station has been designed for wall-mounting in coaches that have a 12 V or 24 V electrical system.

SCOPE OF SUPPLY

- ▶ Charging station (2-piece, pre-assembled)
- ▶ Baseplate
- ▶ 6 screws (for fastening the charging station to the baseplate)
- ▶ Connecting cable (preparation)

MAS – Multichannel Audio System

The Multichannel Audio System (MAS) from Bosch keeps passengers entertained with up to eight individually selectable stereo programs. Up to 100 seat modules are supplied with media content via a central component, the MAS Head Station. Passengers are therefore offered a more personalized entertainment experience.



MAS HEAD STATION 02

The MAS Head Station 02 can accommodate up to eight audio sources and distribute them to a maximum of four trunk lines. Up to 25 seat modules can be connected to each of these trunk lines. So, with four trunk lines, it is possible to supply 100 seats with individually selectable entertainment

- ▶ Unrestricted installation position
- ▶ Variable design options for the MAS according to vehicle requirements
- ▶ Uniform volume level due to integrated gain setting
- ▶ Operating voltage: 24 V
- ▶ Operating temperature: -10 °C to +55 °C
- ▶ Dimensions (W x H x D): 213.0 x 50.0 x 217.5 mm
- ▶ Weight: 1,400 g
- ▶ Standards: CE, FCC, RoHS



MAS SEAT MODULE

Passengers can select their preferred audio program (radio, CD, TV or video) at any time via the MAS Seat Module. The display shows all the channels that are available. The passenger can then make a selection and adjust the volume.

- ▶ Unrestricted installation position, click-in and screw-in
- ▶ Connection option for conventional headphones to the audio jack
- ▶ Improved water resistance for long life
- ▶ Operating voltage: Power supply from MAS Head Station 02
- ▶ Operating temperature: -20 °C to +70 °C
- ▶ Dimensions (W x H x D): 54.7 (77.0) x 35.7 x 20.0 mm
- ▶ Standards: CE, E1, FCC, ECE R118, RoHS, WEEE

Loudspeakers

Bosch loudspeakers ensure announcements can be heard clearly and produce an impressive sound for movies and music. The various models are available in many different sizes and colors and for a wide range of installation depths to accommodate individual requirements.



AL 100

- ▶ Max. load: 25 W
- ▶ Sensitivity: 87 dB
- ▶ Frequency response: 80 to 20,000 Hz
- ▶ Installation depth: 44 mm
- ▶ Diameter: 100 mm
- ▶ Nominal resistance: 4 Ω / 4 Ω
- ▶ Diameter with grille: 135 mm
- ▶ Grille color: black
- ▶ Packaging unit with grill: 2 pcs
- ▶ Packaging unit without grill: 36 pcs

AL 120

- ▶ Max. load: 30 W
- ▶ Sensitivity: 87 dB
- ▶ Frequency response: 70 to 20,000 Hz
- ▶ Installation depth: 28 mm
- ▶ Diameter: 114 mm
- ▶ Nominal resistance: 4 Ω / 8 Ω
- ▶ Diameter with grille: 152 mm
- ▶ Grille color: gray
- ▶ Packaging unit with grill: 16 pcs

AL 130

- ▶ Max. load: 50 W
- ▶ Sensitivity: 88 dB
- ▶ Frequency response: 70 to 20,000 Hz
- ▶ Installation depth: 50 mm
- ▶ Diameter: 115 mm
- ▶ Nominal resistance: 4 Ω / 4 Ω
- ▶ Diameter with grille: 165 mm
- ▶ Grille color: black
- ▶ Packaging unit with grill: 16 pcs
- ▶ Packaging unit with grill: 24 pcs



Excellent image quality – with Coach Video

Multimedia technologies from Bosch cater to every requirement, providing high-speed Wi-Fi connectivity and first-rate picture quality on all displays. Bosch displays have space-saving designs, are equipped with an internal temperature management system, and can be integrated into any coach interior. Our flat-panel displays set new standards in terms of technology, installation, and design.



Mobile Entertainment



COACH MEDIAROUTER

The MediaRouter is a mobile Wi-Fi hotspot. Passengers can access the internet on their mobile devices. In addition, a local media library provides a selection of top entertainment that passengers can choose from according to their tastes and then stream to their smartphone or tablet. This automotive media hotspot handles multiple SIM cards and includes effective bandwidth management. The Coach MediaRouter is therefore the perfect mobile entertainment center.

