



**BOSCH**

Invented for life

# PUBLIC ADDRESS AND CONFERENCE SYSTEMS

## Product Catalogue





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## Bosch Public Address

Bosch Security Systems is a world leader in the design and manufacture of public address and voice alarm systems. With over 50 years of experience in the public address and emergency sound field, Bosch is able to offer innovative product solutions for any Public Address and Voice Evacuation requirement. With its Plena, Paviro and Prasensa ranges, Bosch offers high-quality public address systems to suit locations of all sizes. These products are characterized by excellent value for money, extensive yet highly user-friendly functionality, and stylish, contemporary design.










# PLENA VOICE ALARM SYSTEM

## LBB1990/00 Plena Voice Alarm Controller



-  **EN 54-16 and EN 60849 compliant**
-  **Six-zone system controller**
-  **Built-in 240 W amplifier**
-  **12 business and emergency inputs**
-  **16 MB flash ROM**

## Specifications






|                        |                                     |
|------------------------|-------------------------------------|
| Rated output power     | 240 W                               |
| Frequency response     | 60 Hz to 18 kHz                     |
| Distortion             | <1 % at rated output power, 1kHz    |
| Tone control           | ± 8 dB (Bass) ± 8 dB (Treble)       |
| Voltage                | 115 - 230 VAC, 50/60 Hz or 24 VDC   |
| Input                  | 1 x Mic/line; 1x tape; 12 x Trigger |
| Dimensions (H x W x D) | 144 x 430 x 370 mm                  |
| Weight                 | Approx. 21.17 kg                    |

The Plena Voice Alarm Controller is the heart of the plena voice alarm system. It is the basis of the Plena Voice Alarm System including full system supervision, loudspeaker line impedance supervision, a supervised emergency microphone on the front panel and a supervised message manager. The controller can be used as a stand-alone system with up to six zones, or expanded up to 120 zones using additional six-zone routers. A built-in 240 W amplifier provides the power for the emergency call channel and BGM. Additional Plena Amplifiers can be added to provide two-channel operation.

# PLENA VOICE ALARM SYSTEM

## LBB1992/00 Plena Voice Alarm Router



-  **EN 54-16 and EN 60849 compliant**
-  **Six EMG input contacts**
-  **Six business input contacts**
-  **Six volume override output contacts**
-  **Supervision within the Plena Voice Alarm System**

The Plena Voice Alarm Router is an expansion unit that can add six zones as well as 12 input and eight output contacts to the Voice Alarm System. It can use the built-in amplifier on the LBB 1990/00 Voice Alarm Controller, and provides inputs and outputs for one or two amplifiers in a multi-amplifier one or two-channel system. Multiple routers can also share one amplifier, including the internal amplifier on the controller unit.

### Specifications

|                           |   |
|---------------------------|---|
| Voltage                   | 115 - 230 VAC, 50/60 Hz or 24 VDC                       |
| Distortion                | <1 % at rated output power, 1 kHz                       |
| S/N (flat at min. volume) | >85 dB  |
| Fault indicators          | 8 System Fault LED's<br>12 Loudspeaker line fault LED's |
| Input channels            | 12 x Trigger; 1x 100 V                                  |
| Dimensions (H x W x D)    | 88 x 430 x 260 mm                                       |
| Weight                    | Approx. 3 kg  |

## PLN-6TMW Plena Weekly Timer



-  **Two weekly programs**
-  **14 Chimes**
-  **Six contact outputs**
-  **Automatic daylight/standard time**
-  **BGM level control**

### Specifications






|                        |                            |
|------------------------|----------------------------|
| Voltage                | 230/115VAC, ±15%, 50/60 Hz |
| Connector              | XLR balanced               |
| Dimensions (H x W x D) | 48 x 440 x 312 mm          |
| Mounting               | Stand-alone, 19" rack      |
| Color                  | Charcoal with silver       |
| Operating temperature  | -10 °C to +55 °C           |
| Storage temperature    | -40 °C to +70 °C           |
| Weight                 | Approx. 3 kg               |

The Plena Weekly Timer is an accurate timer for use in public address systems. It is ideally suited for schools, shopping malls and all other venues that need regularly timed messages, signals or other controls. It is ideally suited for connection to the Plena Message Manager and Voice Alarm System.

# PLENA VOICE ALARM SYSTEM

## LBB1965/00 Plena Message Manager








-  **Highly flexible stand-alone digital message player**
-  **Up to 12 messages and 12 trigger inputs**
-  **Downloads messages from a PC in WAV format**
-  **Compliant with standards for emergency sound systems**
-  **Front panel control and remote control**

The Plena message manager is a high performance, highly versatile stand-alone digital message player. Applications range from spot announcements in supermarkets and theme parks to warning and evacuation messages in emergency situations.

## LBB1995/00 Fireman's panel



-  **Remote control panel of the Plena Voice Alarm System**
-  **EN 54-16 certified**
-  **Emergency (EMG) microphone**
-  **EMG state and fault indicators**
-  **Call monitoring loudspeaker**

The Plena Voice Alarm System remote control panel allow the system to be controlled remotely from one or two remote locations. There are five models available:

- The fireman's panel, which has oversized, illuminated controls and an all-call function
- The main RC unit, which duplicates the front panel of the Plena Voice Alarm System Controller
- The RC extension, which duplicates the front panel of the router
- The main RC kit
- The RC extension kit

The kits are a functional match to the remote control and the RC extension, with connectors on the front panel instead of controls and indicators.

### Specifications

|                        |   |
|------------------------|---|
| Voltage                | 230/115VAC, $\pm 15\%$ , 50/60 Hz or 24VDC    |
| Distortion             | < 0.1 % (1kHz)                                |
| Input                  | 1 x XLR, 1 x cinch, 6 x Trigger Input         |
| Output                 | 1 x XLR, 1 x cinch, 1 x Message active output |
| Number of messages     | 12 (maximum)                                  |
| Memory capacity        | 64 Mb EEPROM                                  |
| Dimensions (H x W x D) | 56 x 430 x 270 mm                             |
| Weight                 | Approx. 3 kg                                  |

### Specifications

|                                   |                   |
|-----------------------------------|-------------------|
| Voltage                           | 24 VDC, +20%/-10% |
| Current typical                   | 100 mA            |
| Current max (indicator test)      | 250 mA            |
| Dimensions (H x W x D)            | 134 x 430 x 90 mm |
| Mounting                          | 19" rack or wall  |
| Color                             | Charcoal          |
| Operating temperature             | -10 °C to +55 °C  |
| Storage and transport temperature | -40 °C to +70 °C  |
| Weight                            | Approx. 3 kg      |



# MICROPHONES AND ACCESSORIES

## LBB9080/00 Omnidirectional Dynamic Handheld Microphone



**Excellent speech reproduction**



**Rugged construction**



**Easy to handle**



**Remote switching contact**



**Close talking applications**

The LBB 9080/00 hand held microphone is designed for close talking applications, and is ideal for short announcements. The microphone has a press to talk (PTT) switch on the side. The switch has additional contacts for remote control functions, if required.

### Specifications

|                        |                           |
|------------------------|---------------------------|
| Type                   | Handheld                  |
| Polar pattern          | Omnidirectional           |
| Frequency range        | 280 Hz to 14 kHz          |
| Sensitivity            | 3.1 mV/Pa $\pm$ 4 dB      |
| Rated output impedance | 500 ohms                  |
| Dimensions (H x W x D) | 103 x 62 x 43 mm          |
| Operating temperature  | -25 °C to +55 °C          |
| Storage temperature    | -40 °C to +70 °C          |
| Color                  | Black                     |
| Connector              | 5-pin 180° DIN (lockable) |
| Weight                 | 0.19 kg                   |



# MICROPHONES AND ACCESSORIES

## LBB9099/10 Unidirectional Handheld Microphone



**Dynamic transducer**



**Unidirectional handheld microphone**



**High speech intelligibility**



**Rugged construction**



**Modern nonreflective dark gray finish**

This unidirectional handheld microphone provides cost-effective, high-quality speech intelligibility and is fully compatible with other public address equipment. It is based on a dynamic transducer element in a sturdy housing with shielding against wind and wind bursts (pops). The microphone has excellent cardioid directivity, greatly reducing acoustic feedback. The microphone is intended for public address and sound reinforcement applications such as in leisure centers, assembly halls, and shops.

## LBB9600/20 Condenser Handheld Microphone



**Condenser transducer**



**Unidirectional**



**High speech intelligibility**



**Low sensitivity to case noise and vibrations**



**Phantom powered**

This condenser microphone is based on an electric transducer element in a sturdy housing with shielding against wind and wind bursts (pops). It is intended for public address and sound reinforcement applications, such as in churches, theaters, and conference centers.

### Specifications

|                        |                             |
|------------------------|-----------------------------|
| Type                   | Handheld                    |
| Polar pattern          | Unidirectional              |
| Frequency range        | 100 Hz to 13 kHz            |
| Sensitivity            | 2 mV/Pa $\pm$ 4 dB          |
| Rated output impedance | 600 ohms                    |
| Dimensions (L x D)     | 221 x 53 mm (8.7 x 2.09 in) |
| Color                  | Dark gray                   |
| Operating temperature  | -10 °C to +55 °C            |
| Storage temperature    | -40 °C to +70 °C            |
| Connector              | 5-pin 180° DIN (lockable)   |
| Weight                 | 0.42 kg                     |

### Specifications

|                       |                  |
|-----------------------|------------------|
| Voltage range         | 11 V to 52 V     |
| Current consumption   | <1.5 mA          |
| Polar pattern         | Unidirectional   |
| Frequency range       | 100 Hz to 16 kHz |
| Dimensions (D x L)    | 54 x 170 mm      |
| Color                 | Black            |
| Switch                | On/off slide     |
| Cable length          | 7 m              |
| Connector             | 3-pin XLR (male) |
| Operating temperature | -20 °C to +55 °C |
| Storage temperature   | -40 °C to +70 °C |
| Weight                | 0.24 kg          |

# MICROPHONES AND ACCESSORIES

## LBC2900/xx Unidirectional Handheld Microphones



**Unidirectional dynamic microphone**



**Handheld or stand-mounted use with clip (supplied)**



**Rugged construction**



**Modern nonreflective dark gray finish**

With this unidirectional microphone, Bosch provides impressive audio performance at an economical price. The LBC 2900/xx is based on a dynamic transducer element that is designed for high speech intelligibility. Its rugged enclosure is both stylish and easy to use in a wide range of public and sound reinforcement applications.

### Specifications

|                        |  |
|------------------------|--|
| Type                   | Handheld   |
| Polar pattern          | Unidirectional                                       |
| Frequency Range        | 80 Hz to 12 kHz                                      |
| Sensitivity            | 1.7 mV/Pa $\pm$ 3 dB                                 |
| Rated output impedance | 600 ohms   |
| Dimensions (D x L)     | 52.4 x 165 mm<br>(2.06 X 6.49 in)                    |
| Operating temperature  | -10 °C to +55 °C                                     |
| Storage temperature    | -40 °C to +70 °C                                     |
| Color                  | Black  |
| Connector              | XLR to XLR (LBC 2900/20)<br>XLR to P38 (LBC 2900/15) |
| Weight                 | 0.27 kg  |

## LBB1949/00 Gooseneck Microphone



**Unidirectional condenser microphone**



**Flexible stem**



**Phantom powered by amplifier**



**On/off sliding switch with priority contact**



**Supplied with fixed 2 m (78 in) cable and lockable DIN connector**

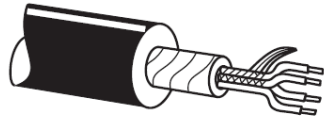
The gooseneck microphone is a stylish high quality unidirectional condenser microphone, mainly intended for public address applications.






### Specifications

|                                   |                           |
|-----------------------------------|---------------------------|
| Voltage range                     | 12 to 48 V                |
| Current consumption               | <8 mA                     |
| Frequency response                | 100 Hz to 16 kHz          |
| Output impedance                  | < 200 ohms                |
| Dimensions (D x L)                | 30 x 500 mm               |
| Color                             | Dark gray                 |
| Cable length                      | 2 m                       |
| Connector                         | 5-pin DIN 180° (lockable) |
| Operating temperature             | -10 °C to +55 °C          |
| Storage and transport temperature | -40 °C to +70 °C          |
| Weight                            | 0.30 kg                   |

## MICROPHONES AND ACCESSORIES

### LBC1081/00 Microphone Cable






-  **Two-plus-two core screened cable**
-  **Black PVC sheath, 5.5 mm diameter**
-  **Two extra cores for remote control or priority functions**
-  **For permanent installations**
-  **0.14 mm<sup>2</sup> Cross-section cores**

#### Specifications

|        |        |
|--------|--------|
| Core   | 4 Core |
| Length | 100 m  |

### LBC1208/40 Microphone Extension Cable



-  **10 m (32.8 ft) extension cable**
-  **Twin-core screened cable**
-  **Three-pole lockable male and female XLR connectors (metal)**

#### Specifications






|            |                    |
|------------|--------------------|
| Core       | Twin Core          |
| Length     | 10 m               |
| Connectors | XLR (M) to XLR (F) |
| Color      | Black              |
| Weight     | 0.42 kg            |

The 32' LBC 1208/40 Microphone Cable features lockable XLR male and female connectors and is designed for low-impedance microphone signals. It delivers maximum signal transfer with minimum loss due to its twin-core construction and is made for use with nearly any dynamic or condenser microphone.

