

SOUND SYSTEM SPECIALIST

SHORT CATALOGUE 2011





The ***simplest way*** *to make your*
Audio Systems



MICROPHONE BASES



B701-PG
With electret microphone



B701-MG
With dynamic microphone

B701-MG312
Only for PA312-MP3 compact system

NO PRE-AMPLIFIED BASES

ABS structure with flexible stem, hold-down button (PTT), toggle key (LOCK) for long messages, LED signalling activation of the microphone and cable with terminals for connection to the precedence contact.

ACCESSORIES

AC700	Fixing kit microphone bases of the B700 range

CABLES

CV2002	CAT5e SF/UTP shielded cable, length 2 m, with RJ45 connectors
CV2005	CAT5e SF/UTP shielded cable, length 5 m, with RJ45 connectors
CV2010	CAT5e SF/UTP shielded cable, length 10 m, with RJ45 connectors
31/142-100	CAT5e SF/UTP shielded cable, 100 m roll
31/2 -100	Shielded microphone cable (2 wires + shield), 100 m roll
31/84-100	Shielded cable (2 wires and 2 wires + shield), 100 m roll
31/65-250	CEI 20-22 II cable, (3 wires + 1 shielded wire), 250 m roll

PRE-AMPLIFIED BASES CAT 5 CONNECTION (12/24 VDC)

ABS structure with electret microphone and stem with a flexible section at the bottom. Equipped with one hold-down (PTT) call key, one toggle (LOCK) call key for long messages and a LED signalling activation of the microphone. The bases can be mixed with one anther or interlocked with two priority levels. The level of the microphone signal and that of the alerting signal (chime generator included) are adjustable from the rear. Models **B711/6-G** and **B711/12-G** also have 6 or 12 zone keys respectively, which can also be programmed for activating alarms.



B711-G General call



B711/6-G 6-zone call



B711/12-G 12-zone call



B 53-C SMALL SIZE

Pre-amplified microphone base with dynamic microphone and gooseneck. Push to talk button and status led. Limited width for use on small surfaces (e.g. supermarket counters, etc.). Complete with 1.5 m cable with leads for stripping.

MICROPHONES



M936 Hand-held microphone

Unidirectional dynamic microphone with cardioid characteristic for general use. On/Off switch, 5 m XLR-XLR cable, clip for boom stand mounting and carrying case.It features high sensitivity, particularly good intelligibility of speech and good reproduction of music



B260 Table-top base

Table-top base for **MC260** and **MC265** microphones in black die-cast zinc. On/Off switch, microphone XLR/F plug with mechanical retaining device and back output XLR/M plug. Dimensions (LxHxD): 120 x 40 x 125 mm. Weight: 1.2 kg.

M1-NC Hand-held microphone

Unidirectional dynamic microphone with PTT push button, 1.5 m spiralled cable and XLR plug.





MC250 Hand-held microphone

This electret pen type microphone, with hypercardioid polar characteristic, provides high working signal levels within a limited coverage angle, reducing to a minimum acoustic feedback problems. Phantom power supply is required. Voice filter switch, 4,5 m XLR-XLR cable, clip for boom stand mounting and carrying case. It features a very extensive frequency response and is a typical studio microphone that can also be effectively used in critical situations.



M976 Hand-held microphone

High-sensitivity dynamic microphone with ipercardioid characteristic, suitable for both speech and music also in difficult situations with acoustic feed back problems (Larsen effect). On/Off switch, 5 m XLR-XLR cable, clip for boom stand mounting and carrying case.

MC260, MC265 Stem microphones

Family of electret microphones featuring elegant lines and suiting the increasingly demanding specifications of the architectural design of rooms, conference halls and places of worship. The cardioid type response of the microphone body and the very sensible electret make this microphone perfect for enhancing the oratorical skills of the user.



MC265 42 cm



MC260 55 cm, double joint gooseneck

MC102, MC102-N ultra-slim surface microphones

Electret microphones with hemicardioid polar characteristic. They can be used on flat horizontal surfaces (tables, floors) or vertical surfaces (walls). Their special directivity feature means that the microphone reproduces the sound coming only from the front, within an angle of 60 degrees from the surface on which they are placed. They are mainly used, therefore, as microphones for conferences or discussions, religious ceremonies, access control and counters for the public. Phantom power supply is required. Status led. Equipped with 5 m MicroXLR-XLR cable and carrying case. Available in white (**MC102**) or black (**MC102-N**).



WIRELESS MICROPHONES

UHF MULTI-CHANNEL KIT



MA855/R850

Hand-held wireless microphone unit

The **MA855/R850** and **MA853/R850** kits are high-performance Diversity UHF wireless microphone systems using PLL technology with 144 selectable channels. They ensure an exceptionally high range coupled with maximum signal reliability and freedom of movement. Each kit incorporates a handy mute function an LCDF display, a key locking function and a battery-low signalling lamp. The R850 receiver, supplied with its own power supply unit, is equipped with an automatic scanning system for identifying the frequency of the microphone, a large LCD, an RF/AF level measuring device and a squelch circuit for eliminating possible environment noise.

ACCESSORIES

AC850	Support for rack mounting of one R850 receiver (1 HE)
AC852	Support for rack mounting of two R850 receivers (1 HE)
AC855	Battery charger for MA855 and MA853 transmitters



MA853/R850

Lavalier wireless microphone kit

UHF FIXED-CHANNEL KIT

ACCESSORIES FOR R824-F1/4

A pocket transmitter can be used with a miniaturised headset type microphone (optional only for frequencies F1 and F2).



MA822-F1	Fixed-frequency lavalier transmitter, F1=796,70 MHz
MA822-F2	Fixed-frequency lavalier transmitter, F2=804,74 MHz

R824-F1/4

UHF wireless microphone system with 4 fixed channels

The **R824-F1/4** wireless microphone kit is a version for mounting in a 19" rack and has four hand-held microphones and four fixed-frequency UHF receiver modules with individual volume and squelch adjustment. The kit is supplied with its own impact-resistant carrier case.



The R820 "True Diversity" single-channel UHF desk-top receiver has two front-panel connections for antennas (included in the supply), signalling lamps indicating the status of the RF signal and of the audio, and a volume control. On the rear panel there are a balanced microphone output and an unbalanced line output.

MA822/R820-F2

Pocket wireless microphone receiver and transmitter with flesh-coloured head-set type miniaturised microphone



MA824/R820-F2

Hand-held wireless microphone receiver and transmitter with unidirectional dynamic microphone



ACCESSORIES

B13-N

Floor stand, complete with telescopic rod and folding tripod. With adjustable height and microphone boom. Height: 92÷152 cm. Base spread: 70 cm. Weight: 2.5 kg.



B20-N

Floor stand with circular cast metal supporting structure. Telescopic rod with adjustable height and painted black tubular metal. Height: 95÷175 cm. Base width: 30 cm. Weight: 4 kg.



B116

Table-top base in black cast-iron, with chromium-plated telescopic rod, adjustable from 37 to 60 cm. For microphone supports S1, S8 and S10





F11-C

Flexible support, with microphone XLR socket, balanced shielded cable (1.1 m) with XLR plug. L.: 40 cm. Dia.: 14 mm.



MC30-GN

Electret microphone with a cardioid polar response and flexible support. It's equipped with a 5-poles DIN male connector. It is possible to use with AC14-B preamplifier card.
Length: 44 cm. Frequency response: 100÷20000 Hz. Sensitivity: -67 dBV/µbar. Impedance: 680 Ω.



F5-N

Flexible support with threaded (16x1) male and female ends. To be used between the B12, B60-N and B70 and the S1, S8 and S10 supports.
Length 40 cm. Dia 14 mm. Black, without cable.

S1

Jointed microphone support, can be screwed onto telescopic table-top or floor bases.

S10

Same features as the S1, with vibrationdamping elastic body.

S8

Jointed support for microphones and wireless microphones with spring-type seal.

B160

Table-top base for MC30-GN microphones, complete with shielded cable (L) 100 cm. Size: Ø 4.5 cm; (H) 4.2 cm.

B60-N

Chromium-plated ring-nut for table-top mounting, black. Provisions for using F5-N or F11-C flexible stems.
Dimensions: Ø 4.5 cm.

B12

Cast-iron table-top base, black, for F5-N and F11-C flexible stems.

27/59

Adaptor for screwing supports S1 and S10 onto the pins of telescopic bases with M12 x 1 or 3/8" threads.

B70

Chromium-plated ring-nut for table-top mounting, black. Provisions for using F5-N or F11-C flexible stems.
Dimensions: Ø 6.5 cm.

AC14-B

Pre-amplifier module for dynamic and electret microphones. Screw connectors. Suitable to install into standard electric box (e.g. 27/901). Balanced audio output. Sensitivity and output signal level can be adjusted. It has provisions for connection to a LED and a push-button activation.
Power supply: 12/24 Vdc. Dimensions: 74 x 50 x 10 mm.

MIXER AMPLIFIERS

AX6000 RANGE • 120W, 240W RMS • 3 OUTPUT ZONES

Versatility, simplicity of use, toughness and reliability are the features of this range of built-in amplifiers, designed for a vast range of applications in the field of sound broadcasting, for both commercial and industrial use. Three output lines (zones), a CAT 5 connection with the microphone stations for zone calls, priority emergency calling for single zones or groups and provisions for including a USB/SD music module card are just a few of the many functions offered in the **AX6000** range.



AX6120	120 W RMS mixer amplifier with 3 output zones
AX6240	240 W RMS mixer amplifier with 3 output zones



ACCESSORIES

AC5660	Brackets for rack-mounting (2 HE)
AC50	Lateral supporting brackets for rack-mounting

FUNCTIONAL FEATURES

- 2 balanced/unbalanced microphone inputs with phantom power supply
- Microphone input or microphone stations of the **PMB** range
- 2 MIC/PH/LINE inputs with specific selector switch
- 2 auxiliary inputs for sound sources (TAPE/CD)
- Telephone/emergency audio input for priority calls with adjustable threshold and sensitivity
- Front-panel adjustment of the level of each microphone and auxiliary input
- Front-panel control of overall volume and of treble and bass tones
- Provisions for inserting via the front panel a USB/SD CARD module (**AC6000**)
- Constant voltage (50/70/100 V) or 8 Ω impedance loudspeaker line output.
- 3 output lines for zones
- Balanced line output for connection to other amplifiers
- Output/input for connection to audio processors
- LED-type Vu meter for clear and immediate reading of power emitted
- Microswitches for setting operating modes
- Includable/excludable speech filters on all microphone inputs
- Contacts for activating input precedence and override
- "Music On Hold" output with output level control (output of the selected auxiliary signal)
- Alerting signal (chime) with level control
- Front-panel keys for selecting music listening zones
- Selectable mains power supply - 230/115 VAC or 24 VDC.

MICROPHONE BASES WITH ZONE SELECTION

PMB106-G microphone stations can be used simply and rapidly with the amplifiers of the **AX6000** range. They enable messages to be sent to one or more receiving zones. It is essential to use CAT5e SF/UTP shielded cables (IN input UNITS), and it is possible to connect up to 8 stations at a maximum distance of 1 km in cascade fashion. The output level can be adjusted by means of the front-panel control on the amplifier (MIC/UNITS).



PMB106-G	6 zone call base

MICROPHONE BASES SINGLE-CALL WITH PRECEDENCE

Single-call microphone bases and with precedence terminals (**B701-MG** and **B701-PG**) can be connected to the microphone inputs (XLR). There are microswitches for programming the inputs to be muted, the priority of the precedence contact and the call zones.



B701-PG
With electret microphone



B701-MG
With dynamic microphone

USB/SD CARD MODULE

The devices of the **AX6000** range are equipped with a compartment for installing an optional module enabling external devices such as SD/MMC cards and USB storage units to be read. This player has a display indicating the presence or otherwise of SD/MMC/USB media, the chosen functions and information concerning the tracks. The module is supplied with a remote control unit.



AC6000	USB/SD card player

AW5600 RANGE • 120W, 240W, 480W RMS

This is a new range of power units designed specifically for professional sound-broadcasting systems with service and emergency messages. Thanks to the great reliability of the protection circuits used, combined with an attractive appearance and the very tough structures, the **AW5600** range constitutes the ideal product for quality amplification, with a particularly interesting price/performance ratio.



AW5612	120 W RMS booster unit
AW5624	240 W RMS booster unit
AW5648	480 W RMS booster unit

FUNCTIONAL FEATURES

- Balanced line input/output (XLR-F and XLR-M sockets, with adjustable sensitivity).
- Unbalanced line input (double RCA socket)
- **B711-G** microphone station input (RJ45 socket)
- Telephone/emergency audio input for priority calls with adjustable threshold and sensitivity
- Front panel overall volume control and treble and bass controls
- Rear-panel selector switch for enabling/disabling front-panel tone and volume controls
- Constant voltage (50/70/100 V) or 8 Ω impedance loudspeaker line output.
- LED-type Vu meter for clear and immediate monitoring of output power
- Contacts for activating precedence on line input
- Alerting signal (chime) with level control
- Selectable 230/115 VAC and 24 VDC mains power supply

ACCESSORIES

AC5660	Brackets for rack-mounting (2 HE)
AC50	Lateral supporting brackets for rack-mounting



FRONT PANEL CONTROL EXCLUSION

If this amplifier is used in emergency systems, it is possible to disable all the front-panel controls (tone and volume controls).
In this way it is possible to prevent the levels set at the time of commissioning the system from being altered accidentally.



