



PLENA RANGE



PLENA ALL-IN-ONE

AMPLIFIERS

Code

A QUICK GUIDE TO DESIGNING PUBLIC ADDRESS SYSTEMS

The first step to designing a PA system is to establish the extent of the areas to be covered by loudspeakers. Next the number of speaker zones needs to be established:

If all of the speakers are always addressed together, this is an "all-call" or "single-zone" system, and so only a single amplifier, typically a mixer amplifier, is required to drive the speakers. If some speakers are addressed some of the time, and others at other times, it is a "multi-zone" and in addition to an amplifier, some kind of switching and routing system, typically a system pre-amplifier and call-station, is required. Speaker selection is largely defined by the location of the speakers - In offices and other similar environments 6W ceiling and cabinet speakers are mostly used, and in warehouses and other large spaces sound projectors are used. Particularly noisy environments usually require horn speakers, as do outdoor locations. Horn speakers are usually unsuitable for music, in which event, high-power sound projectors should be used. The number of microphones in the system will need to be determined, and in the case of multi-zone systems it will need to be established whether each microphone will need to address one zone, all zones, or different combinations of zones.

- 1, Determine which type and how many loud speakers are required
- 2, Select the amplifier - depends on the power required for driving the loudspeakers
- 3, Select the microphone(s) - this is influenced by both the application requirements and desired functionality

Calculating the size of the amplifier

As a rough guide to calculating the size of the amplifier required, the total power of all of the speakers used needs to be calculated and then add 10% for cable loss and expansion. The amplifier power must equal or exceed this number. Consideration should be given to speaker tapings - for example, 6W ceiling speakers are often tapped at half or quarter power, and so these reduced figures (3W and 1.5W) should be used in the calculation. Failure to make this allowance will result in an amplifier of excessive power being chosen; although there is then no danger of damage or malfunction to the amplifier in this case, it does mean that the system cost could be unnecessarily high.

BOSCH (3 Year Warranty)

PLENA ALL-IN-ONE AMPLIFIER SYSTEM

The PLENA BGM/paging system is the versatile All-in-One solution to cover all needs for background music (BGM), making announcements and paging people. This high performance, yet affordable unit is very easy to install and operate.

- ALL-IN-ONE solution for background music and paging
- FM/AM tuner with 15 presets and digital control
- Selectable priority and VOX switching on microphone input 1
- DVD player for audio and MP3 CD/CD-R
- DUAL-ZONE 120W mixer amplifier with volume control per zone
- Optional 2-tone chime to precede announcements

701-0025 **PLN-2AIO120** PLENA Background Music (BGM) & paging system

PLENA MIXING AMPLIFIERS

The PLENA mixer amplifier is a high performance, versatile four microphone inputs mono mixer amplifier, capable of fulfilling a wide variety of public address requirements for surprisingly low cost. A wide choice of input connectors are available: balanced 3-pin XLR and phone jack for microphones, 5-pin DIN for a priority microphone, and stereo inputs for music sources (converted to mono). All microphone inputs have phantom power supply to provide power to condenser microphones and selectable speech filters for improved intelligibility. Microphone inputs 3 and 4 can also be switched to line sensitivity. Furthermore separate music inputs with their own input selector and volume control are available.

701-0004 **LBB1903/10** PLENA single zone mixing amplifier, 30W

701-0005 **LBB1906/10** PLENA single zone mixing amplifier, 60W

701-0006 **LBB1912/10** PLENA single zone mixing amplifier, 120W

PLENA 2-ZONE MIXING AMPLIFIER

The amplifier below includes the same specification as the single zone amplifiers but includes the added feature of 2 zones, with front panel selection buttons.

701-0007 **LBB1914/10** PLENA two zone mixing amplifier, 120W

AMPLIFIERS (continued)

Code

PLENA BOOSTER AMPLIFIERS

The PLENA series offers three types of booster amplifiers: the LBB1930/x0 is a 120W booster amplifier, the LBB1935/x0 is a 240W booster amplifier and the LBB1938/x0 is a very powerful 480W booster amplifier. These are high performance mono amplifiers capable of fulfilling a wide variety of public address requirements at a surprisingly low cost.