# MICROPHONES AND ACCESSORIES

## LBC1215/01 Microphone Clamp



-  **Quick-release universal microphone clamp**
-  **Spring-loaded microphone holder**
-  **Friction angular adjustment**
-  **Screws onto a 3/8", 1/2" or 5/8" Whitworth thread**
-  **Holds microphone stem with 19 to 32 mm diameter**




The 1215/01 Microphone Clamp is available for all Bosch hand-held microphones.

### Specifications

|        |                   |
|--------|-------------------|
| Color  | <b>Matt black</b> |
| Weight | <b>0.06 kg</b>    |

## LBC1221/01 Microphone Floor Stand



-  **Adjustable from 850 to 1600 mm (2.79 to 5.25 ft) with twist clamp**
-  **Three folding legs (360 mm; 1.18 ft) for stability**
-  **Column terminates in male 3/8" Whitworth thread**

### Specifications

|                     |                     |
|---------------------|---------------------|
| Dimensions (folded) | <b>850 x 110 mm</b> |
| Color               | <b>Matt black</b>   |
| Weight              | <b>2.4 kg</b>       |



## MICROPHONES AND ACCESSORIES

### LBC1226/01 Adjustable Boom



Adjustable in reach and angle  
(quick-release screw clamp)



Maximum reach of 670 mm (2.12 ft)



Fits onto 3/8" Whitworth thread

#### Specifications

|        |            |
|--------|------------|
| Length | 840 mm     |
| Color  | Matt black |
| Weight | 0.70 kg    |

### LBC1227/01 Table Stand



Heavy-duty table stand



3/8" Whitworth stud



Shock-absorbing under surface

#### Specifications

|          |            |
|----------|------------|
| Diameter | 130 mm     |
| Color    | Matt black |
| Weight   | 0.99 kg    |

# AMPLIFIERS AND ACCESSORIES



# PLENA EASY LINE MIXER AMPLIFIERS

## PLE-1MExxx-3IN Mixer amplifiers, USB/BT



Inbuilt Bluetooth for audio streaming



Supports audio playback from USB pen drive



4 microphone/line inputs, plus music source input



Insert feature to use as a pre/power amplifier



Optional 2-tone chime generation for input 1



Available in 60W, 120W & 240W

This PLENA Economy mixer amplifier is a professional public address unit with modern state-of-the-art features. It is easy to use, taking the complexity away from the user and putting it where it belongs, inside the equipment. Providing crisp and clear announcements and music is as easy as turning on a radio. Offering the essentials of public address in an affordable package.

| Specifications         | PLE-1ME060-3IN                  | PLE-1ME120-3IN                  | PLE-1ME240-3IN                  |
|------------------------|---------------------------------|---------------------------------|---------------------------------|
| Rated power            | 60W                             | 120W                            | 240W                            |
| Input voltage          | 220-230 V, AC, 50 Hz            | 220-230 V, AC, 50 Hz            | 220-230 V, AC, 50 Hz            |
| Frequency response     | 80 Hz to 18 kHz                 | 80 Hz to 18 kHz                 | 80 Hz to 18 kHz                 |
| Distortion             | <1% @ rated output power, 1 kHz | <1% @ rated output power, 1 kHz | <1% @ rated output power, 1 kHz |
| Loudspeaker output     | 100 V / 4 ohms                  | 100 V / 4 ohms                  | 100 V / 4 ohms                  |
| Safety                 | acc. to IEC 62368-1             | acc. to IEC 62368-1             | acc. to IEC 62368-1             |
| Mounting               | Stand-alone, 19" rack           | Stand-alone, 19" rack           | Stand-alone, 19" rack           |
| Color                  | Charcoal                        | Charcoal                        | Charcoal                        |
| Dimensions (H x W x D) | 100 x 430 x 290 mm              | 100 x 430 x 290 mm              | 100 x 430 x 290 mm              |
| Weight                 | Approx. 6.5 kg                  | Approx. 8.9 kg                  | Approx. 10.5 kg                 |

# PLENA ALL IN ONE MIXER AMPLIFIERS

## PLN-6AIO240 All-in-one amplifier, 6-zone, 240W



**All-in-One solution for background music and paging**



**Six-zone paging system**



**Built-in AM/FM tuner with presets**



**MP3 player for USB device and SD card**



**Optional Call Station and Wall Panel with local audio source and remote**

The Plena All-in-One System is a six zone 240 W background music and paging system, which consists of the Plena All-in-One Unit, an optional remote Wall Panel, and one or more Call Stations. It is a cost-effective public address system for small to medium-sized venues that require an easy to use out of the box solution.

## PLN-2AIO180-IN 180W Two Zone



**Two zone output**



**4 Microphone inputs with independent level control**



**USB drive and SD card for Audio playback**



**Built-in FM tuner with preset memories**



**100V/Telephone input with priority and VOX**

The PLENA all in one mixer amplifiers is a versatile solution for public address, emergency announcements and background music (BGM) requirements. PLN-2AIO180-IN is a 180W two zone mixer amplifier with inbuilt music source capable of playing audio files. Typical applications include use in supermarkets, restaurants, schools, retail chains, canteens, places of worship, gymnasiums etc. The amplifier can be used with PLE-2CS call station.

### Specifications

|                        |  |
|------------------------|--|
| Floating total power   | <b>240 W</b>   |
| Voltage                | <b>115/230 Vac +/- 15%, 50/60 Hz</b>                     |
| Loudspeaker outputs    | <b>100 V</b>   |
| Dimensions (H x W x D) | <b>133 x 430 x 365 mm with feet (19" wide, 3 U high)</b> |
| Mounting               | <b>Standalone, 19" rack</b>                              |
| THD                    | <b>&lt;1%</b>  |
| Weight                 | <b>Approx. 18 kg</b>                                     |

### Specifications

|                           |  |
|---------------------------|--|
| Rated output              | <b>180 W</b>   |
| Frequency response        | <b>80 Hz to 18 kHz</b>                                   |
| THD                       | <b>&lt;1%</b>  |
| Inputs                    | <b>4 Mic Inputs, 100V/Telephone Input with Priority</b>  |
| Loudspeaker direct output | <b>Two Zone Output with 100V and 4 ohms terminals</b>    |
| Input source for BGM      | <b>USB &amp; SD Card Inputs, FM Tuner with 5 Presets</b> |
| Input voltage             | <b>230 VAC, ±15%, 50 Hz or 24 VDC</b>                    |
| Dimensions (HxWxD)        | <b>88 x 433 x 250 (19" wide, 2U High)</b>                |
| Weight                    | <b>12 kg</b>   |



# PLENA ALL IN ONE MIXER AMPLIFIERS

## PLN-1AIO090-IN 90W



**4 Microphone inputs with independent level control**



**USB drive and SD card for Audio playback**



**Built-in FM tuner with preset memories**



**100V/Telephone input with priority and VOX**



**24 VDC backup power supply input**

The PLENA all in one mixer amplifiers is a versatile solution for public address, emergency announcements and background music (BGM) requirements. Typical applications of PLENA all in one 90W mixer amplifier include use in supermarkets, restaurants, schools, retail chains, canteens, places of worship, gymnasiums etc.

## PLE-1MP30-IN



**Bluetooth, USB, FM and TF card slot for audio streaming**



**Variable ducking option**



**Supports 12/24V battery power supply**



**Low battery indication**



**Phantom power supply support**



**1V Line out**

The portable mixer amplifier is a professional public address unit with modern state-of-the-art features, which is built on class-D platform. The amplifier is easy to use, taking the complexity away from the user and putting it where it belongs, inside the equipment. Providing a crisp call or clear music is as easy as turning on a radio. Offering the essentials of public address in an affordable package.

### Specifications

|                           |  |
|---------------------------|--|
| Rated output              | 90 W   |
| Frequency response        | 80 Hz to 20 kHz (+1/-3 dB @ -10 dB)              |
| THD                       | <1%  |
| Inputs                    | 4 Mic Inputs, 100V/Telephone Input with Priority |
| Loudspeaker direct output | 100 V, 70 V and 4 Ohm                            |
| Input source for BGM      | USB & SD Card Inputs, FM Tuner with 5 Presets    |
| Input voltage             | 230 VAC, ±15%, 50 Hz or 24 VDC                   |
| Dimensions (HxWxD)        | 88 x 433 x 250 mm (19" wide, 2U High)            |
| Weight                    | Approx. 10 kg                                    |

### Specifications

|                                   |   |
|-----------------------------------|---|
| Max. Power                        | 30 W for 19/24V, 30 W (-1 dB) for 12V               |
| Frequency response                | 20 Hz to 20 kHz (+1/-3 dB @ -10 dB of rated output) |
| Ducking range                     | 0 dB, -6 dB to -24 dB (+1 dB/-3 dB), Mute           |
| Mic Input 1                       | Connector 1/4" TRS stereo jack                      |
| Mic Input 2                       | Connector 1/4" XLR combo                            |
| Line output                       | XLR type  |
| Dimensions (H x W x D)            | 52 x 224 x 219 mm                                   |
| Mounting                          | Bench/Desktop placement                             |
| Color                             | Traffic black RAL 9017                              |
| Operating temperature             | -5 °C to +45 °C                                     |
| Storage and transport temperature | -15 °C to +70 °C                                    |
| Net weight                        | 2 kg  |

# BOOSTER AMPLIFIERS

## LBD19xx/00 Booster Amplifier



Wide range of power amplifiers including 120W, 240W & 480W



Multiple outputs · 70 V / 100 V and 8/4 ohms



Temperature controlled forced ventilation, overload and short circuit protections



Dual inputs with priority switching (LBD1938)

The LBD 193x amplifiers are powerful power amplifier in a 2U high 19" case (3U housing for LBD 1938) for rack mounting or tabletop use. The Bosch Plena power amplifier series with its varied amplification range fulfills a wide variety of public address requirements at a surprisingly low cost. The amplifier is protected against overload and short circuits. The system has two balanced inputs with priority (available in LBD1938/00 only) each with a loop-through facility. This makes it easy to connect remote systems that require priority control. An additional 100 V line input is provided to connect the amplifier to a 100V loudspeaker line to provide more power to remote locations. The amplifier has 70 V and 100 V outputs for constant voltage loudspeaker systems, and a low impedance output for 8 ohms or 4 ohms loudspeaker loads.

| Specifications            | LBD1930/00   | LBD1935/00   | LBD1938/00   |
|---------------------------|--|--|--|
| Rated output (RMS)        | 120 W  | 240 W  | 480 W  |
| Frequency response        | 50 Hz to 20 kHz (+1 / -3 dB at -10 dB ref. rated output) | 50 Hz to 20 kHz (+1 / -3 dB at -10 dB ref. rated output) | 50 Hz to 20 kHz (+1 / -3 dB at -10 dB ref. rated output) |
| Distortion                | <1 % at rated output power, 1 kHz                        | <1 % at rated output power, 1 kHz                        | <1 % at rated output power, 1 kHz                        |
| S/N (flat at max volume)  | >80 dB   | >85 dB   | >90 dB   |
| Loudspeaker direct output | 100 V, 70 V, 8/4 ohms                                    | 100 V, 70 V, 8/4 ohms                                    | 100 V, 70 V, 8/4 ohms                                    |
| Input voltage             | 230VAC ±10% at 50/60Hz or 24VDC ±10%                     | 230VAC ±10% at 50/60Hz or 24VDC                          | 230VAC ±10% at 50/60Hz or 24VDC                          |
| Inrush current            | 8A at 230 VAC, 6A at 24 VDC                              | 9A at 230 VAC, 11A at 24 VDC                             | 19A at 230 VAC, 30A at 24 VDC                            |
| Max. Power consumption    | 400 VA   | 760 VA   | 1600 VA  |
| Dimensions (H x W x D)    | 100 x 432 x 250 mm                                       | 100 x 432 x 250 mm                                       | 145 x 432 x 370 mm                                       |
| Weight                    | 10.5 kg  | 12.5 kg  | 25 kg  |

## PRE-AMPLIFIER

### LBB1925/10 Plena System



**Six zone system pre-amplifier, with single or dual channel operation**



**Two input channels for call stations**



**Universal input for microphone/line, with speech optimized tone control**



**Three inputs for BGM selection and music optimized tone control**



**Front panel zone selection for BGM and call station zone selection for calls**



**PC and trigger inputs for automated calls, alarm tones and chimes to selected zones**

The Plena system pre-amplifier is a versatile, high performance unit with call and mono BGM (background music facility). It fulfills a wide variety of public address requirements at a surprisingly low cost. It can provide dual channel operation for simultaneous calls and BGM for up to six different zones, using two Plena amplifiers.

