

MILLENNIUM

EGi



Technical Manual

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EGi

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Cables & technical data

Mr. Installer: First, we thank you for choosing our products. We hope that the installation works perfectly and on the first try. To accomplish it, please follow carefully the guidelines provided in this Manual.

We, for our part, have provided all our modules with the appropriate protections so they don't get damaged even in case of a connection error. If, in spite of everything, you have any problem or doubt to solve, don't hesitate to contact our representatives or our Customer Technical Support directly. We are here to help you.



GENERAL LINE 15 Vcc (wires 2 & 4)				
Audio power in the line W	Intensity A	Max. length for a voltage drop of 2,5 V (m)		
		1 mm ²	1,5 mm ²	2,5 mm ²
5 W	0,3	370	—	—
10 W	0,6	185	277	460
15 W	1	110	166	275
20 W	1,3	85	128	215
25 W	1,6	70	105	175

GENERAL LINE 48 Vcc (wires 3 & 30)		
Audio power in the line W	Maximum length (m)	
	1,5 mm ²	2,5 mm ²
100W	100	165


LOW IMPEDANCE SPEAKER LINE <small>(Assuming homogeneous speaker distribution)</small>		
Total impedance	Length	Cable section
2 ohms	34 m	1,5 mm ²
	56 m	2,5 mm ²
4 ohms	70 m	1,5 mm ²
	115 m	2,5 mm ²
8 ohms	70 m	0,75 mm ²
	140 m	1,5 mm ²
	225 m	2,5 mm ²
16 ohms	140 m	0,75 mm ²
	280 m	1,5 mm ²
	450 m	2,5 mm ²




100 V SPEAKER LINE		
Power	Length	Cable section
40 W/100 V	600 m	0,75 mm ²
	1.200 m	1,5 mm ²
	2.000 m	2,5 mm ²

Maximum length for audio wires 1, 5, 6, 7 & 8: 500 m. To prevent the possibility of diaphony troubles over 500 m use balanced wires or contact our Customer Technical Support.

CABLES WITH COLOR WIRES		
	1504 5 wires twisted cable 1504.1 (3 x 0,5 mm ² , 1 x 1 mm ² , 1 x 1,5 mm ²)	1506 7 wires twisted cable 1506.1 (5 x 0,5 mm ² , 1 x 1 mm ² , 1 x 1,5 mm ²)
	1505 4 + 2 wires twisted cable 1505.1 (4 x 0,5 mm ² , 1 x 1 mm ² , 1 x 1,5 mm ²)	1507 7 + 2 wires twisted cable 1507.1 (7 x 0,5 mm ² , 1 x 1 mm ² , 1 x 1,5 mm ²)

Num	COLOUR	mm ²	COLOUR	FUNCTION	VOLTAGE
1	brown	0,5	1	Message audio w/priority over music (+ if balanced)	3 V audio + 7 V ...
10	brown-black	0,5	1 0	Message audio (- if balanced)	3 V audio + 7 V ...
2	red	1 a 1,5	2	Power supply +15 V ...	+15,5 V ...
3	orange	1 a 2,5	3	Power supply 48 V~	48 V~
30	orange-black	1 a 2,5	3 0	Power supply 48 V~	48 V~
4	yellow	1,5 a 2,5	4	GROUND & EARTH	0 V ... & audio
5	green	0,5	5	Channel 1 Audio: (+) if it is balanced	3 V audio + 7 V ...
50	green-black	0,5	5 0	Channel 1 Audio: (-) if it is balanced	3 V audio + 7 V ...
6	blue	0,5	6	Channel 2 Audio: (+) if it is balanced	3 V audio + 7 V ...
60	blue-black	0,5	6 0	Channel 2 Audio: (-) if it is balanced	3 V audio + 7 V ...
7	violet	0,5	7	Channel 3 Audio: (+) if it is balanced	3 V audio + 7 V ...
70	violet-black	0,5	7 0	Channel 3 Audio: (-) if it is balanced	3 V audio + 7 V ...
8	grey	0,5	8	Channel 4 Audio: (+) if it is balanced	3 V audio + 7 V ...
80	grey-black	0,5	8 0	Channel 4 Audio: (-) if it is balanced	3 V audio + 7 V ...
9	white	0,5	9	DIGITAL channel (+) RS-485, all control signals for the system are transmitted in a codified way	Data
90	white-black	0,5	9 0	DIGITAL channel (-) RS-485	Data
0	black	0,5	0	Wire for message priority activation using a logical signal	5 V ... (max. 15 V ...)
in	non defined	0,5	in	Input without priority for local connection	3 V audio + 7 V ...
pin	non defined	0,5	pin	Input with priority for local connection. It has priority over the IN inputs	3 V audio + 7 V ...
out	non defined	0,5	out	Audio output for local connection	3 V audio + 7 V ...

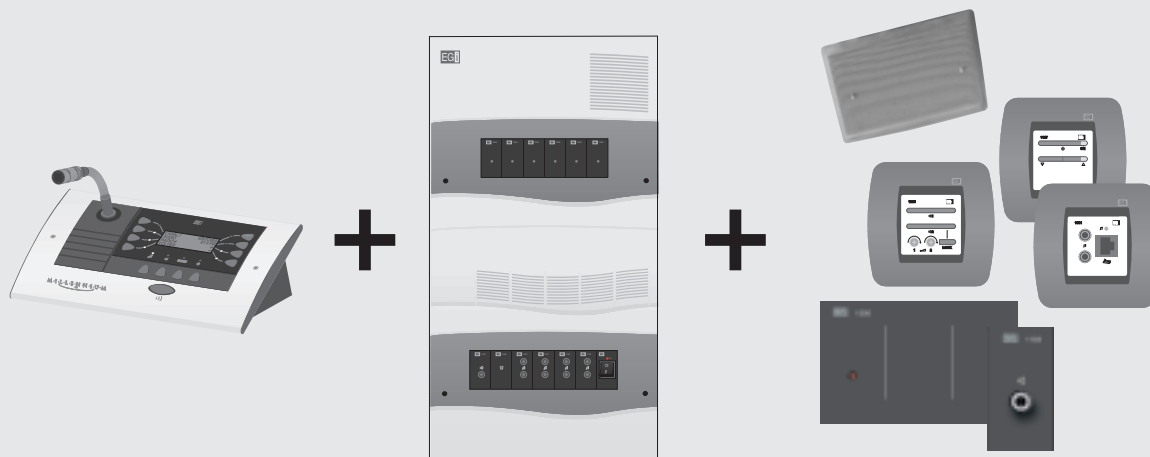
SPEAKER OUTPUT CABLES					
+	red	0,75 to 2,5		Speaker Output (+)	up to 100 V audio + 7 V ...
-/+	black/red	0,75 to 2,5		Speaker Output Common	0 V audio
-	black	0,75 to 2,5		Speaker Output (-)	up to 100 V audio + 7 V ...

DIGITAL AMPLIFIERS					
I	non defined	0,5		Control cable common	0 V ...
T	non defined	0,5		Keyboard information	15 V ...
L	non defined	0,5		Control of channel indicators	max. 14 V ...

IMPORTANT: The pairs of wires 1-10, 5-50, 6-60, 7-70, 8-80 should only be installed complete in big systems with balanced lines, from 500 m on. For smaller systems it is enough to install wires 1, 5, 6, 7 and 8. Wires: 9-90 must always be installed, and the pair 3-30, if used, should always be installed complete.

What is Millennium?

MILLENNIUM is a sound, communications, intercom and public address system designed for the public environment, based in a modular product system according to the following schema:



Control console	Audio Processor	Service modules
1201.xx	1301.xx	1101 - 1107
1202	1302	1203 - 1206
		1303 - 1314
		1501 - 1503
		1701 - 1706

The processor is the actual "heart" of the installation and has the aspect and the simplicity of an electric switchbox.

The control console is the central control device for all the installation. From it, calls are issued, zones selected, volume is raised or lowered, and so on. There is also the possibility of controlling different system features locally by using the control units installed in some zones.

The service modules are control units, microphone preamplifiers, amplifiers and miscellaneous items for the installation. They have a certain influence on the final system features.

Performance levels of Millennium

MILLENNIUM is based in two basic performance levels with features defined by the combination of audio processor and control console used:

CONTROL CONSOLE	+	AUDIO PROCESSOR	=	
1201.xx control console	+	1301.xx audio processor	=	2 + 1 message zones
1202 control console	+	1302 audio processor	=	up to 127 message zones

These combinations of control console and audio processor are unique, that is, 1201.xx control console requires the installation of a 1301.xx audio processor and 1202 control console requires 1302 audio processor.

Millennium 2 + 1 message zones

When we say **2 + 1 message zones**, what we mean is that the system is able to broadcast messages in three different zones, that can be selected from the **1201.xx** control console.

Two of the zones are centralized, that is, their sound amplifiers are in the **1301.xx** audio processor and their control is carried out exclusively from the **1201.xx** audio console.

The third area is a "general line", made of a 15 V $\overline{=}$ power supply line, two music programs and a message channel (5 wires in total), all these provided from the audio processor. Various control units, amplifiers and local items (microphone preamplifiers, and so on) can be added to this general line, so locally controlled sound areas can be created, but they work as a single, common zone for messages.

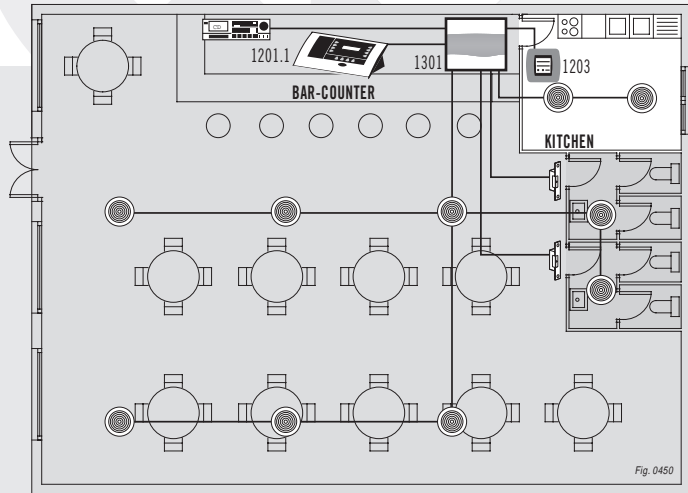
Product structure

CONTROL CONSOLE		AUDIO PROCESSOR		SERVICE MODULES	
1201	Control Console	1301	Audio Processor	1501.10	Connection base for control console / music source. White
1201.1	Control Console with built-in speaker	1301.1	Audio Processor with built-in radio	1501.12	Connection base for control console / music source. Black
1201.11	Control Console with speaker + gooseneck microphone			1204.10	2 channels control unit. 5 W. White
				1204.12	2 channels control unit. 5 W. Black
				1203.10	Intercom unit 2 zones. White
				1203.12	Intercom unit 2 zones. Black
				1105.10	XLR microphone base. White
				1105.12	XLR microphone base. Black
				1106.10	Volume regulator and auxiliary input. White
				1106.12	Volume regulator and auxiliary input. Black
				1107.10	Volume regulator for 1105 base. White
				1107.12	Volume regulator for 1105 base. Black
				1307.1	Power supply unit 15 V, 20 W; 230 V \sim
				1309.1	Amplifier 20 W; 230 V \sim

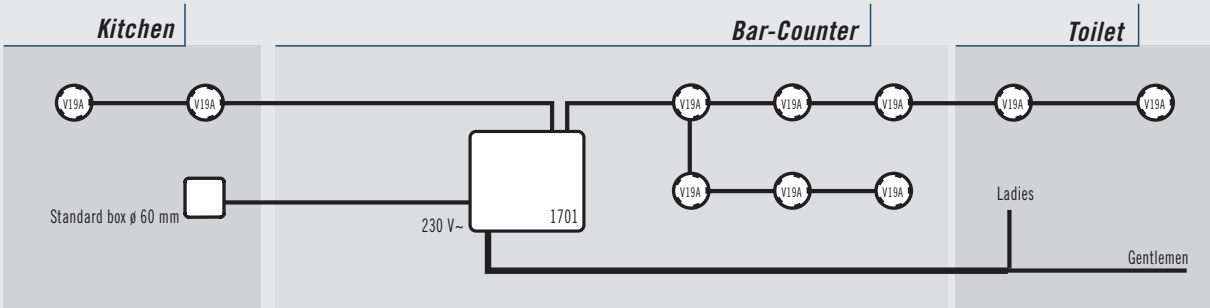
In the next pages (5 to 13) we can see several examples of this kind of systems: bar, fashion shop, car dealer, fast-food, restaurant or middle-size company.

Bar
Installation example

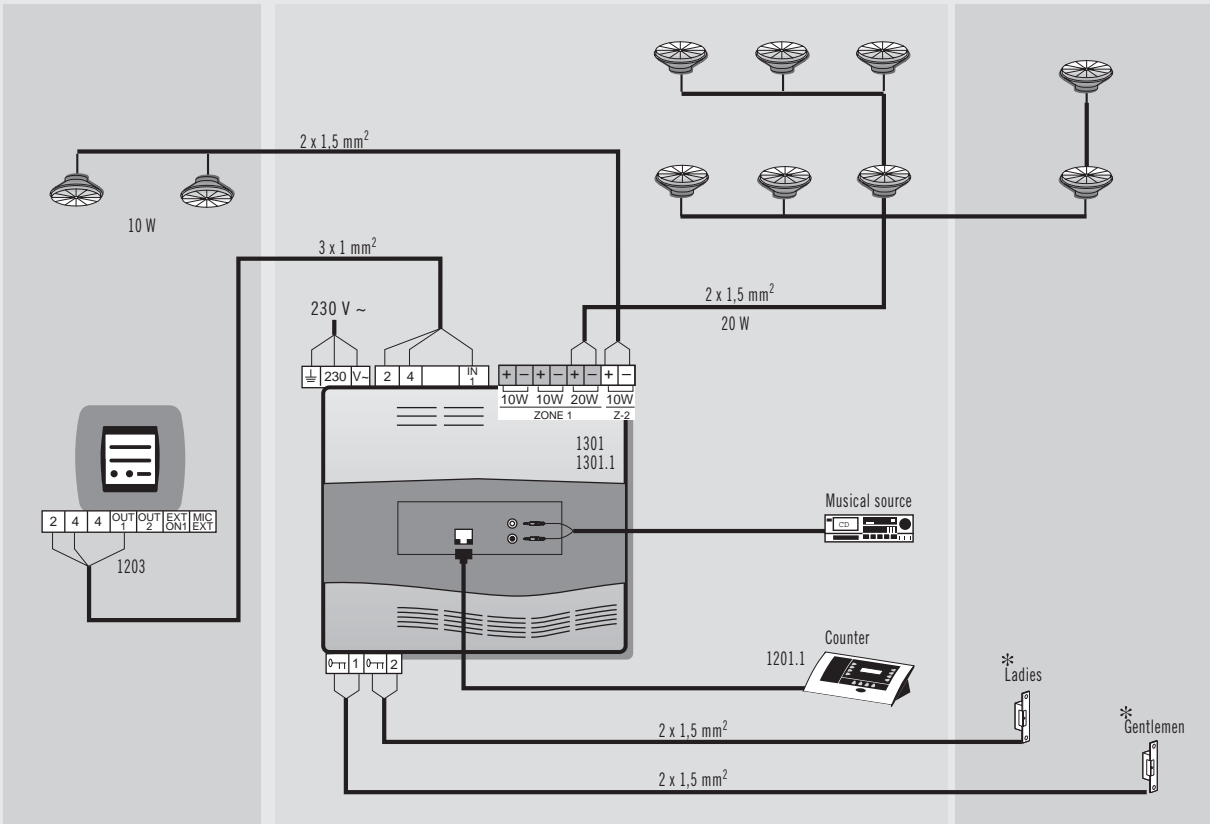
1 or 2 music channels.
2 Zones: kitchen and bar + toilets.
Intercom kitchen-counter.
Electric locks in toilets.



Preinstallation



Installation



Materials

1 intercom unit _____ 1203
2 speakers _____ G14A/16

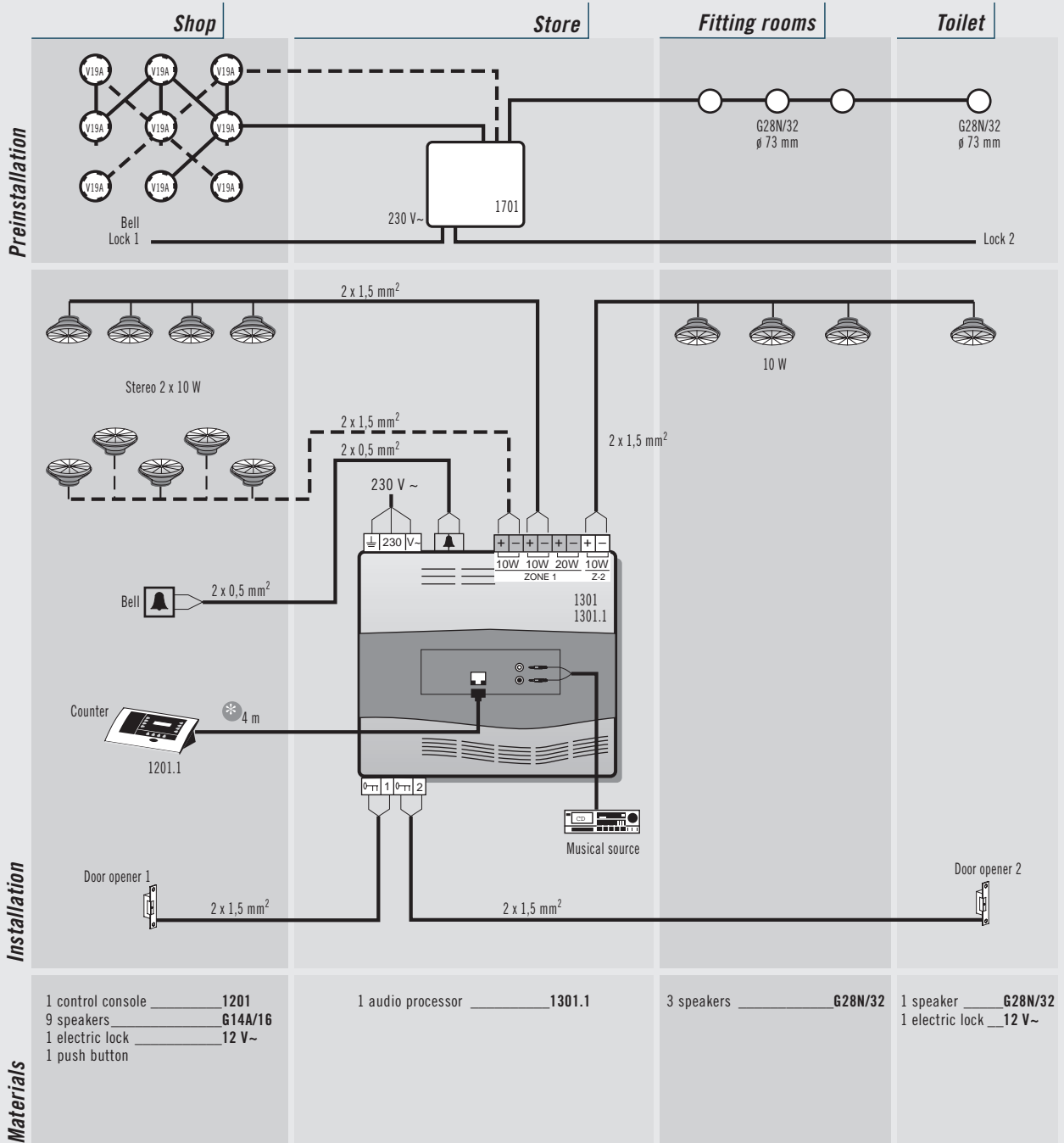
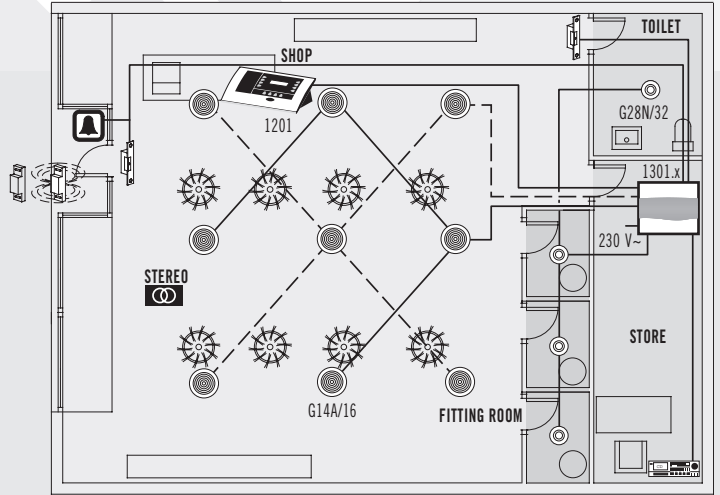
1 control console _____ 1201.1
1 audio processor _____ 1301.X
6 speakers _____ G14A/32

2 speakers _____ G14A/32
2 electric locks _____ 12 V~

*Use 1501 connection base for distances longer than 4 meters (12 feet).
*Valid for any electric drive.

Fashion shop
Installation example

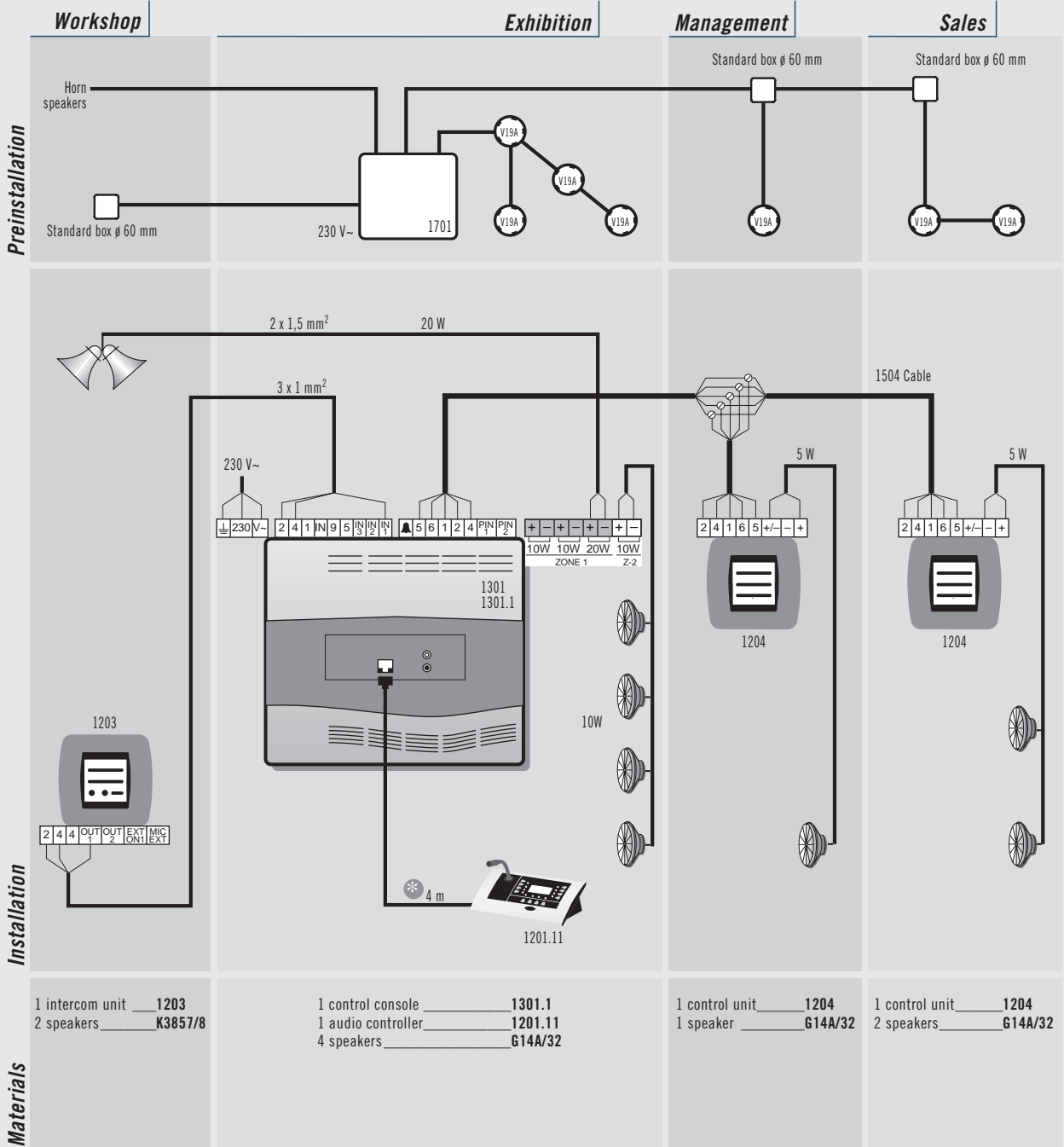
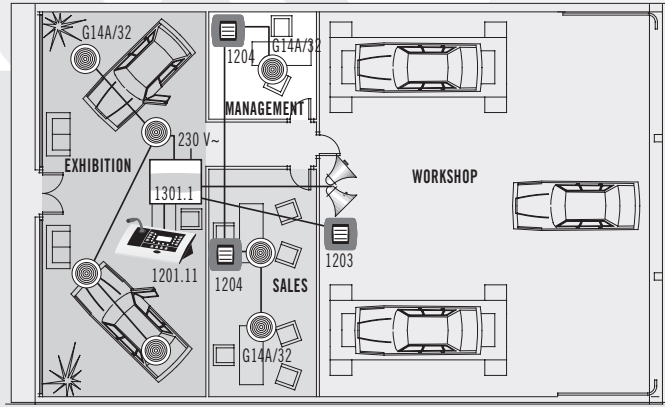
1 or 2 channels of stereo music.
2 Zones: shop and fitting room + toilet.
Door bell through the speakers
of one or both areas.
Electric door opener.