- ▶ Broadband internet access via LTE mobile communications LTE, HSDPA, GPRS, LTE/HSPA + EDGE/GPRS/GSM
- ▶ Transmission of music, pictures and video files via Wi-Fi hotspots
- ▶ Automatic connection
- ▶ Variable setting of number of clients
- ▶ Connection of USB flash drives
- ▶ Wavebands:
 - 800/900/1,800/2,100/2,600 MHz
 - 850/900/2,100 MHz
 - 850/900/1,800/1,900 MHz
- ▶ Wi-Fi: 802.11a/b/g/n; 2.4 GHz
- ▶ Operating voltage: 12/24 V
- ▶ Operating temperature: -40 °C to +85 °C
- ▶ Dimensions (W x H x D): 150 x 110 x 30 mm
- ▶ Weight: <500 g
- ▶ Enclosure type: IP30
- ▶ Standards: CE, E1, R&TTE, MVSS 302, ECE R118



COACH DVB-T2-TUNER

Nowadays we expect mobile TV to be digital and offer interference-free reception and ultra-sharp picture quality. The DVB-T2-Tuner from Bosch is one of the first to provide HD quality in coaches. It has an integrated USB port that is not only useful for updating the software but also for importing audio and video files into the coach system. In addition, further audio and video sources can be connected to the DVB-T2-Tuner and controlled using a remote control. Even on tours that go through several countries, optimal reception of encrypted TV channels is assured thanks to the integrated CI slot. The DVB-T2-Tuner is compatible with the Coach smartInfotainment system as well as earlier systems.

- ▶ OSD menu and IR remote control
- ▶ Mobile DVB-T2 TV reception (HD reception only in Germany)
- ▶ Connection options for two additional video or audio sources
- ▶ External IR receiver (for use without CAN)
- ▶ CVBS video output
- ▶ Video formats:
 - 352 x 240 x 30 p
 - 352 x 288 x 25 p to 1,920 x 1,088 x 60 i
 - 1,280 x 720 x 60 p/50 p
- ▶ Audio formats:
 - MPEG-1/2; Layer 1 & 2: 16 to 48 kHz, Layer 1: 32 to 448 kbps, Layer 2: 32 to 384 kbps
 - MPEG-2/4; AAC-LC, 8 to 96 kHz, 8 to 576 kbps
- ▶ OSD menu languages: German, English, French, Spanish, Italian
- ▶ Operating voltage: 12/24 V
- ▶ Standards: CE, E symbol

In combination with smartInfotainment series:

- ▶ USB for external audio/video source
- ▶ 2 x A/V AUX-IN
- ▶ CAN connection

available from 03/2018



Monitors



19" LCD-LED PREMIUM DESIGN

This Premium Design monitor with a VGA interface and capture logo function produces an ultra-sharp and high-contrast picture. The 16:9 format provides a cinematic experience. The passenger-optimized viewing angle ensures a great view from any seat.

- ▶ VGA interface
- ▶ Picture diagonal: 475.0 mm
- ▶ Picture format: 16:10
- ▶ Viewing angle (H/V): $\pm 80^\circ/\pm 80^\circ$
- ▶ Resolution: 1,440 x 900 pixels
- ▶ LCD brightness: ≥ 250 cd/m²
- ▶ Systems: PAL, SECAM, NTSC
- ▶ Setting parameters: Start logo, brightness, contrast, color saturation, color tone, activation of terminating resistor, 4x format setting
- ▶ Operating voltage: 12/24 V
- ▶ Operating temperature: 0 °C to +50 °C/temperature management function
- ▶ Dimensions (W x H x D): 440.5 x 282.0 x 40.9 mm
- ▶ Weight: 4,700 g
- ▶ Standards: CE, E1, FCC, MVSS 302, ECE R118, RoHS, WEEE



19" LCD-LED PREMIUM SWIVEL MONITOR

Thanks to its patented safety clutch, the 19" LCD-LED Premium Swivel Monitor is the ideal legal solution for installation in the aisle (ECE R107). The mechanism allows the monitor to be easily swiveled forwards or backwards in the event of an emergency. This monitor is likewise equipped with a VGA interface and a passenger-optimized viewing angle. The customer's own logo can, if desired, be imported into the monitor and used as the start-up screen.