#### Specifications

|                           |   |
|---------------------------|---|
| Input voltage             | 230/115VAC, $\pm 15\%$ , 50/60 Hz       |
| Frequency response        | 50 Hz to 20kHz (+1/-3 dB)               |
| Distortion                | < 0.5%                                  |
| S/N (flat at min. volume) | >75 dB                                  |
| Tone control              | $\pm 10$ dB (Bass) $\pm 10$ dB (Treble) |
| Input channels            | 1 x Mic; 3 x Line                       |
| Output channels           | 1 x Master; 1 x Tape; 1 x Headphone     |
| Dimensions (H x W x D)    | 100 x 430 x 270 mm                      |
| Weight                    | Approx. 5 kg                            |

### PRM-UST Music Source, USB, SD, Tuner



**MP3 playback from SD card and USB inputs**



**FM tuner with RDS, presets and digital control**



**Simultaneous operation of SD/USB player and FM tuner**



**Separate outputs for digital source and FM tuner**

The PRM-UST is a professional multi-source music player intended to be used as background music source for public address and commercial audio applications. It has USB interface, SD card input for playing stored music files, and tuner for FM frequency band broadcast receiver. It is used in hotels, shops, supermarkets, restaurants, bars, canteens, gyms, showrooms, and other places where background music creates the right atmosphere.






#### Specifications

|                        |   |
|------------------------|---|
| Voltage range          | 110 – 120 VAC $\pm 10\%$ , 50- 60 Hz / 220 – 240 VAC $\pm 10\%$ , 50- 60 Hz |
| Power consumption      | 15 W  |
| Mounting               | Stand-alone, 19" rack (19" wide, 1 U high)                                  |
| Color in RAL           | RAL 9017 Traffic black  |
| Dimensions (H x W x D) | 44 x 482 x 250 mm   |
| Operating temperature  | 0 °C – 45 °C  |
| Storage temperature    | -40 °C – 70 °C  |
| Weight                 | 3.2 kg  |

## PLENA ACCESSORIES

### PLN-4S6Z Plena All-in-One Wall Panel



-  **Remote control for the Plena All-in-One Unit PLN-6AIO240**
-  **BGM routing and volume control**
-  **Remote selection of four music source inputs**
-  **Remote microphone/line input**
-  **Powered from the Plena All-in-One Unit**






The Plena Wall Panel PLN 4S6Z is used to control the source selection, zone selection, and volume of the Plena All-in-One Unit PLN 6AIO240 from a remote location, and accepts a microphone or music source.

#### Specifications

|                               |   |
|-------------------------------|---|
| Voltage range                 | 24 VDC, supplied by the connected amplifier |
| Current consumption (typical) | <50 mA                                      |
| Connector                     | 1 x RJ45 socket (inside Wall Panel)         |
| Dimensions (H x W x D)        | 115 x 115 x 70 mm                           |
| Operating temperature         | -10°C to +45°C                              |
| Storage temperature           | -40°C to +70°C                              |
| Weight                        | Approx. 0.6 kg                              |

### PLN-1EOL End-of-line supervision board



-  **EN 54-16 certified**
-  **Pilot tone detection on 100 V loudspeaker lines**
-  **Voltage free switch 200 V 1 A and LED indications of pilot tone**
-  **Daisy chainable for monitoring multiple zones on a single input contact**
-  **Fits on built-in mounts on selected Bosch loudspeakers**

A Plena end-of-line board is a PCB designed to detect the 20 kHz pilot tone generated by a supervised public address or voice alarm system. It activates a voltage free switch in the presence of a 20 kHz signal (pilot tone) above 5 V, as well as an LED for easy visual confirmation of operation.

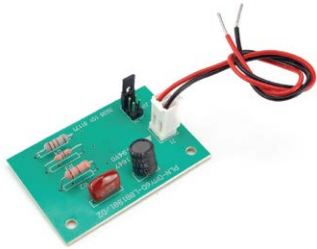
#### Specifications

|                                   |                        |
|-----------------------------------|------------------------|
| Input                             | 1                      |
| Voltage                           | 100 V loudspeaker line |
| Detection threshold               | 5 to 50 V @ 20 kHz     |
| Dimensions (H x W x D)            | 17 x 60 x 40 mm        |
| Mounting                          | WLS II                 |
| Operating temperature             | -10 °C to +55 °C       |
| Storage and transport temperature | -40 °C to +70 °C       |
| Weight                            | Approx. 0.04 kg        |



## PLENA ACCESSORIES

### PLN-DMY60 End-of-line supervision load



**EN 54-16 certified**



**Provides filtered load at 20 kHz**



**Makes longer loudspeaker lines possible**



**Three power settings**



**Fits on built-in mounts on selected Bosch loudspeakers**

#### Specifications

|                                   |                               |
|-----------------------------------|-------------------------------|
| Connector                         | High temperature flying leads |
| Voltage                           | 100 V loudspeaker line        |
| Load                              | 8, 20, and 60 W               |
| Dimensions (H x W x D)            | 17 x 30 x 50 mm               |
| Mounting                          | Two mounting holes            |
| Operating temperature             | -10 °C to +55 °C              |
| Storage and transport temperature | -40 °C to +70 °C              |
| Weight                            | Approx. 0.08 kg               |

The Plena Voice Alarm System employs a simple and easy to use method of loudspeaker surveillance based on impedance measurement. On long wire runs, external influences, such as cable capacitance and speaker impedance, can negatively influence the reliability of the measurements. The dummy loads provide a filtered load exclusively at the pilot tone frequency. This greatly increases the dependability of impedance measurements, providing reliable break or short circuit detection, even on long wire runs.





# PLENA CALL STATIONS AND ACCESSORIES



# PLENA CALL STATIONS AND ACCESSORIES

## PLN-6CS Plena All-in-One Call Station



-  **Stylish, high-quality six-zone Call Station for the Plena All-in-One System**
-  **Six-zone selection keys with LED indicators, and an 'all-call' key**
-  **Momentary Press to Talk (PTT) key**
-  **Configurable gain, speech filter, limiter, and output level for improved intelligibility**







The Plena All-in-One Call Station is a stylish, high quality call station that comprises a stable metal base, a flexible microphone stem, and an unidirectional condenser microphone. It has six zone keys and a separate all call key for easy selection of zones in a Plena All-in-One public address system. A large 'Press To Talk' (PTT) key, with redial function, is used to control the call. In addition to tabletop use, the special design allows the Call Station to be neatly flush mounted in a desktop. Up to six call stations can be connected in a loop through arrangement to the same All in One Unit, with configurable priority.

### Specifications

|                             |                      |
|-----------------------------|----------------------|
| Voltage                     | 24 VDC               |
| Current consumption         | <50 mA               |
| Base dimensions (H x W x D) | 55 x 108 x 240 mm    |
| Mounting                    | Tabletop             |
| Color                       | Charcoal with silver |
| Stem length with microphone | 390 mm               |
| Operating temperature       | -10°C to +45°C       |
| Storage temperature         | -40°C to +70°C       |
| Weight                      | Approx. 0.5 kg       |

## PLE-xCS Plena Easy Line Call Stations



-  **PTT-key for calls for activation**
-  **Momentary or toggle**
-  **Green LED, indicating microphone active**
-  **Stable metal base design with fixed 2 m cable and lockable Euro style connector**
-  **Phantom powered by amplifier**
-  **Loop-through option for up to 8 call stations**






### Specifications

|                        |                                  |
|------------------------|----------------------------------|
| Voltage                | 12 to 48 V                       |
| Sensitivity            | 1.2 mV/pa +/- 4 dB               |
| Frequency response     | 100 Hz to 15 kHz                 |
| Zones                  | PLE-1CS: 1/ALL<br>PLE-2CS: 2/ALL |
| Output impedance       | 200 ohms                         |
| Dimensions (H x W x D) | 40 x 100 x 235 mm                |
| Weight                 | Approx. 1 kg                     |

The Plena tabletop microphone is a stylish, high-quality tabletop unidirectional condenser microphone, mainly intended for making calls in a public address system. Its heavy metal base and rubber feet ensure stability on any flat surface. The special design also allows the unit to be neatly flushmounted in desktops.

## LBB194x/00 Call Stations for LBB 1925/10



-  **Stylish call station (all call & six zones), intended for LBB 1925/10 system pre-amplifier**
-  **Unidirectional condenser microphone on flexible stem**
-  **Six zone selection keys, all-call key, and momentary PTT-key for calls**
-  **Selectable gain, speech filter, and limiter for improved intelligibility**
-  **LED indications for zone selection, system activity and call station status**





### Specifications

|                        |  |
|------------------------|--|
| Voltage                | 18 to 24 V (24 V supplied by LBB 1925/10)  |
| Sensitivity            | 85 dB SPL (gain preset 0 dB)               |
| Frequency response     | 100 Hz to 16 kHz                           |
| Zones                  | LBB1941/00: One/All<br>LBB1946/00: Six/All |
| Output impedance       | 200 ohms                                   |
| Gain preset            | +6 / 0 / -15 dB                            |
| Dimensions (H x W x D) | 40 x 100 x 235 mm                          |
| Weight                 | Approx. 1 kg                               |

The Plena tabletop microphone is a stylish, high-quality tabletop unidirectional condenser microphone, mainly intended for making calls in a public address system. Its heavy metal base and rubber feet ensure stability on any flat surface. The special design also allows the unit to be neatly flushmounted in desktops.

## LBB1950/10 Plena Tabletop Microphone



-  **Tabletop unidirectional condenser microphone with flexible stem**
-  **Phantom powered by amplifier**
-  **Momentary or toggle PTT-key for calls with priority contact**
-  **Green LED, indicating microphone active**
-  **Stable metal base design with fixed 2 m cable and lockable DIN connector**

### Specifications

|                        |                              |
|------------------------|------------------------------|
| Voltage                | 12 to 48 V                   |
| Sensitivity            | 0.7 mV @ 85 dB SPL (2 mV/Pa) |
| Frequency response     | 100 Hz to 16 kHz             |
| Output impedance       | 200 ohms                     |
| Gain preset            | +6 / 0 / -15 dB              |
| Dimensions (H x W x D) | 40 x 100 x 235 mm            |
| Weight                 | Approx. 1 kg                 |

The Plena tabletop microphone is a stylish, high-quality tabletop unidirectional condenser microphone, mainly intended for making calls in a public address system. Its heavy metal base and rubber feet ensure stability on any flat surface. The special design also allows the unit to be neatly flushmounted in desktops.

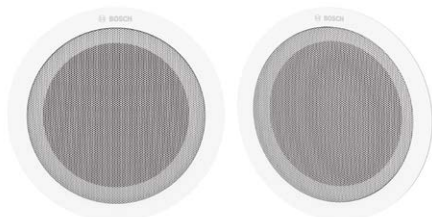
# CEILING LOUDSPEAKERS AND ACCESSORIES





## CEILING LOUDSPEAKERS

### LC9-UC06B Ceiling Speaker 6W White



**Easy to install**



**Flush-mounting in ceiling cavity**



**Simple power setting**

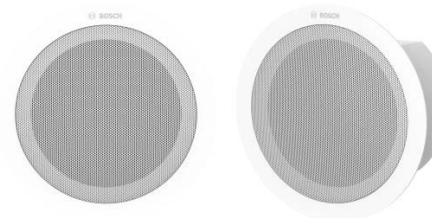


**Suitable for speech and music reproduction**

#### Specifications

|                                       |  |
|---------------------------------------|--|
| Power handling                        | <b>6 W</b>   |
| Rated frequency range                 | <b>235 Hz - 20 kHz</b>                               |
| Sensitivity(SPL 1W/1m)@ 1 KHz         | <b>92 dB</b>   |
| Max SPL (SPL 6W/1 m)@ 1 KHz           | <b>100 dB</b>  |
| Coverage pattern @ 1 kHz/4 kHz (-6dB) | <b>180°/70°</b>                                      |
| Rated impedance                       | <b>1667 Ω @ 6 W, 3333 Ω @ 3 W and 6667 Ω @ 1.5 W</b> |
| Input configuration                   | <b>100 V</b>   |
| Dimensions (DxH)                      | <b>204 x 98 mm</b>                                   |
| Color                                 | <b>White (RAL 9003)</b>                              |
| Net weight                            | <b>0.72 kg</b>                                       |

### LC9-UC06B Ceiling Speaker 6W Backcan White



**Easy to install**



**Flush-mounting in ceiling cavity**



**Simple power setting**



**Suitable for speech and music reproduction**

#### Specifications

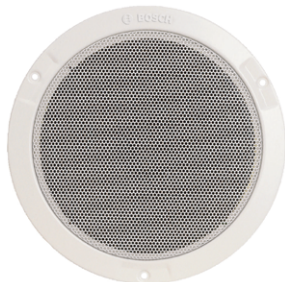
|                                       |  |
|---------------------------------------|--|
| Power handling                        | <b>6 W</b>   |
| Rated frequency range                 | <b>235 Hz - 20 kHz</b>                               |
| Sensitivity(SPL 1W/1m)@ 1 KHz         | <b>92 dB</b>   |
| Max SPL (SPL 6W/1 m)@ 1 KHz           | <b>100 dB</b>  |
| Coverage pattern @ 1 kHz/4 kHz (-6dB) | <b>180°/70°</b>                                      |
| Rated impedance                       | <b>1667 Ω @ 6 W, 3333 Ω @ 3 W and 6667 Ω @ 1.5 W</b> |
| Input configuration                   | <b>100 V</b>   |
| Dimensions (DxH)                      | <b>204 x 98 mm</b>                                   |
| Color                                 | <b>White (RAL 9003)</b>                              |
| Net weight                            | <b>0.72 kg</b>                                       |

The LC9-UC06 and LC9-UC06B are compact, 6W, general-purpose, cost-effective ceiling mount loudspeakers with a perforated metal grille. They are designed for a wide range of applications and have an excellent speech and music performance. The loudspeakers are easy to install thanks to their integral mounting clips. They are available in 2 versions, without backcan (LC9-UC06) and with backcan (LC9-UC06B).