⚠ Use 1501 connection base for distances longer than 4 meters (12 feet).

Car dealer
Installation example

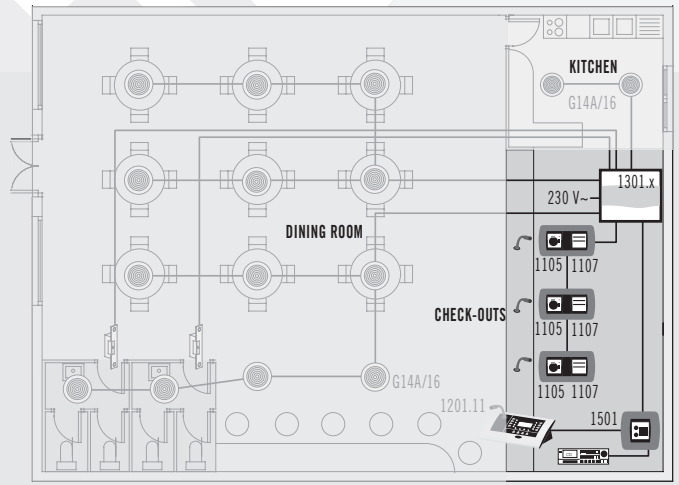
- 1 or 2 music channels.
- Separate message broadcast to workshop, exhibition and offices.
- Message answering from workshop to exhibition.
- General call, emergency evacuation.



*Use 1501 connection base for distances longer than 4 meters (12 feet).

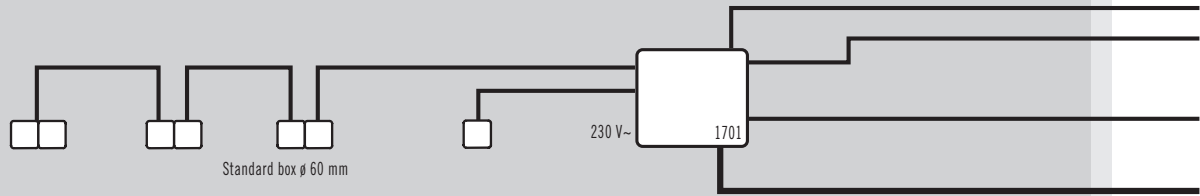
Fast food restaurant
Installation example

- 1 or 2 music channels.
- Food ordering to kitchen through 4 microphones.
- Music in restaurant.
- Lock release in toilets.
- General call.
- Emergency evacuation.

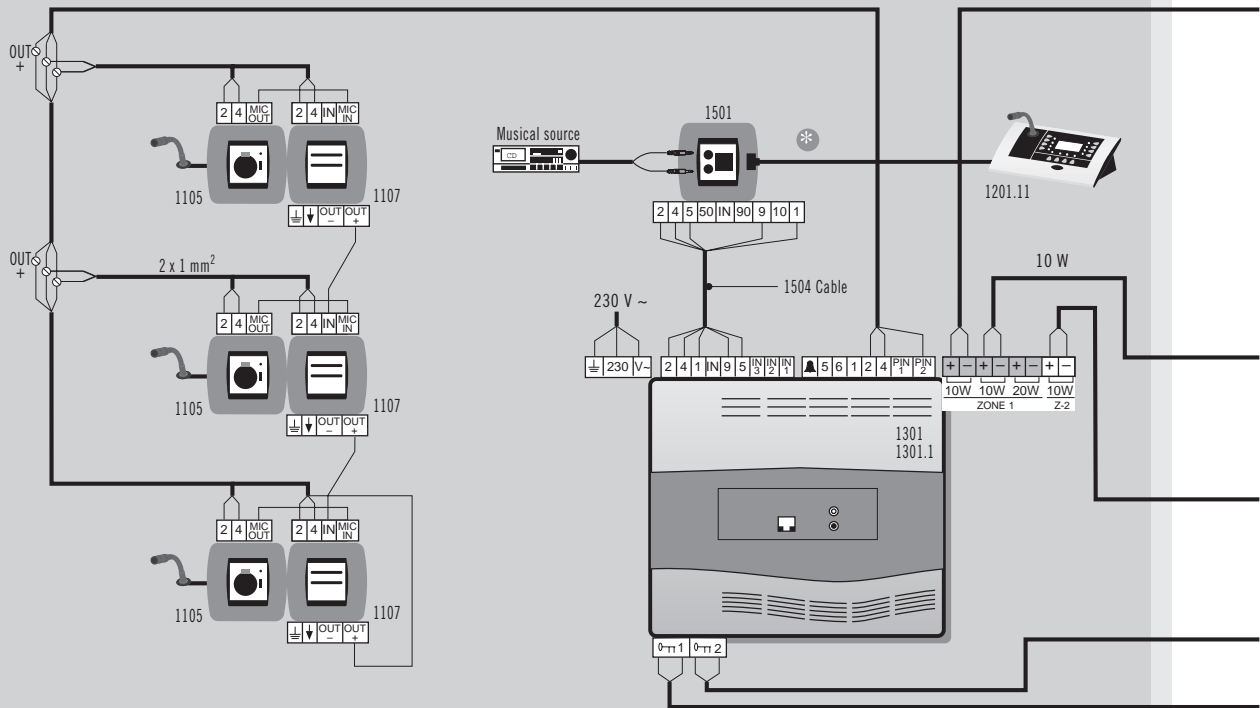


Check-outs

Preinstallation



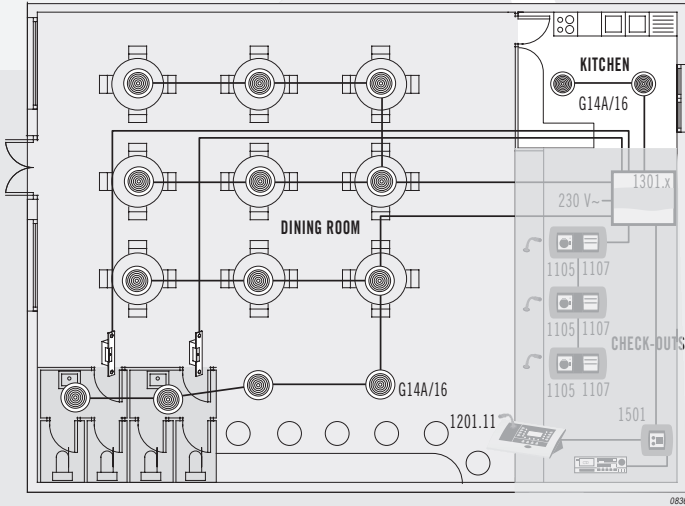
Installation



Materials

- 1 audio processor 1301.1
- 3 microphone bases 1105
- 3 volume regulators 1107
- 1 connection base for control console/audio source 1501
- 1 control console 1201.11

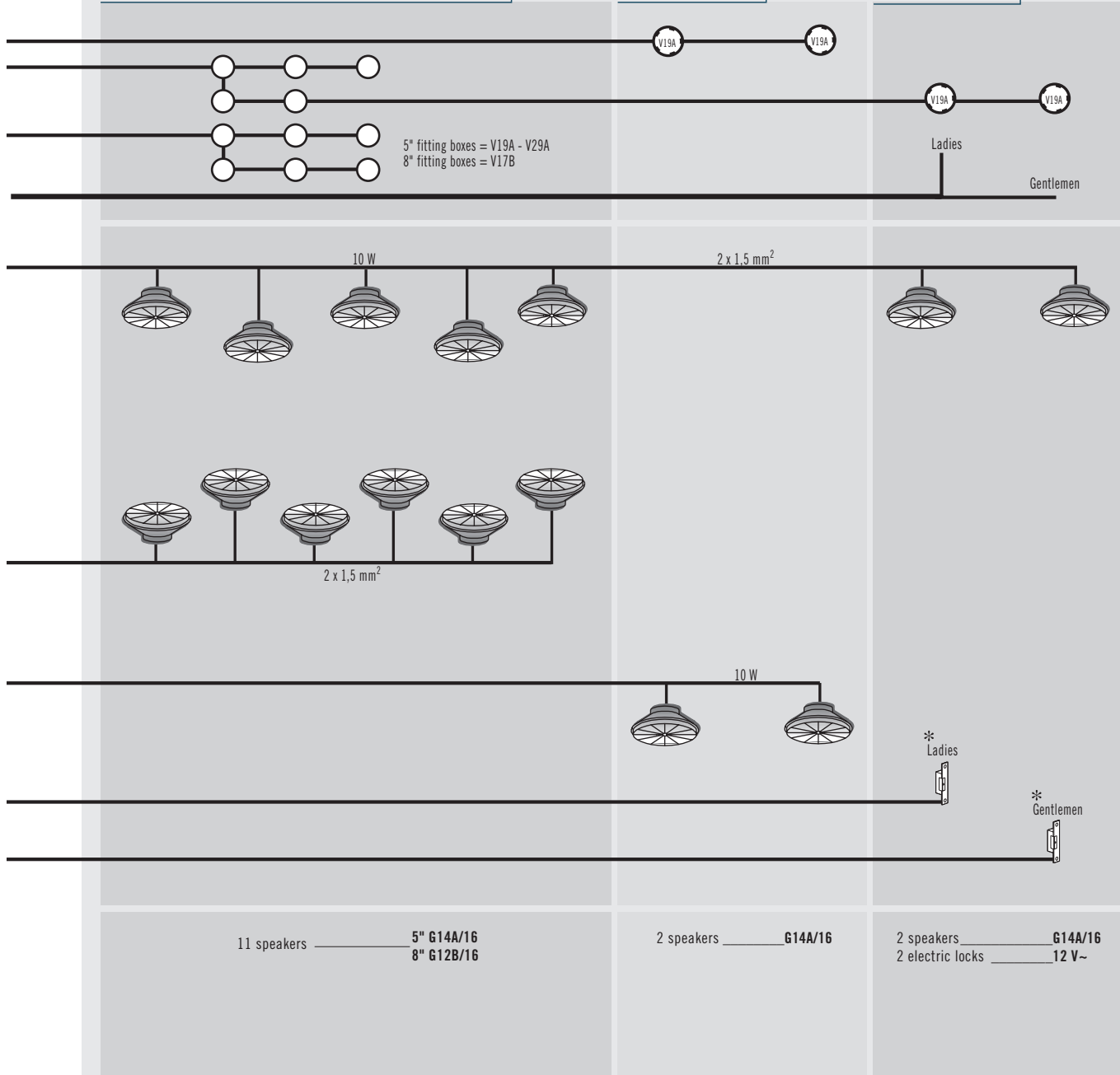
Fast food restaurant
Installation example



Dining room

Check-outs

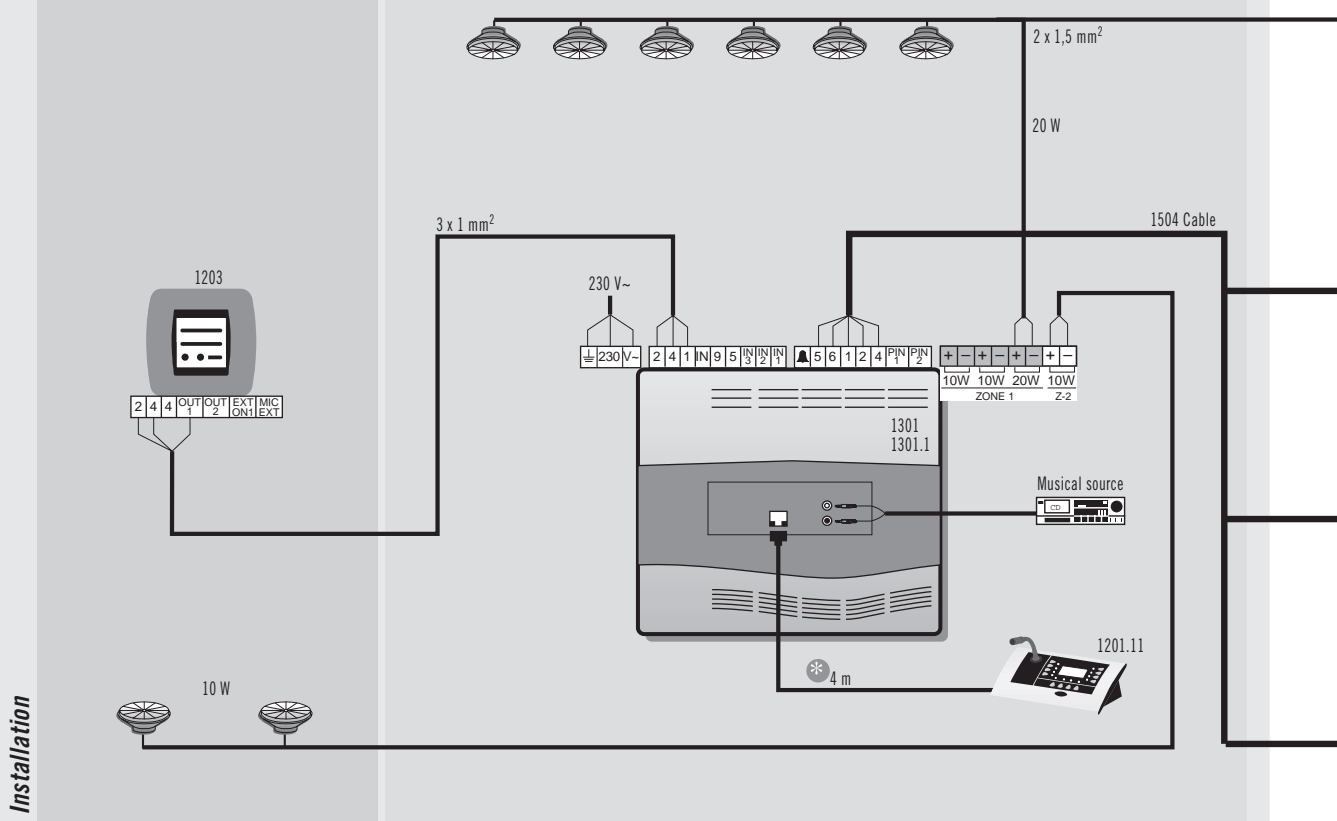
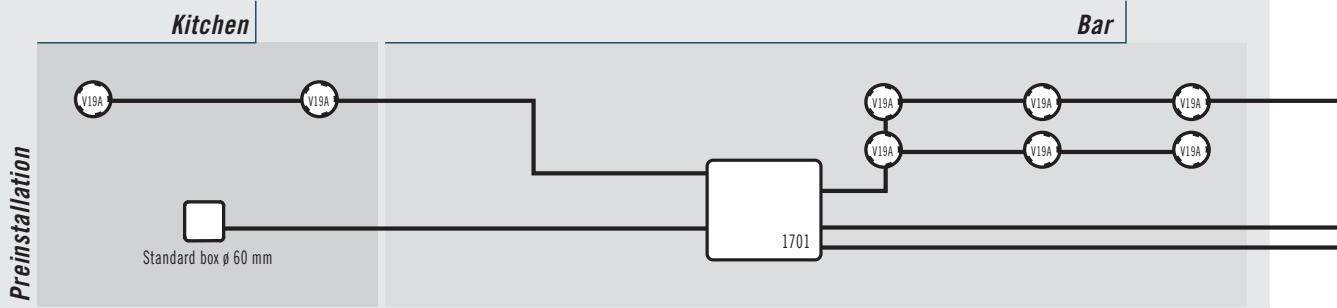
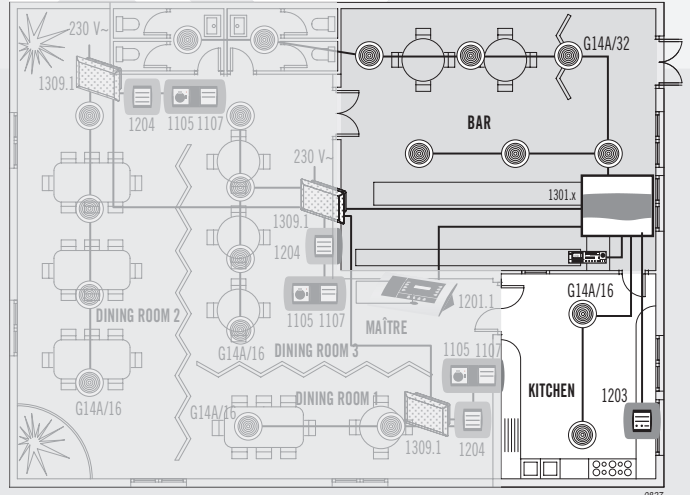
Toilets



* Use 1501 connection base for distances longer than 4 meters (12 feet).
* Valid for any electric drive.

Restaurant
Installation example

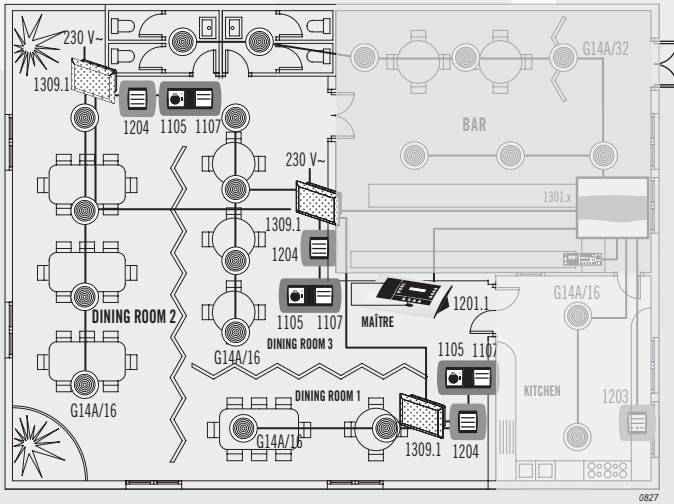
- 1 or 2 music channels.
- Separate message broadcast to bar, kitchen and dining rooms with chime.
- External music source input for each dining room.
- Intercom maître-kitchen.
- Emergency evacuation.



- Materials**
- 1 intercom unit _____ 1203
 - 2 speakers _____ G14A/16

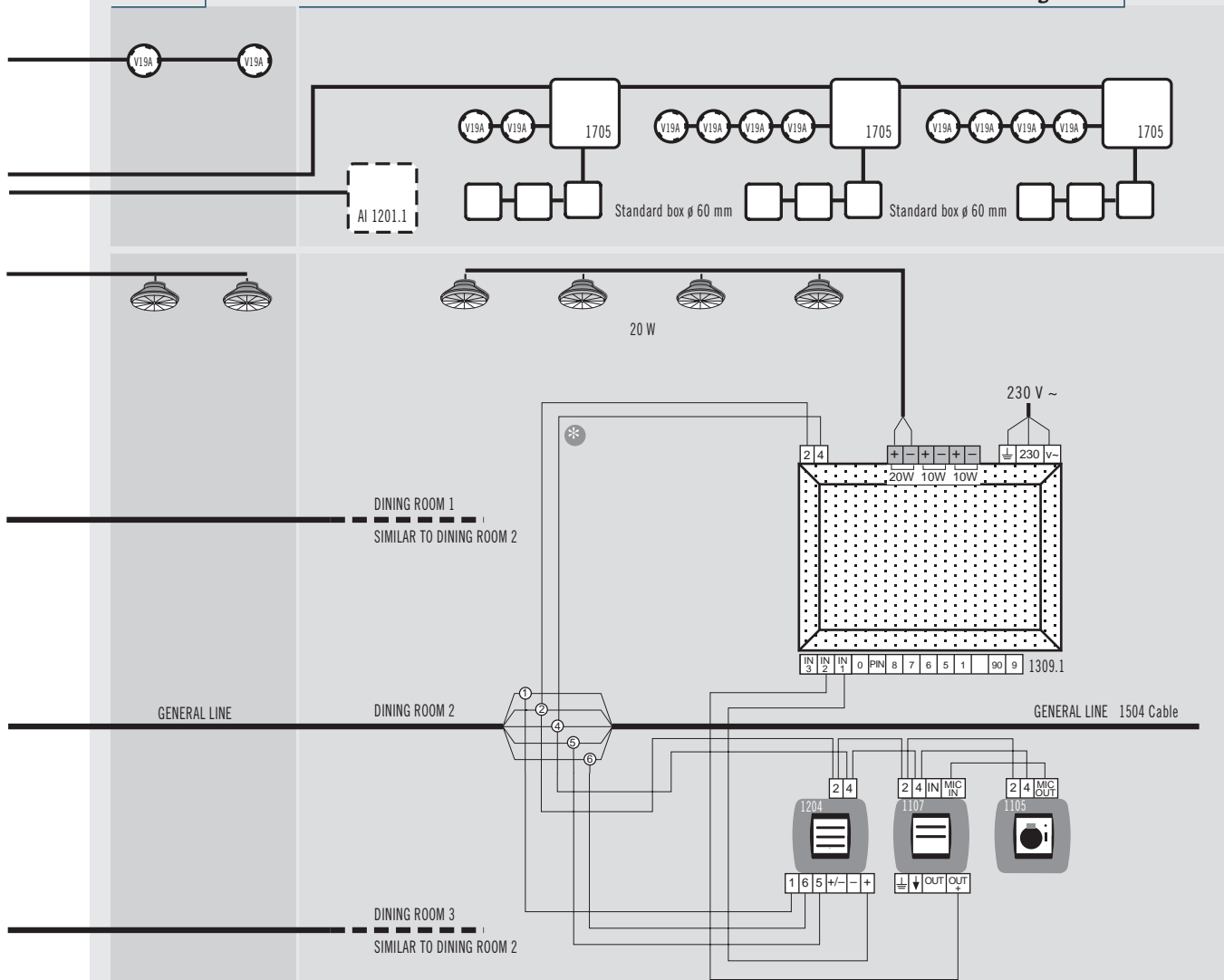
- 1 control console _____ 1201.11
- 1 audio processor _____ 1301.1
- 6 speakers _____ G14A/32

Restaurant
Installation example



Toilet

Dining rooms



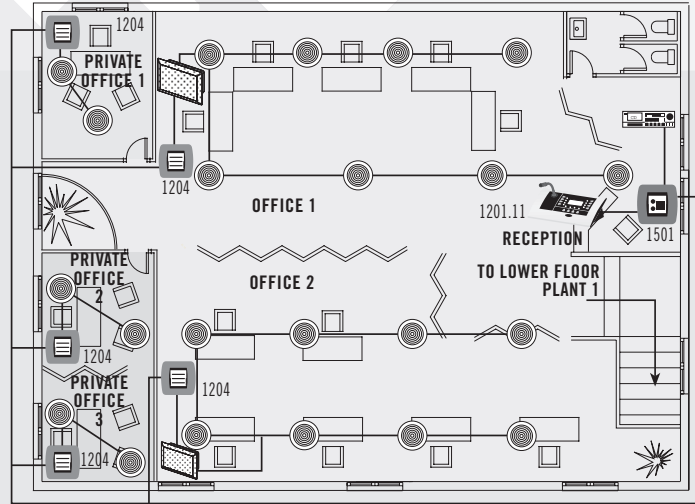
2 speakers **G14A/32**

- 3 amplifiers **1309.1**
- 3 control unit **1204**
- 3 microphone bases **1105**
- 3 volume regulators **1107**
- 10 speakers **G14A/16**

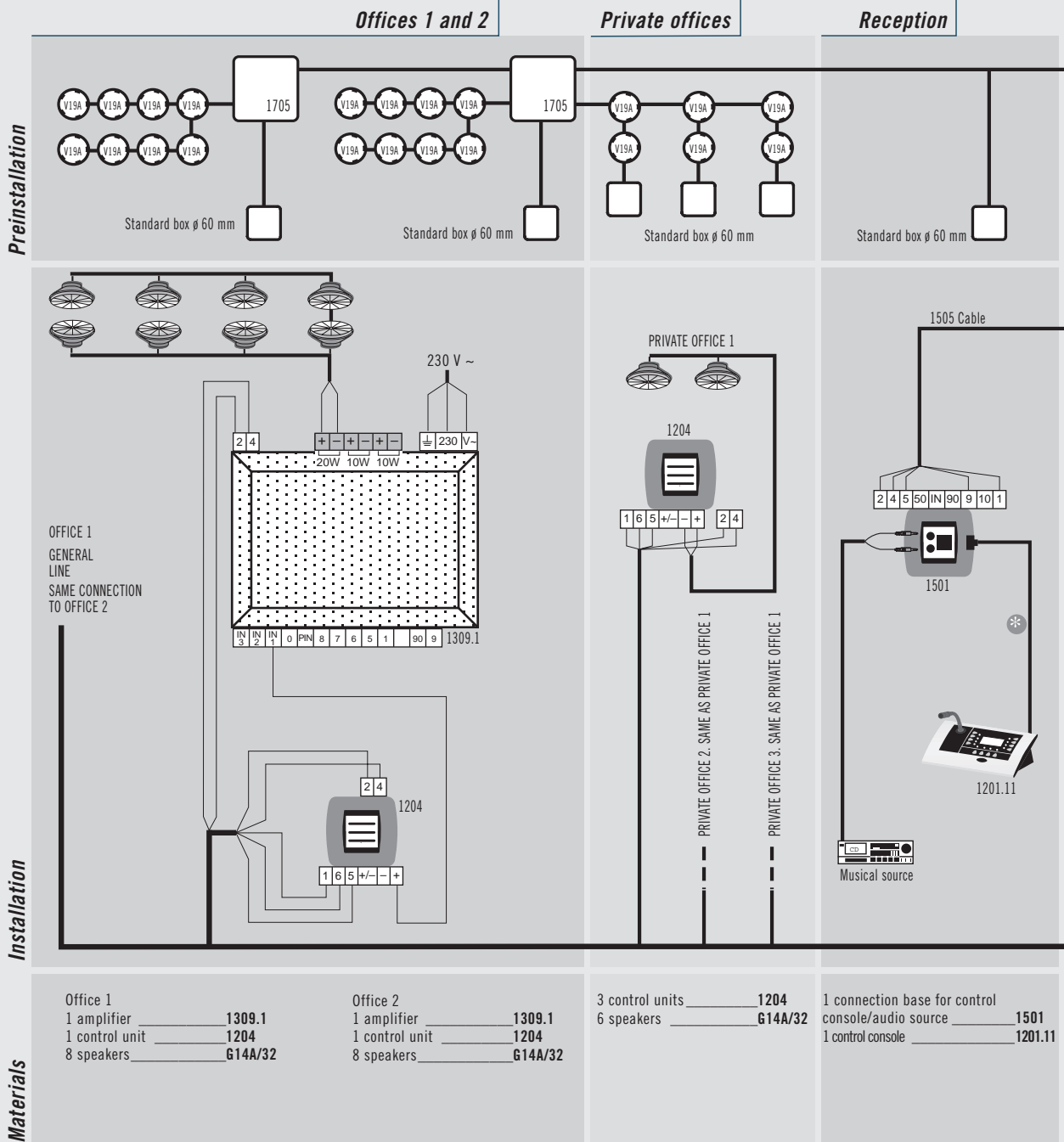
* This connection is only necessary if the installer wants the general line to be feedbacked with the surplus electric power from the amplifier.