- 120W and 240W booster amplifiers in compact 2U-housing
- 70V/100V and 8 OHM outputs
- Balanced line input and loopthrough output
- 100V Input for slave operation on 100V speaker line
- Temperature controlled fan for high reliability
- Mains and battery back-up operation

701-0009 **LBB1930/20** PLENA booster amplifier, 120W701-0010 **LBB1935/20** PLENA booster amplifier, 240W701-0035 **LBB1938/20** PLENA booster amplifier, 480W701-0154 **PLN-1P1000** PLENA booster amplifier, 960W

PLENA SYSTEM PRE-AMPLIFIER SIX ZONES

- 6 zones, with call selection via call station & BGM selection on front panel
- Dual channel operation for BGM & calls (2 boosters required) or combined single channel operation (1 booster required)
- Zone output relays to switch between Call, BGM or Off
- 2 inputs for call stations (up to 8 call stations) LBB1941/00 or LBB1946/00
- 1 universal low noise input
- Multiple chime & alarm tones
- 3 BGM inputs (with selector & volume control)
- Separate volume controls for music & speech
- 6 priority levels
- Priority relay output
- Tape recorder output
- Emergency input with VOX
- Headphone connector
- VU-meter with LED-bar
- 230V AC or 24V dc supply

701-0008 **LBB1925/10** PLENA system pre-amplifier

The PLENA system pre-amplifier is a high performance, versatile call and BGM (background music) mono pre-amplifier; capable of fulfilling a wide variety of public address requirements. It provides dual channel operation for calls and BGM simultaneously to a maximum of six different zones, using two PLENA booster amplifiers. Also single channel operation is possible with only one PLENA booster.

701-0024 **LBB1920/00** PLENA universal pre-amplifier

The PLENA pre-amplifier is a high performance, versatile four input channels mono mixer pre-amplifier, capable of fulfilling a wide variety of public address requirements. All input channels provide a choice of a balanced 3-pin XLR-connector for microphone or line level (selectable), a balanced 5-pin DIN-connector for microphone or line level with priority contact, or a line level stereo Cinch-connector, converted to mono. Microphone inputs have a phantom power supply. Each input channel has its own volume and tone control, a selectable speech filter to reduce the bass content of the speech signal for improved intelligibility, and a balanced direct output on XLR after the channel controls.

700-0035 **LBC1901/00** PLENA rack mount kit for mixer amplifiers

TOA (1 Year Warranty)

MIXER AMPLIFIERS

- 3 microphone inputs
- 2 auxiliary inputs
- 1 recording output
- independent volume input
- master volume controls

700-0012 **A1031** Mixer amplifier with 5 inputs, 30W701-0001 **A1061** Mixer amplifier with 5 inputs, 60W701-0002 **A1121** Mixer amplifier with 5 inputs, 120W

PAGING UNITS

700-0055 **BT5** Enables paging from the telephone. 1 zone, mic/line output700-0056 **BT8** Enables paging from the telephone. 8 zones, has message record facility, message played when handset replaced, mic/line output, supplied with 25D socket

Note: the above paging adapters are designed to operate with a PABX type telephone system via an analogue extension.

DIGITAL VOICE UNITS

700-0031 **LB1** Digital voice unit, 22 secs of speech, user recordable with external mic or line input, replay of message can be triggered by either a contact make or break (switch, push button, P.I.R. etc), line level output, 12V power is available to power a P.I.R. (full specification available on request) 230V ac/24V dc (mic not included)700-0130 **LB7** Digital voice unit, 2 min 15sec which can be split between up to 7 messages, user recordable with external mic or line input replay of messages can be triggered by either a contact break or make (push button, switch, P.I.R. etc), 12V power available for up to 7 P.I.R.'s, line level output, (full specification available on request), 230V ac/24V dc (mic not included)

Amplifiers continued overleaf



InterM A120



InterM PAM-340A Amplifier Modules

AMPLIFIERS (continued)

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InterM (1 Year Warranty)

DESK TOP AMPLIFIERS

- 701-0056 **PA1000B** InterM 30W 3 Input Amplifier, 2 mic inputs, 1 aux input, mic 1 has VOX priority, 100V line or 4/8 ohm output
- 701-0057 **PA935A** InterM 35W 3 Input Amplifier, 1 mic input, 2 mic/aux inputs, mic 1 has VOX priority, 100V line or 4/8 ohm output
- 700-0264 **BKT-PA935A** Rack mounting kit for PA-935A amplifier 2U
- 701-0058 **A60** InterM 60W 5 Input Amplifier, 3 mic inputs, 2 aux inputs, mic 1 has VOX priority, 100V line or 4/8 ohm output
- 701-0059 **A120** InterM, as above, 120W
- 700-0265 **BKT-A120** Rack mounting kit for A60 & A120 amplifiers 2U
- 701-0060 **PA2000A** InterM 60W 6 Input Amplifier, 6 balanced universal mic/line inputs (inputs 1 & 2 have VOX priority), 5 band graphic equaliser, 100V line with 5 switched outputs or 4/8 ohm output, low level output to feed loop amplifier
- 701-0061 **PA4000A** InterM, as above, 120W

DESKTOP MODULE AMPLIFIERS

- 701-0063 **PAM-120A** InterM 120W Amplifier, 6 balanced universal mic/line inputs with individually selectable phantom power & 3 band equalisation on each input, 100V line with 5 switched or single 4/8 ohm output rack mountable using the optional rack mounting kit, 3U high, 230V ac or 24V dc power
- 701-0167 **PAM-340A** InterM 340W amplifier, as above but with additional socket to connect a single RM-05A Remote 5 zone microphone (702-0041) Power 230V ac Only
- 701-0153 **PAM-480A** InterM, As above, 480W Amplifier

MODULES AND ACCESSORIES FOR PAM RANGE AMPLIFIERS

Note: The PAM range of amplifiers have 2 module slots, the left hand slot accepts a tuner only, the right hand slot accepts a CD module.