- ▶ VGA interface
- ▶ Picture diagonal: 475.0 mm
- ▶ Picture format: 16:10
- ▶ Viewing angle (H/V): $\pm 80^\circ/\pm 80^\circ$
- ▶ Resolution: 1,440 x 900 pixels
- ▶ LCD brightness: ≥ 250 cd/m²
- ▶ Systems: PAL, SECAM, NTSC
- ▶ Setting parameters: Start logo, brightness, contrast, color saturation, color tone, activation of terminating resistor, 4x format setting
- ▶ Operating voltage: 12/24 V
- ▶ Operating temperature: 0 °C to +50 °C/temperature management function
- ▶ Dimensions (W x H x D): 489.0 x 347.0 x 47.0 mm
- ▶ Weight: 7,000 g
- ▶ Standards: CE, E1, FCC, MVSS 302, ECE R118, RoHS, WEEE



15" LCD ECOLINE

The 15" LCD EcoLine monitor offers outstanding picture quality that will delight passengers. This functionally optimized 4:3 monitor is unrivalled in its class and naturally also allows customers to import their own logo for the start-up screen

- ▶ Picture diagonal: 380.0 mm
- ▶ Picture format: 4:3
- ▶ Viewing angle (H/V): $\pm 60^\circ/\pm 45^\circ, -55^\circ$
- ▶ Resolution: 1,024 x 768 pixels
- ▶ LCD brightness: ≥ 250 cd/m²
- ▶ Systems: PAL, SECAM, NTSC
- ▶ Setting parameters: Start logo, brightness, contrast, color saturation, color tone
- ▶ Operating voltage: 24 V
- ▶ Operating temperature: 0 °C to +50 °C
- ▶ Dimensions (W x H x D): 338.0 x 261.0 x 40.2 mm
- ▶ Weight: 2,600 g
- ▶ Standards: CE, E1, FCC, MVSS302, ECE R118, RoHS, WEEE



15,4" LCD BASIC

Sturdily built, but nevertheless incorporating state-of-the-art technology, this functionally optimized 15.4" LCD Basic Monitor with a wide-screen format offers first-rate performance for great movie entertainment.

- ▶ Picture diagonal: 397.0 mm
- ▶ Picture format: 16:9
- ▶ Viewing angle (H/V): $\pm 80^\circ/\pm 80^\circ$
- ▶ Resolution: 1,366 x 768 pixels
- ▶ LCD brightness: ≥ 250 cd/m²
- ▶ Systems: PAL, SECAM, NTSC
- ▶ Setting parameters: brightness, contrast, color saturation, color tone, 2x format settings
- ▶ Operating voltage: 12/24 V
- ▶ Operating temperature: 0 °C to +50 °C
- ▶ Dimensions (W x H x D): 346.0 x 230.0 x 41.0 mm
- ▶ Weight: 2,600 g
- ▶ Standards: CE, E1, FCC, MVSS 302, ECE R118, RoHS, WEEE

Monitors



7" COCKPIT DISPLAY

The 7" Cockpit Display is an LCD monitor designed for installation in the driver's workplace. In combination with the Professional Line 3 system, the 7" Cockpit Display can also be used for door surveillance in the coach. The display is versatile and can be installed in many different locations in the vehicle. Thanks to the integrated infrared sensor, it is possible to control the Professional Line 3 system using a separate remote control.

- ▶ Screen diagonal: 180 mm
- ▶ Screen format: 5:3
- ▶ Viewing angle (H/V): +/-65° / +/-55°
- ▶ Resolution at 60 Hz: 88 x 480 pixels
- ▶ LCD brightness: 350 cd/m²
- ▶ System: PAL, NTSC, SECAM
- ▶ Adjustable parameters: brightness, contrast, color saturation, color tone, format
- ▶ Operating voltage: 12/24 V
- ▶ Operating temperature: -20 °C to +66 °C
- ▶ Dimensions (W x H x D): 188 x 120 x 50 mm
- ▶ Weight: 720 g
- ▶ Standards: E1, FCC, CE, ECE R118, RoHS, EG 95/28



VIDEOBOX MONITOR

The Videobox Monitor displays video and door surveillance views on a 7" 16:9-format LCD screen. It is installed in clear view in the coach dashboard and connected to the Videobox.