Middle size business
Installation example

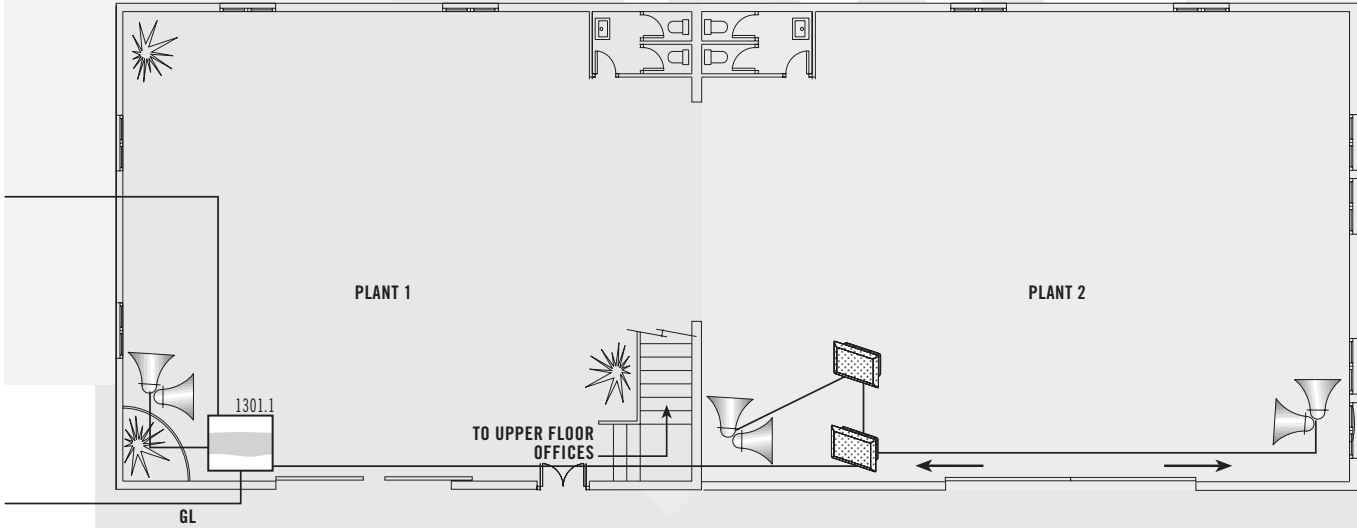
1 or 2 music channels.
Separate message broadcast
to Plant 1, Plant 2 and Offices.



GL

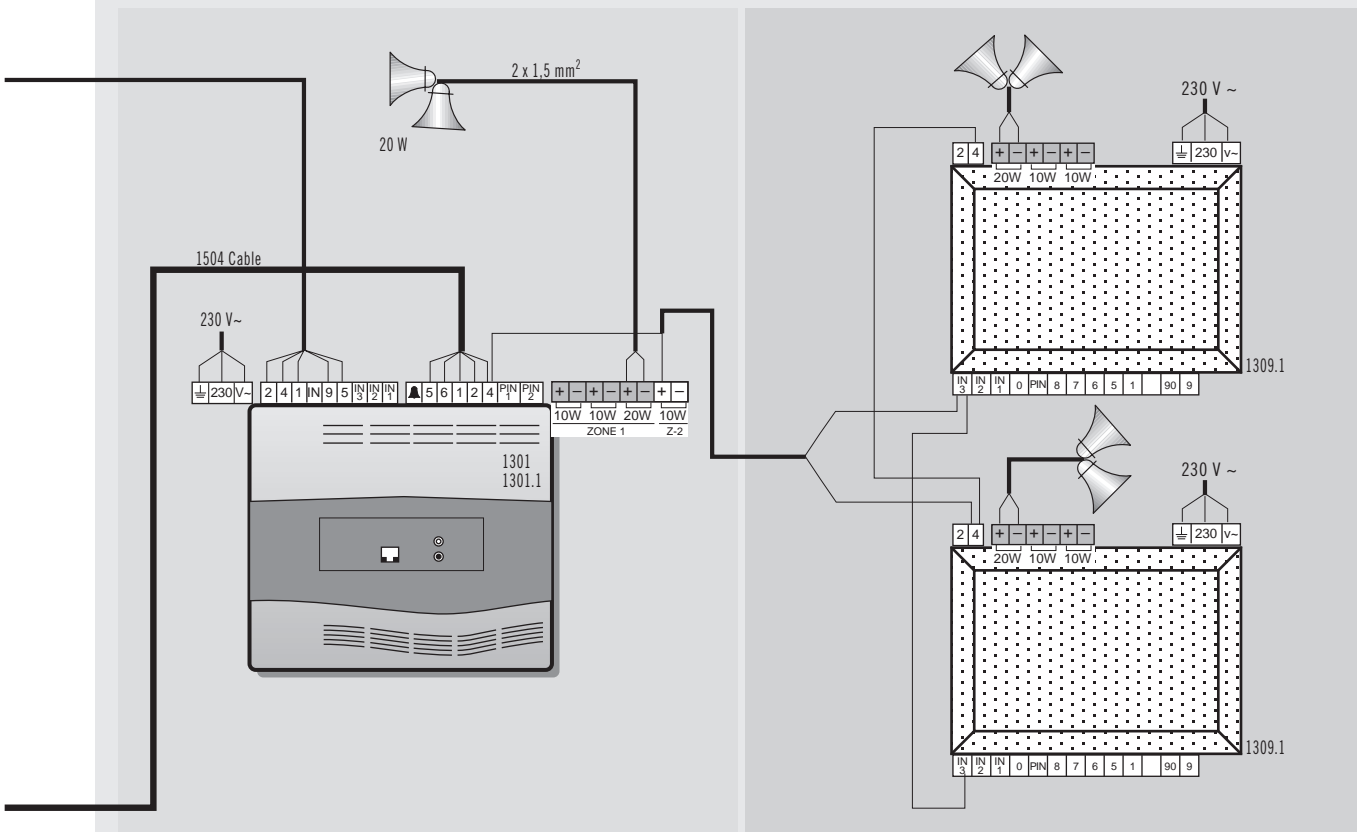


*Use 1501 connection base for distances longer than 4 meters (12 feet).



Plant 1

Plant 2



2 horn speakers _____ **K3857/8**
 1 audio processor _____ **1301.1**

4 horn speakers _____ **K3857/8**
 2 amplifiers _____ **1309.1**

Millennium up to 127 message zones

The system can handle up to 127 message zones, selectable from the 1202 control console. They can also be grouped in up to 15 groups.

Depending on the features that we want for the system, there can be up to 12 centralized areas and the remaining areas behaving in a non-centralized way. An area is said to be centralized when its audio amplifier is inside the processor and non-centralized when its audio amplifier is in the area itself.

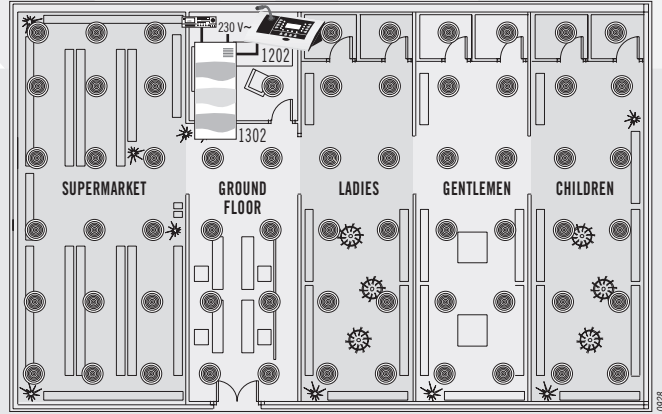
Product structure

CONTROL CONSOLE		AUDIO PROCESSOR	SERVICE MODULES
1202	Control Console	1302 Audio Processor	1501.10 Connection base for control console / music source. White
			1501.12 Connection base for control console / music source. Black
			1101 Modular RCA audio input with compressor
			1102 Modular digital FM tuner
			1103 Modular pre-recorded message player
			1104 Telephone messages module
			1303 2-zone x 10 W amplifier
			1304 1-zone 10 + 10 / 20W amplifier
			1305 Amplifier 1 zone 40 W / 100 V
			1306 Adapter for 100 V power amplifiers up to 250 W
			1312 19" Rack for 6 1306 adapters
			1205.10 4-channel control unit , 1 W, 1-2 speakers. White
			1205.12 4-channel control unit. 1 W, 1-2 speakers. Black
			1206.10 Digital control keyboard. White
			1206.12 Digital control keyboard. Black
			1207.10 4-channel control unit, 2 W. White
			1207.12 4-channel control unit, 2 W. Black
			1105.10 Pre-amplified XLR microphone base. White
			1105.12 Pre-amplified XLR microphone base. Black
			1106.10 Volume regulator and auxiliary input. White
			1106.12 Volume regulator and auxiliary input. Black
			1107.10 Volume regulator for 1105 base. White
			1107.12 Volume regulator for 1105 base. Black
			1311 Digital 10 W amplifier. 15 V
			1309 20 W amplifier with message override. 48 V~
			1309.1 20 W amplifier with message override. 230 V~
			1310 Digital 20 W amplifier. 48 V~
			1310.1 Digital 20 W amplifier. 230 V~
			1308 Buffer-Power supply 15 V, 20 W. 48 V~
			1308.1 Buffer-Power supply 15 V, 20 W. 230 V~
			1307 Power supply unit 15 V ---, 20 W, 48 V~
			1307.1 Power supply unit 15 V == , 20 W, 230 V~

In the next pages (15 to 21) we can see several examples of this kind of systems: shopping mall, sports arena, school or hotel.

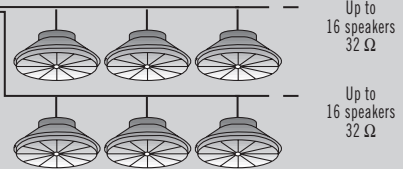
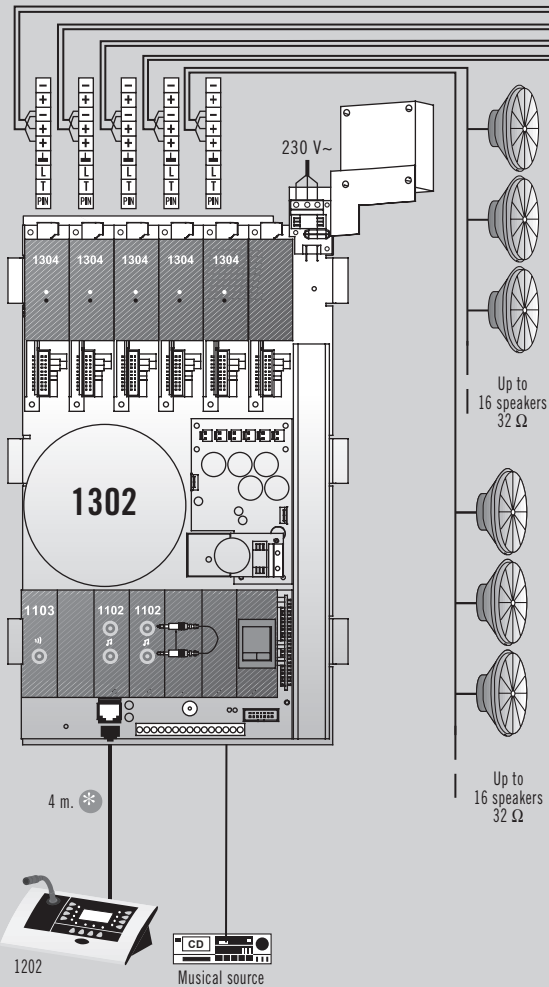
Shopping mall
Installation example

- Individual message broadcast for each section.
- 1 to 4 music channels.
- Pre-recorded message playing.
- Emergency/General call.

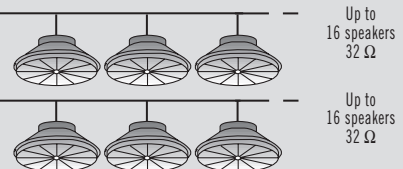


Ground Floor and Management

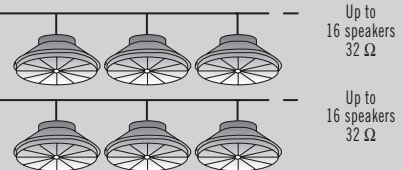
Children



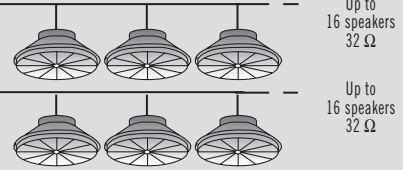
Gentlemen



Ladies



Supermarket



Installation

Materials

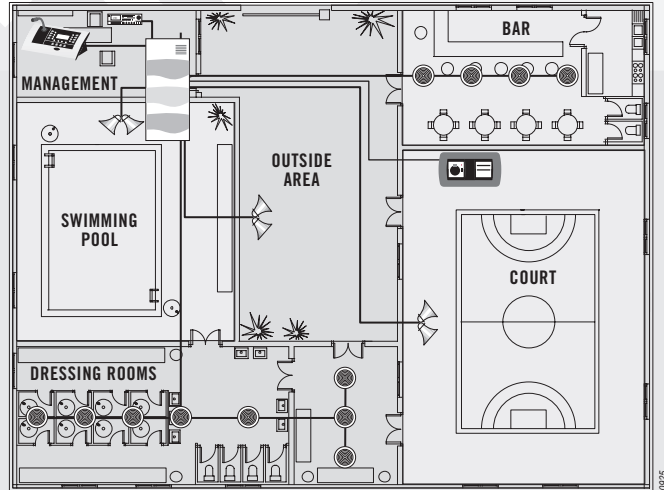
- Ground Floor and Management
- 1 audio processor _____ **1302**
 - 1 control console _____ **1202**
 - 32 speakers _____ **G11B/32**

- | | |
|----------------------------------|----------------------------------|
| Children | Ladies |
| 32 speakers _____ G11B/32 | 32 speakers _____ G11B/32 |
| Gentlemen | Supermarket |
| 32 speakers _____ G11B/32 | 32 speakers _____ G11B/32 |

* Use 1501 connection base for distances longer than 4 meters (12 feet).

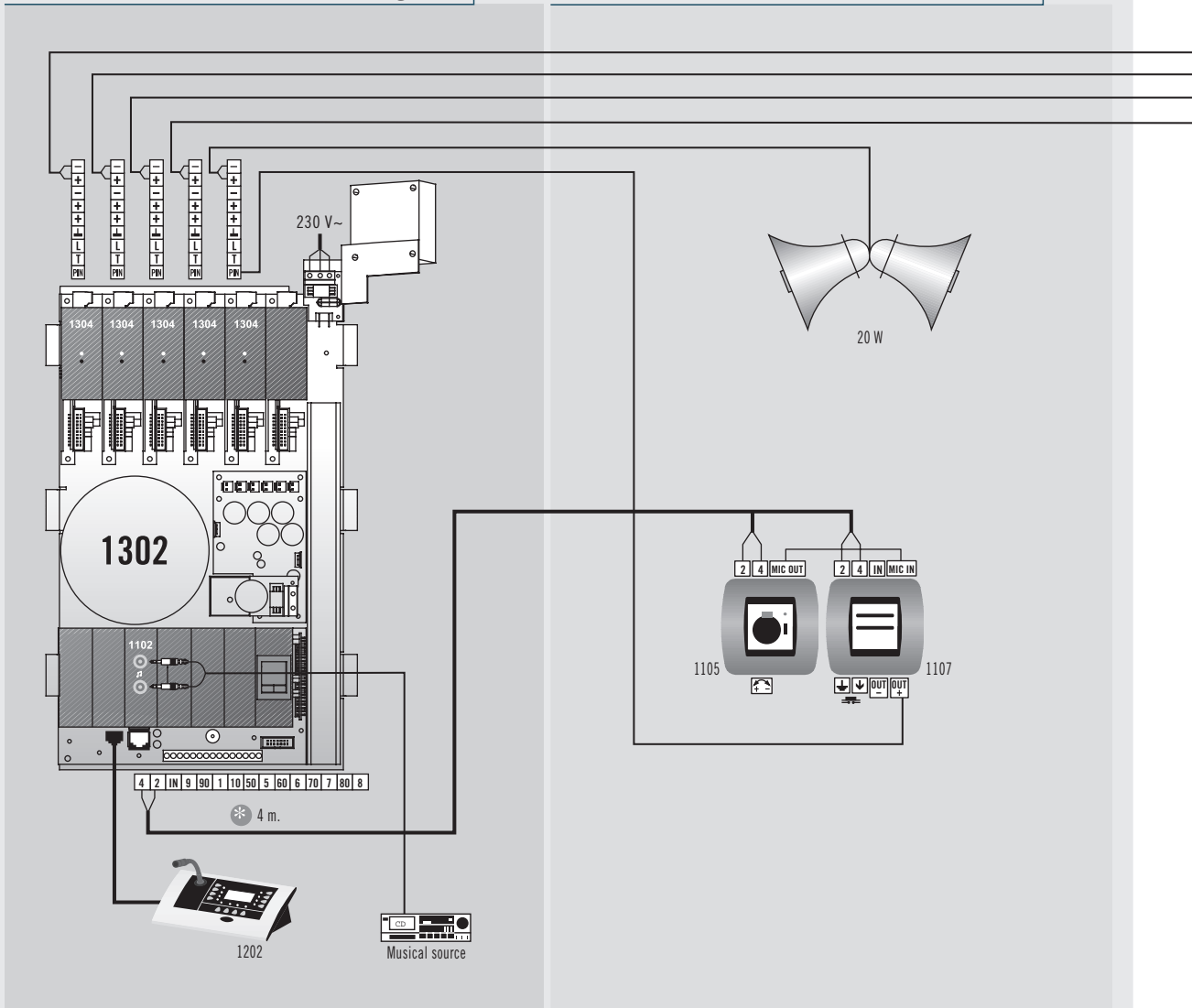
Sports arena. Swimming pool
Installation example

Messages to outside & common areas,
court and swimming pool.
1 music channel.
Microphone input in the court.
Emergency evacuation/General call.



Management

Court



Installation

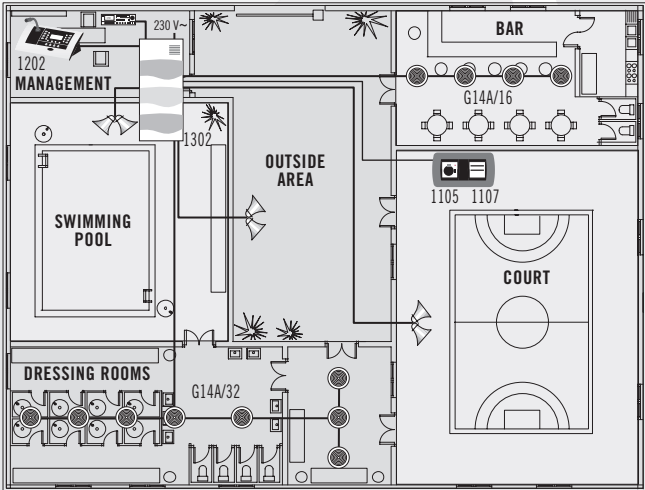
Materials

- 1 audio processor _____ 1302
- 1 control console _____ 1202

- 1 microphone base _____ 1105
- 1 volume regulator _____ 1107
- 2 horn speakers _____ K3857/8

* Use 1501 connection base for distances longer than 4 meters (12 feet).

Sports arena. Swimming pool
Installation example

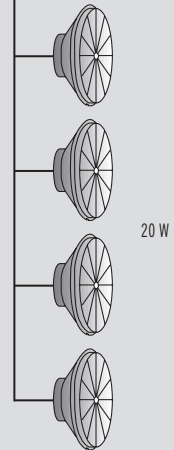
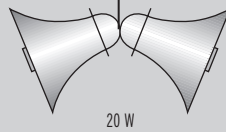
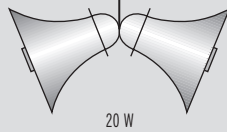
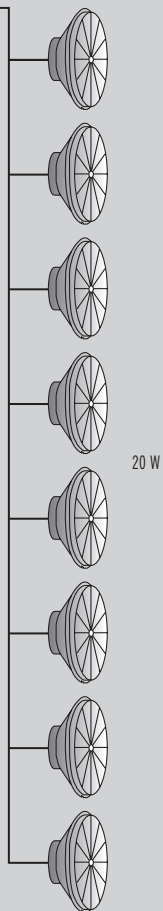