Rear-panel NORM/DIRECT switch

MICROPHONE BASES

B711-G microphone stations can be used simply and rapidly with the amplifiers of the AW5600 range.

It is essential to use CAT5e SF/UTP shielded cables (IN input UNITS), and it is possible to connect up to 6 microphone stations in cascade fashion.

The output level can be adjusted by means of the appropriate rear-panel control (LEV).



B711-G	General call

MIXER AMPLIFIERS

AX3500 RANGE • 40W RMS

FUNCTIONAL FEATURES

- Front microphone input (jack ¼"). Input with automatic precedence function (VOX) and threshold adjustment
- Microphone input with phantom power supply (XLR)
- To be used with microphone bases **B701-MG** and **B701-PG**
- 2 auxiliary inputs for sound sources (TAPE/CD).
- Telephone/emergency audio input for priority calls with adjustable threshold and sensitivity
- Front-panel level control for each microphone and auxiliary input.
- Front-panel treble and bass controls
- Constant voltage (50/70/100 V) or 8 Ω impedance loudspeaker line output
- Auxiliary line output
- Contacts for activating precedence on line input
- Alerting signal (chime) with level control
- Selectable 230/115 VAC and 24 VDC mains power supply



AX3504 40 W RMS mixer amplifier

AX3500 RANGE • 60W, 120W RMS

FUNCTIONAL FEATURES

- 2 microphone inputs with phantom power supply (XLR). MIC 1 with automatic precedence function (VOX) and threshold adjustment control
- Microphone input (XLR) with phantom power supply or RJ45 for connecting up to 6 **B711-G** microphone stations (maximum distance 200 m).
- MIC/PH/LINE input with associated selector switch
- 2 auxiliary inputs for sound sources (TAPE/CD).
- Telephone/emergency audio input for priority calls with adjustable threshold and sensitivity
- Front-panel level control for each microphone and auxiliary input.
- Front panel overall volume control and treble and bass controls
- Constant voltage (50/70/100 V) or 8 Ω impedance loudspeaker line output
- Auxiliary line output.
- LED-type Vu meter for immediate monitoring of output power
- Microswitches for setting priorities and input functions
- Inclusion/exclusion of speech filter on all microphone inputs
- Contacts for activating input precedence
- Alerting signal (chime) with level control
- Selectable 230/115 VAC and 24 VDC mains power supply



AX3506 60 W RMS mixer amplifier

AX3512 120 W RMS mixer amplifier

ACCESSORIES

AC3504 Brackets for rack-mounting (AX3504) (2 HE)

AC3500 Brackets for rack-mounting (AX3506 and AX3512 (2 HE)

MUSIC SOURCES

P8083 RANGE



P8083 CD-MP3/USB/SD CARD player and FM/AM stereo tuner

In a single container designed for mounting in a standard 19" rack and one modular unit high, this equipment contains a CDMP3/USB/SD Card player and an FM/AM stereo tuner. Independent volume and audio output controls on double RCA socket. Combined audio output. CD player with backlit display supplied with remote control. FM/AM stereo tuner with backlit display, automatic and manual tuning, pre-selection of up to 20 stations (10 FM and 10 AM), SLEEP function. FM and AM aerials included.
Power supply requirements: 230/115 VAC - 50/60 Hz / 24 VDC. Size (LxHxP): 482 x 44 x 285 mm (1 HE).



P8083-R Digital USB/SD CARD player/recorder

Digital MP3 audio file recorder and player on external SD card and USB storage media including remote control. It has provisions for mounting in a standard 19" rack with a height of one unit. Front-panel volume control. Rear-panel line input and output on double RCA socket. Management of external storage units from 128 MB to 16 GB. Possibility of selecting the recording quality (128 Kbps or 192 Kbps). Up to 99 recordable audio tracks. Possibility of programming customised playing sequences and of selecting and repeating a single section of a piece. Elimination of files and possibility of copying the data from a USB to an SD card or vice versa. Backlit display.
Power supply requirements: 230/115 VAC - 50/60 Hz / 24 VDC. Size (LxHxP): 482 x 44 x 285 mm (1 HE).

MODULE AVAILABLE ON REQUEST



P8083-T FM/AM stereo tuner

P8083-2T Two FM/AM stereo tuners



P8083-P

Model with CD-MP3/USB/SD CARD player and PITCH speed control



P8083-ALL

Model with CD-MP3/USB/SD CARD player and FM/AM stereo tuner module

P8083-2ALL

Model with two CD-MP3/USB/SD CARD player module and FM/AM stereo tuner module

PA6000 RANGE • AMPLIFIED SINTO-CD/MP3 AND USB/SD CARD PLAYER, 6 OUTPUT ZONES

FUNCTIONAL FEATURES

- 2 balanced/unbalanced microphone inputs with phantom power supplies
- Microphone input or microphone bases of the **PMB** range
- 2 MIC/PH/LINE inputs with associated selector switch
- 2 auxiliary inputs for sound sources (TAPE/CD)
- Telephone/emergency audio input for priority calls with adjustable threshold and sensitivity
- Front-panel level controls for each microphone and auxiliary input
- Front panel overall volume control and treble and bass controls
- Multi-purpose sound source module with CD-MP3/ USB/SD CARD player and AM/FM tuner.
- Constant voltage (50/70/100 V) or 8Ω impedance loudspeaker output lines
- 6 output lines (zones) with front-panel level control for the music signal for each single zone
- Balanced line output for connection to other amplifiers
- Output/input for connection to audio processors
- Connection to an external amplifier for simultaneous music and speech in different zones
- LED-type Vu meter for clear and immediate monitoring of output power
- Microswitches for setting the operating modes
- Inclusion/exclusion of speech filter on all microphone inputs
- Contacts for activating input precedence and override
- "Music On Hold" output with output level control (output of selected auxiliary signal)
- Alerting signal (chime) with level control
- Selectable 230/115 VAC and 24 VDC mains power supply

ACCESSORIES

AC50/3	Brackets for rack-mounting (3 HE)



PA6120	120 W RMS compact system with 6 output zones
PA6240	240 W RMS compact system with 6 output zones

MICROPHONE BASES WITH 6-ZONE SELECTION

The 6-zone call **PMB106-G** microphone bases can be used simply and rapidly. It is essential to use SFTP CAT.5E shielded cables (IN input UNITS), and it is possible to connect up to 8 stations at a maximum distance of 1 km in cascade fashion. The output level can be adjusted by means of the front-panel control on the amplifier (MIC/UNITS).

MICROPHONE BASES SINGLE-CALL WITH PRECEDENCE

Single-call microphone bases and with precedence terminals (**B701-MG** and **B701-PG**) can be connected to the microphone inputs (XLR). There are microswitches for programming the inputs to be muted, the priority of the precedence contact and the call zones.

PA312-MP3 • SINTO-CD/MP3 PLAYER, 120 W RMS, 2 OUTPUT ZONES



FUNCTIONAL FEATURES

- CD/MP3 player with servoassisted controls
- Digital AM/FM tuner with 10 + 10 preset channels
- 1 AUX input for an external source
- 1 telephone/emergency input with VOX priority
- 4 balanced microphone inputs with XLR socket and enable/disable PHANTOM power supply
- **B701-MG312** dedicated general call base
- MIC1 input with dual socket (XLR on the rear and 6.3 mm jack on front panel)
- MIC1 input with VOX precedence
- Music On Hold (MOH) output, not subject to microphone priority
- Master, microphone inputs and music sources volume controls
- Bass and treble tone controls
- Precedence function contacts
- Built-in warning signal (Chime)
- Possibility of selecting 2 different groups of loudspeakers (zones)
- **AC55** optional brackets for rack mounting (2 HE)

PA140-MP3 • SINTO-CD/MP3 AND USB PLAYER, 40 W RMS



FUNCTIONAL FEATURES

- CD/MP3 player
- USB reader
- Digital AM/FM tuner and 5+5 preset channels
- Line AUX input
- 2 XLR microphone inputs
- Microphone inputs and aux source volume controls
- Bass and treble tone control
- Precedence function contacts
- To be used whit microphone bases **B701-MG**

PA212 • SINTO-TAPE, 120 W RMS, 3 OUTPUT ZONES



FUNCTIONAL FEATURES

- "Autoreverse" compact cassette player/recorder with servoassisted controls
- Digital AM/FM tuner with 14 + 14 preset channels
- 2 auxiliary inputs (AUX and CD)
- 4 balanced inputs for dynamic microphones with XLR sockets.
- MIC1 input with dual socket (XLR on the rear and 6.3 mm jack on front panel)
- MIC1 input with VOX precedence
- Input/output for connection to sound processors or an external power amplifier
- Master, microphone inputs and music sources volume controls
- Bass and treble tone controls
- Precedence function contacts
- Built-in 4-tone warning signal
- Possibility of selecting 3 different groups of loudspeakers (zones)
- To be used whit microphone bases **B701-MG**

MX5539 • AUDIO MIXER WITH 9 INPUTS AND 2 OUTPUTS

Pre-amplifier and mixer for professional applications. The number of inputs at disposal, the possibility of expanding them, the PHANTOM power supply for electret microphones and the microphone priority function are just a few of the most important features of this product. It is possible to connect one or more mixers in cascade formation to increase the total number of inputs. The LCF's (Low Cut Filters) emphasise the most important frequencies to make speech more intelligible. It can be installed directly on a 19" rack, height: 1 HE.



FUNCTIONAL FEATURES

- MIC1 microphone input with voice activation (VOX) on all other inputs
- 8 input channels with selectable sensitivity (microphone, microphone with LCF speech filter or line)
- Phantom power supply on all microphone inputs
- Indication of presence of signal for each input
- Individual selection of the output channel for each input (left, right or both)
- Individual level adjustment for each input
- 2 balanced output channels (left and right)
- Separate tone control (treble and bass) and overall level control for each output
- Level indicator signalling lamp for left and right output channels
- Output for recorder
- Contact-based priority of MIC1 input over inputs 2 to 9
- Vox priority of MIC2 and MIC3 inputs over inputs 4 to 9 (enabled via the front panel)
- 4-tone chime enabled via a contact or a push button, level and output channel control

CP122-B • DOUBLE AUTOREVERSE CASSETTE PLAYER

The CP122-B compact cassette player can be used to play automatically and continuously two normal prerecorded cassettes. Control of its operation is managed completely by a dedicated electronic processor. It is possible to connect from one to ten CP122-B units to this equipment in cascade configuration in order to extend the sequential playing capacity up to a maximum of twenty audio cassettes. The playing cycle can be set for automatic starting (when the equipment is switched on) or manual (giving the command by means of the specific push button). The cassette mechanisms are mounted in removable drawers for rapid maintenance. Optional brackets for rack mounting: **27/2466** (1 HE).



DAG9200-B • ALARM SIGNAL GENERATOR



Digital generator of eight alarm signals (chosen from a library of 20 tones), an adjustable single-note signal and with the possibility of recording and playing out a voice message, too. Possibility of selecting the alarm play time (one minute or continuous). Balanced microphone input (with automatic level control) or auxiliary input (with manual sensitivity control) for recording the message. Unbalanced low-impedance output with adjustable level. The front-panel control keypad can be de-activated.
One-digit equipment status display (stand-by, alarm status, message playing, message being recorded). Key-operated switch for enabling recording of message. The device can be controlled from a remote location by means of contacts or an RS232 serial port.
Optional brackets for rack mounting: **27/2466** (1 HE).

DMG9016 • MESSAGE GENERATOR

This equipment is capable of recording digitally up to 16 different messages and of storing them statically, with an overall maximum capacity of 240 seconds. The 16 messages are split up into two groups and the length of each message is defined by the user, who can thus manage the storage capacity of the equipment personally. Thanks to the separation of the memory into two separate blocks (group A and group B), and to the double audio output section, it is possible to broadcast two different messages at the same time. Each function can be managed either through the internal keypad or through an external keypad. In addition, each write or delete operation of the memory is protect by a code that can be customised by the user. A four-digit display and a loudspeaker, positioned inside the equipment, enable each function to be monitored in full. Each time a message is played out, it can be preceded by a warning signal (chime), the amplitude and tone of which can be adjusted. Optional brackets for rack mounting: **27/2466** (1 HE).