- ▶ Picture diagonal: 475 mm
- ▶ Picture format: 16:10
- ▶ Viewing angle (H/V): +80°/+80°
- ▶ Resolution: 1,440 x 900 pixels
- ▶ LCD brightness: ≥250 cd/m²
- ▶ Systems: PAL, NTSC, SECAM
- ▶ Setting parameters: brightness, contrast, color saturation, color tone, format
- ▶ Operating voltage: 12/24 V
- ▶ Operating temperature: 0 °C to +50 °C
- ▶ Dimensions (W x H x D): 188 x 120 x 50 mm
- ▶ Weight: 500 g
- ▶ Standards: CE, E1, FCC, ECE R118, RoHS, WEEE



VIDEOBOX

The Videobox is the central signal-distribution interface. It is used for displaying door surveillance video and other video signals on the monitors. The Videobox operates on a 12/24 V operating voltage.

- ▶ Operating voltage: 12/24 V
- ▶ Operating temperature: -20 °C to +70 °C
- ▶ Dimensions (W x H x D): 212.0 x 139.0 x 43.0 mm
- ▶ Weight: 400 g
- ▶ Standards: CE, E1, FCC, RoHS, WEEE

Video Sources

We ensure your passengers enjoy an uninterrupted movie experience. All Bosch video components are perfectly matched to one another, intuitive to use, and are therefore a popular addition in any coach.



DVD VIDEO PLAYER DVP 08 C

Intuitive technology and sturdy components make this automotive DVD video player a durable and popular addition in any coach. The drive is equipped with a last-memory function, and subtitles can be enabled for all supported languages at the press of a button.

- ▶ Display color: red
- ▶ DVD/CD/MP3 drive with available regional codes: RC1, RC2, RC4, RC5
- ▶ Subtitle function
- ▶ Line-In for second video source (Sat TV, DVB-T)
- ▶ Easy control via separate IR receiver optionally available
- ▶ Operating voltage: 24 V
- ▶ Operating temperature: -20 °C to +70 °C
- ▶ Format: 1 DIN
- ▶ Weight: 1,300 g
- ▶ Standards: CE, E1, FCC, RoHS, WEEE



CAMERA SWITCH

The camera switch can be integrated directly into the 12 V or 24 V vehicle electrical system. It supplies up to four connected cameras and an optional monitor with a constant voltage of 12 V. The camera switch can be operated manually.

- ▶ Operating voltage: 12/24 V
- ▶ Operating temperature: 0 °C to +70 °C
- ▶ Dimensions (W x H x D): 180.0 x 26.0 x 108.0 mm
- ▶ Weight: 414 g
- ▶ Standards: CE, E1, RoHS, WEEE



VGA SPLITTER

The VGA splitter can be used to connect several monitors equipped with a VGA interface to a single computer.

- ▶ Operating voltage: 12/24 V
- ▶ Operating temperature: -20 °C to +70 °C
- ▶ Dimensions (W x H x D): 139.0 x 29.0 x 67.0 mm
- ▶ Weight: 225 g
- ▶ Standards: CE, E1, FCC, RoHS, WEEE



AUDIO/VIDEO SWITCH

The audio/video switch makes it possible to connect two video sources to the coach multimedia system.