Dressing rooms

Swimming pool

Outside area

Bar



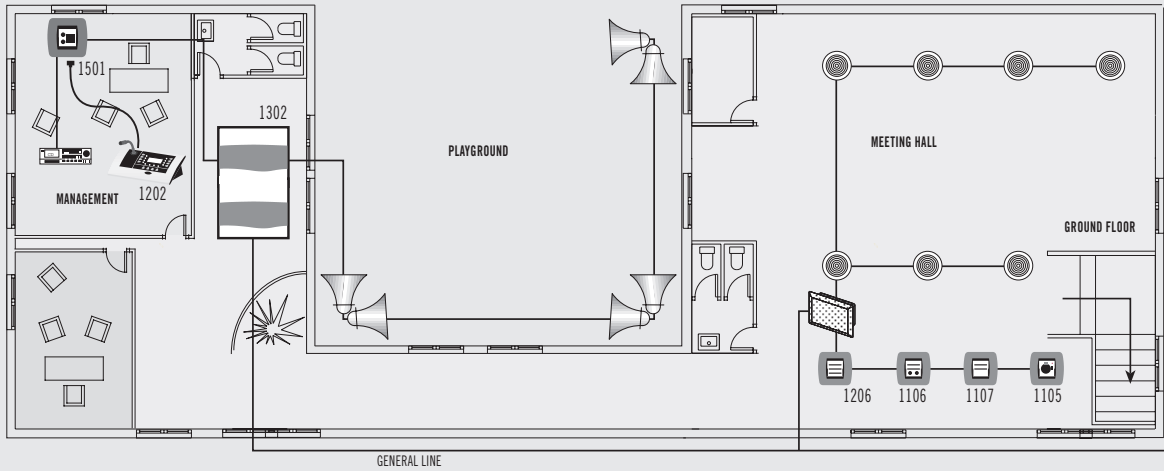
8 speakers _____ **G14A/32**

2 horn speakers _____ **K3857/8**

2 horn speakers _____ **K3857/8**

4 speakers _____ **G14A/16**

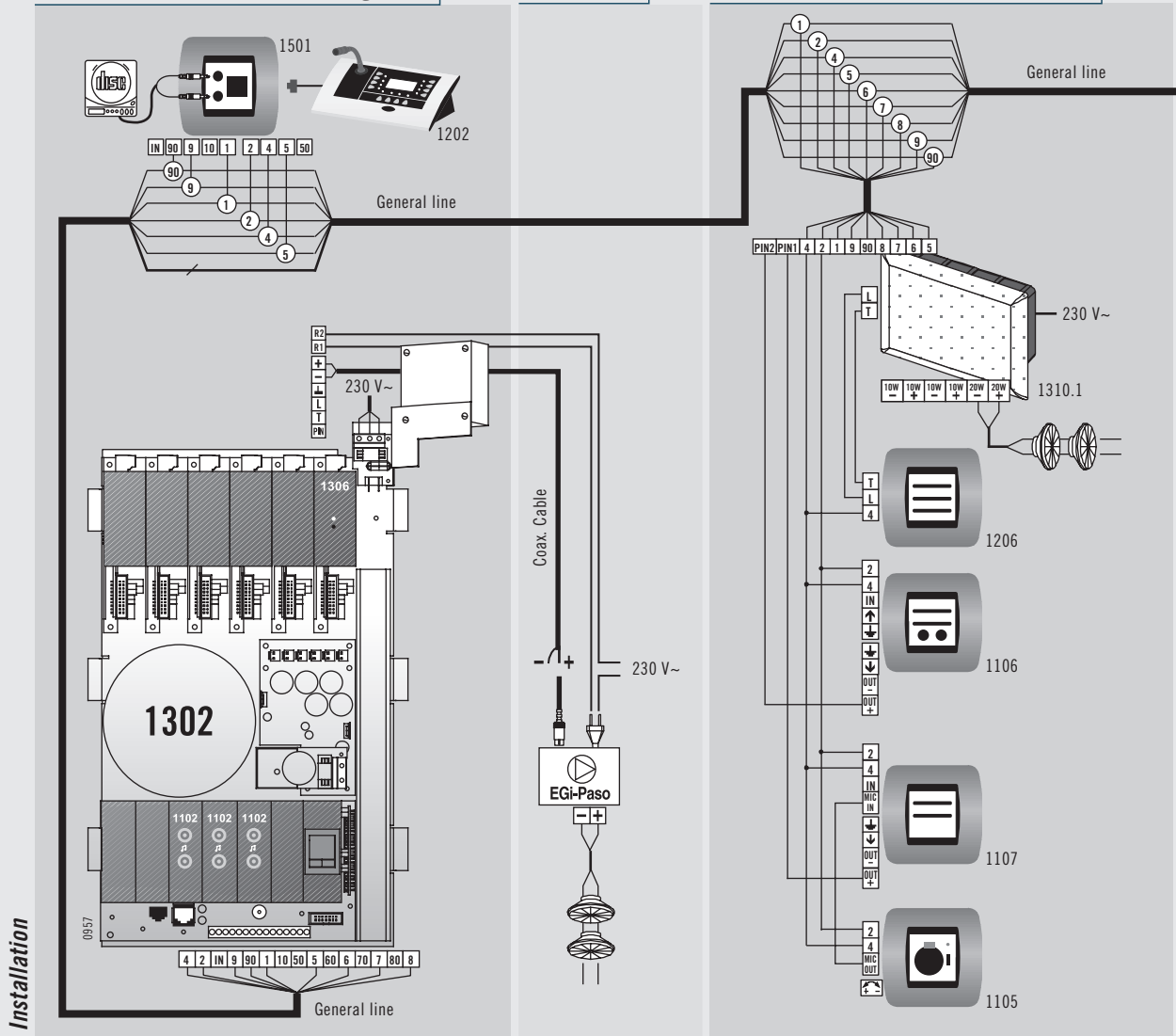
School
Installation example



Management

Playground

Meeting Hall



Installation

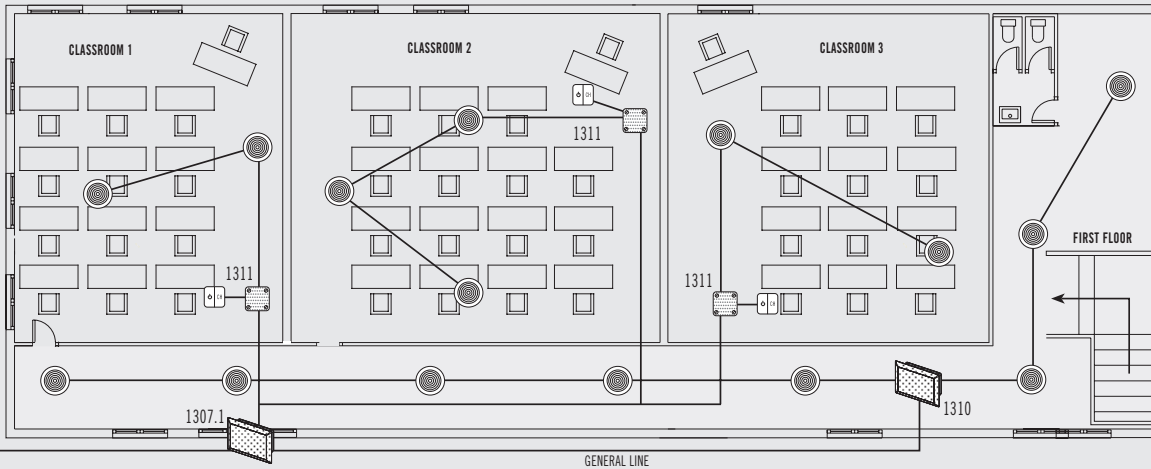
Materials

- 1 audio processor **1302**
- 1 control console **1202**
- 1 connection base **1501**
- 1 adapter for 100 V power amplifiers **1306**
- 4 modular audio inputs **1101**

1 line amplifier 100 V

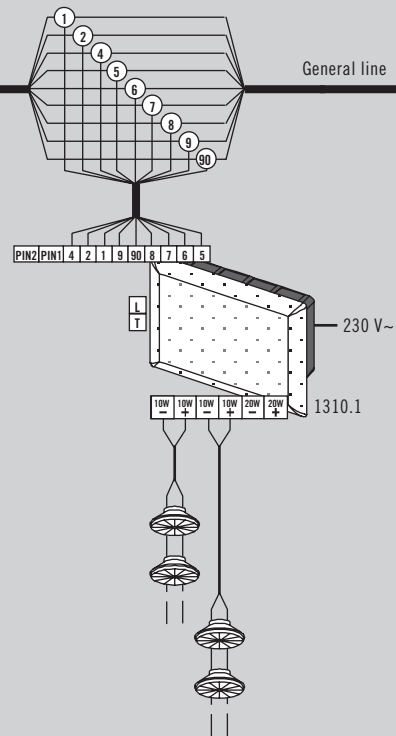
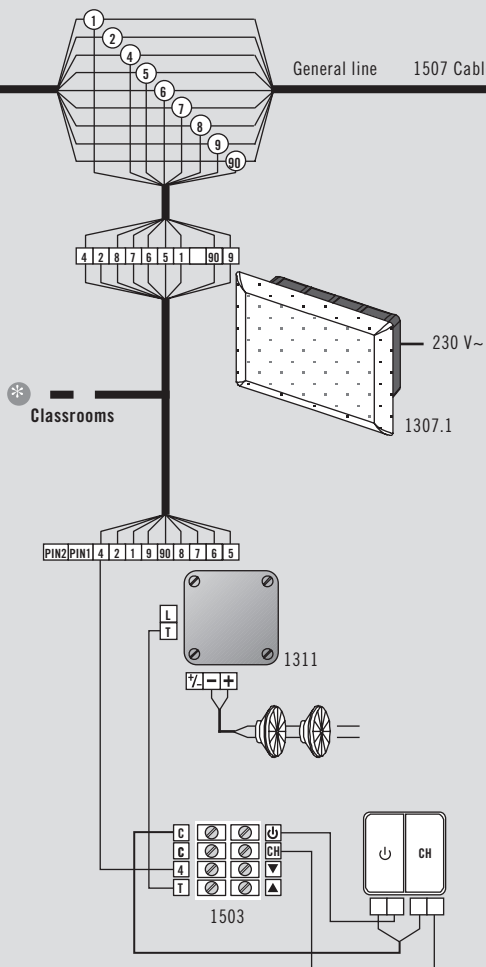
- 1 digital amplifier **1310.1**
- 1 control keyboard **1206**
- 1 volume regulator **1106**
- 1 volume regulator **1107**
- 1 microphone base **1105**

School
Installation example



Classrooms

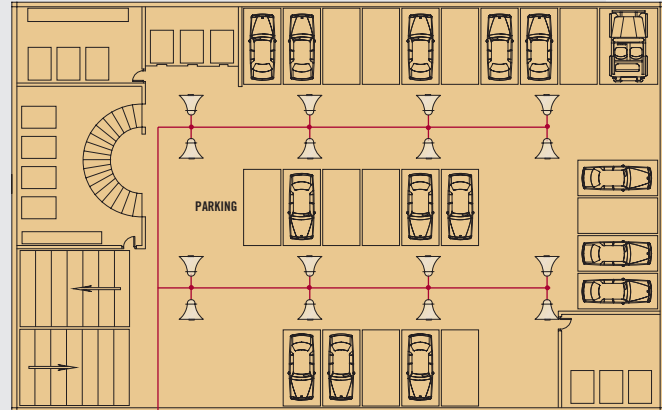
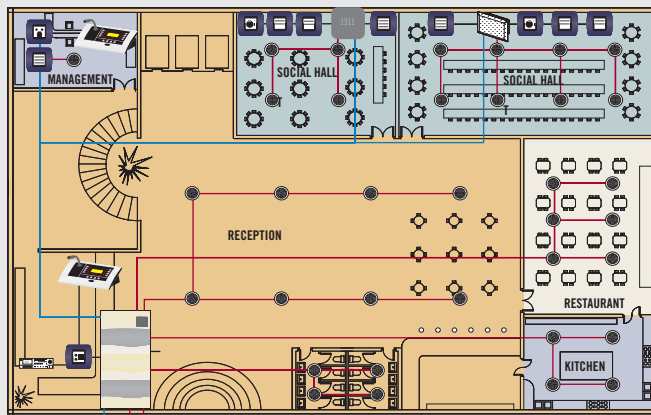
Corridor



*The number of classrooms will vary according to the installed power.

- 1 power supply unit _____ 1307.1
- 1 digital amplifier _____ 1311
- 1 adapter to handle digital amplifiers
by push buttons _____ 1503

- 1 digital amplifier _____ 1310.1



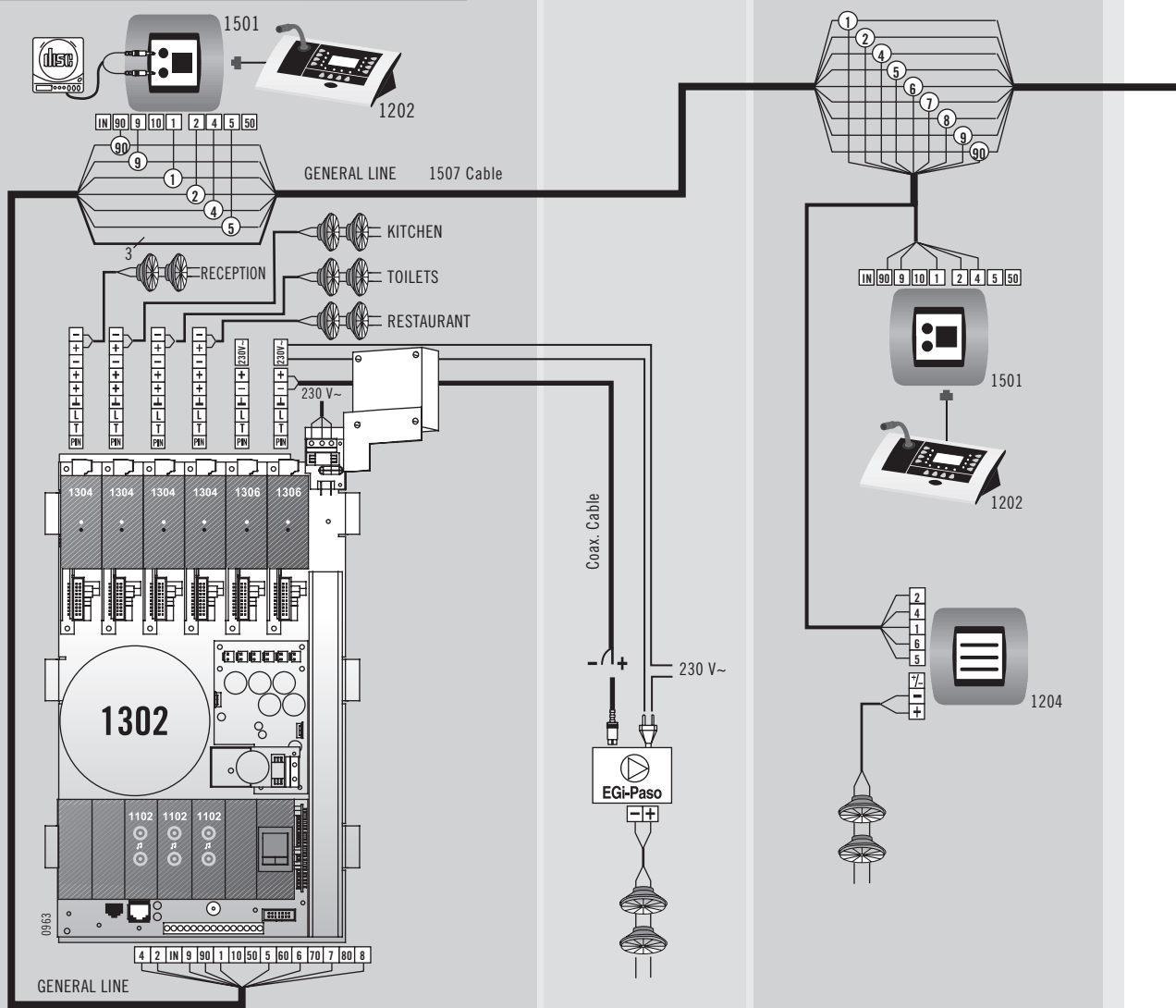
GENERAL LINE TO FLOORS



Reception

Parking

Management



Installation

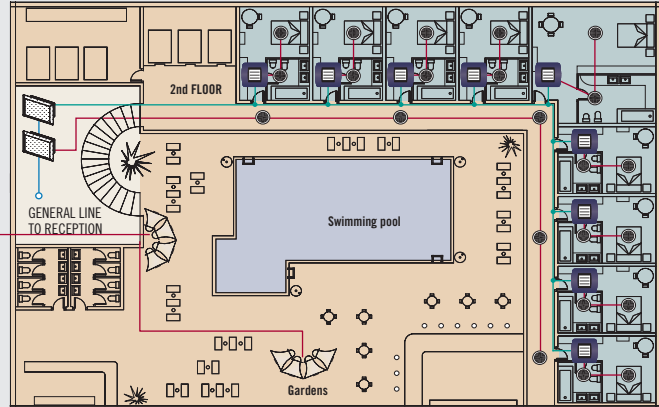
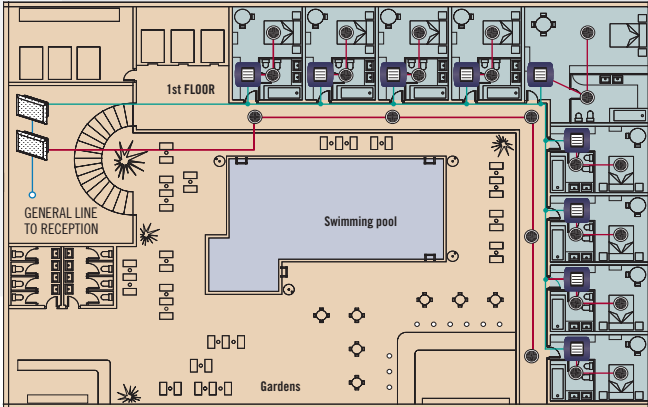
Materials

- 1 audio processor 1302
- 1 control console 1202
- 1 connection base 1501

1 line amplifier 100 V

- 1 control console 1202
- 1 connection base 1501
- 1 control unit 1204

Installation example | Hotel

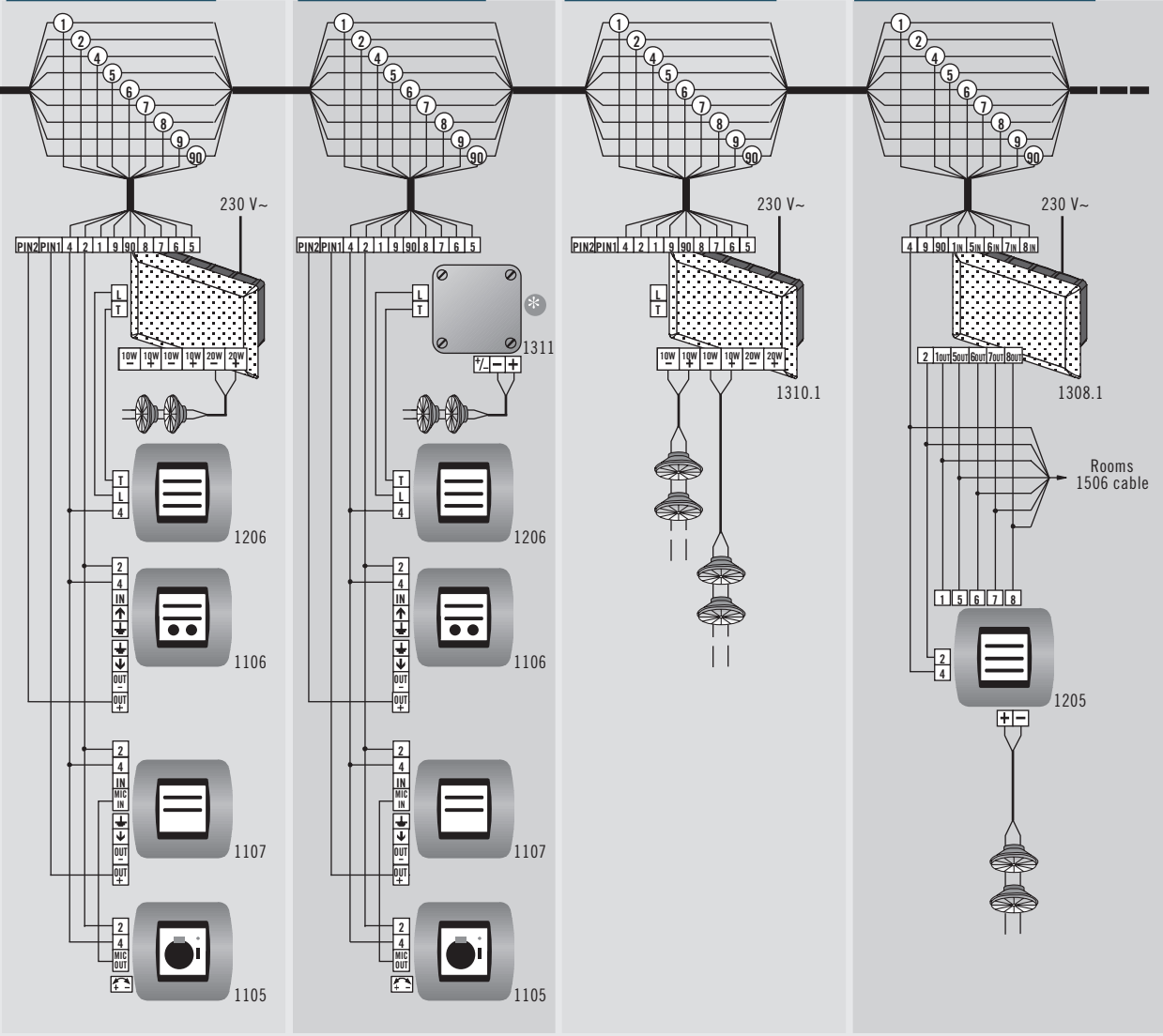


Social hall 1

Social hall 2

Corridor

Rooms



- 1 digital amplifier _____ 1310.1
- 1 control keyboard _____ 1206
- 1 volume regulator _____ 1106
- 1 volume regulator _____ 1107
- 1 microphone base _____ 1105

- 1 digital amplifier _____ 1311
- 1 control keyboard _____ 1206
- 1 volume regulator _____ 1106
- 1 volume regulator _____ 1107
- 1 microphone base _____ 1105

- 1 digital amplifier _____ 1310.1

- 1 buffer-power supply _____ 1308.1
- 1 control unit _____ 1205

* If the distance to the 1302 audio processor is longer than 30 m (100 feet), it is necessary to use a 1307 power supply unit or to replace the 1311 amplifier by a 1310.1

Audio Processor 1301.x



1301.x Audio processor 2 + 1 zones

- 2 + 1 zones audio processor for commercial sound installations.
- It includes a 10 + 10 W (20 W) mono / stereo amplifier for zone 1 and another of 10 W for zone 2, in addition of a 15 V_~ line output for the connection of control units.
- The 15 V_~ line is expandable.
- Messages with pre-warning tone and door bell in the 3 zones.
- Dual 12 V_~, 1 A output for operation of external systems.
- White housing.
- FM radio tuner (only in 1301.1)

Schematics

This processor allows you to provide sound for facilities with 2 centralised zones plus 1 de-centralised zone (general line), being these "zones" understood as the different areas which must be considered for message broadcast. Version 1301.1 incorporates a FM tuner and a dual RCA input for external musical sources.

1 ON/OFF switch for the installation

2 Input for 1201 module

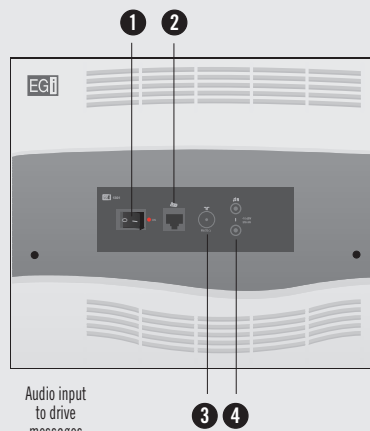
Phone type input RJ45 for the connection of the 1201 control console. There is also the possibility of connecting it internally.

3 Antenna input

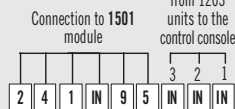
Coaxial input for FM antenna. It enables the connection of a FM antenna to improve the reception of radio stations.

4 Input for external music source

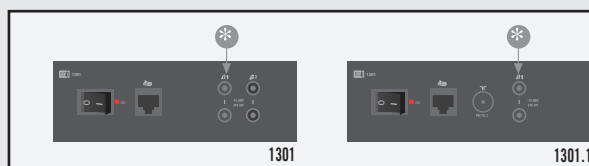
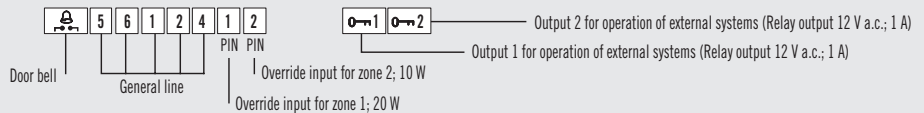
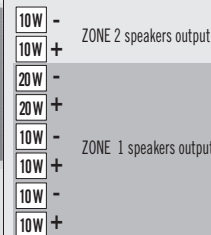
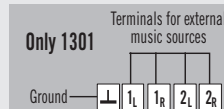
RCA input for external music sources. It enables the connection of an external, music source (CD, cassette player, etc...)



		NUMBER OF SPEAKERS PER LINE		
		4 Ω	16 Ω	32 Ω
Zone 1	20 W	1	4	8
	10 W + 10 W	2 + 2	8 + 8	16 + 16
Zone 2	10 W	-	2	4



Audio input to drive messages from 1203 units to the control console



* If the external music source is connected using the 1501 connection base, this input should remain unused.

TECHNICAL SPECIFICATIONS	1301 • 1301.1 con radio FM				
Power supply	230 V~	Zone 1 power	20 W; min line impedance 4 Ω	General line	Up to 1 A nominal current (máx. 1,5 A)
Consumption	100 W full power		10 + 10 W; min line impedance 2 Ω	Antenna	External input 75 Ω (only 1301.1)
Voltage output	15 V _~ for power supply through general line	Zone 2 power	10 W; min line impedance 8 Ω		

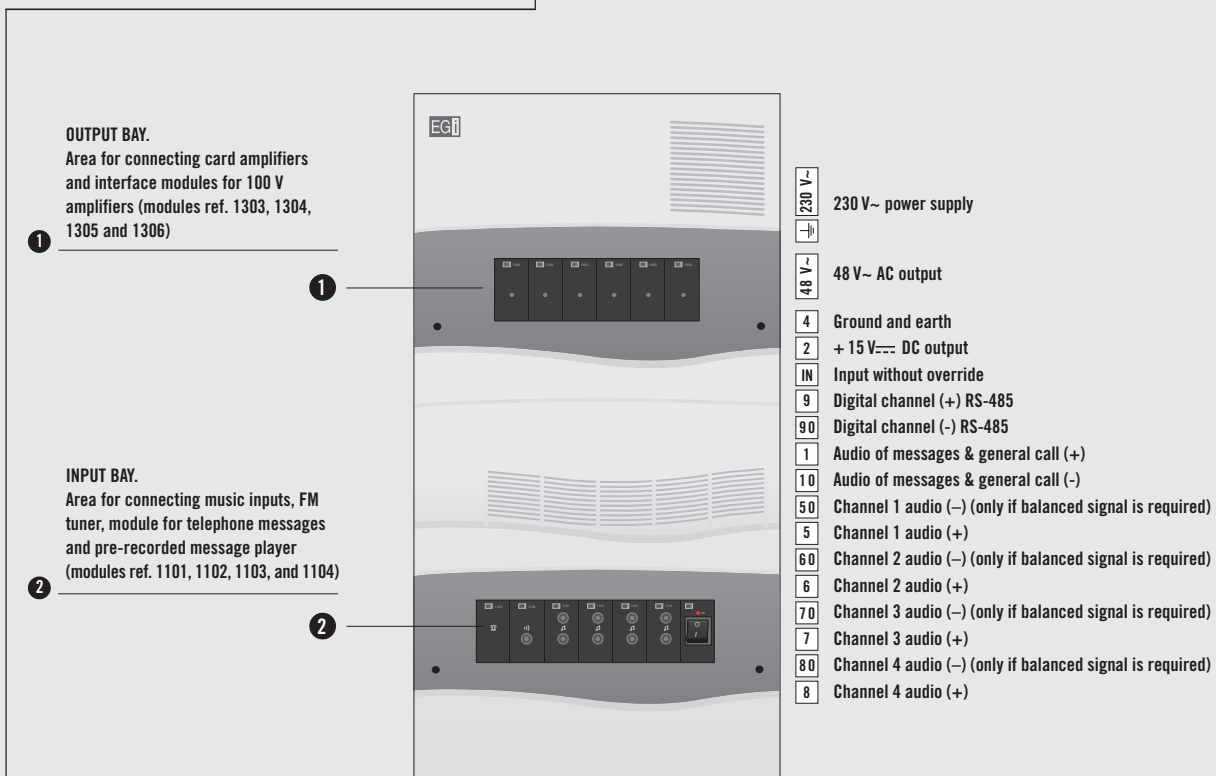
Audio Processor | 1302



1302 Audio processor up to 127 zones

- Audio processor up to 127 zones
- Includes a 200 W power supply.
- Using the 48 V~ AC output, delivers up to 150 W in power.
- Using the 15 V= DC output, delivers up to 1 A of nominal current (maximum 1,5 A)
- The 1302 audio processor includes the power supply and a motherboard in which other modules can be installed using 14 and 20 pin connectors.
- Up to 6 card amplifiers can be installed on it to act in a centralized way, as well as interface modules for 100 V amplifiers, 4 music inputs, 1 module for telephone messages and 1 pre-recorded message player.
- White housing.