# CEILING LOUDSPEAKERS

## LHM0626/00 Ceiling Loudspeaker



**Suitable for speech and music reproduction**



**Flush-mounted in ceilings**



**Unobtrusive white metal grille**



**Complies with international installation and safety regulations**

The LHM-0626/00 is an economic flush mounting ceiling loudspeaker for general-purpose applications. It is a full range loudspeaker for speech and music reproduction in shops, department stores, schools, offices, sports halls, hotels and restaurants. The LHM-0626/00 has a single piece, 6 W, dual cone loudspeaker. A 100 V matching transformer is mounted on the back of the frame. The circular metal grille is an integrated part of the front, and is finished in an unobtrusive white color (RAL 9010).

### Specifications

|  |                                   |
|--|-----------------------------------|
| Maximum power                                  | <b>9 W</b>                        |
| Rated power                                    | <b>6 W (6 / 3 / 1.5 / 0.75 W)</b> |
| Effective frequency range (-10 dB)             | <b>70 Hz to 18 kHz</b>            |
| Rated impedance                                | <b>1667 ohms</b>                  |
| Connector                                      | <b>2-pole screw terminal</b>      |
| Diameter                                       | <b>199 mm</b>                     |
| Maximum depth                                  | <b>77 mm</b>                      |
| Mounting cut-out                               | <b>165 + 5 mm</b>                 |
| Sound pressure level at 6 W / 1 W (1 kHz, 1 m) | <b>99 dB / 91 dB (SPL)</b>        |
| Sound pressure level at 6 W / 1 W (4 kHz, 1 m) | <b>104 dB / 96 dB</b>             |
| Color  | <b>White (RAL 9010)</b>           |
| Weight   | <b>0.9 kg</b>                     |

# CEILING LOUDSPEAKERS

## Ceiling Loudspeakers, ABS



Modern Unobtrusive Styling



Excellent speech and music reproduction



High sound pressure level



LCZ-UC04S-IN is IP 64 certified

ABS ceiling loudspeakers are available in 4W and 6W power variants. These speakers are compact and suitable for areas with space constraint. The loudspeakers have a wide frequency range which helps in reproducing both speech and music efficiently. Both the frame and grille are made from ABS material to reduce the weight of the loudspeaker. The LCZ-UC04S-IN loudspeaker (with special treated paper cone), is IP 64 water protected from the front and can be applied in humidity environments for example bathrooms, saunas, atriums and swimming pool areas.

| Specifications                                       | LBD8351/10            | LBD8352/10 and LBD8353/10                   | LCZ-UC04S-IN            |
|--|-----------------------|---|-------------------------|
| Rated power  | 4 W                   | 6 W   | 4 W                     |
| Power tapping  | 4/2/1 W               | 6/3 /1.5 W                                  | 4/2/1 W                 |
| Input voltage  | 100 V                 | 100 V                                       | 100 V                   |
| Sound pressure level at rated power / 1W(1Khz at 1m) | 95 dB / 89.6 dB (SPL) | 102 dB / 94.4 dB (SPL)                      | 96.9 dB / 91.4 dB (SPL) |
| Effective frequency (-10dB)                          | 100 Hz - 12 kHz       | 100 Hz - 16 KHz                             | 85 Hz to 10 kHz         |
| Rated input impedance                                | 2500 ohms             | 1667 ohms                                   | 2500 ohms               |
| Diameter   | 165 mm                | 180 mm (LBD8352/10) and 210mm (LBD8353/10)  | 164 mm                  |
| Weight   | 0.5 kg                | 0.6 kg (LBD8352/10) and 0.7 kg (LBD8353/10) | 0.5 kg                  |

# CEILING LOUDSPEAKERS

## Ceiling Loudspeakers, Metal



Modern Unobtrusive Styling



Excellent speech and music reproduction



High sound pressure level



In-built line matching transformer

Metal ceiling loudspeakers are available in 6W, 12W and 20W power variants. These loudspeakers are easy to install, since they come attached with springs. The loudspeakers have high sound pressure level which helps in better sound coverage of the area. The loudspeakers have line matching transformer which helps in distribution of loudspeakers over large areas. The loudspeakers are made from metal and tested to withstand large variations in temperature and humidity.

| Specifications                                       | LBD0606/10                                      | LCZ-UM12-IN                                     | LCZ-UM20-IN  |
|--|---|---|--|
| Rated power  | 6 W   | 12 W  | 20 W   |
| Power tapping  | 6/3/1.5 W                                       | 12/6/3 W  | 20/10/5 W  |
| Rated input voltage                                  | 70/100 V  | 100 V   | 100 V  |
| Sound pressure level at rated power / 1W(1KHz at 1m) | 95 dB / 87 dB (SPL) at 6 W / 1 W (1 KHz at 1 m) | 99 dB / 88.7 dB (SPL) at 12W / 1 W (1 kHz, 1 m) | 101.6 dB / 89.2 dB (SPL) at 20W / 1 W (1 kHz, 1 m) |
| Effective frequency range (-10dB)                    | 65 Hz to 20 KHz                                 | 70 Hz to 17 kHz                                 | 40 Hz to 12 kHz                                    |
| Rated input impedance                                | 1667 ohms                                       | 833 ohms  | 500 ohms   |
| Diameter   | 200 mm  | 200 mm  | 240 mm   |
| Maximum depth  | 70 mm   | 70 mm   | 100 mm   |
| Weight   | 0.75 kg   | 1.3 kg  | 1.6 kg   |

# CEILING LOUDSPEAKERS

## LC3-UM06-IN Compact Ceiling speaker, 6W, metal



**Available in 6W power output**



**Lightweight construction**



**Excellent for speech and music reproduction**



**Available in attractive signal-white color**

The LC3-UM06-IN is a general purpose 6 W ceiling loudspeaker, suitable for speech as well as music reproduction, it has a light weight ABS body with a metallic grille, finished with an attractive signal-white color.

### Specifications

|  |                         |
|--|-------------------------|
| Rated power  | 6 W                     |
| Input voltage  | 100 V                   |
| Sound pressure level at rated power / 1W(1Khz at 1m) | 92/85 dB                |
| Effective frequency range (-10 dB)                   | 75 Hz to 18 kHz         |
| Opening angle at 1 kHz/4 kHz (-6 dB)                 | 180°/65°                |
| Rated Impedance                                      | 1667 ohms               |
| Connector  | 4 pole screw connector  |
| Dimensions (DxH)                                     | 170 x 70 mm             |
| Color  | Signal-white (RAL 9003) |
| Operating temperature                                | -5 °C to +55 °C         |
| Storage Temperature                                  | -40 °C to +70 °C        |
| Weight   | 0.54 kg                 |

### System overview

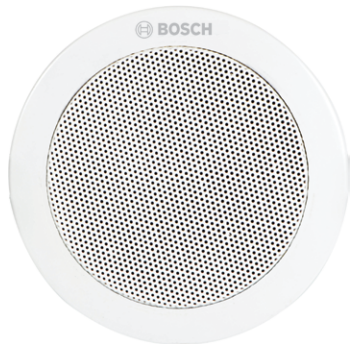
The ceiling speaker unit is integrated with a metallic grille and an ABS baffle, resulting in a light weight construction and is finished in an attractive signal-white color. The loudspeaker has good sensitivity and a wide frequency range, which makes it suitable for speech and music reproduction. It has an in-built line matching transformer, which supports a 100 V line output from the amplifier. The transformer has 3-tappings - full power, half power and quarter power, which helps the user to select the desired output levels based on their customized requirements. The loudspeaker is equipped with spring mounting mechanism, which helps in quick installation of the speaker on the ceiling.

### Installation Notes

The ceiling loudspeaker unit has a diameter of 170 mm. A cut out of 139 mm diameter needs to be carved out in the ceiling for installation. The loudspeaker can be installed by pulling up the mounting clamps and inserting the loudspeaker into the cut out in the ceiling.

# CEILING LOUDSPEAKERS

## LCZ-UM06-IN Compact Ceiling speaker, 6W, metal



**Available in 6W power output**



**Lightweight construction**



**Excellent for speech and music reproduction**



**Available in attractive signal-white color**

The LCZ-UM06 is a general purpose, 6 W compact ceiling loudspeaker, suitable for speech as well as music reproduction, preferred in places where there is a space constraint.

### Specifications

|  |                                |
|--|--------------------------------|
| Rated power  | <b>6W(6/3/1.5W)</b>            |
| Input voltage  | <b>100 V</b>                   |
| Sound pressure level at rated power / 1 W (1 KHz at 1 m) | <b>92/85 dB</b>                |
| Effective frequency range (-10 dB)                       | <b>100 Hz to 20 kHz</b>        |
| Opening angle at 1 kHz/4 kHz (-6 dB)                     | <b>180°/130°</b>               |
| Rated impedance  | <b>1667 ohms</b>               |
| Connector  | <b>4 pole screw connector</b>  |
| Dimensions (DxH)   | <b>105 x 90 mm</b>             |
| Color  | <b>Signal-white (RAL 9003)</b> |
| Weight   | <b>0.58 kg</b>                 |

### System overview

The ceiling loudspeaker is compact in design, integrated with a metal grille and baffle, finished with an attractive signal-white color. The loudspeaker has good sensitivity and a wide frequency range, which makes it suitable for speech and music reproduction. It has an in-built line matching transformer, which supports a 100 V line output from the amplifier. The transformer has 3-tappings - full power, half power and quarter power, which helps the user to select the desired output levels based on their customized requirements. The loudspeaker is equipped with spring mounting mechanism, which helps in quick installation of the speaker on the ceiling.

### Installation Notes

The ceiling loudspeaker unit has a diameter of 105 mm. A cutout of 84 mm diameter needs to be carved out in the ceiling for installation. The loudspeaker can be installed by pulling up the mounting clamps and inserting the loudspeaker into the cutout in the ceiling.

# CEILING LOUDSPEAKERS

## LC1-PCxxG6-6-IN Premium Sound Ceiling



Excellent sound reproduction



Co-axial full-range speaker with poly cone tweeter



Easy to install



Simple power tapping at full, half and quarter power



Tested for PHC with 100 hr continuous operation as per IEC60268-1&5

ABS Ceiling Loudspeakers are available in 15W, 20W, 30W and has full-range performance in the bandwidth of 70 Hz to 20 kHz. It comes with a poly cone tweeter for enhanced performance. The speaker has a line matching transformer to connect to a 100V output from an amplifier.

| Specifications   | LC1-PC15G6-6-IN    | LC1-PC20G6-6-IN         | LC1-PC30G6-6-IN   |
|--|--------------------|-------------------------|-------------------|
| Rated output (RMS)                                       | 15 W               | 20 W                    | 30 W              |
| Power tapping  | 15/7.5/3.75 W      | 20/10/5/2.5 W           | 30/15/7.5 W       |
| Rated input voltage                                      | 100 V              | 100 V                   | 100 V             |
| Sound pressure level at rated power / 1 W (1 KHz at 1 m) | 88 dB (±3 dB)      | 89 dB (±3 dB)           | 90 dB (±3 dB)     |
| Effective frequency range (-10dB)                        | 100 Hz to 20 kHz   | 70 Hz to 20 kHz         | 70 Hz to 20 kHz   |
| Rated impedance at rated power                           | 666/1333/2666 ohms | 500/1000/2000/4000 ohms | 333/666/1333 ohms |
| Driver/Speaker diameter                                  | 5/8 in             | 5/8 in                  | 5/8 in            |
| Weight   | 1.2 kg             | 1.5 kg                  | 1.6 kg            |

## CEILING SPEAKER ACCESSORIES

### LC3-CBB Back box for LC3 speaker



**Light weight ABS material**



**Easy to install**



**Optional back-box**

The optional back box LC3-CBB fully protects the loudspeaker from dust, falling objects and prevents sound traveling via the ceiling cavity to adjacent areas. The loudspeaker frame, grill and back box are manufactured from self extinguishing ABS according to UL 94V0.