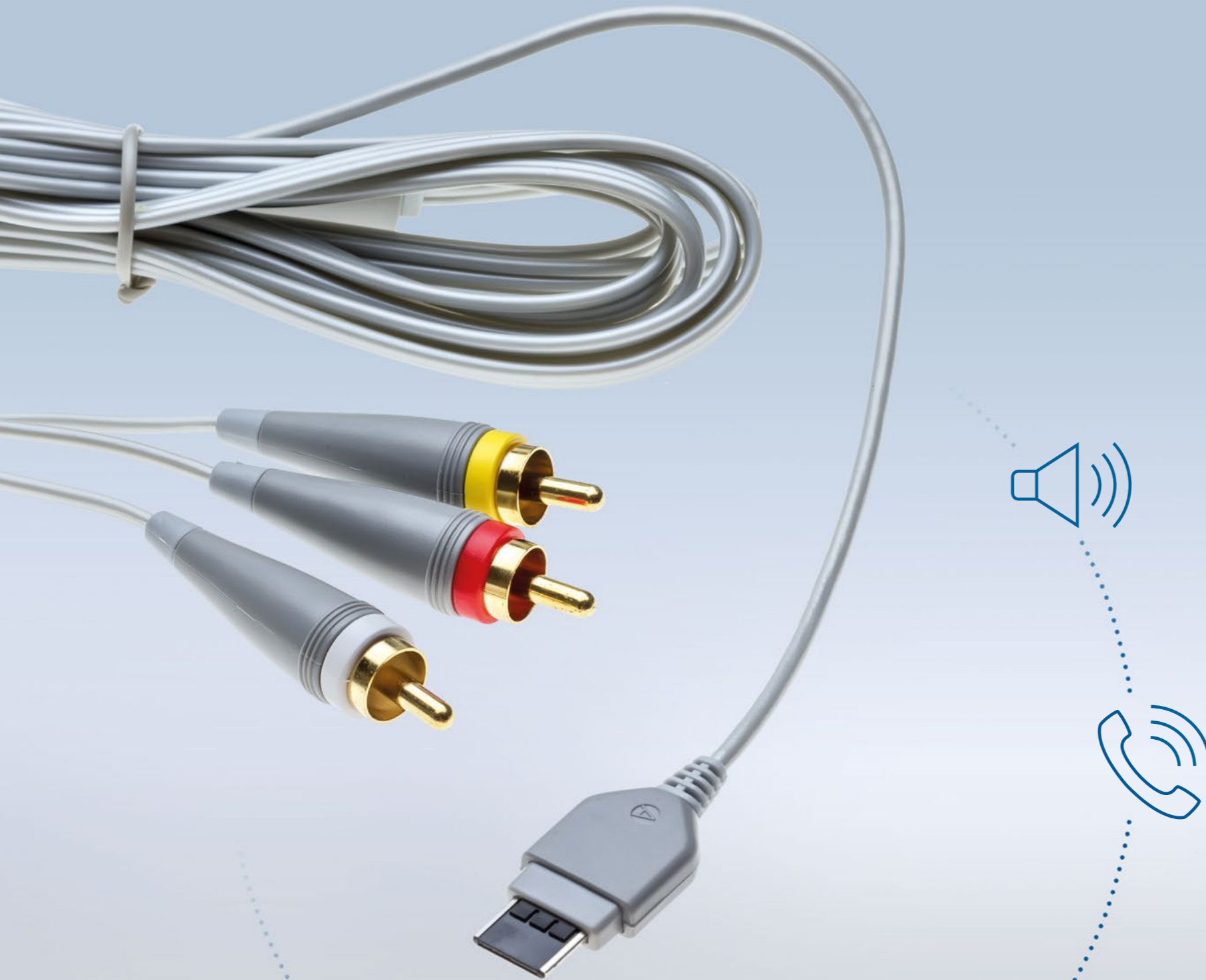
- ▶ Operating voltage: 12/24 V
- ▶ Operating temperature: -20 °C to +70 °C
- ▶ Dimensions (W x H x D): 157.5 x 35.5 x 87.0 mm
- ▶ Weight: 350 g
- ▶ Standards: CE, E1, FCC, RoHS, WEEE



VIDEO AMPLIFIER

This amplifier ensures a consistently excellent picture quality even when operating multiple monitors.

- ▶ Operating voltage: 24 V
- ▶ Operating temperature: -20 °C to +70 °C
- ▶ Dimensions (W x H x D): 140.5 x 29.3 x 82.5 mm
- ▶ Weight: 250 g
- ▶ Standards: CE, E1, FCC, RoHS, WEEE



Enhance as required – with coach accessories

As a system supplier with many years of experience, Bosch always provides an excellent range of suitable accessories. Whether you are looking for a camera switch, CVBS/RGB converter, or simply a new cable, you will find exactly what your system needs. Loudspeakers and amplifiers specially designed for commercial vehicles complete the range.



RGB/CVBS CONVERTER

This high-performance converter enables you to display map views from the Coach Navigation PX-V on the monitors.

- ▶ Operating voltage: 12/24 V
- ▶ Operating temperature: -20 °C to +70 °C
- ▶ Dimensions (W x H x D): 178.0 x 39.3 x 101.0 mm
- ▶ Weight: 500 g
- ▶ Standards: CE, E1, FCC, RoHS, WEEE



CVBS/RGB CONVERTER

This converter makes it possible to display video signals (e.g. from the rear-view camera) on the Bosch cockpit monitor.