Schematics ¹



THE MODULES that CAN BE CONNECTED ARE:

Output bay (upper section of 1302)	
1303	2 zones x 10 W amplifier
1304	1 zone 10 + 10 / 20 W amplifier
1305	1 zone 40 W / 100 V amplifier
1306	Interface module for 100 V amplifiers

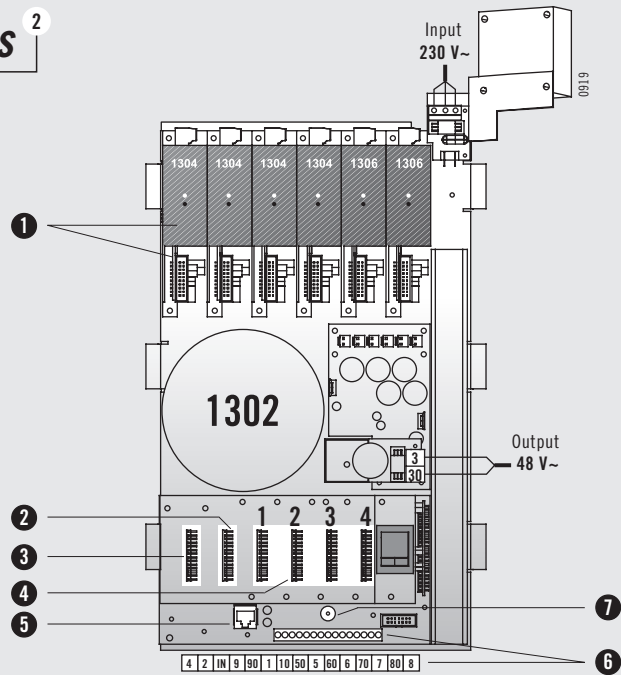
INPUT BAY (Lower section of 1302)	
1101	RCA audio input
1102	FM tuner
1103	Pre-recorded message player
1104	Module for telephone messages

Audio Processor 1302

Schematics ²

Output bay for fixing and connecting the 1303, 1304, 1305, and 1306 modules using the provided 20 pin ribbon wire connectors

- ① 14 pin connector of pre-recorded message player
- ② 14 pin connector of the module for telephone messages
- ③ 14 pins connectors for 1101 and 1102 modules
Begin connecting at position 1.
- ④ RJ-45 connector for control console
- ⑤ Terminal block to General line
- ⑥ Antenna connection



1302 Power processing modules (1303, 1304, 1305 and 1306) (area ①)



1. Insert the power supply female connector of the power processing module in any of the male connectors located in the top of the power supply. There is no possibility of mistaken polarity as the connectors are one way, and can not be placed in the wrong position.



2. Fasten the power processing module into position using the M3 screws included with the module itself, screwing them in any of the possible positions that appear in the base of the 1302. See the picture for more details.



3. Last, connect the line made of a 20 way ribbon wire with 6 female ribbon wire connectors. This way, any power processing module can be connected with any of the connectors and in any position.

1302 Signal processing modules (1101, 1102, 1103 and 1104) (area ②, ③ and ④)



1. In the lower part of the processor, there is a connection motherboard provided with 14 pin female connectors. Plug the audio inlets, pre-recorded message player and module for telephone messages in these connectors. To fasten them properly, use the brass separators, and the screws provided with the module.



2. The modules always include a male 14 pin connector to be inserted in the aforementioned female connectors of the motherboard.



3. Place the modules perpendicularly to the motherboard, and make sure that the connection is properly fastened. Finally, fasten the module, screwing it to the brass separators, using the screws provided in the package of such modules.

Control console | 1201



1201 control console for 2 + 1 areas

- Control console for 2 + 1 areas with message microphone, keyboard and display.
- It controls the music, messages, door locks and door bell in sound installations with up to 3 zones based in 1301.x audio processors.
- It is operated through menus in a 2-line, 16-character display.
- It incorporates a unidirectional gooseneck microphone for issuing messages (only in version 1201.11)
- It is connected to the rest of the installation using a 8-way phone connector.

Operation ¹

It is connected with the 2+1 zones audio processor 1301.x using a cable with an 8-way phone connector RJ-45, directly or using the 1501 connection base when the distance is bigger than 4 m (12 feet).

Operation mode

Although it depends on the function to be controlled, the button presses sequence is quite standardized; see it below, classified according to the function:

MUSIC

Press the wanted zone (ZON1 **1** or ZON2 **2**) and then the music key **3** (M). A menu appears showing the following options:

VOL+, **VOL-** to raise or lower the music volume.

PROGRAM **4** to change the music source; the display will show it as **J/FM**.

Additionally, the shortcut key **TUNING** **5** can be used to change the tuning of the radio, if this is available. When the key is pressed, a menu will appear with the tuned frequency and two keys, **<and>** for changing it.

NOTE: Area 3, corresponding to control units connected to the 15 V~ general line, can not be controlled from the control console, but by the control units themselves.

MESSAGES

Press the wanted zone(s) (ZON1 **1**, ZON2 **2** or ZON3 **3**) and then the big «talk» key **6** to issue a message. Press the wanted zone (ZON1 **1**, ZON2 **2**) and then the message menu key **7** (M) to see the menu that allows the adjustment of the message volume in that zone and for enabling and disabling the pre-warning chime.

BELL

Press the wanted zone (ZON1 **1**, ZON2 **2** or ZON3 **3**) and then the Bell **8** (B) key to show the menu that allows the adjustment of the door bell volume in that area. In area 3 it is only possible to enable or disable the bell, as the volume is set individually in each control unit.

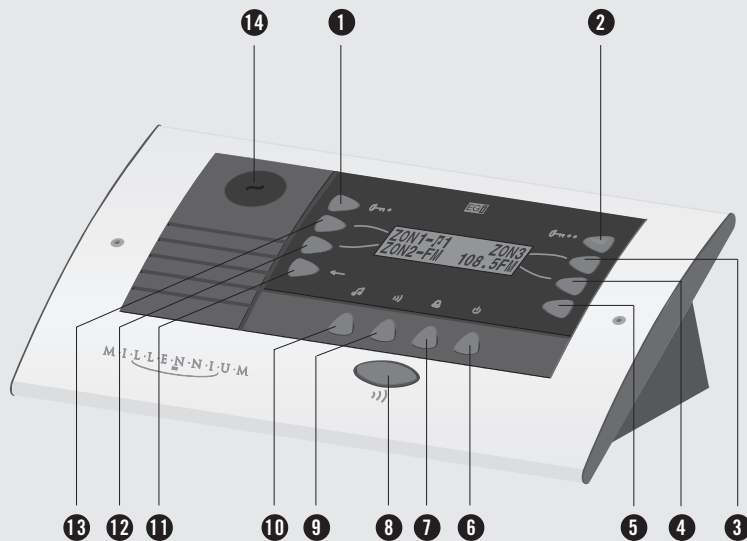
LOCKS

Keys marked with a key symbol **9** and **10**, are shortcut keys for opening the electric locks.

ON-OFF

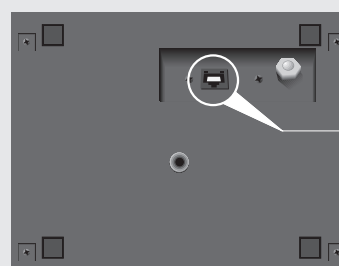
Press the wanted area (ZON1 **1**, ZON2 **2**) and then the key **11** to turn on or off the music in installation zones 1 and 2.

NOTE: Only one 1201.xx module can be connected in an installation.



Support for wall setting

Rear view of the 1201 control console



Phone connection RJ-45

1202 control console for up to 127 zones

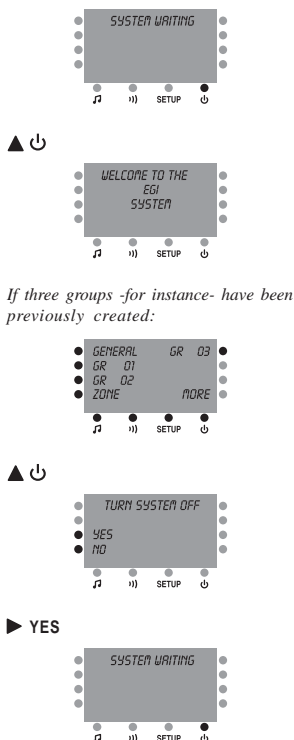
- Control console with capacity for handling audio installations with 127 zones.
- Zones can have the amplification centralized in the 1302 Audio Processor or decentralized in the Control Units and amplifiers connected to the general Line.
- It is operated through menus in a 4-line, 16-character display.
- It controls all the features of the sound installation: music, messages for up to 127 zones –that can be grouped in 15 groups- and General Call, automatic messages triggered by clock, event or manually, and so on.
- Up to 126 units can be connected in a single installation. There can be control consoles with different menu languages and associated chime sounds, all selected from the console, in the same installation.
- It incorporates a unidirectional gooseneck microphone for broadcasting messages or recording automatic messages.
- It is connected to the installation using a 8 ways phone connector.



Note:
Right after turning the system ON for the first time, you must do the system setup. See pages 28 and 60.

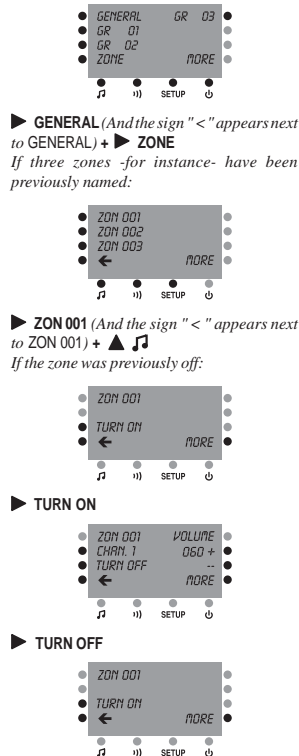
Control console 1202. Basic operation | 1202

1 Turning the system "On" and "Off"



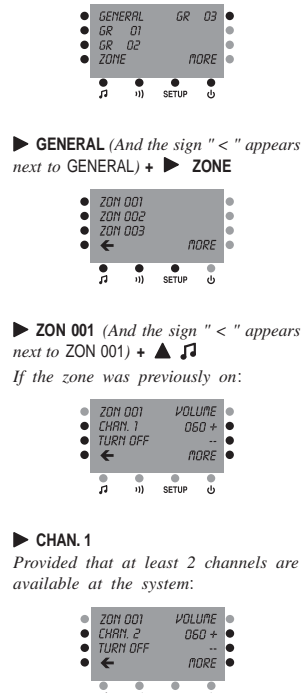
2 Turning a zone "On" and "Off"

If three groups -for instance- have been previously created:



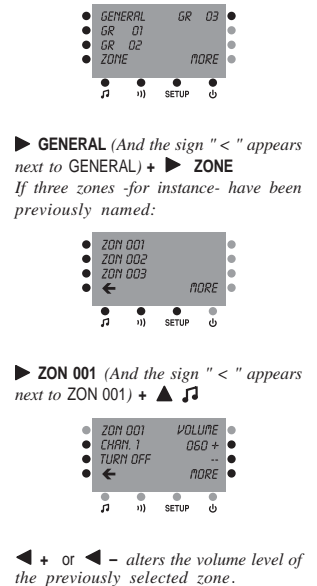
3 Changing the audio channel in a zone

If three groups -for instance- have been previously created:



4 Altering the volume level of a zone

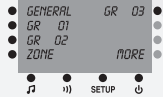
If three groups -for instance- have been previously created:



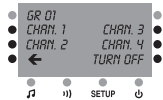
Control console 1202

Control console 1202. Basic operation 1202

5 Turning a Group of zones "On" and "Off" in a specific channel



► **GR 01** (And then the sign "<" appears next to GR 01) + ▲ Provided that there are -for instance- 4 channels available at the system:



► **CHAN. 1**; ► **CHAN. 2**; ◀ **CHAN. 3**;
◀ **CHAN. 4** turn the group **ON** at the selected channel or ◀ **TURN OFF** turns the audio **OFF** in the selected group.

6 Changing an audio channel from external (AUX) music source to internal radio

If three groups -for instance- have been previously created:



▲ Provided that there are -for instance- 4 channels available at the system:



► **CHAN. 1** Provided that there is an internal RADIO tuner available for CHANNEL 1, but the channel is in AUXILIAR mode:



► **RADIO** (And then the sign "<" appears next to RADIO)

7 Tuning of a channel with internal radio



▲ Provided that there are -for instance- 4 channels available at the system:



► **CHAN. 1** Provided that there is an internal radio tuner available for CHANNEL 1, and the channel is in RADIO mode:

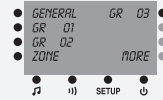


◀ + or ◀ - (short press) tunes the radio 0.1 MHz up or down.

◀ + or ◀ - (long press) searches for the next available radio station in a higher or in a lower frequency.

8 Making a call to zones which are not in "private" mode

If three groups -for instance- have been previously created:



► **GR 01** (And then the sign "<" appears next to GR 01) + ●



As long as we keep the button ● pressed, what is said to the microphone will be broadcast in all the zones belonging to group **GR 01**.

If the selected group is **GENERAL** the call will be broadcast in every zone of the installation.

It is also possible to select several groups or zones, or even a combination of groups and zones -taking into account that if we enter a group to select some of its zones, the selection of that group (as a whole unit) will automatically be cancelled.

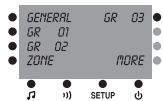
If the paging line is busy because another call is being broadcast or a pre-recorded message is being played or saved from another console 1202, instead of the last two screens, the following message will appear:



Control console 1202. Basic operation 1202

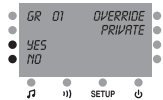
9 Making a call when any of the targeted zones is in "private" mode

If three groups -for instance- have been previously created:



► **GR 01** (And then the sign "<" appears next to GR 01) + ●

If, in the selected group, any of the zones is in "private" mode:



If, instead of a group, a zone had been selected which was in "private" mode, the name given to that zone would appear in the screen.

► **YES** will send the message to the whole group.

► **NO** will send the message only to the zones of the selected group which are not in "private" mode.



●



As long as we keep the button ● pressed, what is said to the microphone will be broadcast in all the selected zones.

It is also possible to select several groups or zones, or even a combination of groups and zones -taking into account that if we enter a group to select some of its zones, the selection of that group (as a whole unit) will automatically be cancelled.

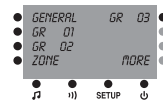
If the paging line is busy because another call is being broadcast or a pre-recorded message is being played or saved from another console 1202, instead of the last two screens, the following message will appear:



Control console 1202. Access restrictions 1202

1 Enabling and disabling the general access password

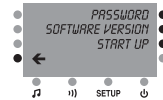
If three groups -for instance- have been previously created:



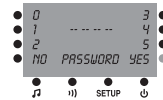
▲ **SETUP** Provided that there is NEITHER a pre-recorded message player (1103) NOR a module for sending messages over the telephone (1104) in the system:



◀ **MORE**



◀ **PASSWORD**



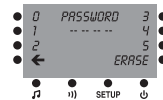
► **NO** disables the general access password.
► 1 + ► 2 + ◀ 3 + ◀ 4 will turn on the led lamp next to YES.

If then we press ◀ **YES** then the code 1234 has been enabled as general access password.

The 4 bottom keys ▲ ; ▲); ▲ **SETUP** and ▲ act here as numeric keys.

2 Entering the general access password

If the general access password is active, whenever we want to access to the advanced functions of the system, the module for sending messages over the telephone, or the pre-recorded message player, a password will be required by the following screen:



The 4 bottom keys ▲ ; ▲); ▲ **SETUP** and ▲ act here as numeric keys.

If we make a mistake when entering the password, it is possible to start again by pressing ◀ **ERASE**.

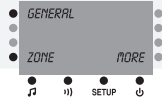
For each entered digit, a " - " symbol will be substituted by a " * " symbol.

Control console 1202. Advanced functions

1202 If the general access password is active the system will require us to introduce it every time we try to operate one of the advanced functions (see point 2 of "access restrictions").

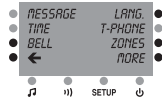
1 Giving a number to each zone

This is the first thing that has to be done in order to configure a system (and it does not have to be done again if the system configuration is not modified). Provided that no groups have been created yet:

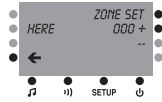


▲ SETUP

If the general access password is NOT active and there is NEITHER a pre-recorded message player (1103) NOR a module for sending messages over the telephone (1104) in the system:

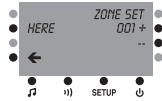


◀ ZONES



◀ ZONE SET cancels all the numbers that have been given to the zones until pressed.

◀ +



▶ HERE gives to the control console 1202 the zone number 1 (the console needs a zone number only if it must be ready to receive messages).

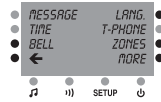
◀ ZONE SET When pressed, the system is ready to assign number 1 to a zone, and all the "zone set" led lamps of the devices which can be given a zone number will blink. If, in the mentioned devices, one of the ZONE SET buttons is pressed, that specific device will be identified as ZONE NR. 1, and the system will get ready to assign number 2 to the following device / zone.



By following this procedure we can give consecutive numbers to all the zones of the installation without going back to the console 1202 (this is useful for the initial configuration of the installation).

It is also possible to select a specific zone number by pressing ◀ + or ◀ - and, after pressing ◀ ZONE SET and following the ZONE SET button of the corresponding device, the selected number will be given to that device (this is useful to replace an old device by a new one which must have the same zone number without repeating the set up procedure).

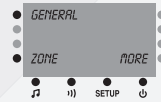
▶ ◀



When a zone number has been assigned to all the zones of the installation, we will quit the labelling procedure and all the ZONE SET led lamps of the different devices will stop blinking. Now it is recommended to start up the system (point nr. 13) prior to label the zones with names.

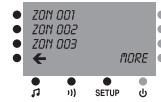
2 Labelling the zones with names

If NO groups have been created yet:



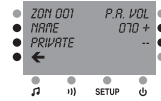
▶ GENERAL (And the sign "<" appears next to GENERAL) + ▶ ZONE

If three zones -for instance- have been previously created:



▶ ZON 001 (And the sign "<" appears next to ZON 001) + ▲ 1)

If the general access password is NOT active



▶ NAME

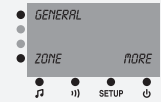


◀ >>> (the cursor is placed in letter "O") + ◀ + ("O" is replaced by "P") + ▶ ◀



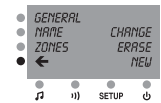
3 Creating a group and giving it a number

If NO groups have been created yet:

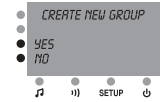


▶ GENERAL (And then the sign "<" appears next to GENERAL) + ▲ 1)

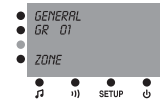
If the general access password is NOT active:



◀ NEW



▶ YES

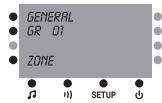


Control console 1202. Advanced functions

1202 If the general access password is active the system will require us to introduce it every time we try to operate one of the advanced functions (see point 2 of "access restrictions").

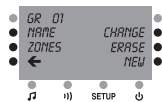
4 Labelling groups with names

If one group has already been created:

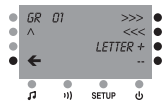


▶ GR 01 (And then the sign "<" appears next to GR 01) + ▲ 1)

If the general access password is NOT active:



▶ NAME

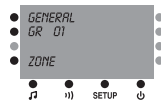


◀ >>> (the cursor is placed in letter "R") + ◀ - ("R" is replaced by "Q") + ▶ ◀



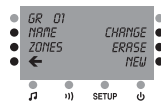
5 Assigning a zone to a group

If one group has already been created:



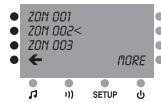
▶ GR 01 (And then the sign "<" appears next to GR 01) + ▲ 1)

If the general access password is NOT active:



▶ ZONES

Provided that there are 3 numbered zones in the system and zone number 2 belongs to group number 1.



▶ ZON 001 + ▶ ZON 002

Now zone number 1 belongs to group number 1 and zone number 2 does not.



6 Changing the order of appearance of groups in the screen

If three groups -for instance- have been previously created:

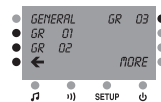


▶ GR 01 (And then the sign "<" appears next to GR 01) + ▲ 1)

If the general access password is NOT active:



◀ CHANGE



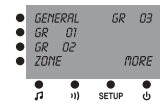
◀ GR 03



Now it is recommended to initialise the system again (like in point number 13) so that the system checks again the relationships between groups and zones.

7 Erasing a group

If three groups -for instance- have been previously created:

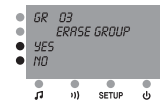


◀ GR 03 (And then the sign ">" appears next to GR 03) + ▲ 1)

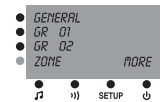
If the general access password is NOT active:



◀ ERASE



▶ YES



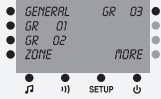
Control console 1202

Control console 1202. Advanced functions

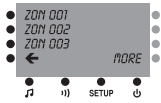
1202 If the general access password is active the system will require us to introduce it every time we try to operate one of the advanced functions (see point 2 of "access restrictions").

8 Changing the Public Address volume level in a zone

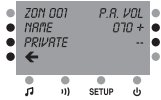
If three groups -for instance- have been previously created:



▶ **GENERAL** (And then the sign "<" appears next to GENERAL) + ▶ **ZONE**
Provided that there are 3 numbered zones in the system:



▶ **ZON 001** (And then the sign "<" appears next to ZON 001) + ▲ (1)



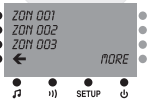
◀ + or ◀ - modifies the volume level of the paging in the selected zone.

9 Enabling and disabling the "private" mode in a zone

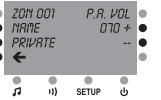
If three groups -for instance- have been previously created:



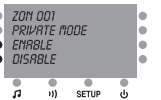
▶ **GENERAL** (And then the sign "<" appears next to GENERAL) + ▶ **ZONE**
Provided that there are 3 numbered zones in the system:



▶ **ZON 001** (And then the sign "<" appears next to ZON 001) + ▲ (1)



▶ **PRIVATE**



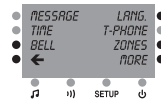
▶ **ENABLE** or ▶ **DISABLE** enables or disables the private mode of a zone.

10 Changing the pre-warning tone of an announcement

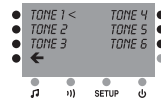
If three groups -for instance- have been previously created:



▲ **SETUP**
Provided that the general access password is NOT active, and there is NEITHER a pre-recorded message player (1103) NOR a module for sending messages over the telephone (1104) in the system:



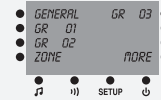
▶ **BELL**



▶ **TONE 2** (And then the sign "<" appears next to TONE 2) changes the pre-warning tone of the announcement.

11 Changing the operation language

If three groups -for instance- have been previously created:



▲ **SETUP**
Provided that the general access password is NOT active, and there is NEITHER a pre-recorded message player (1103) NOR a module for sending messages over the telephone (1104) in the system:



◀ **LANG.**



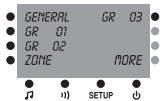
▶ **ENGLISH** (And then the sign "<" appears next to ENGLISH) changes the operation language.

Control console 1202. Advanced functions

1202 If the general access password is active the system will require us to introduce it every time we try to operate one of the advanced functions (see point 2 of "access restrictions").

12 Checking the software versions

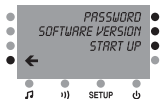
If three groups -for instance- have been previously created:



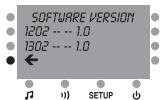
▲ **SETUP**
Provided that the general access password is NOT active, and there is NEITHER a pre-recorded message player (1103) NOR a module for sending messages over the telephone (1104) in the system:



◀ **MORE**

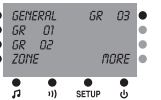


◀ **SOFTWARE VERSION**

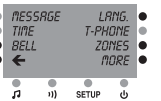


13 Initialising the system

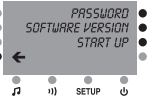
It is recommended to proceed with this operation after the options described in points 1 and 6.
If three groups -for instance- have been previously created:



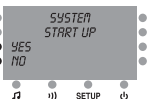
▲ **SETUP**
Provided that the general access password is NOT active, and there is NEITHER a pre-recorded message player (1103) NOR a module for sending messages over the telephone (1104) in the system:



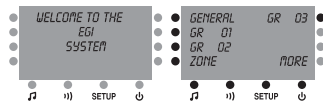
◀ **MORE**



◀ **START UP**



▶ **YES**



Control console 1202

Control console 1202. Operation of the module for sending messages over the telephone

1202 If the general access password is active the system will require us to introduce it every time we try to operate this module (see point 2 of "access restrictions").