DTM9000 • SEQUENTIAL TIMER



The DTM9000 timer is a device enabling the messages recorded in the DMG9016 digital recorder to be played out at intervals of time selected by means of a rotary switch (5, 10, 15, 20, 30 minutes and double timing switch). The DTM9000 can only be used together with the DMG9016, from which it receives the power supply and to which it sends the commands for activating the various different pre-recorded messages. The timer offers two types of automatic playing: single or continuous. The line input can be used to connect a source of music (the output signal from which will be interrupted by the automatic messages).
Dimensions (LxHxD): 275 x 45 x 255 mm. Optional brackets for rack mounting: **27/2469** (1 HE).

DLC9000 • AUTOMATIC LEVEL CONTROLLER

The DLC9000 is a device for automatic control of the audio level of messages being broadcast in environments featuring variable background noise such as, for example, railway stations or department stores. The DLC9000 unit uses a microphone, supplied separately, to detect the environmental noise. The output of the controller is connected between the pre-amplifier and the power amplifier of the zone in question. Optional brackets for rack mounting: **27/2469** (1 HE).



The **SD200** system enables simultaneous distribution of 6 different programmes over a single pair of wires. The ease of installation as compared with conventional systems makes it particularly suitable for sound-broadcasting to the single rooms of accommodation facilities such as hotels, nursing homes, tourist centres, residential centres, cruise ships, ferries and private homes. The heart of the system is the **SDP220** receiver module, which can be installed in any room inside a normal flush-mounted box for wiring systems. The **SDM200** modulator can provide a constant signal for a maximum of 80 **SDP220** receivers. Continuous expansion, in multiples of 80 is possible, by including the **SDB200** amplifier in the signal line.

SDM200 RF SIX AUDIO CHANNEL MODULATOR



This system enables 6 signals from sources generated locally by CD, tuners or multimedia players to be transmitted and mixed via a telephone pair. A pre-amplifier circuit adapts the amplitude of the signals of the sources for correct modulation of the respective carriers generated by a stage that functions according to the PLL technique, with quartz-controlled reference frequency. The six modulated carriers are sent to an RF amplifier and then to the output sockets by means of an RF transformer that takes care of balancing and of the correct impedance value. Power supply voltage: 230 Vac. Dimensions (W x H x D): 411x44x235 mm. Optional brackets for rack mounting: **27/2466** (1 HE).

SDP220 AMPLIFIED SIX CHANNEL RECEIVER



SDP220

SDP220-N

This module demodulates the signals distributed by the **SDM200** modulator. The receiver can be activated from a remote location, even if it is switched off, by means of a voltage of 12 VDC. This feature means that it is possible, if required, to force broadcasting of emergency messages to single listening zones. The module can be operated by means of a 12 VDC source or from the mains at 230 Vac by means of the **SDT100** transformer contained in the **SDA200-T** loudspeaker module. The channels are selected cyclically by means of keys. The selected channel is shown on a display which has automatic brightness adjustment on the basis of the ambient light. Volume control is electronic. Possibility to use headsets plugged into the sockets provided for them. Available in light grey colour (**SDP220**) or black colour (**SDP220-N**).
Output power: 1 W (8 Ω). Dimensions (W x H x D): 116 x 77 x 45 mm.

SDA200 LOUDSPEAKER

This module contains a 3 W / 8 Ω loudspeaker. It can be connected to **SDP220** receivers running on a 12 VDC power supply. Available in light grey colour (**SDA200**) or black colour (**SDA200-N**). Dimensions (W x H x D): 116 x 77 x 35 mm.

SDA200-T LOUDSPEAKER AND POWER SUPPLY FOR SDP220

In addition to the 3 W / 8 Ω loudspeaker, this module also contains a transformer, **SDT100**, from the mains 230 Vac voltage for the **SDP220** receiver module. Available in light grey colour (**SDA200-T**) or black colour (**SDA200-TN**).
Dimensions (W x H x D): 116 x 77 x 55 mm.



SDA200
SDA200-T

SDA200-N
SDA200-TN

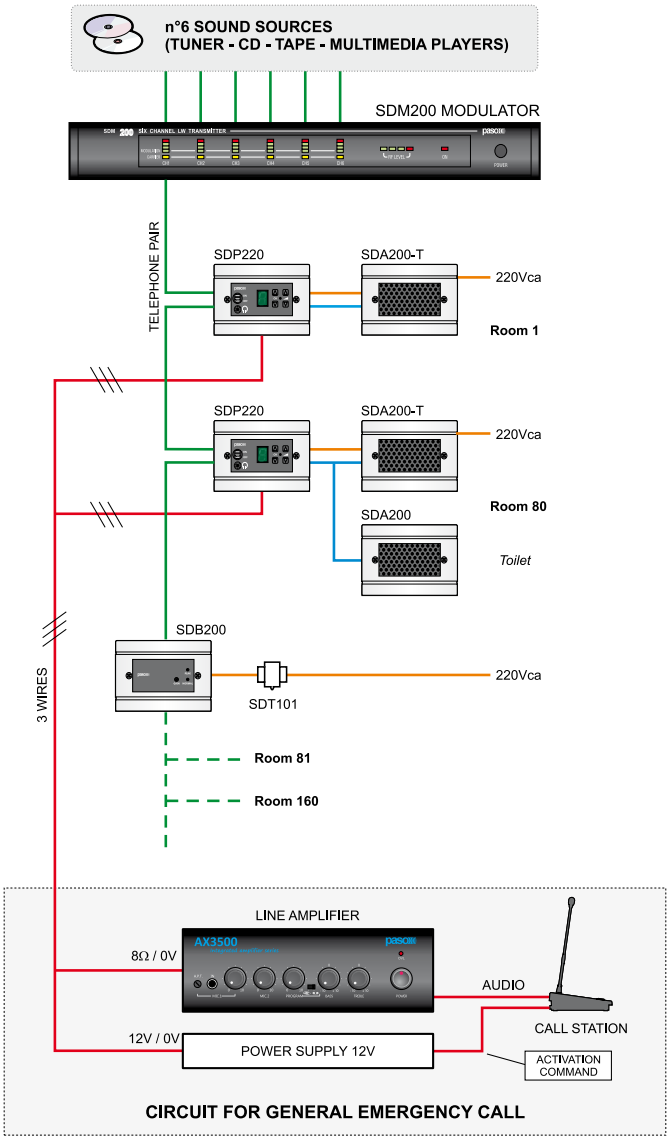
SDB200 LINE AMPLIFIER

This module must be used if the length of the line attenuates the signal excessively or, in any case, if the number of **SDP220** receivers is greater than 80. Each **SDB200** enables a further 80 receivers to be added. It is possible to expand the system to a practically unlimited number of receivers using the appropriate additional **SDB200** amplifiers. For the 230 Vac mains power, it is necessary to add the **SDT101** transformer. Available in light grey colour (**SDB200**) or black colour (**SDB200-N**).
Dimensions (W x H x D): 116 x 77 x 40 mm.



SDB200

SDB200-N



CIRCUIT FOR GENERAL EMERGENCY CALL

ACCESSORIES

SDT100	Transformer for 230 VAC mains power supply for the SDP220
SDT101	Transformer for 230 VAC mains power supply for the SDB200
27/901	Flush-mounting box for the SDP220, SDA200(-T) and SDB200 modules. Size (WxHxD): 107 x 72 x 53 mm



TA220B-Fx

PORTABLE AMPLIFIED SYSTEM WITH WIRELESS MICROPHONE

The **TA220B-FX** mobile amplified system is a complete portable sound system. Its main use is for broadcasting voice and music at outside events with a large public (marches, processions, sports events, guided tours, exhibition events, etc.). The hand-held professional VHF wireless microphone included in the supply gives the speaker great freedom of movement, as he can move away from the amplified system for several dozen metres without prejudicing the quality and power of the signal.

A wired microphone input (XLR) and an AUX input (RCA), with individual mixing adjustment, increase the versatility for use of the product with external sources. The provisions for mounting on the floor stand (included in the supply) adds flexibility to the system, enabling it to be used as a fixed unit. The power supply unit, included in the supply, takes care also of recharging of the internal battery. The special shoulder-strap fixing system and the positions of the controls make the equipment easy and comfortable to "wear", with all the controls within easy reach.

AVAILABLE FREQUENCIES

F1 = 175.00 MHz
F2 = 179.30 MHz
F3 = 184.32 MHz

TA222B-Fx+Fy

PORTABLE AMPLIFIED SYSTEM WITH TWO WIRELESS MICROPHONES



The **TA222B-Fx+Fy** portable amplified system provides the same features as the TA220B-Fx but enables simultaneous use of two hand-held wireless microphones, both included in the supply. The equipment includes two independent VHF receiver modules with mixed outputs.



AVAILABLE FREQUENCIES

F1+F3 = 175.00 e 184.32 MHz
F2+F3 = 179.30 e 184.32 MHz
F3+F4 = 184.32 e 199.82 MHz

TA220B AND TA222B TECHNICAL SPECIFICATIONS

Output power: 35 W
Inputs: Aux, dynamic microphone
Frequency response: 500 ÷ 7.000 Hz
Horn speakers: 2
Power supply: internal 12 V rechargeable battery
Dimensions (WxHxD): 97 x 105 x 1485 mm (without tripod)
Weight: 4,9 kg (without tripod)
Accessories included in the supply: floor stand, hand-held wireless (2 units for TA222B-Fx+Fy model), shoulder-straps, rechargeable battery and battery-charger

TA16 MEGAPHONE, 10 W

Simple, lightweight and practical, the **TA16** megaphone enables announcements, calls and warnings to be broadcast within a radius of several hundred meters, concentrating the sounds in the required direction. It is made of shockproof material that is rainproof, frost-proof, heatproof and resistant to saline atmospheres. It has an on/off switch and a stepless volume control.



TA16 TECHNICAL SPECIFICATIONS

Power supply: No 6 x 1.5V C-type battery (not supplied)
Dimensions (WxHxD): 220 x 158 x 360 mm
Weight: 1,3 kg



SL1120-B AMPLIFIED LECTERN

The amplified lectern is made of mat satin-finished wood, and its elegant shape will fit in with any interior decoration. The four large loudspeakers contained in the stand guarantee pleasant and uniform distribution of sound and speech. The double power supply (from mains and from the optional rechargeable batteries) enable it to be used both indoors and out of doors. The amplifier mixes the signals coming from the microphone of the lectern and from an auxiliary source (wireless microphone receiver, tape, CD player, etc.) by means of independent level controls. An electronic automatic precedence device enables the music signal to be attenuated when the microphone signal is present. On the top of the lectern there is a flexible stem with a vibration-damping support for a unidirectional dynamic microphone, included in the supply.

SL1120-B TECHNICAL SPECIFICATIONS

Output power: 30 W RMS
Frequency response: 140 ÷ 18.000 Hz
Power supply: 230 Vca - 50/60 Hz, 24 Vdc battery (optional)
Inputs: 1 microphone, 1 aux
Controls: Volume, tone, A.P.T. (adjusting of Automatic Precedence Threshold)
Speakers: 4 x Ø 200 mm
Microphone: Unidirectional dynamic microphone
Dimensions (WxHxD): 530 x 1150 x 450 mm
Weight: 22,5 kg (without battery)

1000 RANGE • AMPLIFICATION SYSTEM FOR VEHICLES

The amplifiers of the **1000 range** are ideal for applications in which there is no mains power supply and in particular in the field of mobile system. The range has been designed in standard DIN sizes so as simplify installation as much a possible. Simplicity, flexibility, handiness and safe use are the peculiar features of this range of products for all sorts of commercial and professional application.

Volume controls for each microphone input and external audio source. External audio source selector for the model with the dual input (**T1140**). Priority circuit on the main microphone input (VOX) with level control of the threshold for activating automatic exclusion of any background music programme and of the other microphone inputs. Electronic protection against short circuits.

M1-NC Hand-held microphone

Unidirectional dynamic microphone with PTT push button, 1.5 m spiralled cable and XLR plug.

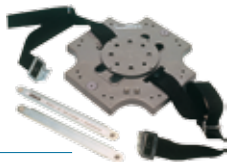


TRW15/8
metal horn 15 W

Rated power: 15 W
Impedance: 8 Ω
Frequency response: 370 ÷ 14.000 Hz
Sound Pressure Level: 120 dB
Dimensions: Ø 205 x 200 mm
Weight: 1,5 kg



27/360



Supporting kit for two horns, complete with elastic bands and hooks.



T1120-B 10/20 W RMS amplifier

Output power (RMS): 10 W / 4 Ω at 12 Vdc
20 W / 8 Ω at 24 Vdc
Power supply: 12/24 Vdc
Inputs: 1 microphone, 1 aux
Controls: microphone volume, aux volume, tone
Dimensions (WxHxD): 200 x 50 x 100 mm



T1220-LB
20/40 W RMS amplifier with autoreverse cassette player

Output power (RMS): 2x10 W / 4+4 Ω at 12 Vdc
2x20 W / 8+8 Ω at 24 Vdc
Power supply: 12/24 Vdc
Inputs: 1 microphone, 1 aux
Controls: microphone volume, aux volume, tone
Automatic cassette/aux precedence
Dimensions (WxHxD): 200 x 50 x 190 mm



T1140 40 W RMS amplifier

Output power (RMS): 40 W / (4, 8, 16 Ω) at 14 Vdc
Power supply: 12/14 Vdc
Inputs: 2 microphones, 2 aux
Controls: 2 microphone volumes, aux volume and selector, tone
Dimensions (WxHxD): 200 x 50 x 190 mm



ITC2000-C • INTERPHONE SYSTEM FOR COUNTERS

ITC2000-C is an interphone system for counters for the public. Microprocessor-based management allows high quality flexible performance. The system has more than one operating model. It can be configured as a handsfree "speak-listen" unit and, if connected to an amplifier, it can be incorporated profitably into a sound-broadcasting system. This latter application is extremely interesting, since in addition to carrying on a conversation over the counter, the operator can also make announcements to the public. It can be used with the **LAX50** current amplifier in sound-broadcasting systems for wearers of hearing aids.