- ▶ Operating voltage: 12/24 V
- ▶ Operating temperature: -20 °C to +70 °C
- ▶ Dimensions (W x H x D): 170.0 x 39.0 x 109.1 mm
- ▶ Weight: 470 g
- ▶ Standards: CE, E1, FCC, RoHS, WEEE

Product Overview

COACH AUDIO

PROFESSIONAL LINE 3	PART NUMBER	PAGE
CCS Professional Premium (RC2)	7 620 200 062	6
CCS Professional Premium (RC1)	7 620 200 061	6
CCS Professional Premium (RC4)	7 620 200 064	6
CCS Professional Premium (RC5)	7 620 200 065	6
CCD Professional Bluetooth	7 620 200 051	8
CCD Professional	7 620 200 052	8
CPA 811	7 620 200 057	9
CPA 2011	7 620 200 058	9
Videobox	7 620 200 059	29
Videobox Monitor	7 620 310 041	28
COACH RADIO		
CAD 12 (RC2)	7 620 210 015	14
CAD 12 (RC1)	7 620 210 020	14
CAD 12 (RC4)	7 620 210 021	14
CAD 12 (RC5)	7 620 210 022	14
MR 12	7 620 210 017	15
CR 24	7 620 210 016	12
Coach smartRadio	7 620 210 042	10
Coach smartPanel	7 620 210 041	11
AMPLIFIERS		
CAA	7 620 220 012	13
MICROPHONES		
CDM 08 GSM	7 620 230 018	16
CDM 08	7 620 230 019	16
BGM 09 S	7 620 230 025	17
BGM 09	7 620 230 024	17
Mounting bracket for BGM 09/BGM 09 S	7 607 022 001	
Foot switch for BGM 09/BGM 09 S	7 607 005 710	
BHM 09	7 620 230 012	17
Mounting clip for BHM 09 S	7 620 270 000	
Mounting sleeve for BHM 09 S	7 620 270 001	
Microphone switch	7 620 230 022	

MAS – MULTI-CHANNEL AUDIO SYSTEM	PART NUMBER	PAGE
MAS Head Station 02	7 620 240 004	20
MAS Seat Module, clip-in	7 620 240 016	20
MAS Seat Module, screw-in	7 620 240 017	20
MAS distributor	7 607 006 318	
MAS terminating resistor	7 607 006 029	
SPEAKERS		
AL 100 with grille (4 Ω)	7 620 250 014	21
AL 100 without grille (4 Ω)	7 620 250 016	21
AL 120 with grille (4 Ω)	7 620 250 011	21
AL 120 with grille (8 Ω)	7 620 250 012	21
AL 130 with grille (4 Ω)	7 620 250 015	21
AL 130 without grille (4 Ω)	7 620 250 018	21

COACH VIDEO

MOBILES ENTERTAINMENT	PART NUMBER	PAGE
DVB-T2-Tuner	7 620 320 031	25
4 antennas for the DVB-T tuner	7 620 340 025	
MediaRouter	7 620 320 029	24
MONITORS		
19" LCD-LED Premium Design	7 620 310 034	26
19" LCD-LED Premium Swivel Monitor	7 620 310 067	26
Bracket for 19" LCD-LED Premium Swivel Monitor	7 620 340 001	
Magnet Set 19" 27,5 mm	7 620 270 002	
Magnet Set 19" 20,0 mm	7 620 270 003	
15" LCD EcoLine	7 620 310 018	27
15,4" LCD Basic	7 620 310 040	27
Videobox Monitor	7 620 310 041	28
7" Cockpit Display	7 620 310 061	28
VIDEO SOURCES		
DVD Video Player DVP 08 C (RC2)	7 620 320 024	30
DVD Video Player DVP 08 C (RC5)	7 620 320 028	30
IR eye 5m cable for DVP 08 C	7 607 005 726	
RGB/CVBS converter (NTSC)	7 620 330 001	33
Audio/video switch	7 620 330 002	31
VGA splitter	7 620 330 005	31
Video amplifier	7 620 330 007	31

Product Overview

COACH ACCESSORIES

COACH ACCESSORIES	PART NUMBER	PAGE
Camera switch for up to 4 camera connections	7 620 500 004	31
CVBS/RGB converter	7 620 500 025	33