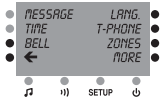
1 Changing the length of the time while a message over the telephone can be broadcast

If three groups -for instance- have been previously created:

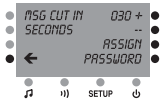


▲ SETUP

Provided that the general access password is NOT active, and there is NOT a pre-recorded message player (1103) in the system but THERE IS a module for sending messages over the telephone (1104):



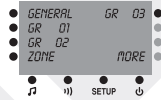
◀ T-PHONE



◀ + or ▶ - modifies the maximum time length while a message can be broadcast.

2 Assigning a telephone number to a zone

If three groups -for instance- have been previously created:



▲ SETUP

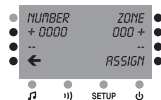
Provided that the general access password is NOT active, and there is NOT a pre-recorded message player (1103) in the system but THERE IS a module for sending messages over the telephone (1104):



◀ T-PHONE



◀ ASSIGN



▶ + or ▶ - modifies the telephone number.

◀ + or ◀ - modifies the zone number.

◀ ASSIGN assigns the selected telephone number to the desired zone number.

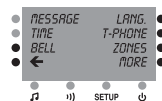
3 Assigning a telephone number to a group

If three groups -for instance- have been previously created:

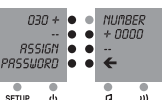


▲ SETUP

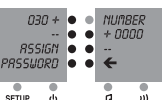
Provided that the general access password is NOT active, and there is NOT a pre-recorded message player (1103) in the system but THERE IS a module for sending messages over the telephone (1104):



◀ T-PHONE



◀ ASSIGN



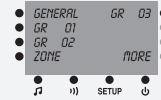
▶ + or ▶ - modifies the telephone number.

◀ + or ◀ - modifies the group number.

◀ ASSIGN assigns the selected telephone number to the desired group number.

4 Enabling and disabling the password for messages over the telephone

If three groups -for instance- have been previously created:

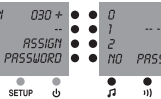


▲ SETUP

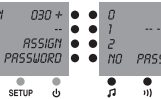
Provided that the general access password is NOT active, and there is NOT a pre-recorded message player (1103) in the system but THERE IS a module for sending messages over the telephone (1104):



◀ T-PHONE



◀ PASSWORD



▶ NO disables the password for messages over the telephone.

▶ 1 + ▶ 2 + ▶ 3 + ▶ 4 will turn on the led lamp next to YES. If then we press ◀ YES then the code 1234 has been enabled as password for messages over the telephone.

The 4 bottom keys ▶ (MUSIC); ▶ (MUSIC); ▶ (MUSIC) and ▶ (MUSIC) act here as numeric keys.

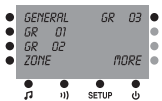
This password will have to be entered in the telephone keyboard whenever the user tries to broadcast a message over the telephone. This will be requested by means of a set of commands recorded in the module 1104. The user will listen to these commands in his telephone handset after dialling the extension reserved for the Public Address system.

Control console 1202. Operation of the pre-recorded message player

1202 If the general access password is active the system will require us to introduce it every time we try to operate this module (see point 2 of "access restrictions").

1 Broadcasting a message at a definite time

If three groups -for instance- have been previously created:



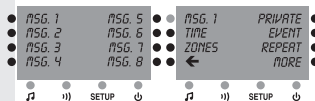
▲ SETUP

Provided that the general access password is NOT active, and there is a pre-recorded message player (1103) in the system but NOT a module for sending messages over the telephone (1104):



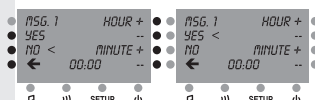
▶ MESSAGE

▶ MSG. 1



▶ TIME

▶ YES



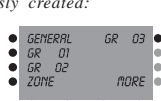
◀ HOUR + or ▶ - changes the hour.

◀ MINUTE + or ▶ - changes the minute.

▶ ◀ programs message number one to be launched at the selected time.

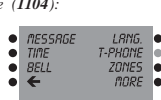
2 Broadcasting a message as a reaction to an event

If three groups -for instance- have been previously created:



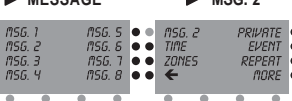
▲ SETUP

Provided that the general access password is NOT active, and there is a pre-recorded message player (1103) in the system but NOT a module for sending messages over the telephone (1104):

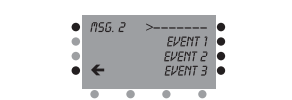


▶ MESSAGE

▶ MSG. 2



◀ EVENT

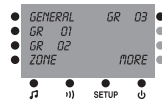


◀ -----; ▶ EVENT 1; ▶ EVENT 2 or ▶ EVENT 3 (and then the sign ">" appears next to the selected option).

▶ ◀ Assigns message number 2 to no event, or to event 1, 2 or 3 (depending on the previously pressed key).

3 Selecting the destination of a message

If three groups -for instance- have been previously created:



▲ SETUP

Provided that the general access password is NOT active, and there is a pre-recorded message player (1103) in the system but NOT a module for sending messages over the telephone (1104):



▶ MESSAGE

▶ MSG. 3



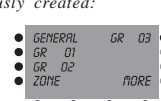
▶ ZONES



▶ ◀ assigns ZON 001 as first destination of message number 3, and leaves empty the three other possible destinations. In order to assign a 2nd, 3rd or 4th destination, move vertically the symbol ">" with the 4 buttons on the right and select destination between the different zones and groups by pressing ▶ + or ▶ -. When everything is according to our preferences, we must press ▶ ◀

4 Respecting or overriding the "private" mode of the zones

If three groups -for instance- have been previously created:



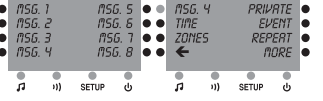
▲ SETUP

Provided that the general access password is NOT active, and there is a pre-recorded message player (1103) in the system but NOT a module for sending messages over the telephone (1104):



▶ MESSAGE

▶ MSG. 4



◀ PRIVATE



◀ YES (and then the sign ">" appears next to YES) + ▶ ensures the broadcast of the message in ALL the destination zones.

◀ NO (and then the sign ">" appears next to NO) + ▶ will only broadcast the message in those destination zones which are not in "private" mode.

Control console 1202

Control console 1202. Operation of the pre-recorded message player

1202 If the general access password is active the system will require us to introduce it every time we try to operate this module (see point 2 of "access restrictions").

5 Replay of a message

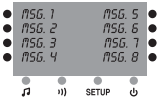
If three groups -for instance- have been previously created:



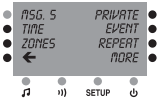
▲ SETUP
Provided that the general access password is NOT active, and there is a pre-recorded message player (1103) in the system but NOT a module for sending messages over the telephone (1104):



▶ MESSAGE



◀ MSG. 5



◀ REPEAT

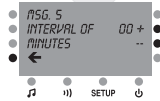
Provided that message number 5 is already recorded:



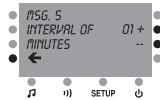
◀ + + +



◀ INTERVAL



◀ +



◀ + or ◀ - programs message 5 to be played 2 times, with an interval of 1 minute between 2 repeats.

6 Changing the volume level of a message

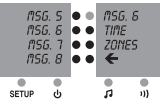
If three groups -for instance- have been previously created:



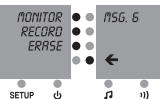
▲ SETUP
Provided that the general access password is NOT active, and there is a pre-recorded message player (1103) in the system but NOT a module for sending messages over the telephone (1104):



▶ MESSAGE



◀ MORE



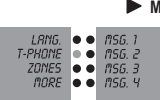
◀ + or ◀ - modifies the volume level of the message. If reduced to 0, the message will be played in each target zone at the volume level that is set for paging there.

7 Monitoring a message

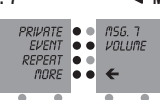
If three groups -for instance- have been previously created:



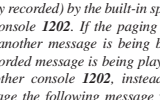
▲ SETUP
Provided that the general access password is NOT active, and there is a pre-recorded message player (1103) in the system but NOT a module for sending messages over the telephone (1104):



▶ MSG. 7



◀ MONITOR



◀ MONITOR plays the message number 7 (if previously recorded) by the built-in speaker at the control console 1202. If the paging line is busy because another message is being broadcast or a pre-recorded message is being played or saved from another console 1202, instead of playing the message the following message will appear:

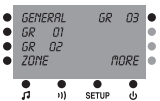


Control console 1202. Operation of the pre-recorded message player

1202 If the general access password is active the system will require us to introduce it every time we try to operate this module (see point 2 of "access restrictions").

8 Recording a message

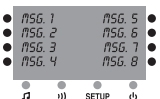
If three groups -for instance- have been previously created:



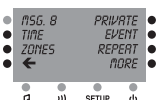
▲ SETUP
Provided that the general access password is NOT active, and there is a pre-recorded message player (1103) in the system but NOT a module for sending messages over the telephone (1104):



▶ MESSAGE



◀ MSG. 8



◀ MORE



◀ RECORD



◀ EXT MIC (And then the sign ">" appears next to EXT MIC)

Starts recording the message from the gooseneck microphone in the control console or from an external microphone connected to the RCA socket in the pre-recorded message player, depending on where the symbol ">" is.

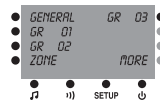
As long as we keep the key (●) pressed a countdown -starting from 15- will let us know the time remaining to finish up the record. The message record will finish when the countdown reaches 0 or when we release the button (●), whatever comes first.

If the paging line is busy because another message is being broadcast or a pre-recorded message is being played or saved from another console 1202, instead of starting the record the following message will appear:

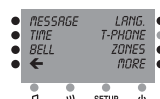


9 Erasing a message

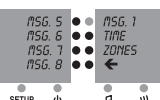
If three groups -for instance- have been previously created:



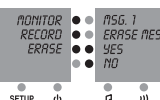
▲ SETUP
Provided that the general access password is NOT active, and there is a pre-recorded message player (1103) in the system but NOT a module for sending messages over the telephone (1104):



▶ MESSAGE



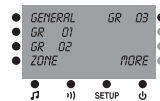
◀ MORE



▶ YES erases message number 1.

10 Time setting

If three groups -for instance- have been previously created:



▲ SETUP
Provided that the general access password is NOT active, and there is a pre-recorded message player (1103) in the system but NOT a module for sending messages over the telephone (1104):

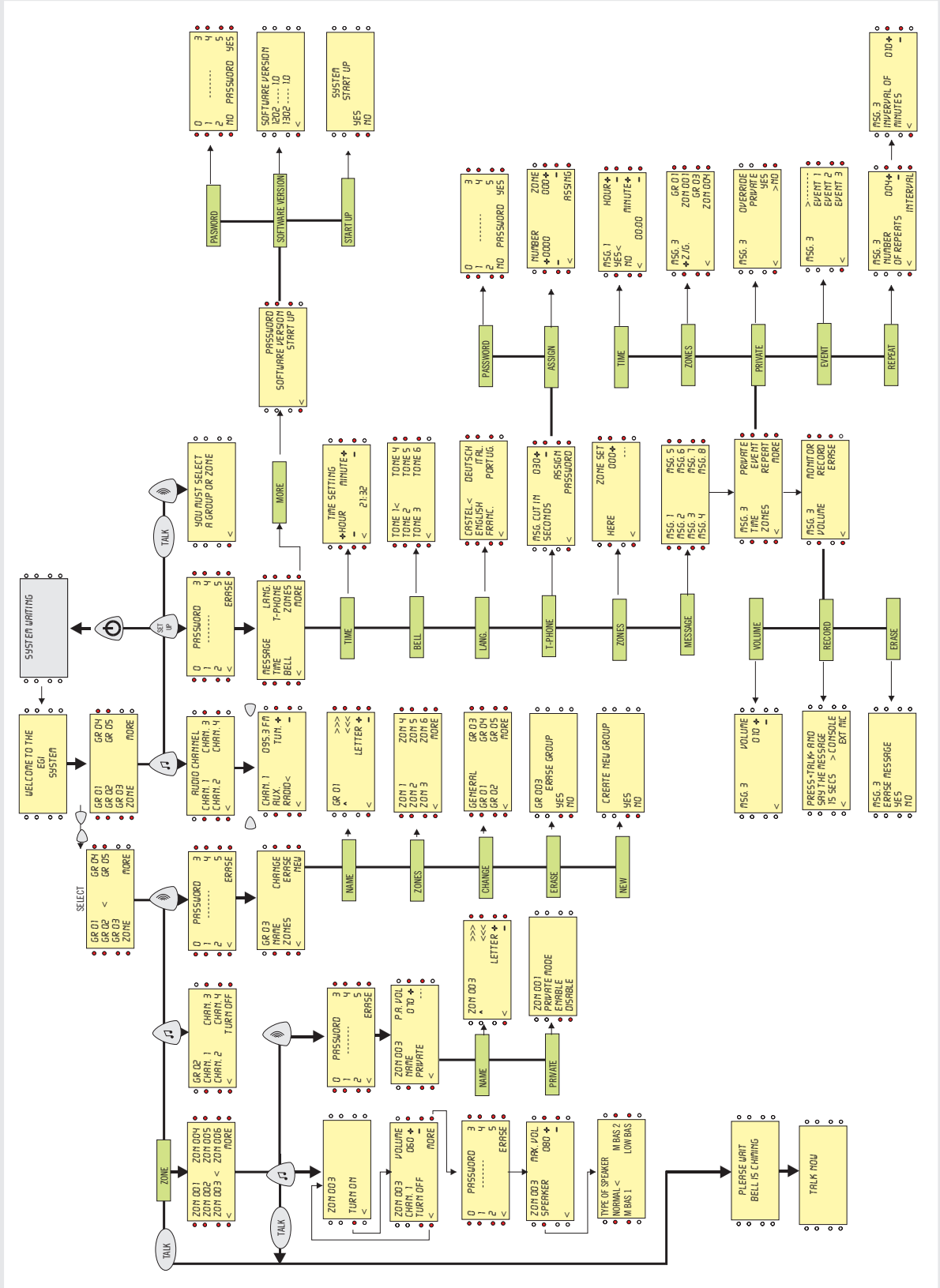


▶ TIME



▶ + or ▶ - modifies the hour.
◀ + or ◀ - modifies the minute.
▶ ◀ adjusts the time of the system.

Control Console menu tree | 1202



Connection base 1501



1501.10 Base for connection of control console / music source. White

- Connection base for connecting the 1201.x and 1202 control consoles, as well as external music sources far from the 1301.x or 1302 audio processor.
- With RCA audio input for connecting an external music source to the sound installation. Mono output.
- Lamp indicating signal presence.

1501.10 Base for connection of control console / music source. Black

- Same features that the 1501.10 in black.

Schematics ¹

1 Pilot lamp for RCA signal reception

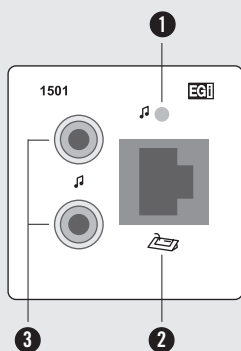
It lights when the RCA connectors are receiving an audio signal from an external music source which is over the minimum sensitivity threshold.

2 Inlet for 1201.x or 1202 control consoles

RJ-45 phone-type inlet for the connection of the 1201.x or 1202 control consoles.

3 Inlet for external audio source

RCA input for the connection of external audio sources.

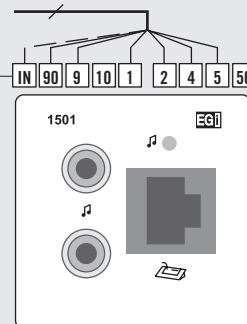


Connection to the 1301.x or 1302 audio processor

- Terminal block for direct connection of 1201 control consoles to 1203 intercom units.
- Audio output for direct connection of external audio sources to IN or PIN-type inputs whether at the audio processor 1302 or local amplifiers.

This connection base is used for connecting the 1201.x or 1202 control consoles, as well as any external audio source to the 1301.x or 1302 audio processor.

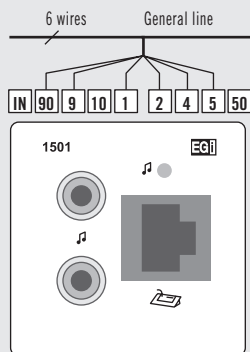
Both connections can be used at the same time. The music source coming from this module is the "1" music program.



WARNING: Get sure that, if this inlet is used to connect an audio source that will provide signal to the audio program nr. 1 (wires 5 and 50), then in the input section of the audio processor 1302 only the 14-pin connection bays nr. 2, 3 and 4 (see page 24) can be used. The use of the 14-pin connectors at the audio processor and the RCA inlet at the connection base is not compatible for the same audio program.

1501 connection with 6 wires ²

Connection to the 1301.x or 1302 audio processor

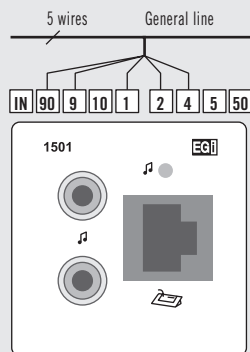


With input for music program through the 1501 module.

If this music program input is used, the music source input "1" of the 1302 processor must not be used.

1501 connection with 5 wires ³

Connection to the 1301.x or 1302 audio processor



Without input for music program through the 1501 module.

The wires "10, 90 and 50" are only necessary if there is an audio processor 1302 in the system.



Use terminals "10 and 50" only for distances over 1500 ft. (500 m). In that cases, an audio de-balancer is also needed.

NOTE: If this input is used for the connection of an external music source, a monoaural program will be provided to the system.

TECHNICAL SPECIFICATIONS

	1501
Power supply	15 V _{DC}
Input impedance	20 KΩ
Sensitivity of the RCA input	370 mV
Current consumption (@ max. power)	80 mA

Volume regulator and aux. input | 1106



1106.10 Volume regulator and auxiliary input. White

- Volume regulator, with auxiliary input for local audio sources including on/off switch and indicating lamp.
- It incorporates a slow signal compressor for preventing distortion.
- For the connection of wireless microphones and music sources
- Self-mixing for up to 5 units.

1106.12 Volume regulator and auxiliary input. Black

- Same features that the 1106.10 in black

Schematics ¹

1 ON/OFF push button

One press turns on and the next press turns off the auxiliary input 1106.

2 ON lamp

It lights when the module is activated by pressing the ON push button or, automatically, when a signal coming from a previous module is passing through.

3 Volume regulator

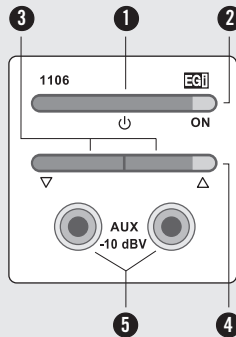
For raising Δ or lowering ∇ the sound level of the auxiliary input.

4 Pilot lamp for volume regulation

It lights only when the module is activated locally, but not when signals coming from other modules are passing through the auxiliary input. It blinks when the volume level has reached its top.

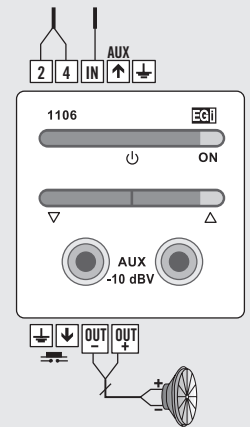
5 Inlet for audio source

An external audio source (CD player, cassette deck, soundblaster, etc.) can be connected here for local use. A wireless microphone receiver can also be connected here.



- 2 Power supply output 15 V_{DC}
- 4 Ground
- IN Inlet for self-mixing
- ↑ Audio auxiliary input (replaces the frontal RCA input)
- ↓ Auxiliary input ground
- ↓ Ground of remote push button
- ↓ Terminal for connection of remote push button

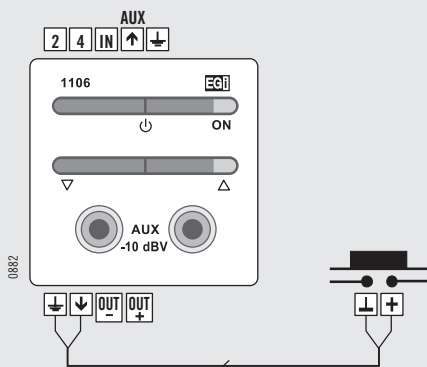
Input for serial connection (max. 5 units)



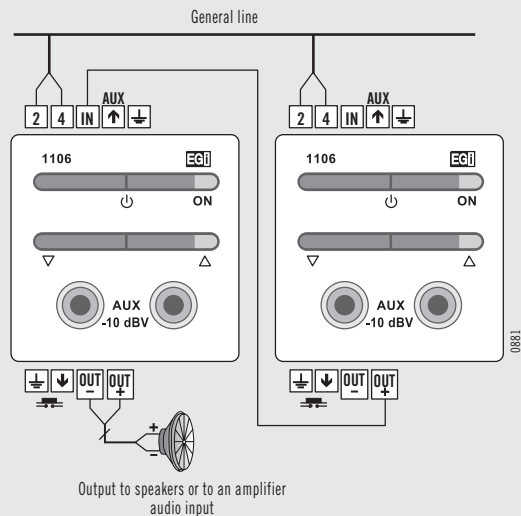
Output to speakers or to an amplifier audio input

1106 connection of a remote push button ²

If we wanted to control the on/off status of this auxiliary input using a remote push button, the connection of it should be in the following way:



1106 serial connection of several 1106 ³



TECHNICAL SPECIFICATIONS

	1106
DC Power supply	15 V _{DC} by general line
Power	1.25 W; minimum line impedance 16 Ω
Input impedance	20 K Ω
Auto-mixing input	5 units serially or in cascade
Current consumption (@ max. power)	162 mA
Sensitivity of the RCA input	(-10 dBV) = 316 mV

Pre-amplified XLR microphone base | 1105



1105.10 Pre-amplified XLR microphone base. White

- Pre-amplified XLR base for the connection of local microphones to a sound installation.
- Voice compressor included for preventing distortion.
- The connected microphone can be either dynamic (balanced or not) or electret (with or without phantom power supply).

1105.12 Pre-amplified XLR microphone base. Black

- Same features that the 1105.10 in black.

Schematics

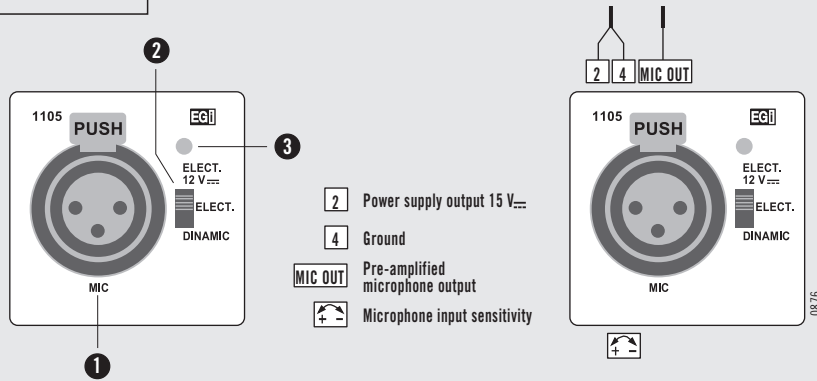
1 Professional XLR microphone socket

2 Microphone type selector

This key enables the user to select which type of microphone will be connected to the XLR socket: dynamic, electret without power supply, or electret with phantom power supply.

3 Led indicating operation and compression

It indicates that the module has a 15 V power supply and, when blinking, the operation of the voice compressor.



Volume regulator for 1105 base | 1107



1107.10 Volume regulator for 1105 base. White

- On push button with indicating lamp.
- Digital volume regulator with 80 steps of 1 dB.
- Push button inlet for remote activation of the microphone.
- Self-mixing up to 6 units.

1107.12 Volume regulator for 1105 base. Black

- Same features that the 1107.10 in black.

Schematics

1 ON/OFF push button

One press turns on and the next one turns off the microphone base 1105.

2 ON lamp

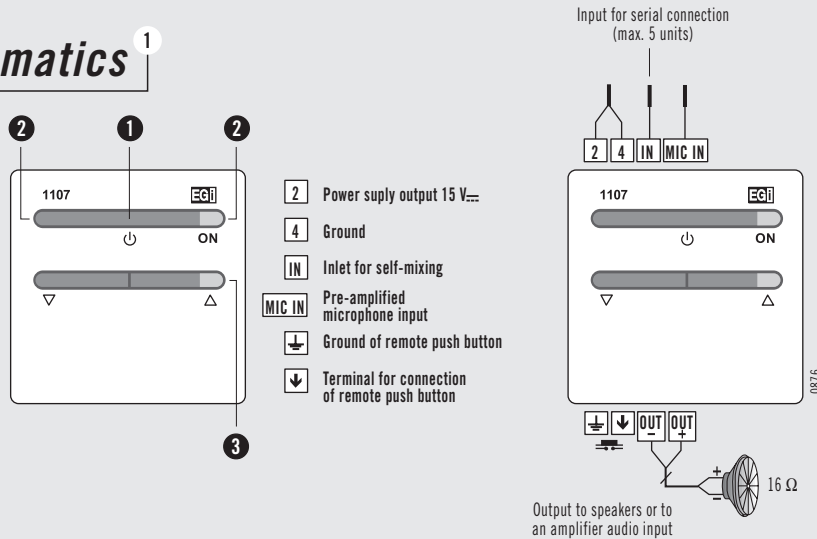
It lights when the module is activated by pressing the ON push button or, automatically, when a signal coming from a previous module is passing through.

3 Volume selector

It lights only when the module is activated locally, but not when signals coming from other modules are passing through the 1107.

4 Volume selection indicating lamp

It blinks when the microphone volume level reaches the maximum.