#### Specifications

|                                   |                   |
|-----------------------------------|-------------------|
| Diameter                          | 148 mm (5.82 in)  |
| Maximum depth                     | 96.3 mm (3.79 in) |
| Material                          | ABS               |
| Color                             | White (RAL 9010)  |
| Operating temperature             | -25 °C to +55 °C  |
| Storage and transport temperature | -40 °C to +70 °C  |
| Weight                            | 0.11 kg           |

### Metal fire dome



**Protects the rear of the ceiling loudspeaker**



**Easy assembly with the loudspeaker**



**Knockout holes for two grommets and two cable glands**



**B15 certified according to DIN 4102-8**

#### Specifications

|                               |   |
|-------------------------------|---|
| Dimensions (dia. x max depth) | 147 x 87 mm (5.8 x 3.4 in)                                      |
| Weight                        | 0.36 kg   |
| Color                         | White (RAL 9010) LBC3080/11<br>Flame Red (RAL 3000) LBC 3080/01 |

During a fire, the ceiling cavity can allow fire or smoke to spread throughout a building. To inhibit fire entering the cavity via the ceiling loudspeaker, it can be fitted with an LBC3080/11 steel fire dome. This is mounted on the loudspeaker assembly using four self-tapping screws supplied with the fire dome. The fire-dome has knockout holes for two grommets (supplied) and two cable glands (PG 13). This fire dome can only be used with the ceiling speakers: LBC3087/41, LBC3090/01, LBC3090/31, LHM0606/00, LHM0606/10 and LHM0626/00.



# CEILING SPEAKER ACCESSORIES

## Ceiling loudspeaker, Accessories



The back box is made from ABS material and is color matched with the ceiling loudspeakers. The Back box has knockout holes and is supplied with the cable glands. The unit can only be used as a back cover for LBD0606/10 and LCZ-UM12-IN ceiling loudspeakers. The back cover can be fitted to the ceiling loudspeaker frame by using the self tapping screws.

| Specifications                 | LM1-BB-IN             |
|--------------------------------|-----------------------|
| Dimensions (dia. x max. depth) | <b>160 x 87.75 mm</b> |
| Color                          | <b>Off White</b>      |
| Weight                         | <b>0.14 kg</b>        |



The metal fire dome is made from metal. It can be fitted to the LBD0606/10 & LCZ-UM12-IN ceiling loudspeakers. The fire dome can be mounted on the loudspeaker assembly using four self tapping screws supplied with the fire dome. The fire dome has knockout holes for two grommets and two cable glands (supplied along with the product). The fire dome is available in red color. The fire dome has been tested to withstand high temperatures.

| Specifications                 | LM1-MFD-IN              |
|--------------------------------|-------------------------|
| Dimensions (dia. x max. depth) | <b>142.1 x 87.75 mm</b> |
| Color                          | <b>Red</b>              |
| Weight                         | <b>0.3 kg</b>           |



The LBD8356/00 is used as a back box for mounting speakers in areas without false ceiling. The backbox supports ceiling speakers like LBD0606/10 and LCZUM12-IN.

| Specifications         | LBD8356/00       |
|------------------------|------------------|
| Dimensions (Outer Dia) | <b>272 mm</b>    |
| Color                  | <b>Off White</b> |
| Weight                 | <b>0.35 kg</b>   |






# CABINET AND COLUMN SPEAKERS



# CABINET & COLUMN LOUDSPEAKERS

## Wooden Cabinet Loudspeakers



-  Good speech intelligibility and background music reproduction
-  High Sound Pressure Level
-  Excellent frequency response, Wide opening angle
-  In built 100V line matching transformer
-  Available in Black & White Color

The Bosch cabinet and column loudspeakers are general purpose cost-effective loudspeakers for indoor use. Provided with quick and easy mounting in corners between two walls, or between a wall and ceiling; the speaker unit is made of wooden frame with non-transparent woven cloth in matching color. LBD3921 is a 24W column loudspeaker, suitable for indoor use where beaming is desirable.

LBD 3902 & LBD 3904 both are 6W speakers, where LBD 3902 is straight side and LBD 3904 is slanted side. LBD 3905 is bi-directional 12W speaker with slanted side easy selection of power taps (normal, half or quarter of rated power) are available for the speakers through the power taps. All the wooden loudspeakers are available in black and white colors.

| Specifications                                    | LBD3902 (D\L)          | LBD3903 (D\L)            | LBD3904 (D\L)           | LBD3905 (D\L)            | LBD3921 (D\L)            |
|---|------------------------|--------------------------|-------------------------|--------------------------|--------------------------|
| Rated power                                       | 6W (6 W / 3 W / 1.5 W) | 12W (12 W / 6 W / 3 W)   | 6 W (6 W / 3 W / 1.5 W) | 12 W (12 W / 6 W / 3 W)  | 24 W (24 W / 12 W / 6 W) |
| Rated input voltage                               | 100V                   | 100V                     | 100V                    | 100V                     | 100V                     |
| Sound pressure level at rated power / 1W(1KHz,1m) | 93.8 dB / 86 dB (SPL)  | 102.0 dB / 91.7 dB (SPL) | 95.9 dB / 88.6 dB (SPL) | 95.4 dB / 85.4 dB (SPL)  | 104.4 dB / 91.3 dB (SPL) |
| Effective frequency range (-10 dB)                | 150 Hz to 15 kHz       | 150 Hz to 15 kHz         | 150 Hz to 15 kHz        | 150 Hz to 15 kHz         | 150 Hz to 15 kHz         |
| Rated input impedance                             | 1667 ohms              | 833 ohms                 | 1667 ohms               | 833 ohms                 | 417 ohms                 |
| Opening angle horizontal (-6 dB)                  | 199°/83° (at 1/4 kHz)  | 184° / 86° (at 1/4 kHz)  | 153° / 81° (at 1/4 kHz) | 261° / 250° (at 1/4 kHz) | 206°/ 68° (at 1/4 kHz)   |
| Opening angle vertical (-6 dB)                    | 199°/83° (at 1/4 kHz)  | 66° / 58° (at 1/4 kHz)   | 153° / 81° (at 1/4 kHz) | 261° / 250° (at 1/4 kHz) | 36°/ 9° (at 1/4 kHz)     |
| Dimensions (H x W x D)                            | 243 x 151 x 140/119 mm | 445 x 151 x 150 /111 mm  | 243 x 151 x 131 mm      | 243 x 230 x 131 mm       | 849 x 151 x 127 mm       |
| Weight  | 1.3 kg                 | 2.6 kg                   | 1.2 kg                  | 1.9 kg                   | 4.9 kg                   |

# CABINET & COLUMN LOUDSPEAKERS

## Metal Column speakers



For applications where directivity is important



Good speech intelligibility and background music reproduction



Swivel wall-mounting bracket supplied as standard



Available in black and white color

The LA2-UMxx-D/L-IN metal column loudspeakers deliver professional performance from a robust, yet aesthetically designed metal enclosure in a white or black finish. It is an ideal column loudspeaker where sound beaming is required, for indoor use in passenger terminals, places of worship, conference venues, factories, exhibition areas. A swivel wall mounting bracket is supplied as standard, allowing accurate positioning.

| Specifications   | LA2-UM30-D/L-IN    | LA2-UM40-D/L-IN    | LA2-UM60-D/L-IN    |
|--|--------------------|--------------------|--------------------|
| Maximum power  | 45 W               | 60 W               | 90 W               |
| Rated power (PHC)                                      | 30 W               | 40 W               | 60 W               |
| Sound pressure level at rated power / 1 W (1 kHz, 1 m) | 105 / 92 dB (SPL)  | 106 / 93 dB (SPL)  | 107 / 95 dB (SPL)  |
| Effective frequency range (-10dB)                      | 153 Hz to 17.7 kHz | 120 Hz to 15.3 kHz | 147 Hz to 17.4 kHz |
| Horizontal opening angle at 1 kHz/4 kHz (-6 dB)        | 198°/130°          | 201°/129°          | 200°/129°          |
| Vertical opening angle at 1 kHz/4 kHz (-6 dB)          | 62°/18°            | 55°/14°            | 54°/14°            |
| Dimensions (L x W x D)                                 | 571 x 122 x 90 mm  | 651 x 140 x 110 mm | 651 x 140 x 110 mm |
| Weight   | 5.3 kg             | 7 kg               | 8 kg               |

# CABINET & COLUMN LOUDSPEAKERS

## Premium-sound Cabinet Loudspeaker Range



High-fidelity music and speech reproduction



Selectable 8 ohms, 70 V and 100 V inputs



Compact yet robust ABS enclosure



Supplied with adjustable wall-mounting bracket



Available in Black & White Color

The Premium-sound cabinet loudspeaker range consists of a 15 W and 30 W model, available in a light or dark color. The loudspeakers have selectable 8 ohms, 70 V and 100 V inputs. Typical applications are: theme bars, music restaurants, theme parks, retail outlets, audio visual, boardrooms and offices, exhibition areas, showrooms, fitness centers and presentation environments.

| Specifications  | LB2-UC15-(D1/L1)                                  | LB2-UC30-(D1/L1)                                |
|---|---|---|
| Rated power   | 15 W  | 30 W  |
| Power tapping   | 1.9/3.75/7.5/15 W                                 | 3.75/7.5/15/30 W                                |
| Rated input voltage                                       | 11/70/100 V                                       | 15.5/70/100 V                                   |
| Sound pressure level<br>at rated power / 1 W (1 kHz, 1 m) | 99/87 dB (SPL)                                    | 105/90 dB (SPL)                                 |
| Effective frequency range (-10 dB)                        | 95 Hz to 20 kHz                                   | 100 Hz to 19 kHz                                |
| Transducers   | 101.6 mm (4") woofer, 13 mm (0.51 ") dome tweeter | 127 mm (5") woofer, 13 mm (0.51 ") dome tweeter |
| Rated input impedance                                     | 8/326/667 ohms                                    | 8/163/333 ohms                                  |
| Dimension (HxWxD) in mm                                   | 205 x 136 x 118 mm                                | 245 x 160 x 131 mm                              |
| Weight  | Approx. 1.9 kg                                    | Approx. 2.4 kg                                  |

## CABINET & COLUMN LOUDSPEAKERS

### LB9-UC06 Cabinet speaker 6W white



**Suitable for speech and music reproduction**



**Easy to install**



**Simple power setting**



**Knock-out ports for cable entries**

The LB9-UC06 is a compact, 6W, general-purpose, cost-effective, indoor loudspeaker with a perforated metal grille. It is designed for a wide range of applications and has excellent speech and music performance. The loudspeaker is with two mounting screws.

#### Specifications

|                                       |  |
|---------------------------------------|--|
| Power handling                        | <b>6 W</b>   |
| Transformer Taps                      | <b>6, 3, 1.5 W</b>   |
| Rated frequency range (-10 dB)        | <b>135 Hz - 20 kHz</b>   |
| Sensitivity (SPL 1 W/1 m)             | <b>92 dB</b>   |
| Max SPL (SPL 6 W/1 m)                 | <b>100 dB</b>  |
| Coverage pattern @ 1 kHz/4 kHz (-6dB) | <b>130°/70°</b>  |
| Rated impedance                       | <b>1667 <math>\Omega</math> @ 6 W, 3333 <math>\Omega</math> @ 3 W and 6667 <math>\Omega</math> @ 1.5 W</b> |
| Input configuration                   | <b>100 V</b>   |
| Dimensions (DxH)                      | <b>230 x 111 mm</b>  |
| Operating temperature                 | <b>-25 °C to +55 °C</b>  |
| Storage temperature                   | <b>-40 °C to +70 °C</b>  |
| Weight                                | <b>0.93 kg</b>   |

# **HORN LOUD SPEAKERS AND SOUND PROJECTORS**














# HORN LOUDSPEAKERS & SOUND PROJECTORS

## LBC34xx/00 Horn Loudspeakers



Bosch high-efficiency horn loudspeakers provide excellent speech reproduction and sound distribution for a wide scope of outdoor applications. They are ideal for sports grounds, parks, exhibitions, factories and swimming pools.