- 701-0070 **PAM-T** InterM AM/FM Digital Tuner module for PAM range, 30 station memory. An external aerial is recommended for optimum performance
- 701-0072 **PAM-CDA** InterM Single CD player module for PAM range
- 702-0041 **RM-05A** InterM 5 zone plus 'All Call' microphone for use with PAM-340A & PAM-480A amplifiers ONLY. A built in line level amplifier allows the RM-05A to be installed some distance from the host amplifier

COMMERCIAL 19" RACK EQUIPMENT

- 701-0065 **PA9312** InterM 120W 100V Power Amplifier, Rack mounting 3U high, 230V ac/24V dc operation
- 701-0066 **PA9336** InterM 360W 100V Power Amplifier, Rack mounting 3U high, 230V ac/24V dc operation
- 701-0107 **PA-9348** InterM 480W 100V Power Amplifier, Rack mounting 3U high 230V ac/24V dc operation
- 701-0049 **PP-9214** InterM Dual Output Pre Amplifier, 8 balanced mic/line inputs, 2 stereo & 2 Auxiliary inputs, mic inputs have phantom power, Mic 1 & priority 1&2 have VOX priority over other inputs. Mic/line inputs can be switched to either or both of the 2 balanced outputs. Ideal for systems where 2 zones are required, one with music and paging and the other with paging only. Rack mounting 2U high 230V ac/24V dc operation
- NEW** 701-0195 **QD-4420** Inter-M, 4 Channel Power Amplifier 4x 60W into 4 Ohms, 40W into 8 Ohms per channel, Rackmounting 2U High, 230V operation
- NEW** 701-0196 **OT-4420** Transformer Unit to convert the outputs of the above, to 100V line operation, Rackmountable 2U high, passive unit (no power required)
- NEW** 701-0119 **QD-4480** Inter-M, 4 Channel Power Amplifier 4x 120W into 4 Ohms, 80W into 8 Ohms per channel, Rackmounting 2U High, 230V operation
- NEW** 700-0205 **OT-4480** Transformer Unit to convert the outputs of the above, to 100V line operation, Rackmountable 2U high, passive unit (no power required)
- NEW** 701-0197 **QD-4960** Inter-M, 4 Channel Power Amplifier 4x 240W into 4 Ohms, 120W into 8 Ohms per channel, Rackmounting 2U High, 230V operation
- NEW** 701-0198 **OT-4960** Transformer Unit to convert the outputs of the above, to 100V line operation, Rackmountable 2U high, passive unit (no power required)

ADI-GARDINER now offer a comprehensive rack system design & build service. Using CIE's extensive portfolio of products, their technical support team can design and build a PA system to your specification. Each system is supplied assembled, wired and fully tested as part of the build package and is supplied with a comprehensive operation manual including user instructions, a schematic drawing of the system, a visual rack layout and easy to use connection details. Contact our Technical Sales Support department for details.



InterM FOCUS 500 COMPACT



InterM STS-K001L

AMPLIFIERS (continued)

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PORTABLE PA SYSTEMS

- NEW** 701-0189 **SMART300 VHF** Portable Presentation System, 10W, Powered by Internal battery or 230V ac, Complete with VHF Radio Microphone Receiver. (Transmitter not included) SEE BELOW
- NEW** 701-0187 **SMART300 VHF-USB** As above With USB2 Input for the playback of MP3 Files
- NEW** 702-0140 **Q1002** Single Channel Handheld VHF Transmitter. (Requires 1 x 9V PP3 Battery not supplied).
- NEW** 702-0141 **M1002/MC16X** Single Channel Beltpack Transmitter c/w Microphone, (Requires 1 x 9V PP3 Battery not supplied)
- NEW** 700-0634 **SB12** Carry/Storage Bag for Smart 300 and Accessories
- 700-0266 **FOCUS500(U10R)** Chaiyo 30W mains/battery wireless presentation system complete with UHF radio microphone receiver. Transmitter not included
- 700-0267 **FOCUS500(U1DR)** As above with CD module.
- 700-0268 **SQ-5016(AT)** Hand held transmitter for use with Focus
- 700-0269 **SQ-5016(S)** Belt pack transmitter for use with Focus
- 702-0059 **MC-72(S)** Headworn microphone for use with SM-5016(S)
- 702-0062 **MC-15(S)** Tieclip microphone for use with SM-5016(S)

SPEECH TRANSFER SYSTEMS

The SecuriCom Speech Transfer System is a 2 way intercom specifically designed to aid communication where normal speech is impaired by the use of glass security partitions or similar barriers. Every system is controlled and powered individually and comprises a twin channel audio amplifier, power supply unit, staff unit with integral speaker, a gooseneck microphone for the member of staff and a microphone and speaker for the customer. The microphone and speaker units are supplied in various formats to enable the system to be installed in differing locations. These modules are fitted either to the counter surface or surrounding mullion thus preserving the integrity of the glass partition. The system operates on an "open duplex" basis (ie all speakers are live simultaneously).