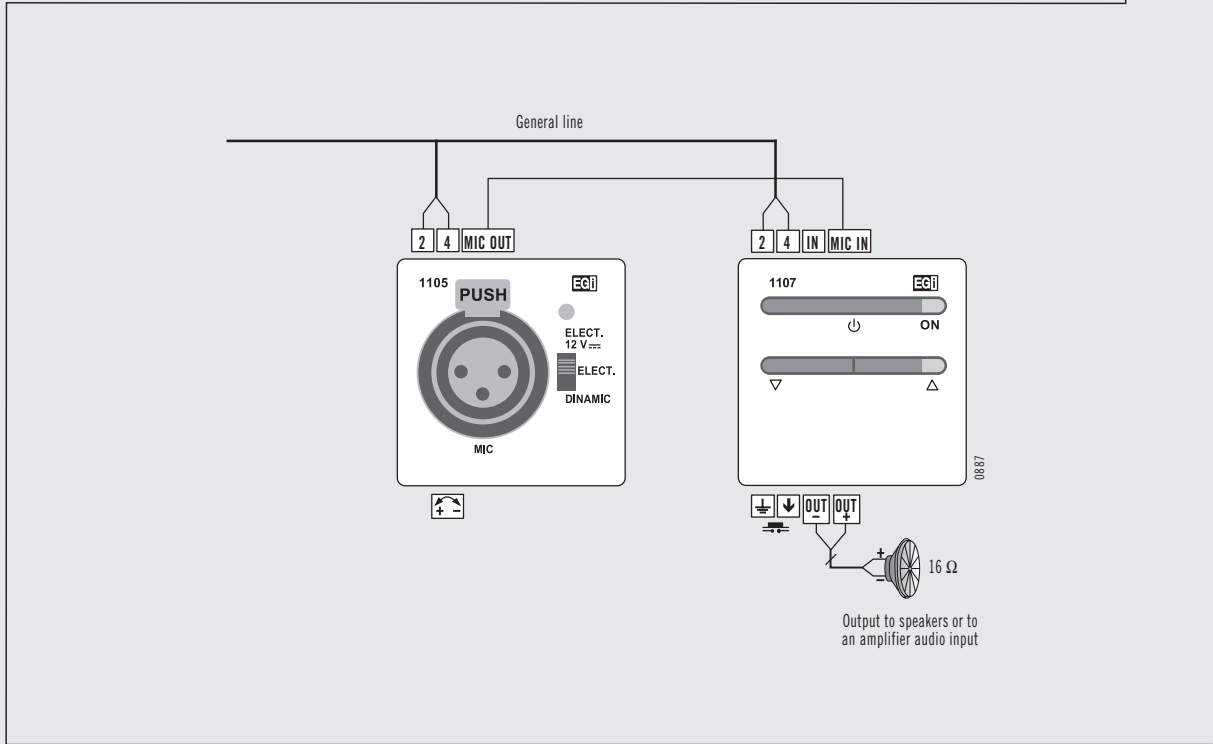


TECHNICAL SPECIFICATIONS	1105
DC Power supply	15 V \dots by general line
Input impedance	2 K Ω
Current consumption (@ max. power)	30 mA

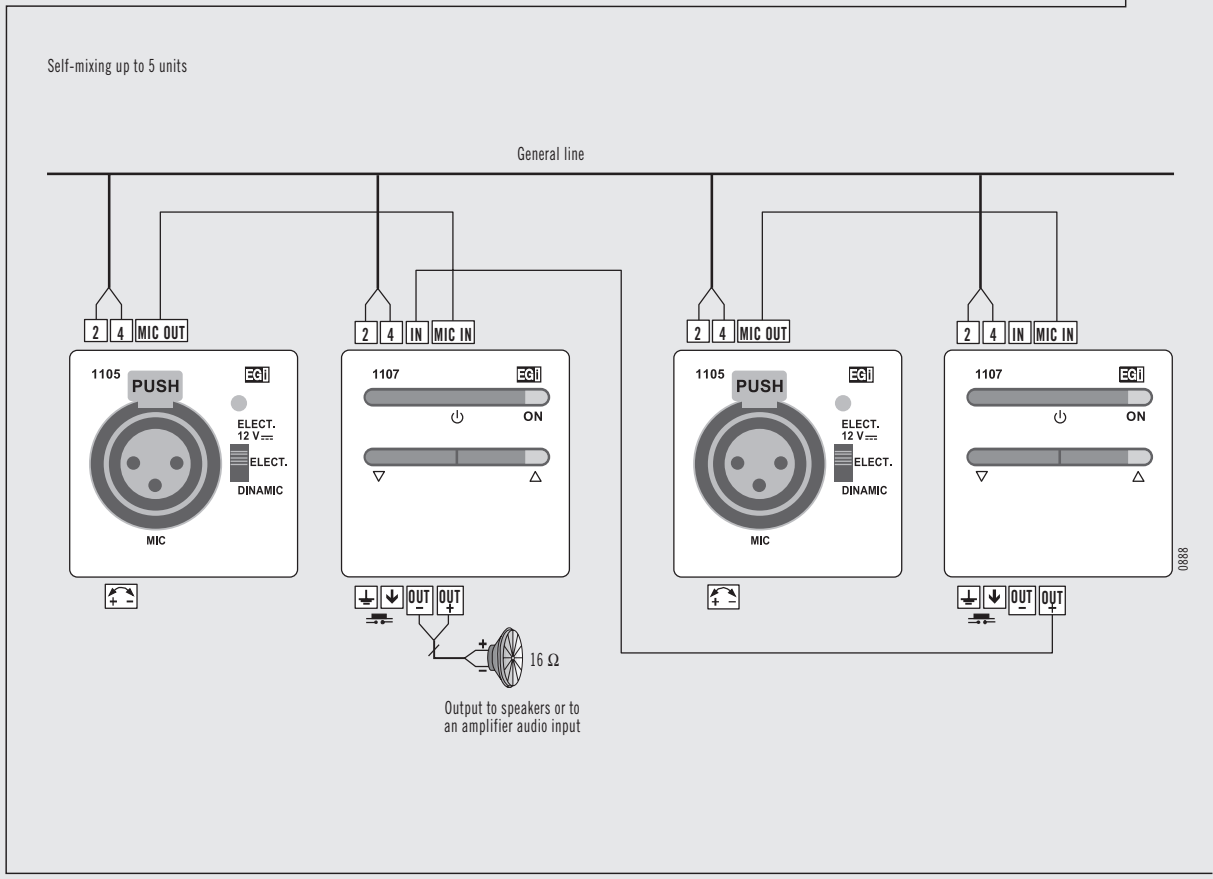
TECHNICAL SPECIFICATIONS	1107
DC Power supply	15 V \dots by general line
Power	1.25 W; minimum line impedance 16 Ω
Input impedance	20 K Ω
Self-mixing input	up to 5 units

Connection details for 1105 and 1107

2
Connection of modules 1105 with 1107



3
Serial connection of several 1105 and 1107



2-channel control unit. 5 W | 1204



1204.10 2-channel control unit. 5 W, 1-8 speakers. Message override. White

- 2-channel control unit, 5 W power for connecting from 1 to 8 speakers.
- Digital volume regulation with 80 steps of 1 dB and loudness.
- It recognizes the number of channels in the installation and adapts its selector for them.
- Message override.

1204.12 2-channel control unit. 5 W, 1-8 speakers. Message override. Black

- Same features that the 1204.10 in black.

Schematics ¹

1 ON/OFF push button

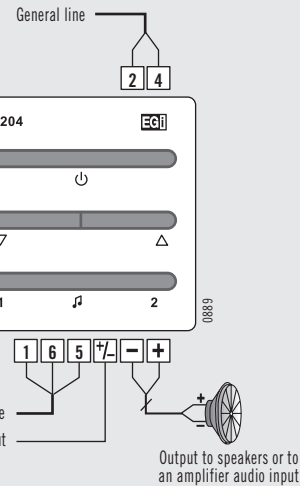
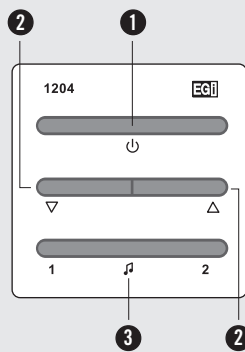
One press turns on and the next press turns off the sound system in that zone.

2 Volume selector

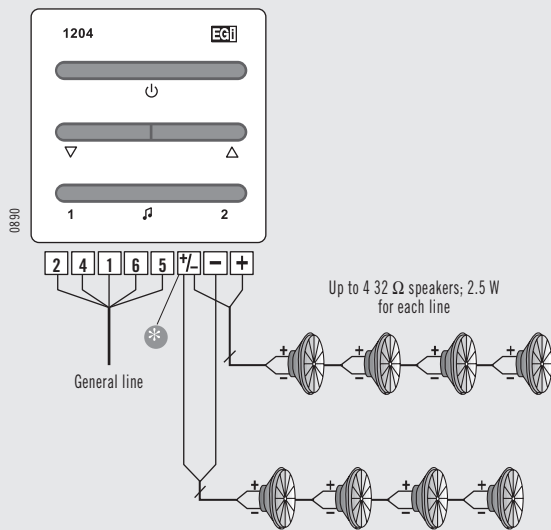
For raising Δ or lowering ∇ the sound level of the control unit.

3 Channel selector

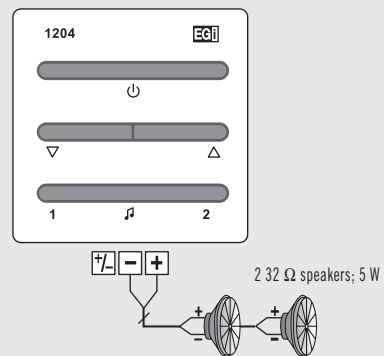
This push button enables the user to select the sound channel ("1" or "2") that will be played in a zone. Every time that it is pressed, it will change between the available channels. The selection will be showed by the light of a red lamp.



1204 ² 2 x 2.5 W outputs over a 8 Ω minimum load



1204 ³ 1 x 5 W outputs over a 16 Ω minimum load



		NUMBER OF SPEAKERS IN PARALLEL		
		8 Ω	16 Ω	32 Ω
5 W	Min impedance 16 Ω	\rightarrow	1	2
2.5 W + 2.5 W	Min impedance 8 Ω	1 + 1	2 + 2	4 + 4

* When it is combined with ∇ it acts as a negative terminal, and when it is combined with Δ it acts as a positive terminal

TECHNICAL SPECIFICATIONS	1204
DC Power supply	15 V \dots by general line
High power output	5 W; minimum line impedance 16 Ω
Low power output between the terminals (+ and +/-) or (- and +/-)	2.5 W; minimum line impedance 8 Ω
Current consumption (@ max. power)	540 mA

Intercom unit | 1203



1203.10 2-zone intercom unit with built-in amplifier. White

- 2-zone intercom unit with 2 x 1.5 W built-in amplifier, separate volume setting for each zone and lock key for keeping the zone 2 pressed.
- It can be used with internal built-in ambient microphone or with an external microphone.

1203.12 2-zone intercom unit with built-in amplifier. Black

- Same features that the 1203.10 in black.

Schematics ¹

1 Push button to select zone 1

By pressing this push button a call will be made to zone 1. It is possible to talk to zone 1 as long as we keep on pressing the button.

2 Push button to select zone 2

By pressing this push button a call will be made to zone 2. It is possible to talk to zone 2 as long as we keep on pressing the button.

3 LOCK push button

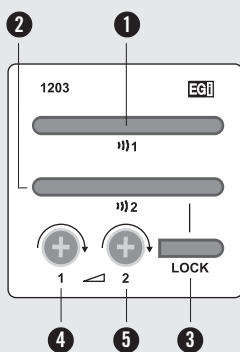
By pressing this button the zone 2 will stay permanently selected: you can talk to zone 2 even if the push button 2 is released. A red lamp informs you that the communication with zone 2 is permanently open. If this button is pressed again the lock function is disabled.

4 Volume regulator zone 1

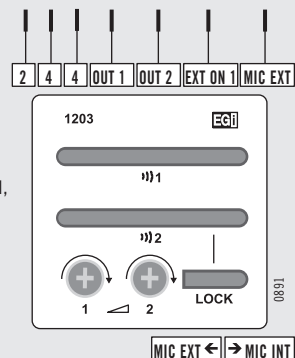
By turning this screw clockwise we will raise the volume level of the message broadcast in zone 1.

5 Volume regulator zone 2

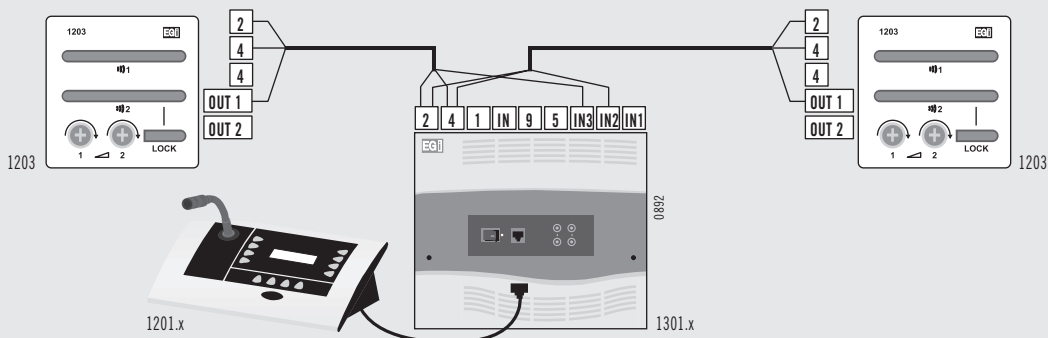
By turning this screw clockwise we will raise the volume level of the message broadcast in zone 2.



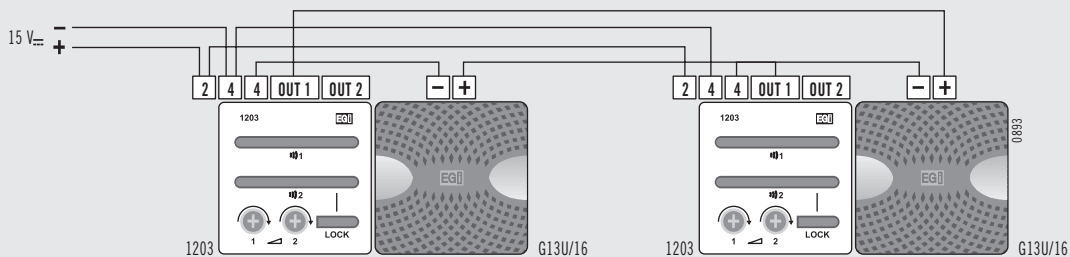
- 2 Power supply output 15 V_{DC}
- 4 Ground terminals
- OUT 1 Outputs to a PIN input, to the IN terminal of module 1501, or to a speaker
- OUT 2
- EXT ON 1 Zone 1 remote ON (15 V_{DC})
- MIC EXT External microphone input (only electret-type)
- MIC EXT ← Internal/external microphone selection jumper
- MIC INT



Connection of 2 intercom units to a 1201 control console ²



Direct connection of intercom units ³



TECHNICAL SPECIFICATIONS

	1203
Continuous power supply	15 V _{DC} by general line
Power	1.5 W per output
Minimum line impedance	16 Ω
Push button input	0 V _{DC} • 15 V _{DC} external
Current consumption (@ max. power)	200 mA

4-channel control unit. 1 W | 1205



1205.10 4-channel control unit. 1 W, 1-2 speakers. Message override. White

- 4-channel control unit, 1 W power for connecting 1 or 2 speakers.
- Digital volume regulation with 32 steps of 2 dB that, if we want so, will slowly decrease from 6 hours of operation on until turning off (hotels).
- Message override.

1205.12 4-channel control unit. 1 W, 1-2 speakers. Message override. Black

- Same features that the 1205.10 in black.

Schematics ¹

1 ON/OFF push button

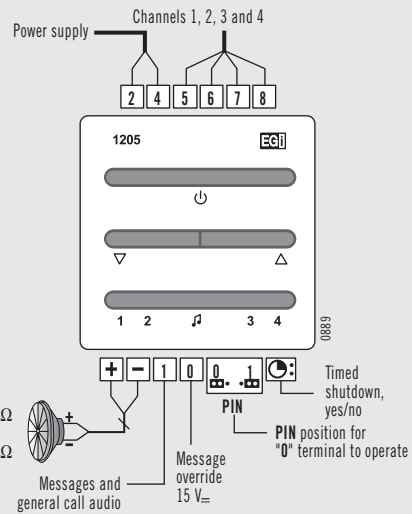
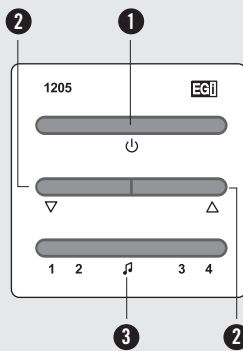
One press turns on and the next press turns off the sound system in that zone.

2 Volume selector

For raising Δ or lowering ∇ the sound level of the control unit.

3 Channel selector

This push button enables the user to select the sound channel that will be played in a zone. Every time that it is pressed, it will change between the available channels. The selection will be showed by the light of a red lamp.

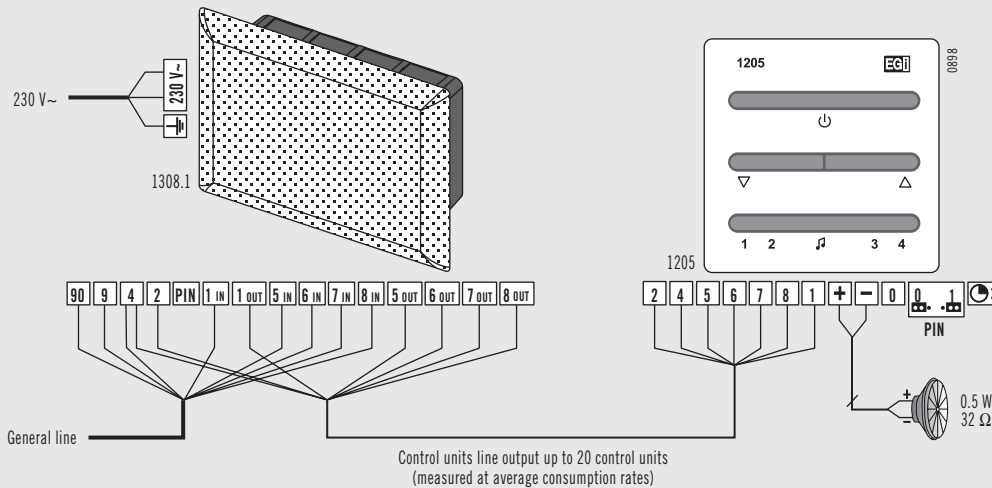


WARNING: The speaker output of this unit does not carry the 7 V_{oc} component necessary to be connected to the "IN" or "PIN" input of a "Millennium" amplifier. If the result signal of a control unit must be directed to a "PIN" or "IN" input, please use control unit 1207.xx.

TECHNICAL SPECIFICATIONS	1205
Power supply	15 V _{ac} by general line
Power	1 W; minimum line impedance 16 Ω
Current consumption (@ max. power)	250 mA

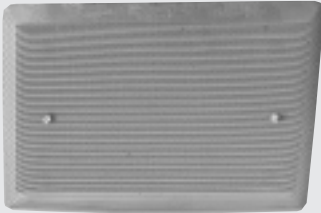
Connection details

1205 4-channel control unit
1308.1 Power supply & buffer



Control units line output up to 20 control units
(measured at average consumption rates)

Power supply | 1307.1



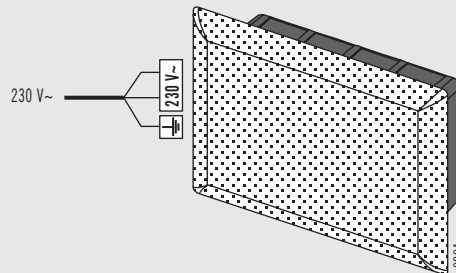
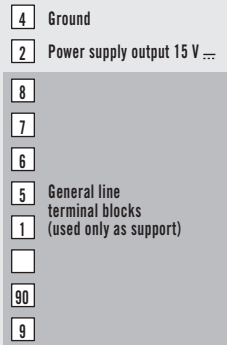
1307.1 15 V_{DC}, 20 W power supply powered at 230 V~

- 15 V_{DC}, 20 W power supply with protection against short-circuits and polarity inversion.
- It can be connected in parallel with other units.
- It can be used as general line connection box.
- 230 V~ input.

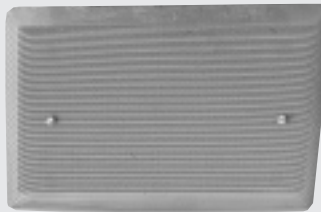
1307 15 V_{DC}, 20 W power supply powered at 48 V~

- Same features that 1307.1 with 48 V~ input.

Schematics ¹



Power supply & buffer | 1308.1



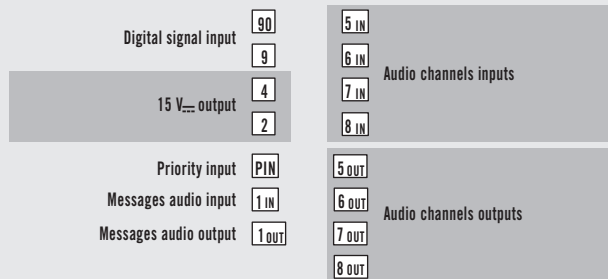
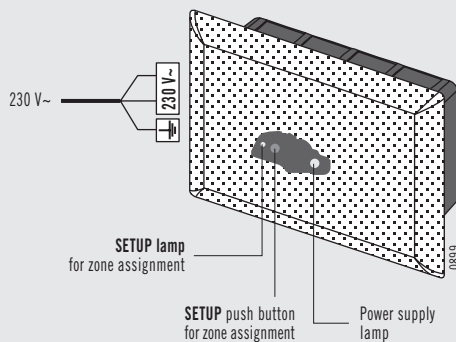
1308.1 15 V_{DC}, 20 W power supply & buffer powered at 230 V~

- 15 V_{DC}, 20 W power supply with protection against short-circuits and polarity inversion.
- It can be used as general line connection box.
- With 5 audio channels buffer to reduce cabling sections.
- 230 V~ input.
- It can supply power to a max. nr. of 20 control units 1205 (measured at average consumption rates).

1308 15 V_{DC}, 20 W power supply & buffer powered at 48 V~

- Same features that 1308.1 with 48 V~ input.

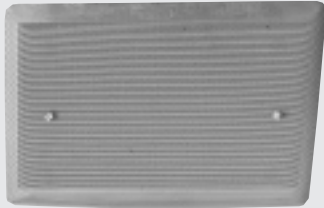
Schematics ¹



TECHNICAL SPECIFICATIONS	1307.1
Power supply	230 V~
Output	15 V _{DC}
Power	20 W
Consumption	25 W
Current supply	1'3 A

TECHNICAL SPECIFICATIONS	1308.1
Power supply	230 V~
Output	15 V _{DC}
Power	20 W
Consumption	25 W

Amplifier 1309.1



1309.1 20 W Amplifier with override input. 230 V~

- 10 + 10 W (2 Ω) / 20 W (4 Ω) amplifier.
- With 3 mixed audio inputs, one of them adjustable plus another with override.
- It can be used as general line junction box.
- 230 V~ power supply.

1309 20 W Amplifier with override input. 48 V~

- Same features that 1309.1 with 48 V~ input.

The order of priority of the amplifier inputs is the following (from higher to lower):

- 1) Audio signals arriving at the "1" terminal block –if the digital information at wires "9" and "90" confirms that there is a general call or a private message to this zone-
- 2) Audio signals arriving to the PIN input (see below for connection of non-Millennium devices)
- 3) Audio signals arriving to the IN inputs.

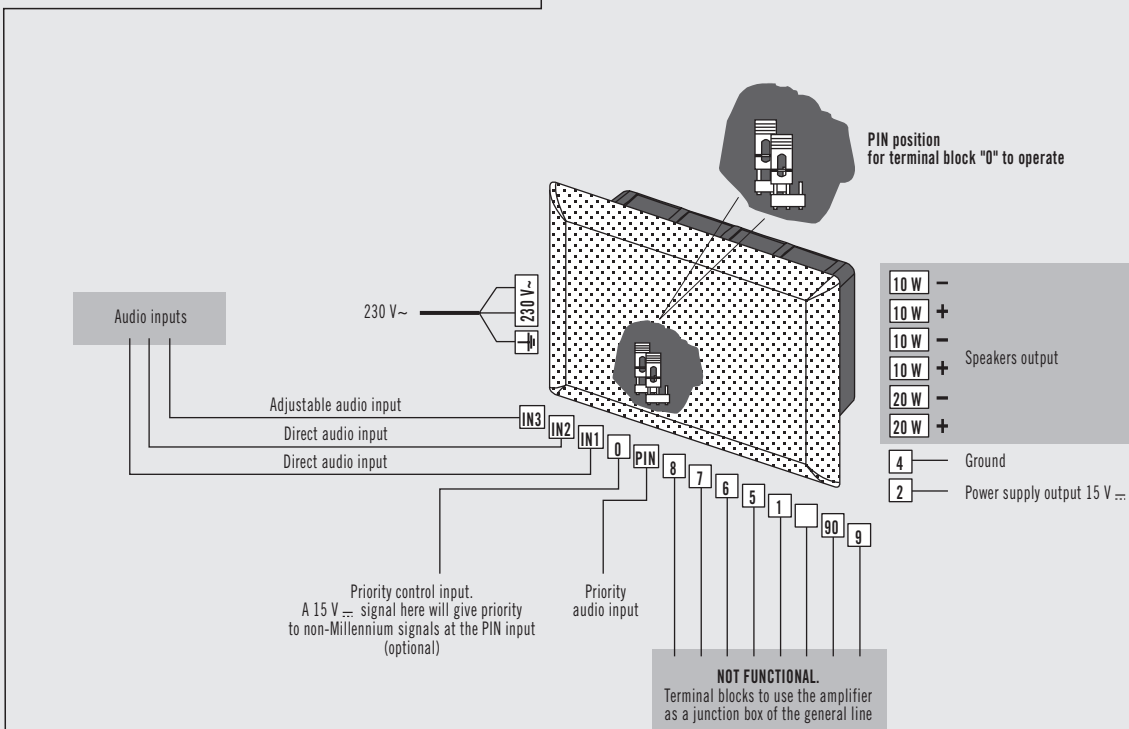
Whenever an audio signal reaches one of these inputs, all the inputs that have a lower priority level fade down and remain silent as long as the new signal is present. There are three IN inputs in the amplifier. The gain of two of them is constant, while the gain of the third one is adjustable. These inputs are added (mixed) internally giving as a result an input signal to the multiplexer.