The **ITC2000-C** stands out from other "speak-listen" systems available on the market since it operates in the attenuation mode rather than by switching. This makes the conversation more natural, since the unpleasant breaks in the dialogue that are typical of switched systems are avoided. The operator station is equipped with a microphone on a flexible stem, long enough to enable conversation in a natural tone of voice and volume, with no howl-round effects. The system must be equipped with either one and two **PASO C401-B** loudspeakers on the public side, for listening. These are made of aluminium, are extremely tough and suitable also for applications requiring protection against vandalism, (e.g. railway and underground, night chemists).
In the back panel there are two standard 3,5 mm jack plugs for connecting headphones and/or external microphone.

ITC2000-C Interphone system for counters

The ITC2000-C interphone system consists of the following:

- Microphone base equipped with microphone with anti-hissing protection
- External 230 Vac/18 Vdc, 500 mA power supply
- Junction box (telephone type) with 6-pole socket (female)
- Connecting cable between the interphone base and the junction box (length 3 m), equipped with 6-pin telephone connectors (male)
- Wall-mounted electret microphone, equipped with shielded cable (length 3 m). This microphone was designed for mounting on the glass pane above the counter, thanks to its vibration-proof double-adhesive strip

Note: it works with an external loudspeaker model **C401-B**, not included in the supply.

ITC2000-C TECHNICAL SPECIFICATIONS

Power supply: 15 Vdc/60 mA ÷ 200 mA
Rated power
internal loudspeaker: 1 W / 8 Ω
external loudspeaker: 1 W / 8 Ω (0,6 W / 16 Ω)
Frequency response (-3 dB): 270 ÷ 8000 Hz
Microphone base
dimensions (WxHxD): 200 x 158 x 81 mm
flush-mounting hole: 191 x 155 mm (maximum depth 72 mm)
C401-B speaker dimensions (WxHxD): 95 x 105 x 77 mm



C401-B
Wall mounting loudspeaker, 3 W/16 Ω

SOUND PROJECTORS

C48 RANGE

Excellent reproduction of music and speech both indoor and outdoor. Cylindrical structure, made of self-extinguishing white ABS and equipped with line transformer and adjustable swivel for installation.



C48/6-T 6 W

C48/12-TW 12 W, IP65



C48/6-2T
6+6 W, bi-directional

C48/12-2TW
12+12 W, IP65, bi-directional

SERIE C56 "SUNFLOWER"

Projectors suitable for use in shops, boutiques, offices, etc. Made of white self-extinguishing ABS and equipped with line transformer. The C56 projectors are supplied with a swivelling bracket for securing it easily to a wall or the ceiling.
The **C56/12-TW** waterproof model can be used in outdoor installation.





C56/6-T 6 W

C56/12-TW 12 W, IP55

C46 RANGE

Small sound projector featuring excellent quality of reproduction, with moisture-proof loudspeaker for outdoor use. Made of pale grey shockproof polystyrene, it is equipped with a line transformer and a swivelling stainless steel bracket.
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C46-TW 6 W, IP54

Model	C56/6-T	C56/12-TW	C46-TW	C48/6-T	C48/12-T	C48/6-2T	C48/12-2TW
Rated power	6 W	12 W	6 W		12 W	12W (6+6 W)	24W (12+12 W)
Adjustable power	6 / 3 / 1,5 W	12 / 6 / 3 W	6 / 3 / 1,5 W		12 / 6 / 3 W		24 / 12 / 6 / 3 W
Loudspeakers	1 broadband					2 broadband	
Sound press. SPL Pnom/1m	96 dB	99 dB	98 dB	96 dB	99 dB	96 dB	98 dB
Sensivity 1W/1m	88 dB		91 dB	88 dB		88 dB	87 dB
Frequency response	160 ÷10.000 Hz	160 ÷ 12.000 Hz	140 ÷ 15.000 Hz	150 ÷ 12.000 Hz	180 ÷ 15.000 Hz	170 ÷12.000 Hz	
Dispersion angle @2kHz	90°		180°	160°		140°	
Protection degree	IP 44	IP 55	IP 54	IP 44			IP 65
Dimensions (W x H x D)	239 x 156 x 194 mm		Ø 115 x 160 mm	Ø 140 x 207 mm			
Weight	1,5 kg	1,9 kg	1 kg	1,5 kg	1,7 kg	2 kg	2,2 kg

HIGH EFFICIENCY SOUND PROJECTORS

C86 RANGE • ALUMINIUM VANDAL-PROOF HOUSING

Aluminium alloy housing and hot galvanised steel front grille. Due to its very sturdy and waterproof construction it is specially designed for tough environments and in security/evacuation systems (VES models, "**-V**" reference code). Equipped with broadband loudspeaker to ensure excellent sound reproduction and a line transformer. The VES models include a thermal fuse which excludes the speaker in case of overheating and a flame resistant connecting cable.



C86/20-2TW
10+10 W, IP65

C86/20-2V
10+10 W, IP65, bi-directional (VES)



C86/20-TW
20 W, IP65

C86/20-V
20 W, IP65, bi-directional (VES)

C55 RANGE

Made of UV-stabilised self extinguishing (UL 94-VO standard) ABS, with black chromed stainless steel front grille, these projectors provide optimal quality sound and high acoustic performances. They are equipped with line transformer and swivelling bracket .The range includes models for indoor use (**C55**) or waterproof (**C55-S**, **C55-TW**) also for outdoor applications.



C55 20 W

C55-S 20 W, IP66

C55-TW 40 W, IP65

Model	C86/20-TW	C86/20-2TW	C86/20-V	C86/20-2V	C55	C55-S	C55-TW
Rated power	20 W	20 W (10+10 W)	20 W	20 W (10+10 W)	20 W		40 W
Adjustable power	20 / 10 / 5 W						40 / 20 / 10 / 5 W
Loudspeakers	1 broadband	2 broadband	1 broadband	2 broadband	1 broadband		
Sound press. SPL Pnom/1m	103 dB	100 dB	103 dB	100 dB	102 dB	100 dB	103 dB
Sensivity 1W/1m	90 dB	87 dB	90 dB	87 dB	89 dB	87 dB	
Frequency response	150 ÷ 15.000 Hz				150 ÷ 12.000 Hz	150 ÷ 6.500 Hz	100 ÷ 19.000 Hz
Dispersion angle @2kHz	90°	2 x 110°	90°	2 x 110°	70°		110°
Protection degree	IP 65				IP 44	IP 66	IP 65
Dimensions (W x H x D)	180 x 145 x 178 mm				Ø 200 x 220 mm		
Weight	2,35 kg	2,85 kg	2,4 kg	2,9 kg	3 kg		

HORN SPEAKERS COMPLETE WITH DRIVER UNITS

METAL HORNS

Weatherproof horn speakers particularly well suited for outdoor use, even in difficult weather conditions. Each model has a line transformer and a rear switch for selecting the operating output. **TR10-TW**, **TRX20-TW** and **TRX20-V** models are characterised by a die-cast aluminium body with stainless steel screws and brackets. The horn is made of aluminium except for **TR10-TW** model (shockproof ABS).The **TRX20-V** model has been designed to be used in security voice evacuation installations and has a 4KV resistant line transformer, a thermal fuse, a ground connector and a flame resistant connecting cable.



TRX20-V 20 W, IP66 (VES)



TR10-TW 10 W, IP65



TRX20-TW 20 W, IP66



TR30-TW 30 W, IP66

EXTENDED-RANGE HORNS

Two-way speaker units characterised by high efficiency and excellent frequency response and holding power. **TR30-HF** model, with IP66 mechanical protection degree, is well suited for outdoor use.



TR20-HF 16 W

TR40-HF 40 W



TR30-HF 30 W, IP66

Model	TR10-TW	TRX20-TW	TRX20-V	TR30-TW	TR20-HF	TR30-HF	TR40-HF
Rated power	10 W	20 W		30 W	16 W	30 W	40 W
Adjustable power	10 / 5 / 3 / 1 W	20 / 10 / 5 / 2,5 W		30 / 20 / 15 / 10 / 5 W	16 / 8 / 4 W	30 / 15 / 7,5 / 3,75 W	40 / 20 / 10 / 5 W
Sound press. SPL Pnom/1m	112 dB	123 dB		122 dB	116 dB	113 dB	118 dB
Sensivity 1W/1m	102 dB	110 dB		107 dB	102 dB	98 dB	99 dB
Frequency response	450 ÷ 10.000 Hz	350 ÷ 12.500 Hz	160 ÷ 10.000 Hz	350 ÷ 6.000 Hz	110 ÷ 20.000 Hz	150 ÷ 13.000 Hz	110 ÷ 17.000 Hz
Dispersion angle @2kHz	Hor. 100° - Ver. 90°	80°		70°	Hor. 45° - Ver. 80°	Hor. 35° - Ver. 65°	Hor. 45° - Ver. 80°
Protection degree	IP 65	IP 66			IP 44	IP 66	IP 44
Dimensions (W x H x D)	176 x 126 x 180 mm	Ø 213 x 230 mm	Ø 213 x 230 mm	Ø 259 x 261 mm	335 x 240 x 315 mm	418 x 332 x 379 mm	335 x 240 x 315 mm
Weight	1,2 kg	1,5 kg	1,8 kg	1,75 kg	4,2 kg	5,7 kg	6,2 kg

EXPONENTIAL HORN WITH SEPARATE DRIVER UNITS

The **TR1-B**, **TR2-B** and **TR3-B** exponential horns are made of grey Moplen. They are unbreakable and weatherproof. Each horn has a swivelling bracket for securing it in place and a rear cap capable of holding the **UT35** and **UT60** (impedance) or **UT35-T** and **UT60-T** (100V transformer) magneto-dynamic units, supplied separately, as shown in the following table.



TR1-B



TR2-B



TR3-B

TR400-SX "SINCRO MIX"

VERY HIGH EFFICIENCY

This horn can fit four **UT60** (60 W/16 Ω) or **UT150** (150 W/16 Ω) compression units, supplied separately. The sound waves generated by the single units are synchronised when their acoustic pressure is still in the initial expansion phase. Reinforced fibreglass material. Very high efficiency combined with perfect intelligibility of speech. These features make it particularly suitable for powerful sound broadcasting and/or alarm-signalling systems for airports, motor-racing circuits, horse-racing courses, sports fields, etc.



DRIVER UNITS



UT35 35 W, 16 Ω



UT150 150 W, 16 Ω



UT35-T 35 W, 100 V



UT60 60 W, 16 Ω



UT60-T 60 W, 100 V

Model	TR1-B	TR2-B	TR3-B	TR400-SX	UT35	UT35-T	UT60-T	UT60	UT150
Suitable for	UT35, UT60-T, UT35-T			UT60, UT150	TR1-B, TR2-B, TR3-B			TR3-B, TR400-SX	TR400-SX
Measures carried out with	UT35-T			UT60 (UT150)	TR3-B				TR400-SX
Sound press. SPL Pnom/1m	123 dB		125 dB	135 dB (141 dB)	124 dB	125 dB	128 dB	127 dB	135 dB
Sensivity 1W/1m	108 dB		110 dB	112 dB (114 dB)	109 dB	110 dB	111 dB	110 dB	114 dB
Frequency response	350 ÷ 5000 Hz			150 ÷ 6.000 Hz (100 ÷ 10.000 Hz)	-	-	-	-	-
Dispersion angle @2kHz	50°	Hor. 70° - Ver.50°	Hor. 55° - Ver.40°	Hor. 125° - Ver.150°	-	-	-	-	-
Dimensions (W x H x D)	Ø 250 x 408 mm	340 x 180 x 416 mm	515 x 285 x 486 mm	680 x 410 x 545 mm	Ø 105 x 106 mm	Ø 112 x 154 mm	Ø 112 x154 mm	Ø 105 x 106 mm	Ø 116 x 100 mm
Weight	1,2 kg	1,25 kg	2,1 kg	10 kg	1,3 kg	1,75 kg	2,1 kg	1,55 kg	3,1 kg

SOUND COLUMNS

C400 RANGE "SLIM LINE"

Small size and high acoustic performance characterise the sound columns of the **C400** range. They consist of an extruded aluminium structure painted pale grey with a solid front grille and sealed ends in shockproof material. Each column is equipped with its own line transformer and the **S4-B** swivelling support for wall-mounting. The **C450-TW** and **C4100-TW** models can be used in outdoor applications, even under unfavourable weather. The **C402-T** two-way model is very small and also equipped with bracket for wall mounting.