COACH ZUBEHÖRKABEL

PROFESSIONAL LINE 3	PART NUMBER
Connection CCS-CPS – 1,7 m	7 620 280 021
Connection CCS-CPA – 5 m	7 620 280 023
Connection CCS-CPA – 8 m	7 620 280 024
Connection CCS - USB Snap On	7 620 280 042
Connection CCD - Jack Plug (USB + AUX)	7 620 280 057
Connection CCS-Videobox – 5 m	7 620 280 047
Connection CCS-Videobox – 6 m	7 620 280 068
Connection Videobox Monitor – 5 m	7 620 280 108
Connection CPA-Videobox – 5 m	7 620 280 044
Connection CPA-Videobox – 7 m	7 620 280 067
Connection Videobox-Videobox Monitor – 1,5 m	7 620 280 045
Connection Videobox-Videobox Monitor – 6 m	7 620 280 061
Connection Videobox-Videobox Monitor – 7,5 m	7 620 280 070
DVB-T-Tuner cable – 3,5 m	7 620 280 062
C2-Y adapter – 0,25 m	7 620 280 065
Extension CCS-DVB-T-CAN – 6 m	7 620 280 066
COACH smartInfotainment Series	
Connection Video	7 620 280 109
Connection Media-CAN	7 620 280 110
ADDITIONAL AUDIO EQUIPMENT	
Extension CDC/IDC-CPA – 1,3 m	7 620 280 039
Extension CDC/IDC-CPA – 6 m	7 620 280 040
Connection CCS-USB	7 620 280 033
Connection CCS-USB Snap on	7 620 280 042
MAS – MULTI-CHANNEL AUDIO SYSTEM	
Cable set for Professional Line 3	7 620 280 030
Preamp cable – 5 m	7 607 006 327

MICROPHONES	PART NUMBER
Extension with switch for CDM 08 – 1,5 m	7 620 280 089
Extension for CDM 08 driver's seat – 6 m	7 620 280 090
Extension for CDM 08 – 1,25 m	7 620 280 092
Extension for CDM 08 – 6 m	7 620 280 091
Adapter cable CCS – CDM 08	7 620 280 094
Adapter cable CCS – BHM 09 S	7 620 280 093
Adapter cable CCS – BGM 09	7 620 280 095
Connection cable for foot switch	7 607 181 001
Spiral cable for hand-held microphone DIN plug	7 620 230 113
ExtensionDIN Plug – 3 m	7 620 280 107
Spiral cable for hand-held microphone XLR plug	7 620 230 115
VIDEO SOURCES	
Connection DVP-CPA – 2,5 m	7 607 006 416
Remote cable DVP-CPA – 2,5 m	7 607 006 437
Adapter cable CPA-Video	7 620 280 035
Connection CCS-Video+IR eye	7 620 270 007
Connection CCS-DVP/DVB-T-Tuner	7 620 280 041
Connection DVB-T-Tuner Standalone	7 620 280 069
NAVIGATION	
Connection CPA-PX-V	7 620 280 036
Connection CPA-PX-V (KL30-12 V)	7 620 280 071
Connection CLX-CCU/CCX – 1,5 m	7 607 006 429
Connection CCU-Converter – 6 m	7 607 006 430
Connection Coach Navigation-CLX – 6 m	7 607 006 434
Extension Wide Screen Monitor – 1,5 m	7 607 006 411
Connection Coach Navigation Converter – 6,5 m	7 620 280 410
Connection Coach Navigation Converter – 4 m	7 607 006 410
Connection Coach Navigation Converter – 1,5 m	7 607 006 414
MOBILE ENTERTAINMENT	
Connection MediaRouter USB	7 620 280 086
Connection MediaRouter ETH	7 620 280 087
MONITORS	
Video cable monitor-monitor – 10 m	7 607 263 000
Video cable monitor-player – 10 m	7 607 263 001
COLOR CAMERA	
Adapter cable camera/converter – 0,17 m	4 998 101 884



Our speedy local customer service

Bosch has a network of service centers in all European countries that are popular holiday destinations. The staff there will be delighted to assist you with their technical know-how. To get you on the road again quickly, solutions for technical problems are found on the spot. An up-to-date list of our service partners is available online at: www.bosch-professional-systems.com