-  High-quality speech and music reproduction
-  High efficiency drivers
-  Up to 45 W (max. power)
-  Wide opening angle
-  Excellent speech reproduction
-  Simple power setting
-  Water and dust protected to IP 65
-  Versatile mounting bracket
-  Comply with international installation and safety regulations

| Specifications                                  | LBC 3470/00                                | LBC 3481/12                                      | LBC 3491/12                                     | LBC 3492/12                                    | LBC 3493/12                                    |
|---|--|--|---|--|--|
| Maximum power                                   | 22.5 W                                     | 15 W   | 15 W  | 30 W   | 45 W   |
| Rated power (PHC)                               | 15 W                                       | 10 / 5 / 2.5 W                                   | 10 / 5 / 2.5 W                                  | 20 / 10 / 5 W                                  | 30 / 15 / 7.5 W                                |
| Sound pressure level at 15 W / 1 W (1 kHz, 1 m) | 115 / 103 dB (SPL)                         | 113 dB / 103 dB (SPL)                            | 118 dB / 108 dB (SPL)                           | 118 dB / 108 dB (SPL)                          | 126 dB / 111 dB (SPL)                          |
| Sound pressure level at 15 W / 1 W (2 kHz, 1 m) | -  | 115 dB / 105 dB (SPL)                            | 121 dB / 111 dB (SPL)                           | 123 dB / 110 dB (SPL)                          | 127 dB / 112 dB (SPL)                          |
| Effective frequency range (- 10 dB)             | 500 Hz to 5 kHz                            | 500Hz to 7kHz                                    | 480Hz to 5.5kHz                                 | 380Hz to 5.5kHz                                | 380Hz to 5kHz                                  |
| Opening angle at 1 kHz / 4 kHz (-6 dB)          | 130° / 50°                                 | Horizontal - 160° / 50°<br>Vertical - 160° / 50° | Horizontal - 90° / 40°<br>Vertical - 130° / 45° | Horizontal - 80° / 35°<br>Vertical - 80° / 35° | Horizontal - 70° / 40°<br>Vertical - 70° / 40° |
| Rated input voltage                             | 100 V                                      | 100 V  | 100 V   | 100 V  | 100 V  |
| Rated impedance                                 | 667 Ohm                                    | 1000 ohm   | 1000 ohm  | 500 ohm  | 333 ohm  |
| Connection                                      | 4-wire cable.<br>Lenght: 500 mm (19.68 in) | 2 m, 4-wire cable                                | 2 m, 4-wire cable                               | 2 m, 4-wire cable                              | 2 m, 4-wire cable                              |
| Dimensions                                      | 235 x 190 x 225 mm                         | -  | -   | -  | -  |
| Weight  | 1.5 kg                                     | 1.25 kg (2.75 lb)                                | 1.4 kg (3.08 lb)                                | 2.65 kg  | 3 kg   |

# HORN LOUDSPEAKERS & SOUND PROJECTORS

## LH1-XXXX-IN ABS Horn Loudspeakers



Excellent speech reproduction



Water and dust protected to IP 65



Easy to install



Simple power tapping through color code



The LH1-CC15-IN is circular horn loudspeaker and its horn and back-cover are made of ABS material. These speakers have a line matching transformer to connect to 100 V output from amplifier. The loudspeaker has power tapings at full power, half power and quarter power to connect at different power levels.

| Specifications   | LH1-CC1-IN                    | LH1-EC15-IN                     | LH1-CC30-IN                  | LH1-EC30-IN                    |
|--|-------------------------------|---------------------------------|------------------------------|--------------------------------|
| Maximum Power  | 22.5 W                        | 22.5 W                          | 45 W                         | 45 W                           |
| Rated Power  | 15W( 15/7.5/3.75)             | 15 W (15 W / 7.5 W / 3.75 W)    | 30 W (30 W / 15 W / 7.5 W)   | 30 W (30 W / 15 W / 7.5 W)     |
| Sound pressure level at rated power / 1W (1Khz at 1 m) | 103 dB                        | 103.1 dB                        | 108 dB                       | 115 dB/108 dB                  |
| Effective frequency range (-10dB)                      | 500 to 3,500 Hz               | 500 to 3,500 Hz                 | 600 Hz to 3500 Hz            | 490 Hz to 4500 Hz              |
| Opening Angle at 1 KHz (-6dB)                          | Circular : 90 (H)/90 (V)      | Elliptical : 110 (H)/82 (V)     | Circular: 95 (H)/95 (V)      | Elliptical : 112 (H)/85 (V)    |
| Rated Voltage  | 100 V                         | 100 V                           | 100 V                        | 100 V                          |
| Rated impedance  | 667 ohms                      | 666.7 ohms                      | 333 ohms                     | 333 ohms                       |
| Dimension (HxWxD)                                      | Circular : 290 x 280 x 290 mm | Elliptical : 285 x 280 x 285 mm | Circular: 290 x 280 x 290 mm | Elliptical: 285 x 280 x 285 mm |
| Weight   | Circular : 1.9 kg             | Elliptical : 1.8 kg             | Circular: 1.9 kg             | Elliptical: 1.8 kg             |

# HORN LOUDSPEAKERS & SOUND PROJECTORS

## LHW-UMx-IN, Without Driver



-  Excellent speech reproduction
-  Water and dust protected according to IP65
-  Simple power tapping through color-coded cables
-  Anodized fasteners employed for product longevity

The Bosch professional horn loudspeaker system includes a range of circular horns and high-efficiency driver units. This provides the customer with the flexibility to use different combinations of horns and drivers for different applications.

| Specifications        | LHW-UMS-IN                     | LHW-UML-IN                       |
|-----------------------|--------------------------------|----------------------------------|
| Diameter              | 18 inch                        | 22 inch                          |
| Material              | Aluminum                       | Material-Aluminum                |
| Screw type            | Steel anodized screws          | Screw type-Steel anodized screws |
| Screw thread          | 1-3/8 inch,18 threads per inch | 1-3/8 inch,18 threads per inch   |
| Color                 | RAL 7035 Light gray            | RAL 7035 Light gray              |
| IP rating             | IP 65                          | IP 65                            |
| Diameter              | 460 mm                         | 562 mm                           |
| Operating temperature | -10 °C – 60 °C                 | 10 °C – 60 °C                    |
| Storage temperature   | -10 °C – 65 °C                 | 10 °C – 65 °C                    |
| Weight                | 2.3 kg                         | 3.06 kg                          |

# HORN LOUDSPEAKERS & SOUND PROJECTORS

## LHD-UMxxx-IN



**Excellent speech reproduction**



**Water and dust protected according to IP65**



**Simple power tapping through color-coded cables**



**Anodized fasteners employed for product longevity**






The LHD-UMxxx-IN Driver Units are to be used with a horn loudspeaker driver unit suitable for 100 V public address applications. This driver unit can be installed along with 22-inch and 18-inch horn waveguides (supplied separately). 1-3/8 inch, 18 threads per inch screw thread is used for mounting the driver into the horns.

| Specifications                | LHD-UM40X-IN        | LHD-UM60-IN           | LHD-UM60X-IN        |
|-------------------------------|---------------------|-----------------------|---------------------|
| Frequency range (-10 dB) (Hz) | 350 Hz – 3,500 Hz   | 350 Hz – 3,500 Hz     | 350 Hz – 3,500 Hz   |
| Maximum power                 | 60 W                | 90 W                  | 90 W                |
| Rated power                   | 40 W                | 60 W                  | 60 W                |
| Power tapping                 | 40 W/20 W/10 W      | 60 W (single tapping) | 60 W/30 W/15 W      |
| IP rating                     | IP 65               | IP 65                 | IP 65               |
| Nominal impedance             | 250 $\Omega$        | 16 $\Omega$           | 166 $\Omega$        |
| Dimensions                    | 160 x 126 mm        | 95 x 107 mm           | 160 x 126 mm        |
| Operating temperature         | -10 °C – 60 °C      | -                     | -                   |
| Storage temperature           | -10 °C – 65 °C      | -                     | -                   |
| Color                         | RAL 7035 Light gray | RAL 7035 Light gray   | RAL 7035 Light gray |
| Weight (without horn)         | 2.3 kg              | 1.6 kg                | 2.3 kg              |

# HORN LOUDSPEAKERS & SOUND PROJECTORS

## LBC3095/15 Pendant sphere loudspeaker, 10W








-  Suitable for speech and music reproduction
-  Simple power setting
-  5 m fixed connection cable
-  Water and dust protected
-  Robust self-extinguishing ABS enclosure to UL 94 V0

The LBC 3095/15 is a pendant sphere designed to be suspended from the ceiling via its connecting cable. The pleasing shape and neutral color make the pendant sphere models interesting architectural features in their own right.

## LBC3094/15 Sound projector loudspeaker, 10W



-  Suitable for speech and music reproduction
-  Simple power setting
-  2 m fixed connection cable
-  IP63 water and dust protected
-  Robust self-extinguishing ABS enclosure to UL 94 V0

The LBC 3094/15 is a sound projector for speech and background music reproduction in indoor or outdoor applications such as shopping centers, factory grounds and sports fields.

### Specifications

|   |                             |
|---|-----------------------------|
| Rated power                                     | 10 W                        |
| Power tapping                                   | 10/5/2.5 W                  |
| Sound pressure level at 10 W / 1 W (1 kHz, 1 m) | 99 dB/89 dB (SPL)           |
| Effective frequency range (-10 dB)              | 130 Hz to 20 kHz            |
| Opening angle at 1 kHz / 4 kHz (-6 dB)          | 180°/90°                    |
| Rated voltage                                   | 100 V                       |
| Rated impedance                                 | 1000 ohms                   |
| Connection                                      | 5 m 4-wire cable            |
| Dimensions (D x L)                              | 185 x 157 mm (7.3 x 6.2 in) |
| Color   | White (RAL 9010)            |
| Weight  | 1.64 kg                     |





### Specifications

|   |   |
|---|---|
| Maximum power                                   | 15 W  |
| Rated power (PHC)                               | 10 W  |
| Power tapping                                   | 10/5/2.5 W  |
| Sound pressure level at 10 W / 1 W (1 kHz, 1 m) | 104 dB/94 dB  |
| Effective frequency range (-10 dB)              | 140 Hz to 10 kHz  |
| Opening angle at 1 kHz / 4 kHz (-6 dB)          | 152°/60°  |
| Rated input voltage                             | 100 V   |
| Rated impedance                                 | 1000 ohms   |
| Electrical connection                           | 2 m (78.74 in) 4-core fixed cable (4 x 0.5 mm <sup>2</sup> /20 AWG) |
| Dimensions (D x L)                              | 177 x 268 mm  |
| Color   | White (RAL 9010)  |
| Weight  | 2.2 kg  |

# HORN LOUDSPEAKERS & SOUND PROJECTORS

## Sound projectors



-  Excellent speech and music reproduction
-  Very wide opening angle
-  Modern unobtrusive styling
-  Simple power setting

The LBC 3941/11 is a 6 W cost-effective sound projector. It features a very wide opening angle and unobtrusive styling. Water and dust protection to IP 65 make it suitable for indoor and outdoor use. LBD8354/10 is a 6 W sound projector and LBD8355/00 is a 6 W bi-directional sound projector.

| Specifications   | LBD 8354/10          | LBD 8355/00                 |
|--|----------------------|-----------------------------|
| Rated power  | 6 W                  | 12 W                        |
| Power tapping  | 6/3/1.5 W            | 6/3/1.5 W                   |
| Rated input voltage                                      | 100 V                | 100 V                       |
| Sound pressure level at rated power / 1 W (1 KHz at 1 m) | 95/87 dB (4 kHz, 1m) | 100.3 / 91.3 dB (1 kHz, 1m) |
| Effective frequency range (-10 dB)                       | 180 Hz - 8 KHz       | 100 Hz - 8 KHz              |
| Rated input impedance                                    | 1667 ohms            | 1667 ohms                   |
| Dimensions   | 144 x 203 mm         | 210 x 68 mm                 |
| Weight   | 1.35 kg              | 0.70 kg                     |

# VOLUME CONTROLS










# VOLUME CONTROLS

## LBC14xx/10 Series



-  **12 W, 36 W and 100 W versions**
-  **Available in power-save or failsafe versions**
-  **Built-in 24 VDC override relay**
-  **Continuous rotating system**
-  **Complies with international installation and safety regulations**

Public address systems are often used for both announcements and background music distribution. Volume controls can be used to adjust the level locally. In addition to volume control, program selectors can also be installed to select five different programs locally. The design and color are unobtrusive in any interior. Ease of installation, operation and reliability is optimized in the design.