C440-T 40 W

C4100-TW 100 W, IP66



C430-T 30 W



C420-T 20 W

C450-TW 50 W, IP66



C402-T 6 W



C624-T WALNUT WOOD COLUMN

Refined and elegant column, with a solid walnut wood structure. Thanks to the high directivity of the emission lobe, it can even be used in acoustically "difficult" rooms. A "Speech-Enhancer" filter can also be used to improve the intelligibility of speech in particularly critical acoustic conditions. This column is equipped with 6 loudspeakers for an excellent reproduction of music and speech. The **AC904** jointed support, included in the supply, makes installation extremely easy in any conditions.



C550-T

The **C550-T** column gives users uncompromising performance, solidity and elegant design. It consists of an extruded aluminium structure and a front grille featuring broad sound dispersion. The ends, made of black shockproof material and fitted with rubber gaskets guarantee total weatherproofing. It is equipped with **36/1854** and **36/1855** fixed brackets; alternatively, the **AC904** optional swivelling support can be used.

Model	C402-T	C420-T	C430-T	C440-T	C450-TW	C4100-TW	C550-TW	C624-T
Rated power	6 W	20 W	30 W	40 W	50 W	100 W	50W	24 W
Adjustable power	6 / 3 / 1,5 W	20 / 10 / 5 W	30 / 15 / 7,5 W	40 / 20 / 10 W	50 / 25 / 12,5 W	100 / 50 / 25 W	50 / 25/ 12,5 W	24 / 12 / 6 W
Loudspeakers	1 Wf + 1 Tw	4 Wf + 1 Tw	6 Wf + 1 Tw	7 Wf + 2 Tw	4 Wf + 1Tw	7 Wf + 2 Tw	2 Wf + 1 Tw	6 broadband
Sound press. SPL Pnom/1m	101 dB	105 dB	110 dB		109 dB	115 dB	108 dB	106 dB
Sensivity 1W/1m	94 dB	92 dB	95 dB	94 dB	92 dB	95 dB	93 dB	93 dB
Frequency response	200 ÷18.000 Hz	180 ÷ 16.000 Hz		150 ÷14.000 Hz	120 ÷15.000 Hz	100 ÷ 10.000 Hz	100 ÷ 20.000 Hz	150 ÷15.000 Hz
Dispersion angle @2kHz	Hor. 210° - Ver. 140°	Hor. 160° - Ver. 30°	Hor. 160° - Ver. 20°	Hor. 160° - Ver. 13°	Hor. 160° - Ver. 30°	Hor. 150° - Ver. 20°	Hor. 120° - Ver. 40°	Hor. 210° - Ver. 20°
Protection degree	IP 44	IP 44	IP 44	IP 44	IP 66	IP 66	IP 44	IP 4x
Mounting	Brackets included	S4-B support included					Brackets included	AC904 included
Dimensions (W x H x D)	95 x 182 x 78 mm	95 x 520 x 80 mm	95 x 725 x 80 mm	95 x 890 x 80 mm	95 x 520 x 80 mm	95 x 890 x 80 mm	166 x 408 x 121 mm	140 x 870 x 100 mm
Weight	1,2 kg	3,5 kg	4,8 kg	5,65 kg	2,3 kg	4,8 kg	4,5 kg	6,3 kg

SPEAKERS FOR WALL AND FLUSH-MOUNTING

C41 RANGE

Two-way speakers made of white ABS material with a front metal grille. Ceiling mounting hooks. Wall flush-mounting using **AC941** box (optional).



C41/10-HF

10 W, two way

C44 RANGE

Speakers made of plastic material with a front metal grille. They are available in two models (6 and 20 W), each with a line transformer. Elegant design for hotels, offices, shops. Wall flush-mounting with optional **AC901** box.



C44/6-TB 6 W

C44/20-TB 20 W

WALL MOUNTING C33, C34, C37 RANGE

They are ideal for both background music and speech. The C33 and C34 ranges are made of white ABS material with a front metal grille. The **C34-RB** unit also has an external stepped volume control. The **C37/6-V** model has a metal body and includes ceramic terminal strips and a thermal fuse (VES system).



C37/6-V

6 W (VES)

C34-RB

6 W, with volume control





C33 10 W two-way "FLAT"



C34-TB 6 W

Model	C33/10-T	C34-TB	C34-RB	C37/6-V	C41/10-HF	C44/6-TB	C44/20-TB
Rated power	10 W	6 W			10 W	6 W	20 W
Adjustable power	10 / 5 W	6 / 3 / 1,5 W	6 / 3 / 1,5 /0,75 / 0,3 W	6 / 3 / 1,5 W	-	6 / 3 / 1,5 W	20 / 10 / 5 / 2,5 W
Loudspeakers	1 Wf + 1 Tw	1 broadband			1 Wf + 1 Tw	1 broadband	1 two-cone broadband
Sound press. SPL Pnom/1m	99 dB	100 dB		98 dB	98 dB	97 dB	103 dB
Sensivity 1W/1m	89 dB	93 dB		91 dB	88 dB	90 dB	90 dB
Frequency response	200 ÷ 18.000 Hz	180 ÷ 16.000 Hz		120 ÷ 15.000 Hz	120 ÷ 20.000 Hz	150 - 13.000 Hz	100 ÷ 15.000 Hz
Dispersion angle @2kHz	90°	110°		130°	170°	120°	
Dimensions (W x H x D)	185 x 272 x 46 mm	218 x 216 x 120 mm		210 x 190 x 70 mm	148 x 222 x 68 mm	165 x 280 x 70 mm	
Weight	0,92 kg	1,24 kg		1,6 kg	1,3 kg	0,83 kg	1,38 kg

ACCESSORIES

AC901

C44 Flush-mounting box (162 x 276 x 78 mm)

AC941

C41 Flush-mounting box (155 x 210 x 70 mm)

C95 RANGE "ONDA" LUCCI E ORLANDINI DESIGN

This line of speaker units features original design and great quality. It is available in the standard colours “quartz” white and “goldmetal” black. The support included in the supply of each unit can be used to mount it on a wall or ceiling. The optional **AC915** support can be used to position the speaker unit on a shelf. Excellent reproduction of speech and music.





AC915

C95/20-T	20 W, 100 V, white
C95/40-T	40 W, 100 V, white
C95/40	40 W, 8 Ω, white
C95/20-TN	20 W, 100 V, black
C95/40-TN	40 W, 100 V, black
C95/40- N	40 W, 8 Ω, black

C82 RANGE

Two-way speaker units made of plastic material and available in white or black colour. A rotary switch enables the 100 V constant-voltage connection (10-5-2.5 W) or the low-impedance (8 Ω) connection. High-level acoustic performance, small size and attractive design. Bracket for vertical/horizontal wall mounting. Rapid connection of the wiring by means spring-type terminal.





C82/10-T	10 W, white
C82/10-TN	10 W, black

C92 RANGE

Wall-mounted speaker units with shockproof semi-foam polystyrene chassis. They are ideal for installing into indoor interior, when high-quality sound is required. Each model is supplied with a bracket for securing it to a wall. The optional accessories include brackets for fixing the units in groups of 2, 3 or 4 loudspeakers to form an angle of cover of 180°, 270° and 360° respectively.



C92/20-T 20 W

C93 RANGE

Indoor two-way speaker units made of ABS with a front metal grille and available in white or black colour. Compact size, elegant design and high-level acoustic performance. Rotary switch for connection to constant-voltage or low-impedance lines (8 Ω). Bracket for vertical/horizontal wall mounting.



C93/16-T
16 W, white

C93/16-TN
16 W, black



C93/30-TN
30 W, bass-reflex, black

C93/30-T
30 W, bass-reflex, white

ACCESSORIES FOR C92 SERIES





AC922-B
For fixing 2 speaker units





AC923-B
For fixing 3 speaker units





AC924-B
For fixing 4 speaker units

C36 RANGE "CANDY"

Elegant and discrete design, specifically aimed at schools, hospitals, waiting rooms, hotels, shops,offices, and restaurants where both music and speech have to be heard by customers. Self-extinguishing white ABS body with a front metal grille.



C36/6-T
6 W, mono-directional



C36/6-2T
3+3 W, bi-directional

Model	C95/40-T	C95/40	C95/20-T	C82/10-T	C92/20-T	C93/16-T	C93/30-T	C36/6-T	C36/6-2T
Rated power	40 W	40 W	20 W	10 W	20 W	16 W	30 W	6 W	6 W (3+3 W)
Adjustable power	40 / 20 / 10 / 5 W	-	20 / 10 / 5 / 2,5 W	10 / 5 / 2,5 W	20 / 10 / 5 / 2,5 W	16 / 8 / 4 / 2 W	30 / 16 / 8 / 4 W	6 / 3 / 1,5 W	
Loudspeakers	1Wf + 1Tw		1 Broadband	1Wf + 1Tw	1 Broadband	1Wf + 1Tw	1Wf + 1Tw (bass-reflex)	1 Broadband	2 Broadband
Sound press. SPL Pnom/1m	103 dB		101 dB	98 dB	103 dB	98 dB	101 dB	95 dB	93 dB
Sensivity 1W/1m	87 dB		88 dB	86 dB	90 dB	86 dB	87 dB	88 dB	86 dB
Frequency response	100 ÷ 20.000 Hz		130 ÷ 20.000 Hz	200 ÷ 22.500 Hz	100 ÷ 15.000 Hz	120 ÷ 20.000 Hz	70 ÷ 20.000 Hz	150 ÷ 10.000 Hz	130 ÷ 14.000 Hz
Dispersion angle @2kHz	130°		150°	115°	120°	130°	90°	150°	150° (@4kHz)
Dimensions (W x H x D)	320 x 215 x 93 mm			140 x 187 x 115 mm	180 x 280 x 150 mm	165 x 210 x 135 mm	220 x 290 x 170 mm	258 x 169 x 72 mm	
Weight	2,8 kg	2,2 kg	2,1 kg	1,24 kg	2,1 kg	1,9 kg	4,1 kg	0,75 kg	0,93 kg

CEILING SPEAKER UNITS

C57, C58 RANGE

Ceiling-speakers made of stamped metal sheeting treated with white scratchproof and non-reflecting paint.
Each unit consists of a load-bearing ring with quick-fitting hooks with springs for easy securing to the ceiling.
Optional flame-proof protecting caps **AC957** (for **C57-TB**) or **AC958** (for **C58/6-TB** and **C58/12-TB**).



C57-TB 6 W, Ø 180 mm



C58/12-TB
12 W, Ø 220 mm

C58/6-TB
6 W, Ø 220 mm

C52, C53 RANGE

Ceiling-speakers made of stamped metal sheeting, rapid installation to the false ceiling by means of handy tough spring-type hooks. The loudspeakers are equipped with transformer for connection to 100 V constant-voltage lines.



C52/12-T
12 W, Ø 200 mm

C52/6-T
6 W, Ø 200 mm



C53/10 -T
10 W, Ø 265 mm

C58-HF RANGE

Range of two-way ceiling speakers feature high quality and high power; they are made entirely of white ABS with back cover and quick fixing system by means hooks. These speakers deliver high intelligibility speech and accurate music reproduction.



C58/20-HF 20 W, two way, Ø 213 mm

VES C57, C58 RANGE

According to the specification of the voice evacuation system (VES), the **C57** and **C58** range can be supply with **AC957** and **AC958** flame-proof caps and **AC950** kit (ceramic terminal strips with thermal fuse).



AC957
flame-proof cap for C57 range

AC958
flame-proof cap for C58 range



AC950
Ceramic terminal strip with thermal fuse

Model	C52/6-T	C52/12-T	C53/10-T	C57-TB	C58/6-TB	C58/12-TB	C58/20-HF
Rated power	6 W	12 W	10 W	6 W		12 W	20 W
Adjustable power	6 / 3 / 1,5 W	12/ 6 / 3 W	10 / 5 / 2,5 W	6 / 3 / 1,5 W		12/ 6 / 3 W	20 W-
Sound press. SPL Pnom/1m	99 dB	102 dB	103 dB	102 dB		105 dB	101 dB
Sensivity 1W/1m	92 dB	92 dB	93 dB	95 dB		95 dB	88 dB
Frequency response	80 ÷ 12.000 Hz		70 ÷ 20.000 Hz	100 - 15.000 Hz	80 ÷ 20.000 Hz		80 ÷ 20.000 Hz
Dispersion angle @2kHz	160°		80°	150°	130°		180°
Mounting	Ø 160 ÷ 165 mm		Ø 230 mm	Ø 160 ÷ 165 mm	Ø 200 ÷ 205 mm		Ø 170 mm
Dimensions (W x H x D)	Ø 200 x 62 mm		Ø 265 x 79 mm	Ø 180 x 110 mm	Ø 220 x 130 mm		Ø 213 x 130 mm
Weight	0,64 kg	0,7 kg	1,2 kg	1,1 kg	1,3 kg	1,45 kg	1,4 kg

C572, C582 RANGE • VOICE EVACUATION SYSTEMS APPLICATION

These speaker units for flush mounting are made of metal with white grille. According to international VES standard, they are equipped with flame-proof steel cap and ceramic terminal strip with thermal fuse. The flame-proof cap equipped with double cable gland allows an easy daisy-chain installation



C572/6-V
6 W, Ø 180 mm (VES)



C582/10-V
10 W, Ø 230 mm (VES)



C47 RANGE

Compact size and excellent acoustic performance. The **C47/6-TB** is indicated for indoor installations, while the **C47/12-TW** is suitable for particularly damp places (bathrooms, kitchens, swimming pools etc.). They are made of self-extinguishing ABS; white colour.