- 700-0049 **STS-K001L** Contacta Securicom Audio Bridge speech transfer system c/w induction loop facility
- 700-0042 **STS-K002L** Contacta Securicom Surface speech transfer system c/w induction loop facility
- 700-0053 **STS-K003L** Contacta Securicom Flush speech transfer system c/w induction loop facility

BACKGROUND MUSIC & AUTOMATIC MESSAGE ANNOUNCEMENTS

Code

Note: You need a Performing Rights Society licence and a PPL licence to use copyright music in public, contacting these organisations BEFORE playing music in public could save you money!!
PRS Freephone - 0800 0684828, PPL - 0207 5341000

BOSCH (3 Year Warranty)

- DVD player (audio, MP3 & CDR compatible)
- Simultaneous operation of CD-player & tuner
- FM/AM tuner
- Separate outputs & level controls
- Mono operation for BGM
- 230V ac supply

701-0175 **PLN-DVDDT** PLENA DVD/MP3 - player/tuner

PLENA DVD/MP3 - player/tuner - The PLENA BGM source unit is the ideal high quality source for background music (BGM) in public address systems. The unit comprises a DVD player and a digitally controlled FM/AM tuner in a compact 2U high, 19"-wide housing. Typically it is used in shops, supermarkets, restaurants, bars, canteens, gymnasiums, showrooms and other places where BGM creates the right atmosphere. The unit can be connected to all types of public address amplifiers. The unit's appearance is in-line with the current range of Bosch PLENA amplifiers.

700-0029 **LBB1965/00** PLENA Message Manager

The PLENA digital message manager stores up to 12 separate messages recorded using the standard Windows® WAV file format. Via any of its 12 trigger inputs, it can replay announcements of up to four messages routed to user-determined zones (in combination with the PLENA system pre-amplifier). Trigger inputs have sequential priority, and are remotely activated, although inputs 7 to 12 also feature front panel activation. Messages are downloaded from a PC into the unit's built-in flash memory via RS232. Audio quality is set by adjusting the sampling rate from 24 kHz (near-CD quality) to 8 kHz (maximum message time of 500 seconds). The message manager functions as a stand-alone unit as the PC is disconnected once messages have been downloaded. The Windows® software (supplied) takes care of downloading messages and configuring and routing of announcements. The unit features built-in system checks and other safety features for providing emergency and evacuation messages in EN60849-compliant systems.

701-0100 **LBB1968/00** PLENA Feedback Suppressor

The Plena Feedback Suppressor is an easy to use and ideal solution for applications like houses of worship and congress centres where microphone and loudspeakers are often in the same room and the annoying effect of feedback can occur. The unit also has 2 microphone inputs with built-in auto-mixer, that adjusts both inputs in such a way that the microphone that is spoken in loudest gets the highest gain, while keeping the summed gain constant for maximum feedback margin. This is ideal for a dual microphone set-up on a rostrum, pulpit or conference table.

700-0373 **PLN-6WTM** Plena Weekly Timer

The Plena Weekly Timer has 6 contact outputs, 14 chimes and is an ideal partner for Plena Message Manager or Plena VAS. Applications:- Schools, Shopping Malls etc.

701-0179 **PLN-1LA10** Plena Loop Amplifier

The Plena Loop Amplifier is a high power, current driven amplifier with coverage up to 600sq.m. Compliant to EN60849.

BACKGROUND MUSIC

InterM (1 Year Warranty)

PAM SERIES

701-0070 **PAM-T** AM/FM digital tuner with 30-station memory, for use with PAM series range of amplifiers

701-0072 **PAM-CDA** Single CD player, random play, music scan, timer counter, repeat, forward/reverse music search, for use with PAM series range of amplifiers

The PAM series amplifiers will accept 1 tuner and/or 1 CD module.

Denon (1 Year Warranty)

TUNER

701-0076 **DNU100** Digital FM/MW/LW tuner, features 40 station random preset memory, rapid FM station search

CD PLAYER

701-0078 **DNC200P** 5 - disc carousel, continuous playback of 5 CD's, 3 - mode random playback, 20 - selection music calendar display, programme play, intelligent disc scan