| Specifications         | LBC 1400/10             | LBC 1401/10             | LBC 1410/10             | LBC 1420/10                 | LBC 1430/10                 |
|------------------------|-------------------------|-------------------------|-------------------------|-----------------------------|-----------------------------|
| Rated power            | 12 W                    | 12 W                    | 36 W                    | 100 W                       | 100 W                       |
| Attenuation steps      | 5 x 3 dB+ off           | 5 x 3 dB + off          | 8 x 3 dB+ off           | 10 x 2 dB+ off              | 10 x 2 dB+ off              |
| Frequency response     | 50 Hz to 20 kHz (-1 dB) | 50 Hz to 20 kHz (-1 dB) | 50 Hz to 20 kHz (-1 dB) | 50 Hz to 20 kHz (-1 dB)     | 50 Hz to 20 kHz (-1 dB)     |
| THD                    | <0.5%                   | <0.5%                   | <0.5%                   | <0.5%                       | <0.5%                       |
| No. of Programs        | -                       | -                       | -                       | -                           | -                           |
| Dimensions (H x W x D) | 87 x 87 x 45.6 mm       | 81 x 81 x 45.5 mm       | 87 x 87 x 45.6 mm       | 87 x 147 x 61.5 mm          | 87 x 87 x 32.9 mm           |
| Weight                 | 0.22 kg                 | 0.22 kg                 | 0.22 kg                 | 0.51 kg (including surface) | 0.13 kg (including surface) |

# VOLUME CONTROLS

## LM1-VCXX Series



**12 W and 36 W versions**



**Suitable for 3-wire and 4-wire override systems**



**Built-in 24 VDC override relay**



**Robust design**



**Available in Portrait and Landscape design**

Public address systems are often used for both announcements and background music distribution. Volume controls can be used to adjust the sound level locally. In the event of an (emergency) announcement, the built-in relay ensures that the message is broadcast at a preset level, independent of the local volume setting. The volume controls are suitable for 3-wire and 4-wire override systems. The volume controls are available in 12 W and 36 W and available in portrait (vertical) and landscape (horizontal) design. The 12 W volume control features 5 attenuation steps of -3 dB and an off position. The 36 W volume control features 8 attenuation steps of -3 dB and an off position. The intuitive graphics around the knob clearly shows the attenuator steps and off position.

| Specifications         | LM1-VC12P (P/L)         | LM1-VC36P (P/L)  | LM1-VC12P-IN (Portrait)        | LM1-VC36L-IN (Landscape) |
|------------------------|-------------------------|------------------|--------------------------------|--------------------------|
| Rated power            | 12 W                    | 36 W             | 12 W                           | 36 W                     |
| Attenuation steps      | 5 x -3 dB+ off          | 8 x -3 dB+ off   | 9 x 3 db + 2 off               | 9 x 3 db + 2 off         |
| Frequency response     | 50 Hz to 20 kHz (-1 dB) | 50 Hz to 20 kHz  | 50 Hz to 20 kHz (-1 dB)(-1 dB) | 50 Hz to 20 kHz (-1 dB)  |
| THD                    | 50 Hz to 20 kHz         | <0.5%            | -                              | -                        |
| No. of Programs        | -                       | -                | -                              | -                        |
| Dimensions (H x W x D) | 114 x 70 x 32 mm        | 114 x 70 x 32 mm | 92.6 x 91 x 80 mm              | 92.6 x 91 x 80 mm        |
| Weight                 | 0.25 kg                 | 0.27 kg          | 0.27 kg                        | 0.28 kg                  |






# CONFERENCE SYSTEM



# CONFERENCE SYSTEM

## CCS700 Conference System



-  System is compact, light weight and easy to use
-  Upto 50 discussion units (delegates/ chairman) can be connected in a system
-  Priority option with chairman unit to moderate the discussion
-  Auxiliary input option for BGM playback
-  Headphone sockets with volume control with delegate/ chairman units

CCS700 Conference System is an easy to use, plug and play solution for the audio conference requirements. The CCSE-Dx delegate units enable participants to actively take part in the meeting proceedings. A built-in microphone allows them to speak to the other delegates, and they can listen to the discussion using the built-in loudspeaker or (optional) personal headphones. The CCSE-CMx Chairman Units are equipped with enhanced functionality that enables the user to take the role of chairman in a conference or meeting. CCSE-CMS/DS are units with short microphone, it functions as similar as CCSE-CML/DL. Moulded cables are introduced in three variants 10 meters (CCSE-CA-10), 5 meters (CCSE-CA-05) and 2 meters (CCSE-CA-02) to facilitate the system integrators during installation process.

| Specifications  | CCSE-CU                | CCSE-CML/S       | CCSE-DL/S        |
|---|------------------------|------------------|------------------|
| Mains voltage   | 230 VAC, 50 Hz (±10%)  | -                | -                |
| DC voltage supply to contribution units                       | 24 V ± 1V DC           | -                | -                |
| SNR   | >50 dB at rated output | -                | -                |
| Nominal acoustic input at the microphone                      | -                      | 85dB SPL         | 85dB SPL         |
| Frequency response  | 200 Hz to 12 kHz       | 400Hz to 10Khz   | 400Hz to 10Khz   |
| Dimensions(H X W X D)<br>(without Microphones)                | 88 x 361 x 252mm       | 54 x 136 x 138mm | 54 x 136 x 138mm |
| Length of the microphone (in mm)<br>from the base of the stem | -                      | 488/313          | 488/313          |
| Weight  | 5.5 kg                 | 1.2 kg           | 1.2 kg           |

# CONFERENCE SYSTEM

## CCS900 Conference System



Designed for esthetic, acoustical and functional performance



Unique, patent pending “Possible-To-Speak” indicator



Easy and convenient to use



Future-proof extendibility



Digital acoustic feedback suppression



Excellent speech intelligibility with genuine Bosch DAFS technology

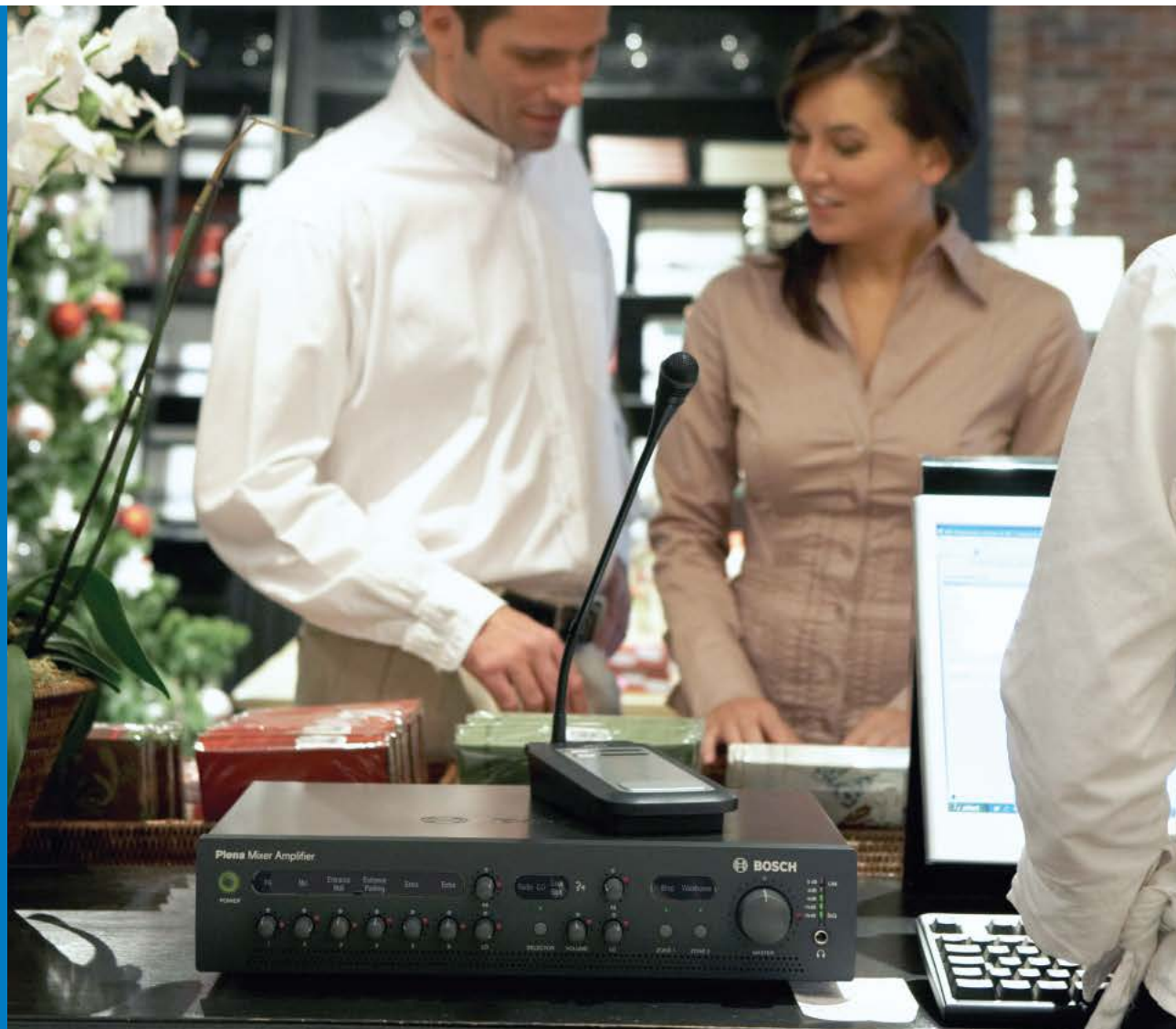


Highly flexible and customizable system supporting up to 150 units

The CCS 900 Ultra Discussion System from Bosch brings order and convenience to small and middle-sized gatherings and conferences. This versatile and economical system is both simple to install and extremely straightforward to use. It has all the facilities required for achieving full control of meetings and discussions, without the need for an operator.

| Specifications  | CCS-CMx CCS Chairman Unit          | CCS-CU Control Unit          | CCS-Dx CCS Delegate Unit         |
|---|------------------------------------|------------------------------|----------------------------------|
| Frequency response  | 25Hz - 12.5 kHz                    | -                            | 25Hz - 12.5 kHz                  |
| Mains voltage   | -                                  | 100 to 240 VAC ± 10 %        | -                                |
| DC voltage supply   | -                                  | 24 V ± 1 V (current limited) | -                                |
| SNR   | -                                  | -                            | -                                |
| Nominal acoustic input at the microphone                      | < 0.5%                             | < 0.5%                       | < 0.5%                           |
| Frequency response  | -                                  | -                            | -                                |
| Dimensions(H X W X D)<br>(without Microphones)                | 71 x 220 x 140mm                   | 84 x 361 x 143 mm            | 71 x 220 x 140 mm                |
| Length of the microphone (in mm)<br>from the base of the stem | CCS-CMS : 313mm<br>CCS-CML : 488mm | -                            | CCS-DS : 313mm<br>CCS-DL : 488mm |
| Weight  | 1 kg                               | 1.5 kg                       | 1 kg                             |

## Application Areas



## Application - Shopping Centre

Multimedia trends like unique music streams per zone, digital music and even product and music videos are popular options in retail environments like chain stores, boutiques or the local supermarket.

The Bosch Plena Public Address System is a straightforward way to provide quality background music as well as clear voice announcements. The system will not only provide a soothing music but also will alert the customers during emergencies.



### Solution Requirements

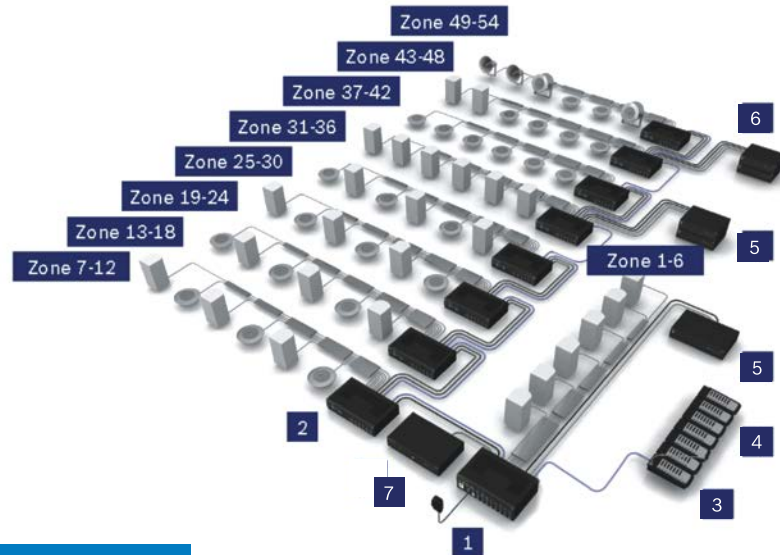
- Easy to install, customize and expand
- Typically up to 60 zones
- Speech intelligibility
- Variable power requirement per zone
- Call station from central control room
- Background Music with multiple sources in public areas
- Compatible speakers
- Aesthetic design
- Flexibility and scalability



## Typical Solution

| Sl. No | Product Description* | Qty* |
|--------|----------------------|------|
| 1      | Controller           | 1 X  |
| 2      | Router               | 8 X  |
| 3      | Call Station         | 1 X  |
| 4      | Call Station Keypad  | 5 X  |
| 5      | 240W power amplifier | 3 X  |
| 6      | 480W power amplifier | 2 X  |
| 7      | BGM Source           | 1 X  |

\*Note: Product models and the quantity for a solution will depend on the scale of the solution and prevalent site conditions



## Features

- For small- to medium-sized applications with up to 120 zones
- Built-in intelligent Message Manager to play automated timed messages.
- Plug-and-play installation with PC configurability
- Interconnects via CAT5 cable
- Fully EVAC-compliant solution



## Application - Schools

Schools are typical examples of applications with a large number of zones each with a relatively low output power requirement per zone.