C47/12-TW
12 W, Ø 140 mm

C47/6-TB
6 W, Ø 140 mm



C49 RANGE

These speaker units for protruding ceiling-mounting are made of self-extinguishing white ABS. They can be combined with C47 ceiling-speakers or C48 sound projectors which has an esthetically matching front panel.



C49/6-T
6 W, Ø 140 mm

C470 RANGE

These speaker units for flush mounting are made of ABS with metal grille; white colour. They are equipped with ABS back cover, weatherproof cable gland and connecting cable



C470/6-TW
6 W, IP55, Ø 140 mm

Model	C47/6-TB	C47/12-TW	C470/6-TW	C49/6-T	C572/6-V	C582/10-V
Rated power	6 W	12 W	6 W	6 W	6 W	10 W
Adjustable power	6 / 3 / 1,5 W	12 / 6 / 3 W	6 / 3 W	6 / 3 / 1,5 W	6/ 3 W	10 / 5 W
Sound press. SPL Pnom/1m	97 dB	99 dB	98 dB	97 dB	97 dB	101 dB
Sensivity 1W/1m	89 dB	88 dB	91 dB	89 dB	90 dB	91 dB
Frequency response	110 ÷ 12.000 Hz	110 ÷ 14.000 Hz	150 ÷ 18.000 Hz	110 ÷ 12.000 Hz	90 ÷ 18.000 Hz	
Dispersion angle @2kHz	160°				150°	120°
Mounting hole	Ø 109 mm		Ø 125 mm	-	Ø 160 mm	Ø 200 mm
Dimensions (W x H x D)	Ø 140 x 105 mm		Ø 140 x 130 mm	Ø 200 x 71 mm	Ø 180 x 127 mm	Ø 230 x 127 mm
Weight	0,75 kg	0,95 kg	0,9 kg	1,2 kg	1,3 kg	1,4 kg

CSPOT RANGE • SPOT-LIGHT CEILING SPEAKERS

The small size and the shape of the speaker allow to camouflage it among the different aesthetic or functional elements of the ceiling. Painted metal structure; transformer for constant-voltage line connection. The CSPOT ceiling speakers are available in several colours.



CSPOT/6-T
6 W, Ø 105 mm, white



CSPOT/6-TN
6 W, Ø 105 mm, black



CSPOT/6-TS
6 W, Ø 105 mm, silver

C59 RANGE • SUSPENDED SPEAKERS

High-quality round speaker unit suitable also for use in rooms that are particularly difficult from the acoustic and plant-engineering point of view. it is made of white ABS and each unit has a line transformer and a device for securing it to the ceiling (4 m cable).

C59-T 15 W



Model	CSPOT/6-T	C59-T
Rated power	6 W	15 W
Adjustable power	6 / 4 / 2 W	15 / 7,5 / 3,75 W
Sound press. SPL Pnom/1m	95 dB	100 dB
Sensivity 1W/1m	86 dB	90 dB
Frequency response	100 ÷ 20.000 Hz	70 ÷ 20.000 Hz
Dispersion angle @2kHz	130°	80°
Mounting	Hole: Ø 85	4 m cable / ceiling mounting
Dimensions (W x H x D)	Ø 105 x 85 mm	Ø 202 x 176 mm
Weight	0,5 Kg	1,8 Kg

PRO-SOUND LOUDSPEAKERS

C150-HF PASSIVE SPEAKER UNIT
80 W RMS/150 W PMAX

Professional speaker unit, 80 W RMS (150 W maximum long-term output), bass-reflex, two ways with crossover filter. Broad and uniform frequency response with controlled directivity. Cabinet made of semi-expanded shockproof material with built-in carrier handle. Metal grille.



CA980 ACTIVE SPEAKERS UNIT
80 W RMS

The **CA980** is an active two-way speaker unit with the same acoustic features as the C150-HF speaker; it incorporates an 80 W RMS amplifier with a balanced input (micro/line) and an output for cascade connection of several speaker units.



Model	CA980	C150-HF
Rated power	80 W	80 W / 150 W
Loudspeaker	1 Tw + 1 Wf 6,5"	
Impedance	-	8 Ω
Sound pressure SPL Pnom/1m	117 dB	117 dB / 120 dB
Dispersion angle @ 2kHz	Hor. 180° - Ver. 180°	Hor. 200° - Ver. 180°
INPUTS	Jack 6,3 mm	-
Sensitivity	LINE IN: 600 mV, MIC IN: 1,5 mV / 1,5 kΩ	-
Frequency response	LINE IN: 40 ÷ 16.500 Hz MIC IN: 210 ÷ 16.500 Hz	60 ÷ 18.000 Hz
S/N Ratio	LINE IN: 83 dB, MIC IN: 62 dB	-
Mains power supply	230 Vca – 50/60 Hz	-
Dimensions (W x H x D)	250 x 405 x 257 mm	
Weight	8 kg	6,1 kg

ACCESSORIES

B102	Floor-standing base
AC930	Support for securing to B102 base
AC904	Wall mounting swivel support for C150-HF
AC916	Wall mounting kit for C150-HF
TM106-I	80 W line transformer for C150-HF
TM92	Transformer for galvanic separation of the signal (for CA980)

ATTENUATORS

They can be used to adjust the acoustic level of speakers in constant-voltage systems (100-70-50 V). Models with different rated outputs are available depending on the maximum loads that can be connected to them. Each unit is equipped with an autotransformer, an 11-position switch and a front mask. Some models ("**R**" reference code) are equipped with a relay capable of excluding attenuation in the presence of alarm priority signals (override command, 24 Vdc). Standard range and Europa range ("**E**" reference code) are available, depending on their size. Standard range is also available in black colour ("**N**" reference code). The **L56-R** selector switch can be used to switch 6 different programs from constant-voltage lines to one or more loudspeakers. Equipped with a by-pass relay for priority calls, it has provisions for connection to an attenuator.

STANDARD RANGE





EUROPA RANGE





LS6-R



TL100-RE

	STANDARD RANGE				EUROPA RANGE					
Model	TL10, TL10-N	TL35, TL35-N	TL35-R, TL35-RN	TL50, TL50-N	TL12-E	TL36-E	TL36-RE	TL50-E	TL100-RE	LS6-R
Output rated	10 W	35 W	35 W	50 W	12 W	36 W	36 W	50 W	100 W	-
Switch position	10 + off									6
Override command	-		24 V	-			24 V	-	24 V	
Flush-mounting box	27/901 (107 x 72 x 53 mm, standard 503)				AC911 (70 x 70 x 50 mm)				-	AC911 (70 x 70 x 50 mm)
Wall-mounting box	-				AC913 (81 x 81 x 49 mm)				AC914 (82 x 155 x 51 mm)	AC913 (81 x 81 x 49 mm)
Dimensions (WxHxD)	116 x 77 x 50 mm				81 x 81 x 50 mm				80 x 152 x 45 mm	81 x 81 x 50 mm

MULTIZONE VOICE/MUSIC CONTROL SYSTEMS

P8036 • SIX ZONE VOICE/MUSIC CONTROL UNIT

The equipment enables a maximum of 6 zones to be selected by means of a microphone base. The equipment can be used both with the line signals (before the amplifier) and with power signals (output from the amplifier with 100 V line). The **P8036** has provisions for connecting two amplifiers (one for music and one for speech) and it can be configured to operate with a single amplifier for both voice and music. There are 4 inputs for auxiliary sound sources with selectors and level controls, one input on a terminal strip for connecting several pre-amplified microphone bases (**B711-G** and/or **B711/6-G**) and an input with VOX priority for sound sources, such as a message generator or an alarm-tone generator. The music source that was selected, adjusted in amplitude, will be available at the MUSIC OUT output , while the voice signal from the base or from the VOX input (depending on priority) will be available on the SPEECH OUT. If there is only one amplifier, this output will also provide the music featuring the lowest priority. Possibility of activating/deactivating music for each zone by means of front-panel switches. By-pass of any attenuators on the loudspeaker line using three-wire override connection. It can be installed directly on a 19" rack, height: 1 HE.



P8136/P8236 • MASTER AND SLAVE MULTIZONE VOICE/MUSIC CONTROL UNIT

The Master/Slave multizone voice/music control system was developed for easy installation and operation in a wide range of applications where background music distribution, speech announcements and prerecorded messages are requested. It's characterized by an unique flexibility in the interconnection and matching of the various components so as advanced, effective and economic public address systems of any complexity can be easily built up. Through simple CAT5 cables up to **6 Master Control Units P8136** can be connected with up to **30 Slave Control Units P8236** to manage up to 216 call and music zones. Up to 16 Microphone consoles **PMB106-G** and/or **PMB112-G** can be used with each Control Unit. The possibility of interconnecting various Control Units, even far away from each other, makes more effective and economic the sonorization of building complexes, allowing both centralized and/or local controls. The multizone voice/music control system can indifferently operate with separated amplifiers for voice and music or single amplifiers for both voice and music and, in large installations it can be configured to drive more amplifiers for each zone.

P8136 MASTER UNIT



- RJ45 CAT5 inputs for:
  - **PMB106-G**, **PMB112-G** set as master paging consoles (up to 16)
  - **PMB106-G**, **PMB112-G** paging consoles (up to 16)
  - **P8136** master units (up to 5)
  - **P8236** slave units (up to 5)
  - **ACI08136** external I/O card units (up to 6)
- Software configuration and USB Personal Computer connection
- 2 VOX line inputs with automatic priority activation (telephone/emergency audio inputs)
- 4 music source inputs (Tape, CD, Tuner, Aux)
- line music input from other master unit (centralized background music signal)
- 2 separate 100 V inputs for music and speech signals
- six zone output lines splitted in 2 groups of 3; 100 V or 0 dB according to system configuration
- 0 dB speech and music audio outputs
- 24 Vdc zone override connection
- **ACMG8136** pre-recorded message card unit (option)
- 6 zone music insertion switches
- Keypad to set-up system
- 230 Vac/24 Vdc power supply

P8236 SLAVE UNIT



- RJ45 CAT5 inputs for:
  - **PMB106-G**, **PMB112-G** paging consoles (up to 16)
  - **P8136** master unit
  - **P8236** slave units (up to 5)
  - **ACI08136** external I/O card units (up to 6)
- local music input
- 2 separate 100 V inputs for music and speech signals
- six zone output lines splitted in 2 groups of 3; 100 V or 0 dB according to system configuration
- 0 dB speech and music audio outputs
- 24 Vdc zone override connection
- 6 zone music insertion switches
- 230 Vac/24 Vdc power supply

ACCESSORIES

ACI08136 I/O CARD UNIT



- CAT5 master/slave unit connection
- 6 opto-insulated input contacts
- 6 output relay contacts
- 24 Vdc power supply
- 0 dB audio input
- Enable/disable VOX function (telephone/emergency audio input)
- 12 Vdc output

ACMG8136 PRE-RECORDED MESSAGE GENERATOR

- Optional P8136 master card unit
- SD memory card
- Wav message type
- 127 messages
- microphone input
- Headphone output
- USB connector

PMB RANGE MICROPHONE BASES

Pre-amplified desk-top base microphones for general and group zone calls. ABS structure with electret microphone and stem with a flexible section at the bottom. Programmable zone selection keys. Up to 7 paging priority levels. Microphone sensitivity adjustment. Locally speech filter insertion. System busy indication. RJ45 connections whit CAT5e SF/UTP shielded cable.



PMB106-G
6 zone call base



PMB112-G
12 zone call base



PMB112-EG
12 push button extension key

INTEGRATED VOICE EVACUATION SYSTEM

PA8506-V • 2X250 W RMS • 6 OUTPUT ZONES

- EN54-16 AND EN60849 COMPLIANCE
- SIX DOUBLE OUTPUT ZONES (A&B)
- DIGITAL AUDIO PROCESS (DSP)
- TWO CHANNEL BROADCAST SYSTEM
- TWO CLASS D AMPLIFIERS (2X250 W)



The **PA8506-V** is designed for easy installation and operation in a wide range of applications where both emergency voice alarm systems and public address systems are required, always according to the voice evacuation safety standards, such as EN54-16 and EN60849. Beyond paging and music broadcast operations, the PA8506-V is able to make alarm announcements in emergency situations. According to standard, the built-in surveillance function continuously checks the system for all possible failures. It enables background music and general or zone calls without interfering with its diagnostic routine.

It includes an emergency microphone, two class D power amplifiers (2 x 250 W), a message generator, a BGM USB input and an external amplifier input to increase power. It provides also 6 zone outputs, with continuous speaker line monitoring function and it can be easily expanded up to 12 zones using another unit as a slave.

The **PA8506-V** can handle different audio sources such as microphones, paging units and background music devices, including USB flash drive. The speaker output section consists of 6 separated lines; each line has its own internal music level control. Furthermore, each output line consists of 2 speaker circuits (A & B) in order to guarantee the complete area coverage also in case of one loudspeaker circuit failure. The front controls and the LCD display allow easy system setup. For a more user-friendly configuration a web server function is also available.

The equipment is a fully 2-channel broadcast system including 2 built-in class D amplifiers (one for music and one for speech). Both amplifiers are continuously monitored. The 'music' amplifier operates also as stand-by amplifier: in case of 'speech' amplifier failure, the 'music' amplifier automatically replaces it. Optional brackets for rack mounting: **AC8506** (3 HE).

MAIN SYSTEM FEATURES

- ALL IN ONE (Message/Alarm generator, paging and BGM)
- 2-channel broadcast system
- Two built-in 250 W RMS class D power amplifiers
- Six broadcasting zones
- Music volume control for each zone
- Up to 16 paging units, **PMB** range (7 priority levels)
- USB input for background music and messages source
- Balanced microphone input (IN 1) with Phantom power supply and priority contact
- Balanced microphone or line input (IN 2) with Phantom power supply (MIC), priority contact or automatic (VOX) precedence
- Balanced line input (IN 3) with automatic (VOX) precedence function
- Auxiliary line input for an external music source
- Management of an external 250 W amplifier to increase power
- Full digital audio control (DSP)
- 6 open collector outputs (system status or override to by-pass attenuators)
- 8 programmable and controlled input contacts
- 2 relay outputs for 'emergency' and 'failure' conditions
- Built-in loudspeaker for channel monitoring and acoustic failure signalling (beep)
- Easy and simple configuration (large LCD display)
- Emergency zone disabling and Do Not Disturb functions
- Web server function

MAIN EMERGENCY FEATURES

- Controlled emergency microphone
- Control and monitoring of the integrity of the critical path (from the emergency signal sources to the loudspeaker lines)
- Continuous loudspeaker line monitoring (integrity and dispersion to earth) without interruption of BGM or paging calls
- Back-up power amplifier management
- Controlled double loudspeaker output line for each zone (A and B)
- Built-in message generator to broadcast voice alarms on two channels (EVAC and ALERT)
- Complete diagnostic of system fault events
- 24 Vdc emergency secondary power supply



MICROPHONE BASES WITH ZONE SELECTION



Up to 16 microphone basis can be easily and quickly connected to **PA8506-V**, which allow to send messages either to one or more zones. According to system configuration, it is possible to split the daisy-chain connection on two lines (the total distance can be one km maximum) and, if needed, it is possible to power supply through the back socket directly. The usage of shielded cables CAT5e SF/UTP is needful (input PAGING UNITS).

PMB106-G 6 zone call base

ACCESSORIES

AC8506 brackets for rack mounting (3 HE)

PMS2006-VES • SYSTEM COMPLYING ACCORDING TO EN60849

The main purpose of the **PMS2006-VES** system is to enable guided and controlled evacuation of a building in the event of fire or any other emergency situation requiring evacuation. It can be configured to include up to a maximum of 36 sound-broadcasting zones, and can be programmed to broadcast pre-recorded warning and evacuation messages or to send out live messages with top priority.
Designed and structured for easy installation and for use in a vast number of applications, the system is compatible with any PASO amplifier that has a 100 V constant-voltage output and guarantees great versatility with an extremely advantageous cost/performance ratio.

The basic configuration of the system calls for the use of a **PMS2006-VES** management unit, a **PM2006-V** line monitoring unit (for up to a maximum of 6 lines) and normal power amplifiers. The **PMS2006-VES** cage contains all the cards required for a basic system (CPU, microphone control card, message generator, audio output module, I/O cards and a power supply unit).
The **PM2006-V** unit can control up to 6 broadcasting/emergency zones. For each zone there is a double output circuit (A and B), with the two parts controlled separately. In this way it is possible to guarantee full coverage of the area even in the event of a failure on one of the two circuits of the loudspeaker line.

SYSTEM FUNCTIONAL FEATURES

- Monitored emergency microphone.
- Up to 36 sound-broadcasting /emergency zones
- Up to 31 call stations of the PMB range (7 priority levels)
- Detection of system malfunctioning and/or failures (within 100 seconds)
- Software for configuring the system via a PC
- Checking and monitoring of the integrity of the 'critical path' (from the sources of the emergency to the loudspeaker lines)
- Checking of the loudspeaker lines (integrity and dispersion to earth)
- Double loudspeaker line for each zone (A and B)
- Monitoring of the amplifiers connected
- Automatic management of the stand-by amplifier
- Up to 128 programmable I/O contacts
- Input for secondary power supply (24 VDC)

PMS2006- VES MANAGEMENT UNIT



The **PMS2006-VES** is the main management unit and is equipped with a CPU for checking the various audio signals and the diagnostics system (reporting the last 99 events). It is programmed via a PC connected to the RS232 serial port (the configuration software is included). The cage includes a hand-held monitored emergency microphone, a recorder/player for two monitored emergency messages of 4 minutes each, an IN/OUT interface with 8 programmable input contacts and 8 LEDs and 8 output contacts for diagnostics, an audio matrix for managing the priority levels of the signals and an alarm-tone generator able to produce 19 different tones.It is possible to connect up to 31 calling bases of the **PMB** range, programming them according to 7 different priority levels. There is an auxiliary line input for an external music source and an RS484 serial connector for connecting **PM2006-V** zone-selection units (up to 6 modules). Power supply: 220 VAC and 24 VDC. 19" standard for rack-mounting (3 HE).

PM2006-V CONTROL AND DISTRIBUTION UNIT FOR 6 LOUDSPEAKER LINES



The **PM2006-V** is a 6-zone selection unit capable of monitoring the loudspeaker lines according to **EN60849**. It takes care of switching the voice/music signals to 6 zones each with a double line (A/B for redundancy), checking simultaneously the integrity of the critical path (from the emergency sources to the loudspeaker lines). A short circuit on line A of a zone will cause this line to be de-activated so that broadcasting of the sound continues on line B (which covers the whole area involved). 100 V line inputs for the voice, music and stand-by amplifiers (output power of up to 500 W each). The **PM2006-V** unit can be configured with a single amplifier for both voice and music or with two separate amplifiers (one for voice and one for music). If required, a third amplifier can be added as a stand-by, with automatic switching in the event of malfunctioning of the voice amplifier. The system is compatible with any PASO amplifier with a 100 V output. Front-panel keypad for activating music in the single zones, selecting the areas for receiving emergency calls and programming the equipment. RS485 serial connector for the **PMS2006-VES** control unit. Power supply: 220 VAC and 24 VDC. 19" standard for rack-mounting (1 HE).

PMB RANGE MICROPHONE BASES

Pre-amplified table-top microphone stations for "All call" and calls to zones. ABS casing with electret microphone and stem with flexible section at the bottom. Programmable zone-selection keys. Seven levels of priority for calls. Adjustable microphone sensitivity. Includable speech filter. Busy LED. RJ45 connector with shielded cables (CAT5e SF/UTP).

PMB106-G 6 zones



PMB112-G 12 zones



PMB112-EG 12 push button extension key





PMS2000-VES • EN60849 MODULAR SYSTEM

The **PMS2006-VES** system, the architecture of which is based on the principle of using one amplifier to supply several zones, is able to provide in a simple and inexpensive manner a basic solution meeting the requirements of the applicable standards for Voice Evacuation Systems.
For more demanding applications, in which separate amplification for each zone is necessary, the **PASO PMS2000-VES** is available. This is a professional modular amplification system, **certified according to EN60849**. It is extremely versatile and capable of meeting very complex system specifications. For greater information, consult the "**PASO general catalogue**" or visit **www.paso.it.**



CS2100 • CONFERENCE AND VOTING SYSTEM

The **CS2100** Conference System enables automatic management of up to 100 microphone units. All operations can be managed via **CL2100-G** control console unit. Conference modes that the system is able to manage are: 'MANUAL', 'AUTOMATIC' and 'OPEN'.
At any time during the discussion, any person attending the meeting who wishes to speak may queue to do so. In the MANUAL and AUTOMATIC modes, the microphone unit will be enabled to speak by the operator (Manual Mode), or after a pre-set time (Automatic Mode). Delegate units are enabled to speak in the order in which they are queued to speak via the control unit. In the OPEN conference mode, all the microphone units can speak at the same time. The Chairman can take part in a conversation with Delegates or, if necessary, activate the 'Priority' function to place all the other units on hold.

SYSTEM FUNCTIONAL FEATURES

- Maximum overall number of units that can be used: **100**
- Up to **98** Delegate units: **B2100-DG** with vote or **B2080-DG** without vote, and Secretary unit (**B2080-DG** set in Secretary mode)
- Up to **2** Chairman units (**B2100-PG**)
- Management of the following conference modes: **Automatic** (time-based management), **Manual** (management by an operator) or **Open** (simultaneous management of several units)
- Up to 4 operator console units for system management (**CL2100-G**)
- Management of electronic voting in "open" or "secret" modes
- Direct enabling of a Delegate unit via the control console
- The Chairman can speak either in the conversation mode or in the priority mode
- Easy cascade connection using CAT5 shielded cables
- Up to 6 connecting lines (max. 20 units per line – max. 100 metres from the central control unit to the last unit connected)
- Up to 4 display panels (**CT2001)**
- RS232 serial connector for a PC (connected directly to the central control unit or to the network of the microphone units by means of a **CSIF2100** interface)
- Connection of additional sources such as a wired microphone, a wireless microphone receiver or other sources of sound
- Possibility to connect an audio recorder
- Connection to an amplifier unit to broadcast the conference audio

CS2100 CENTRAL CONTROL UNIT



The **CS2100** unit, which has a sophisticated digital controller, is able to manage the sequence of the contributions, electronic voting and the various alphanumeric display panels in the conference room. To configure the system and for the various control activities, at least one **CL2100-G** console is required (a maximum of four can be installed).
The central control unit is able to power up to 100 microphone units, with 6 RJ45 outputs at disposal for the various cascade connections to the microphones, to the consoles and to the display panels (CAT5e SF/UTP shielded cable). 'MIC'/'AUX IN' input for connecting additional sources such as a wired microphone, a wireless microphone receiver or other sound sources (12 V phantom power supply for the 'MIC' input). Double 'IN' and 'OUT' phono sockets for connecting an audio recorder. Separate and independent front-panel controls for the signal coming from the units, for the 'TAPE' input and for the 'MIC/AUX IN' input. 'BOOSTER OUT' output socket for connecting an amplifier unit for sound broadcasting in the hall. Power supply requirements: 230 VAC 50/60 Hz.
Size (W x H x D) 482 x 45 x 240 mm. 19" standard for rack-mounting (1HE).



B2100-DG DELEGATE DESK UNIT



This unit enables the delegate to speak and to vote electronically according to three different options: For, Abstained and Against. Warning LEDs indicate that the unit is on stand-by, that it is enabled to speak, that the time at disposal has run out and that a vote has been cast.
The unit has a cardioid electret microphone with a 43-cm flexible stem and a lighted ring. Push-button for queuing to speak. Three keys for voting and a cover for privacy. Built-in loudspeaker which is excluded when the unit is active. Volume control. Socket for connecting a headphone (3.5 mm jack). Rear-panel double RJ45 socket (IN/OUT) for cascade connection to the other units or to the central control unit using shielded cable (CAT5e SF/UTP). Colour: pale grey.
Size (WxHxD): 116 x 60 (490) x 200 mm.

B2100-PG CHAIRMAN DESK UNIT



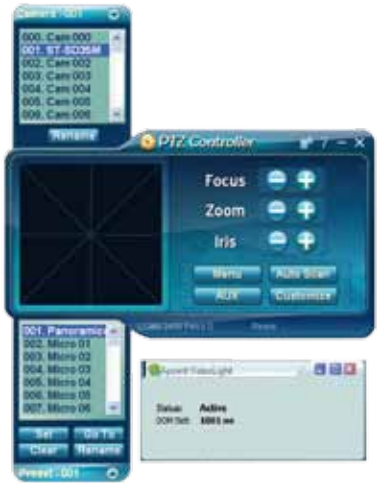
With its double key, this unit enables the Chairman to talk either in the Conversation Mode or in the Priority mode. The Priority control causes all the other microphones to be switched off. It has a cardioid electret microphone with a 43-cm flexible stem and a lighted ring. Three keys for voting and cover for privacy. Built-in loudspeaker which is excluded when the unit is active. Volume control.
Socket for headphone (3.5 mm jack). Rear-panel double RJ45 socket (IN/OUT) for cascade connection to the other units or to the central control unit using shielded cable (CAT5e SFTP). Colour: pale grey.
Size (WxHxD): 116 x 60 (490) x200 mm.