In addition to mandatory voice alarm functionality for evacuating staff and students, EVAC systems for schools should also include chime tones for notifying the Start/ Finish of classes, plus public address functionality for individually calling classrooms or public area.

Since a classroom has a low ambient noise level, one loudspeaker is usually sufficient, keeping the total power requirement relatively low. Outside areas such as playgrounds and sports fields will require more numbers of weatherproof horn loudspeakers.



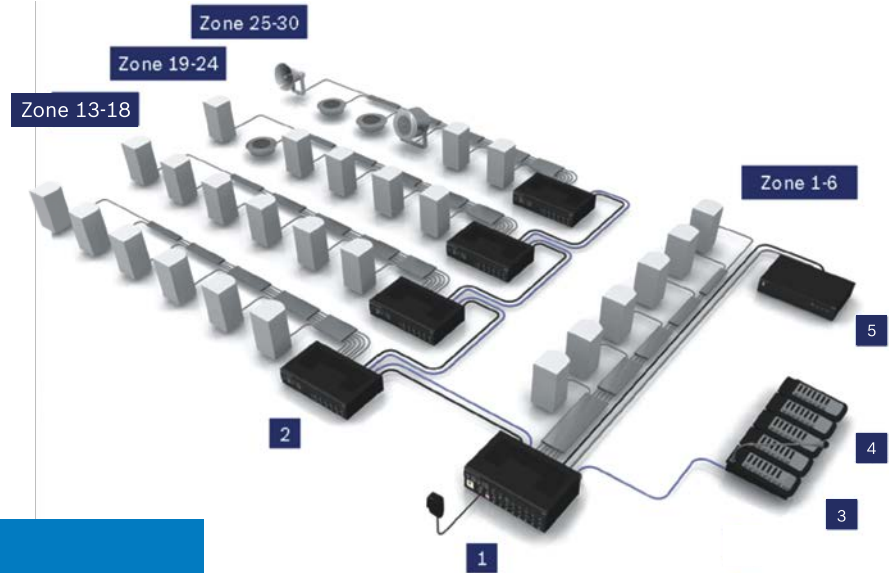
### Solution Requirements

- Typically 20 to 120 classrooms (in larger schools)
- Low power requirement (1 loudspeaker) per classroom
- Call station in main office
- Additional public address functions such as chime tones desirable, hourly alarms.
- BGM in recreation areas is optional

## Typical Solution

| Sl. No | Product Description*       | Qty*  |
|--------|----------------------------|-------|
| 1      | Controller                 | 1 X   |
| 2      | Router                     | 4 X   |
| 3      | Call Station               | 1 X   |
| 4      | Call Station Keypad        | 5 X   |
| 5      | 480W power amplifier       | 1 X   |
| 6      | Wooden Cabinet Loudspeaker | 120 X |
| 7      | BGM Source (Optional)      | 1 X   |

\*Note: Product models and the quantity for a solution will depend on the scale of the solution and prevalent site conditions



## Features

- Intuitive to use and operate.
- Good speech intelligibility
- Built-in intelligent Message Manager to play automated timed messages.
- Seamless Integration with fire alarm systems.
- Plug-and-play installation with PC configurability
- Interconnects via CAT5 cable
- Fully EVAC-compliant solution



## Application - Offices / Commercial Blocks

Offices come in different sizes, each having its own unique requirement. And most require quality background music and clear voice announcements in various zones, such as a demonstration room, the lobby or a warehouse. With full functionality, the Plena Public Address Easy Line is an ideal solution for smaller office environments. The music inputs and multi-zone control, combined with professional level amplification capability makes it a flexible system, easy to install and easy to customize.



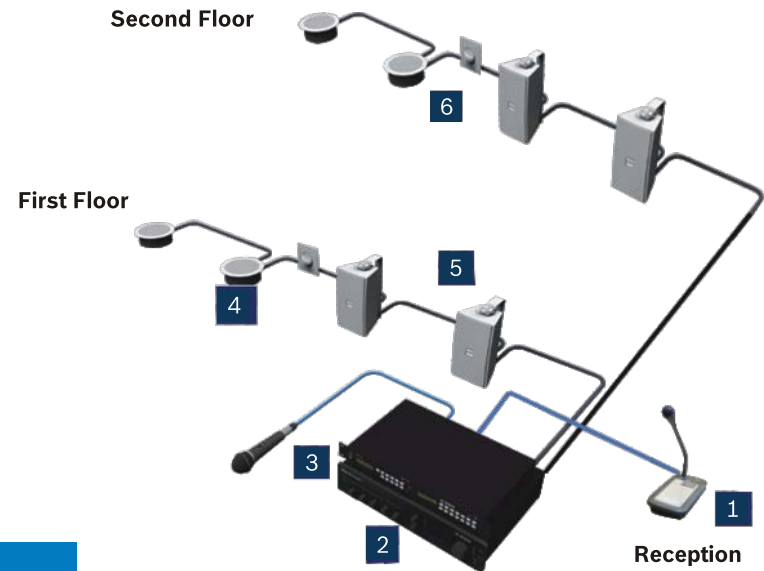
### Solution Requirements

- Typically 2 zones
- Background music and voice announcements in all zones
- Remote source and zone selection
- Separate music & speech for multifunctional room
- Easy operation for personnel
- Telephone central connection

## Typical Solution

| Sl. No | Product Description*                             | Qty* |
|--------|--|------|
| 1      | Plena 2-zone call station                        | 1 X  |
| 2      | Plena Two Mixer amplifier / All in One Amplifier | 1X   |
| 3      | BGM Source                                       | 1 X  |
| 4      | Ceiling loudspeakers                             | 20 X |
| 5      | Premium Cabinet Loudspeaker                      | 5 X  |
| 6      | Volume Control                                   | 4 X  |
|        | 480W power amplifier(optional)                   |      |
|        | 240W power amplifier(optional)                   |      |

\*Note: Product models and the quantity for a solution will depend on the scale of the solution and prevalent site conditions



## Features

- Two Zone output to address separate areas
- Microphone/ Music inputs for use during special occasions
- USB drive and SD card for MP3 playback as a background music source
- Built-in FM tuner with preset memories
- Telephone input to connect to EPABX
- High priority emergency input to integrate with other audio systems



## Application - Restaurant

Restaurants are busy businesses that demand multitasking public address systems with quality music and voice announcement capability.

Today, the modern restaurant is an entire dining experience in itself. Many brands have developed one stop concepts with indoor dining, drive-in services and fresh on-the-go lunches. A public address solution needs to offer more functionality than just background music and simple announcements. The Plena Public Address Easy Line multi-zone controllers and amplifiers combined with professional level amplification capability are suited for this kind of application.



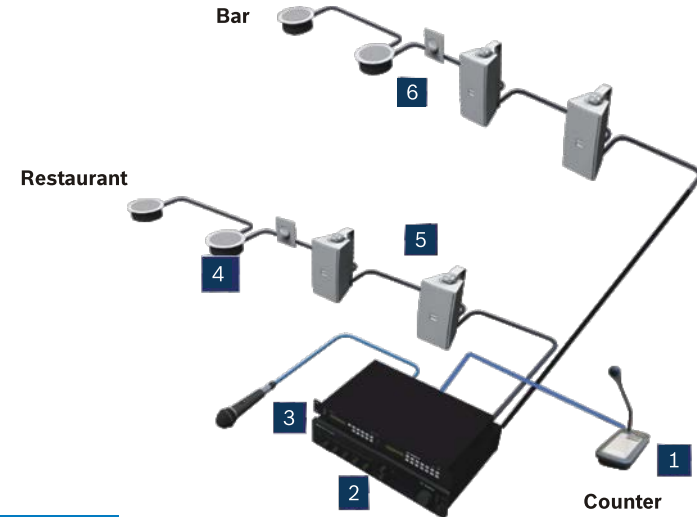
### Solution Requirements

- 2 zones
- Background music and voice
- Announcements in all zones
- Speech intelligibility in noisy environment
- Call stations for all counters
- Facility for paging personnel and customers
- Easy operation for staff

## Typical Solution

| Sl. No | Product Description*                             | Qty* |
|--------|--|------|
| 1      | Plena 2-zone call station / Microphone           | 1 X  |
| 2      | Plena Two Mixer amplifier / All in One Amplifier | 1X   |
| 3      | BGM Source                                       | 1 X  |
| 4      | Ceiling loudspeakers                             | 20 X |
| 5      | Premium Cabinet Loudspeaker                      | 5 X  |
| 6      | Volume Control                                   | 4 X  |
|        | 480W power amplifier(optional)                   |      |
|        | 240W power amplifier(optional)                   |      |

\*Note: Product models and the quantity for a solution will depend on the scale of the solution and prevalent site conditions



## Features

- Two Zone output to address separate areas.
- Microphone/ Music inputs for use during special occasions.
- USB drive and SD card for MP3 playback as a background music source.
- Built-in FM tuner with preset memories
- Telephone input to connect to EPABX
- High priority emergency input to integrate with other audio systems.





## Application - Houses of Worship

Houses of worship are the places where people get inspiration and motivation. The prayers will help the people to achieve the same. Most of these places often have acoustically reverberant environments which require special attention while designing the sound system.

The Bosch Plena Public address system will provide crystal clear sound without any distractions thus enhancing the effectiveness of the prayers.



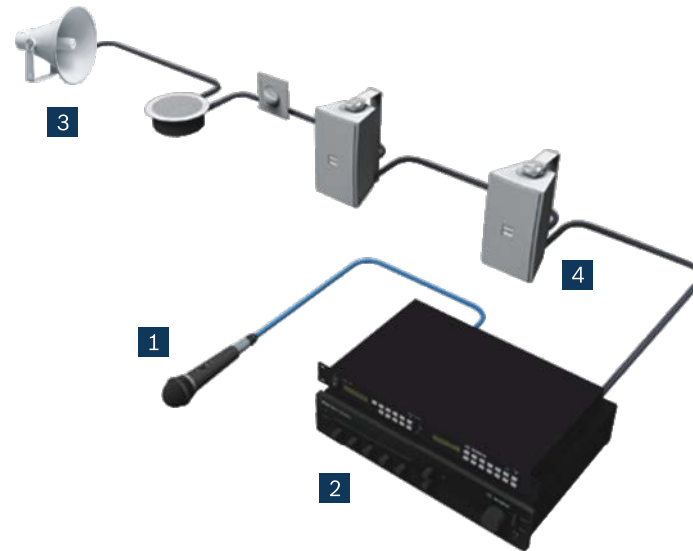
### Solution Requirements

- Background music and voice announcements
- Speech intelligibility in noisy environment
- Microphones for the priest
- Call station for the security manager
- Facility for paging automated general announcements .
- Easy operation for staff

## Typical Solution

| Sl. No | Product Description*                  | Qty* |
|--------|---------------------------------------|------|
| 1      | Microphone / Plena call station       | 1 X  |
| 2      | Plena all in one mixer amplifier      | 1X   |
| 3      | Horn Loudspeakers                     | 5 X  |
| 4      | Premium Cabinet Loudspeaker           | 10 X |
|        | Wooden Cabinet Loudspeaker (Optional) | 10 X |
|        | 240W power amplifier (Optional)       |      |
|        | 480W power amplifier(Optional)        |      |

\*Note: Product models and the quantity for a solution will depend on the scale of the solution and prevalent site conditions



## Features

- Microphone/ Music inputs for use during special occasions.
- Horn Loudspeakers for outdoor areas
- USB drive and SD card for MP3 playback as a background music source.
- Telephone input to connect to EPABX
- High priority emergency input to integrate with other audio systems.



## **A Tradition of Quality and Innovation**

For over 125 years, the Bosch name stands for quality and reliability. Bosch is the global supplier of choice of innovative technology, backed by the highest standards for service and support.

Bosch Security Systems proudly offers a wide range of security, safety, communications and sound solutions that are relied upon every day in applications around the world, from government facilities and public venues, to businesses, schools and homes.

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