CL2100-G CONTROL CONSOLE UNIT



This console enables programming and complete management of the discussion and of the voting and, if required, activation of a microphone unit regardless of the queuing order (**B2100-DG** and **B2080-DG**). The backlit LCD display shows the status of the microphones (ID number of the active microphone and of the next in the queue and number of speakers queued) and the results of the vote (total number of abstentions and number of votes for and against). Rear-panel double RJ45 socket (IN/OUT) for direct connection to the central control unit or cascade connection to other units (CAT5e SF/UTP shielded cable). The console has all the necessary controls for easy and immediate use (numerical keypad from 0 to 9, key for selecting the conference mode, key for starting/ending the voting, key for proceeding with the discussion, menu key for choosing the language, selecting the speach timeout and service functions). Colour: pale grey.
Size (WxHxD): 116 x 60 x 200 mm.

X-VL105 AUTOMATIC VIDEO MANAGEMENT SYSTEM



PTZ CONTROLLER

X-VL105 ApointVL video system is the basic solution for enabling management of video-recording with **PASO CS2100** conference systems. It consists of automatic video tracking on the speaker in order to provide a high-quality image to combine with the audio. This is a necessary pre-requisite for implementing highly topical audiovisual applications such as streaming, creation of audio or video CDs and/or DVDs using standard formats (e.g. mp3/wmv) and possibility to publish conferences on the web. Indeed, in addition to live video management, the **X-VL105**, controlled entirely via a Personal Computer, also enables digital recording and easy management of streaming.

ApointVL system consists of the following:

- **PTZ Controller VL software** for automatic and manual video camera tracking
- **A colour dome camera**, optical zoom 10x + digital zoom 10x, 127 presets with 10-digit label title and possibility to set the characteristics of the image for each single preset. Power supply: 12 VDC/2 A. Tough vandal-proof build, easy to assemble, it is supplied complete with a wall-mounting bracket. It can also be used as a desk unit or suspended from the ceiling (accessories not included).

Automatic tracking takes place thanks to integration with the conference system with its CS2100 central control unit and at least one CL2100-G operator console (set either in the automatic or in the manual mode). Up to a maximum of 98 microphone units (B2080-DG and/or B2100-DG) plus one B2100-PG Chairman unit can be connected to it. As soon as a microphone unit is activated (either manually or automatically, according to the system operating mode), the video camera will go to the preset position and the current speaker will be framed.
Manual tracking can be carried out using mouse and/or by means of a joystick (optional).



DOME CAMERA



JOYSTICK

The system can be expanded to manage up to a maximum of 16 video cameras with the appropriate switching video matrix.
To use the **X-VL105** video system it is necessary to have a dedicated PC of a suitable size, according to the type of conference system to be managed and to the services intended to be used (management of video cameras only, audio/video recording, streaming, etc.).

With **ApointVL** it is possible to use the following optional software modules:

- **X-VL205 ApointVL Multimedia** to create audio/video files indexed according to the speakers' names, to starting and ending times and the agenda
- **X-VL210 ApointVL Multimedia On Web** for post-playback of the indexed meetings on the streaming server

ApointVL video management system is the entry-level solution of **NexusPub** that, at absolutely competitive costs, enables automatic management and control of all the operations relating to **PASO** discussion and conference systems. Full management of conference and of voting operations, synoptic viewing of the hall by means of video terminals and/or video projectors showing all the information about the meeting, analyses and statistics of all items clearly (attendance, speakers, voting, etc.), live video of the meeting with preset positioning or live movement of video cameras, audio and video recording of the meetings, creation of audio/video files indexed according to the contributions, consultation of meetings via web with the possibility of searching for contributions on the basis of speaker, meeting and/or topic being discussed are just a few of the innovative functions of **NexusPub**.



ACCESSORIES FOR CS2100 SYSTEM

CT2001 CONFERENCE-ROOM DISPLAY PANEL



This panel shows to the delegates and to the public the main information about the conference being held. At the end of each voting session it indicates the total number of votes for and against the motion and the number of abstentions. During the discussion (except in case of an "OPEN" conference), it indicates the ID number of current speaker's microphone, the ID number of the next in queue and the total number of speakers queued. Fixed-field alphanumeric display with interchangeable language messages. It has a double RJ45 socket (IN/OUT) on the rear for connection to the central control unit or in cascade to the other units (CAT5e SF/UTP shielded cable). Mains power supply: 230 VAC.
Size (WxHxD) 1050 x 500 x 40 mm.

EASY CAT5 CONNECTION

One of the plusses of **PASO CS2000** systems is the extreme simplicity with which they can be installed and connected.
All the units have rear-panel double RJ45 sockets (IN/OUT) for easy cascade connection using CAT5 shielded cable. There are no constraints of any kind connected with the physical positions of the units within the system.
The Delegate units, Chairman units, display panels and interface for remote connection of a PC can be connected to any point of the network linking them to the central unit.

CSIF2100 REMOTE INTERFACE TO CONNECT A PC

It enables a Personal Computer with dedicated control software to be connected to any point of the microphone unit network of the CS2100 system. It has a double RJ45 socket (IN/OUT) for direct connection to the control unit or in cascade to the other units (CAT5e SF/UTP shielded cable). DB9 socket for RS232 serial connection to the PC.
Size (WxHxD): 136 x 26.5 x 95 mm.



CS2000 CONFERENCE SYSTEMS

CS2080 • OPEN CONFERENCE SYSTEM

The **CS2080** conference system is easy to install, inexpensive, does not require any programming or assistant in the hall in order to function. It is a discussion system featuring free access, with priority for the Chairman microphone (moderator). Suitable for conferences attended by a maximum of 80 people (including the Chairman).

CS2080 CENTRAL CONTROL UNIT



Created in order to manage small discussion-only systems without operational personnel. The versatility of the output connections and the separate and independent front-panel level controls for each audio input signal are the plusses of this central control unit. It powers up to 80 units with the availability of four RJ45 outputs for the various cascade connections of the units (CAT5e SF/UTP shielded cable).
'MIC'/'AUX IN' input for connecting additional sources such as a wired microphone, a wireless microphone receiver or other sound sources. It is possible to use the 12V phantom power supply for the 'MIC' input. Double 'IN' and 'OUT' phono sockets for connecting an audio recorder. 'BOOSTER OUT' output socket for connecting an amplifier unit for broadcasting the audio in the conference hall. Power supply requirements: 230 VAC 50/60 Hz. Size (W x H x P) 482 x 45 x 240 mm. 19" standard for rack-mounting (1 HE).

B2080-DG DELEGATE DESK UNIT



This unit enables the delegate to contribute to discussion, with a LED that signals when the microphone is active. The unit has a cardioid electret microphone with a 43-cm flexible stem and a lighted ring. There is a button for queuing to speak.
Built-in loudspeaker which is excluded when the unit is active. Volume control. Socket for listening via a headphone (3.5 mm jack). Rear-panel double RJ45 socket (IN/OUT) for cascade connection to other units or to the central control unit by mans of CAT5e SF/UTP shielded cable. Colour: pale grey. Size (WxHxD): 116 x 60 (490) x 200 mm.

Note: **B2080-DG** microphone units can be used with the **CS2100** system to work as delegate units without vote or, if appropriately configured, as Secretary unit, with the possibility to speak directly without queued.

ACCESSORIES FOR CS2100/CS2080 SYSTEMS

CV2002	CAT5e SF/UTP shielded cable, length 2 m, with RJ45 connectors
CV2005	CAT5e SF/UTP shielded cable, length 5 m, with RJ45 connectors
CV2010	CAT5e SF/UTP shielded cable, length 10 m, with RJ45 connectors

SYSTEM FUNCTIONAL FEATURES

- Maximum overall number of units that can be used: 80
- Up to **79** Delegate units (**B2080-DG**)
- Chairman unit (**B2080-PG**)
- **Open** conference (simultaneous management of several units)
- The Chairman can speak in the conversation mode or in the priority mode
- Easy cascade connection by means of CAT5 shielded cables
- Up to 4 connecting lines (max. 20 units per line – max. 100 metres from the central control unit to the last unit connected)
- Connection of additional sources such as a wired microphone, a wireless microphone receiver or other sound sources
- Possibility to connect an audio recorder
- Connection to an amplifier unit to broadcast conference audio



B2080-PG CHAIRMAN DESK UNIT



This unit has a double key that enables Chairman to speak either in the conversation mode or in the priority mode. The priority control causes all the other microphones to be switched off. It has a cardioid electret microphone with a 43-cm flexible stem and a lighted ring. Built-in loudspeaker which is excluded when the station is active. Volume control. Socket for listening via a headphone (3.5 mm jack). Double RJ45 socket (IN/OUT) on the rear panel for cascade connection to other units or to the central control unit by means of CAT5e SF/UTP shielded cable.
Colour: pale grey. Size (LxHxD): 116 x 60 (490) x200 mm.

31/142-100	CAT5e SF/UTP shielded cable, 100 m roll
AC700	Fixing kit for microphone units

AULA CONGRESS SYSTEMS

Product range with the exclusive trademark design **AULA** fully meets needs to implement congressual applications with as many options in terms of configurations and accessories as possible. It is designed for applications in which the discussion and voting functions are combined with simultaneous translation, management via PC, conference status viewing through conference-room displays and speakers' video tracking.

AULA congress products offer the right answer for any system requirement, from the simple need for small discussion systems to the more complex demand for large meetings or congresses (installations with up to 250 microphone units).

Electronic voting, badges for enabling recognition and access, simultaneous translation, hold-the-key function, video with automatic tracking of each speaker, standard LCD or plasma displays or synoptic panels in the hall are just a few examples of the services provided by these systems.

For further information, consult the "**PASO general catalogue**" or visit **www.paso.it**.



DESK UNIT



INFRARED DIGITAL RECEIVER



INTERPRETER UNIT

PASO SpA is an Italian company established in 1973 thanks to the enthusiasm of a group of managers and technicians from the Milan-based company **GELOSO**, which had been on the market since 1931 and was an international leader in the field of professional sound broadcasting. **PASO** took over its trademark and patents, as well as the valuable heritage of experience, skill and techniques.

PASO is now a leading company on the market of sound broadcasting and congress systems, and has made a name for itself in Italy and abroad. The crucial point of the company's policy is customer satisfaction, to be achieved through the quality of products and services, pursued consistently and with passion, and backed by a product range able to meet all sorts of different requirements as well as a competent and professional sales organisation. All this is guaranteed by certification of our Quality System according to the latest version of **UNI EN ISO 9001**.

In the current global market context, **PASO** claims with justified pride its identity as an Italian manufacturing company that designs, develops, manufactures and markets its own products. Thanks to the commitment and professional skills of its personnel, the company has always kept up with technical evolution in terms of both products and manufacturing in accordance with the standards and directives applicable from time to time.

This new '**short catalogue**' which includes totally innovative product lines, is intended to mark the Company's constant commitment. It is a useful tool for designing and creating sound amplification and conference systems for small and medium-sized applications. **PASO** also offers complete solutions for audio systems applied to emergency services and congress systems. For further information, consult the '**PASO general catalogue**' or visit **www.paso.it**.

Sound broadcasting system

Sound-broadcasting installations, especially if they are complex and require high levels of safety and flexibility, must be combined increasingly frequently with sophisticated systems for managing and controlling the various components, for flexible selection of the inputs and outputs and for interfacing with external peripheral equipment. For these and other demanding applications, **PASO** offers several solutions such as, by way of example, the PMS2000, an extremely versatile professional modular amplification "system" capable of meeting the most complex system specifications.

Voice Evacuation Systems (VES)

On premises featuring the presence of large numbers of people, it is essential to have a suitable sound-broadcasting system that, activated by the fire alarm control unit, is able to manage emergency situations, enabling guided and controlled evacuation of the building. The European standards now in force define specifically the design and installation terms required in order to meet the appropriate safety and reliability requirements. **PASO** can offer solutions that comply in full with the voice evacuation and safety standards (**EN 54-16, EN 60849**).

Congress systems

The secret of a successful conference depends on the use of congress systems able to guarantee clear and intelligible speech, together with evolved management tools enabling the use of advanced information and multimedia services. The **CS2000** and **AULA** conference systems are able to meet these requirements in a simply and orderly manner, offering an elegant solution "Made in Italy".

Download a QR-reader application to your smartphone free of charge and scan the QR code shown opposite with the camera. You will enter in the **PASO** world immediately.

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Detailed technical data sheets, operation diagrams and user manuals of the main products are available at www.paso.it

PASO S.p.A. strive to improve their products continuously, and therefore reserve the right to make changes to the drawings and technical specifications at any time and without notice.

ED. 06/2011