If the audio signal reaching a PIN or a IN input of this amplifier comes from a Millennium device, its origin can be a OUT output (such as those present in auxiliary input modules or in volume regulators for microphone bases) or the "+" terminal of a control unit. In these cases, the micro-controller of the amplifier detects a direct voltage component (7 VDC) that is transmitted together with the audio signal and it reacts to that signal by giving access to it according to the above explained priority order. This 7VDC signal is typical of the Millennium devices, except for the 1205.

Normally non-Millennium audio sources should be connected to the sound system through their specific pre-amplifiers (1105, 1106 and 1107). If we wanted an audio signal that does not come from a Millennium device to directly enter the amplifier, we must connect it to the PIN input. In order for this signal to be detected by the PIN input, a signal of 15 VDC must be provided to the terminal block "0", and it will have to remain present as long as we want the signal to keep being broadcast.

Regarding the amplified output, it can be configured in two different ways: **two 10 W outputs** over a minimum load of 2 W each or as a **single 20 W output** over a minimum 4 Ω load. The amplifier itself is able to detect how the speakers are connected (if connected only to the 20 W output or if distributed between the two 10 W outputs) and gets automatically self-configured according to this.

Schematics ¹

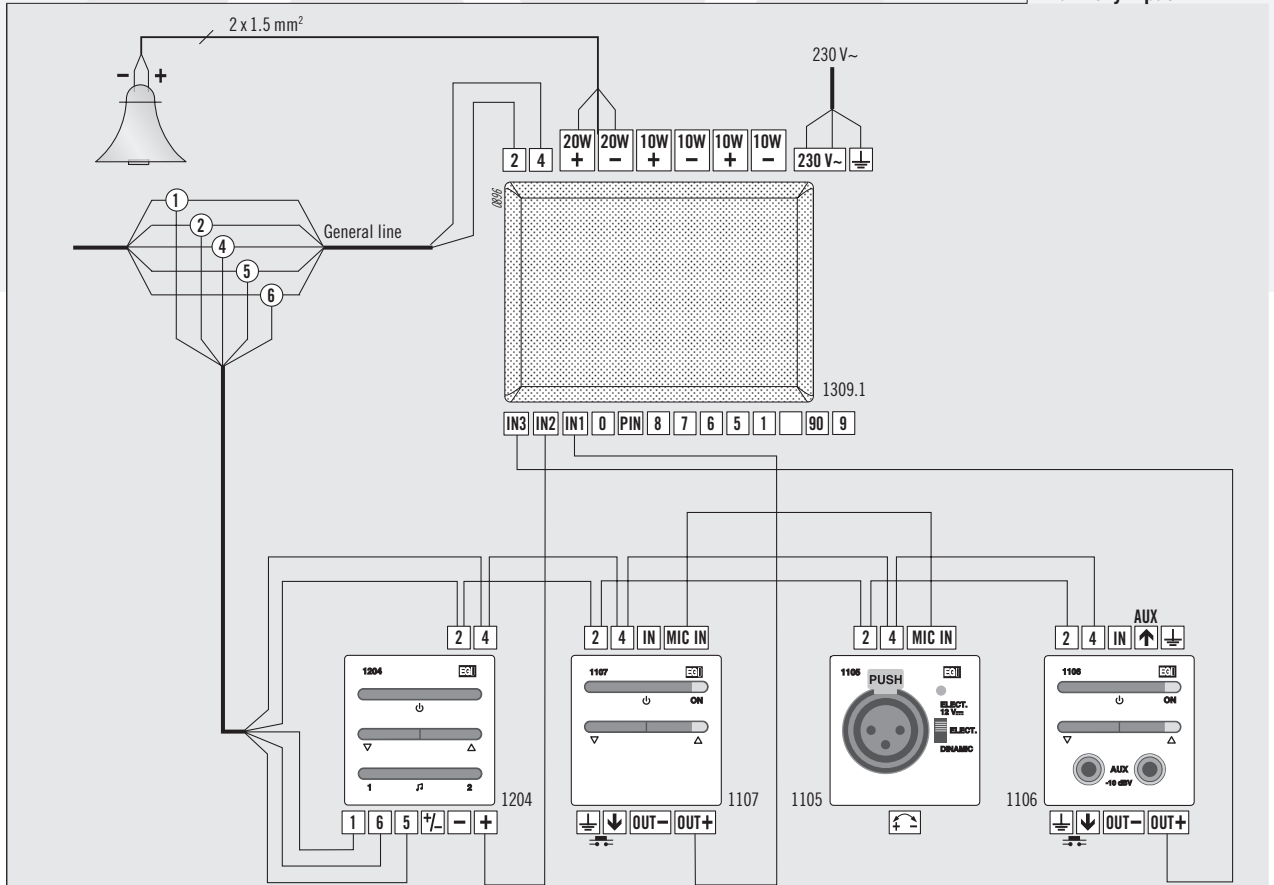


		NUMBER OF SPEAKERS	
		16 Ω	32 Ω
10+10W	20W	Up to 4 speakers	Up to 8 speakers
	10+10W	8 + 8 speakers	16 + 16 speakers

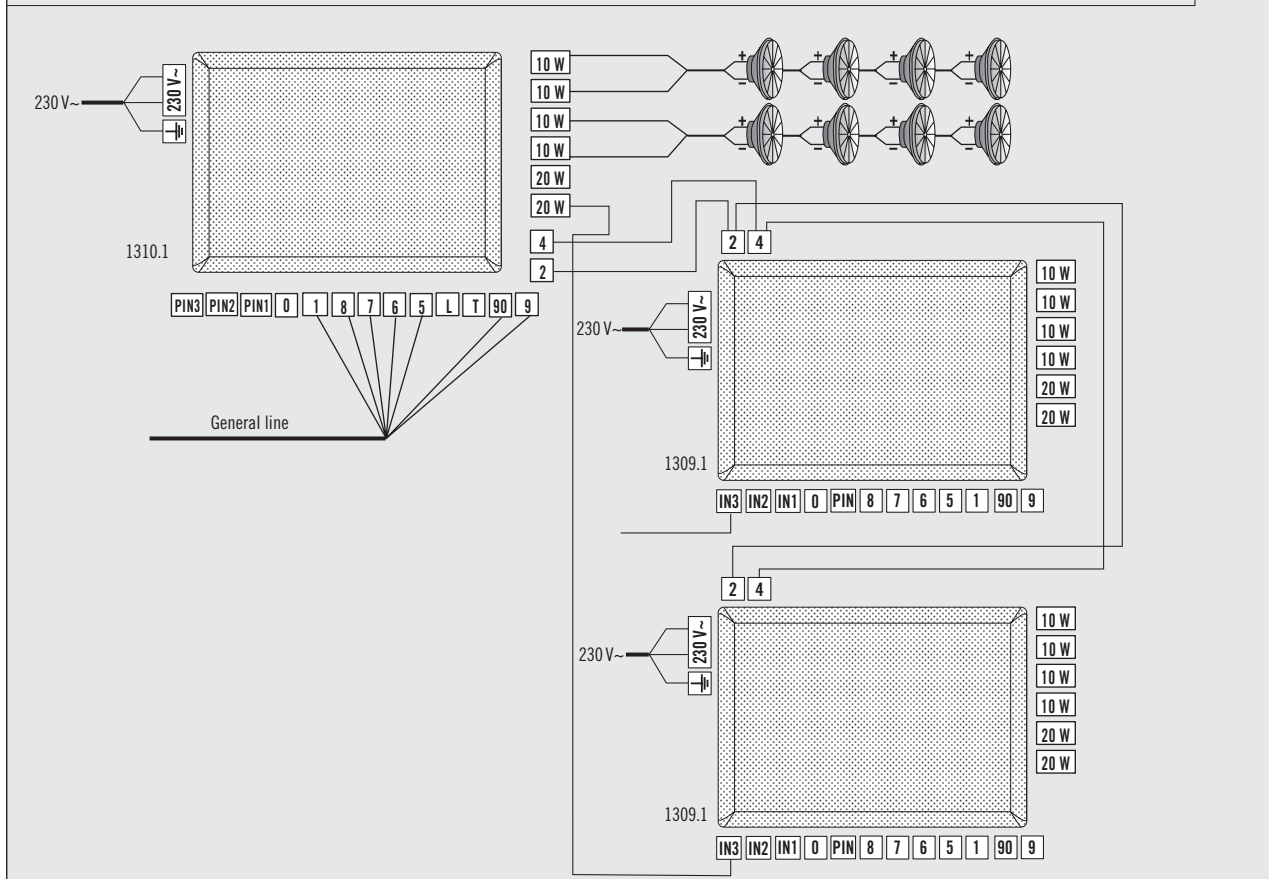
TECHNICAL SPECIFICATIONS	1309.1
Power supply	230 V~
Power	20 W; minimum line impedance 4 Ω
Power	10 + 10 W; minimum line impedance 2 Ω
Consumption	40 W

Connection details

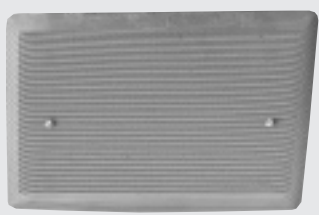
Amplifier. Control Unit.
Microphone base with
volume regulator.
Auxiliary input



«Master» amplifier 1310.1 driving two «slave» power boosters 1309.1



Digital 20 W amplifier | 1310.1



1310.1 Digital 20 W amplifier. 230 V~

- 10 + 10 W (2 Ω) / 20 W (4 Ω) amplifier.
- With 3 mixed audio inputs, one of them adjustable.
- Message broadcast with override input.
- Digital assignment of zone number.
- Functional terminals for connection to general line.
- 230 V~ power supply.

1310 Digital 20 W amplifier. 48 V~

- Same features that 1310.1 with 48 V~ input.

The order of priority of the amplifier inputs is the following (from higher to lower):

- 1) Audio signals arriving at the "1" terminal block –if the digital information at wires "9" and "90" confirms that there is a general call or a private message to this zone-
- 2) Audio signals arriving to the **PIN** input (see below for connection of non-Millennium devices)
- 3) Audio signals arriving to the IN inputs.
- 4) Audio signals from the general line channels arriving through the inputs "5", "6", "7" and "8".

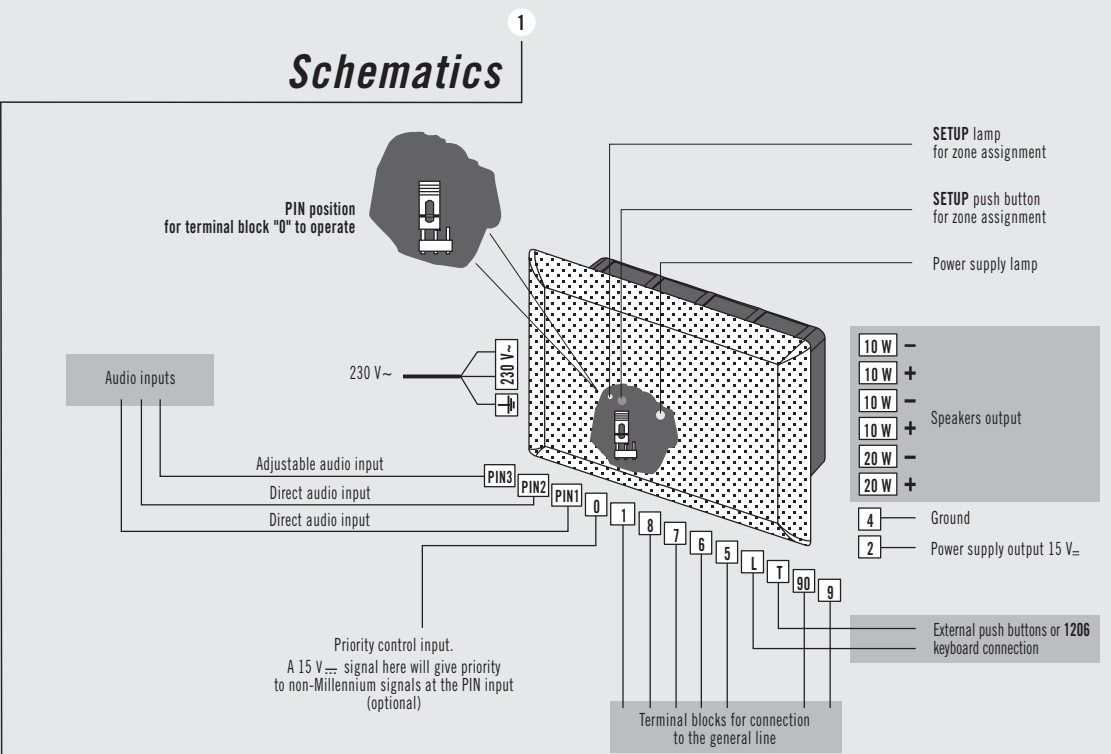
Whenever an audio signal reaches one of these inputs, all the inputs that have a lower priority level fade down and remain silent as long as the new signal is present. There are three **PIN** inputs in the amplifier. The gain of two of them is constant, while the gain of the third one is adjustable. These inputs are added (mixed) internally giving as a result an input signal to the multiplexer.

If the audio signal reaching a PIN input of this amplifier comes from a Millennium device, its origin can be a OUT output (such as those present in auxiliary input modules or in volume regulators for microphone bases) or the "+" terminal of a control unit. In these cases, the micro-controller of the amplifier detects a direct voltage component (7 VDC) that is transmitted together with the audio signal and it reacts to that signal by giving access to it according to the above explained priority order. This 7VDC signal is typical of the Millennium devices, except for the 1205.

Normally non-Millennium audio sources should be connected to the sound system through their specific pre-amplifiers (1105, 1106 and 1107). If we wanted an audio signal that does not come from a **Millennium** device to directly enter the amplifier, we must connect it to one of the **PIN** inputs. In order for this signal to be detected by the PIN inputs, a signal of 15 VDC must be provided to the terminal block "0", and it will have to remain present as long as we want the signal to keep being broadcast.

Regarding the amplified output, it can be configured in two different ways: **two 10 W outputs** over a minimum load of 2 Ω each or as a **single 20 W output** over a minimum 4 Ω load. The amplifier itself is able to detect how the speakers are connected (if connected only to the 20 W output or if distributed between the two 10 W outputs) and gets automatically self-configured according to this.

Schematics



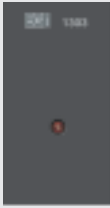
NUMBER OF SPEAKERS

	16 Ω	32 Ω
20 W	Up to 4 speakers	Up to 8 speakers
10+10 W	8 + 8 speakers	16 + 16 speakers

TECHNICAL SPECIFICATIONS

	1310.1
Power supply	230 V~
Power	20 W; minimum line impedance 4 Ω
Power	10 + 10 W; minimum line impedance 2 Ω
Consumption	40 W

10 + 10 W amplifier | 1303



1303 2-zone amplifier. 2 x (10 W / 5 + 5 W)

- Modular amplifier for 2 zones of (10 W / 5 + 5 W) each.
- To connect up to 16 speakers in each zone.
- Equalization according to the connected speakers.
- Volume with 80 steps of 1 dB and loudness.
- Message override (PIN inputs + digital message control).

Schematics 1

Terminals blocks Screw for mounting on the processor

0910

20 pin connector Screw for mounting on the processor

SETUP lamp for zone assignment

SETUP push button for zone assignment

PIN 1 Priority input, Zone 1
PIN 2 Priority input, Zone 2

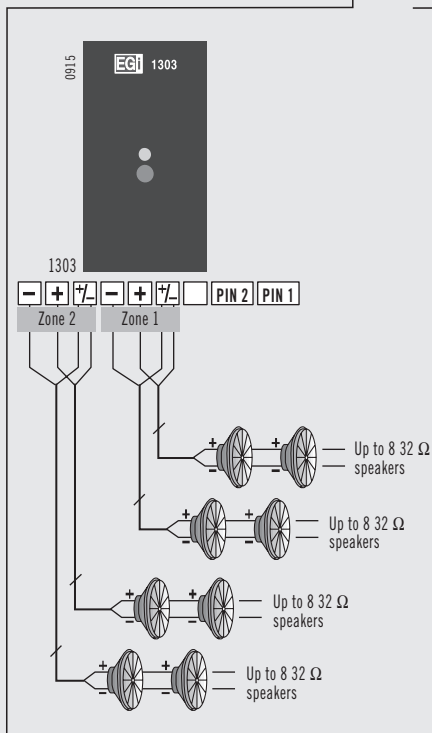
+/− Zone 1 output
 − Zone 1 output

+/− Zone 2 output
 − Zone 2 output

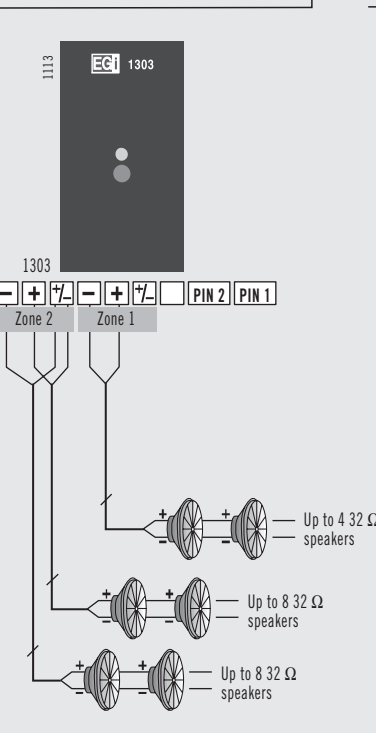
NUMBER OF SPEAKERS IN EACH ZONE				
		4 Ω	16 Ω	32 Ω
1 line wiring 10 W	Min impedance 8 Ω	→	2	4
2-line wiring 5 + 5 W	Min impedance 4 Ω		1 + 1	4 + 4 8 + 8

* See connection of this amplifier to the audio processor 1302 at page 24.

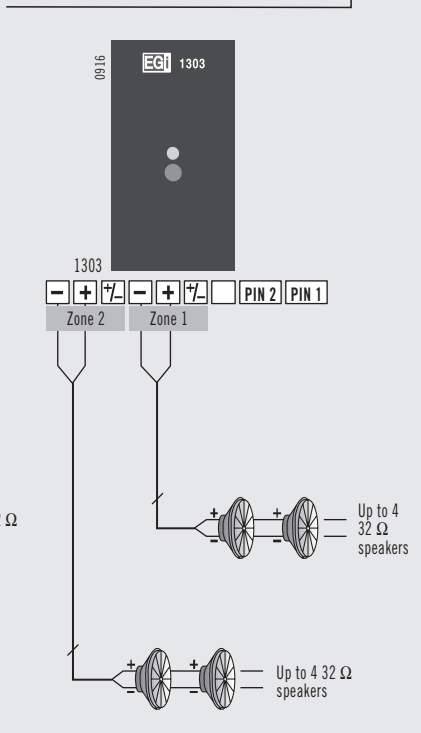
1303 speaker wiring of each zone in 2 lines (5 W each) 2



speaker wiring of one zone in 1 line (10 W) and the other zone in two lines (5 W each) 3

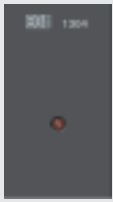


speaker wiring of one zone in 1 line (10 W) and the other zone in two lines (5 W each) 4



TECHNICAL SPECIFICATIONS	1303
Continuous power supply	15 V _{DC}
High power output	10 W; minimum line impedance 8 Ω
Low power output between the terminals (+, +/-) and (-, +/-)	5 W; minimum line impedance 4 Ω

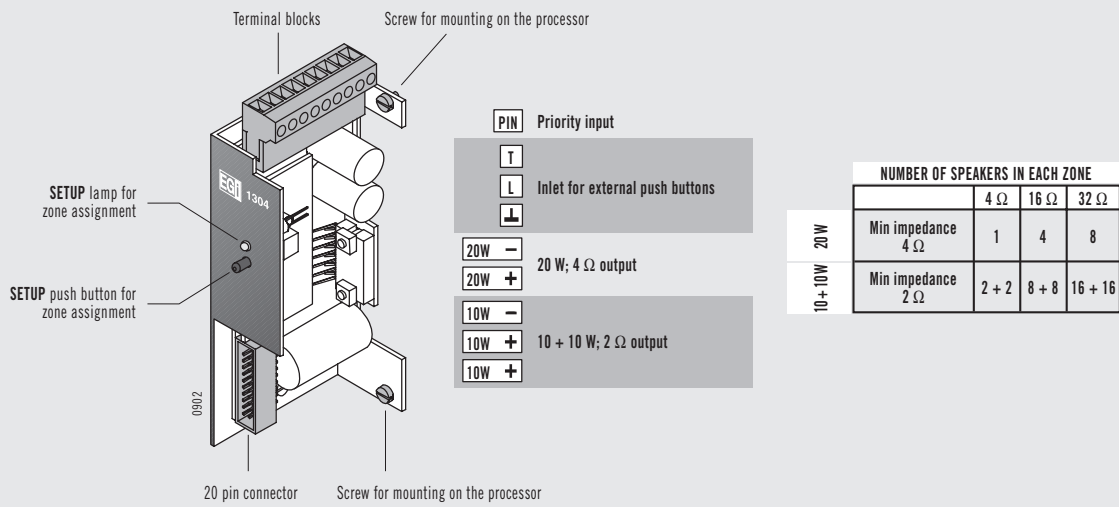
20 W amplifier | 1304



1304 1-zone amplifier. 10 + 10 W / 20 W

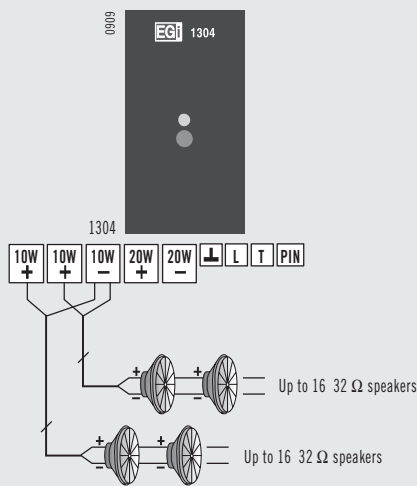
- Modular amplifier for 1 zone 10 + 10 W (20 W).
- To connect up to 32 speakers.
- Equalization according to the connected speakers.
- Volume with 80 steps of 1 dB and loudness.
- Input for local volume regulation using 2 standard electric push buttons.
- Message override (PIN inputs + digital message control).

Schematics 1

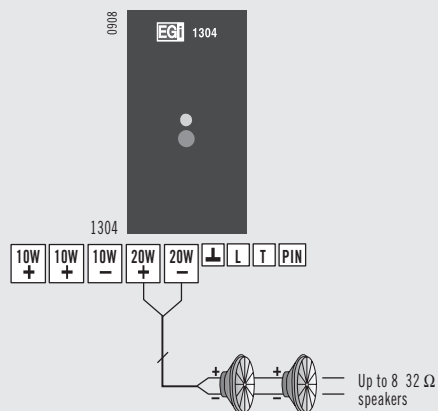


* See connection of this amplifier to the audio processor 1302 at page 24.

1304 speaker wiring in 2 lines 2



1304 speaker wiring in 1 line 3



TECHNICAL SPECIFICATIONS

	1304
Continuous power supply	15 V ...
Input impedance	70 K Ω
High power output	20 W; minimum line impedance 4 Ω
Low power output between the terminals (+, +/-) and (-, +/-)	10 + 10 W; minimum line impedance 2 Ω

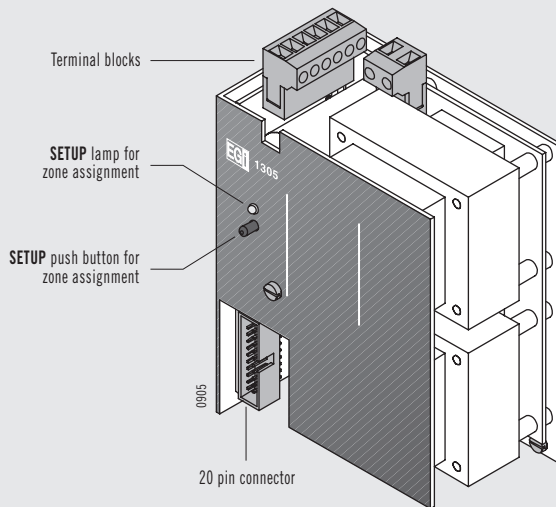
40 W amplifier | 1305



1305 1-zone amplifier. 40 W, 100 V output

- Modular amplifier for 1 zone (40 W) with 100 V line output.
- Equalization according to the connected speakers.
- Volume with 80 steps of 1 dB and loudness.
- Message override (PIN inputs + digital message control).
- Input for local volume regulation using 2 standard electric push buttons.

Schematics 1

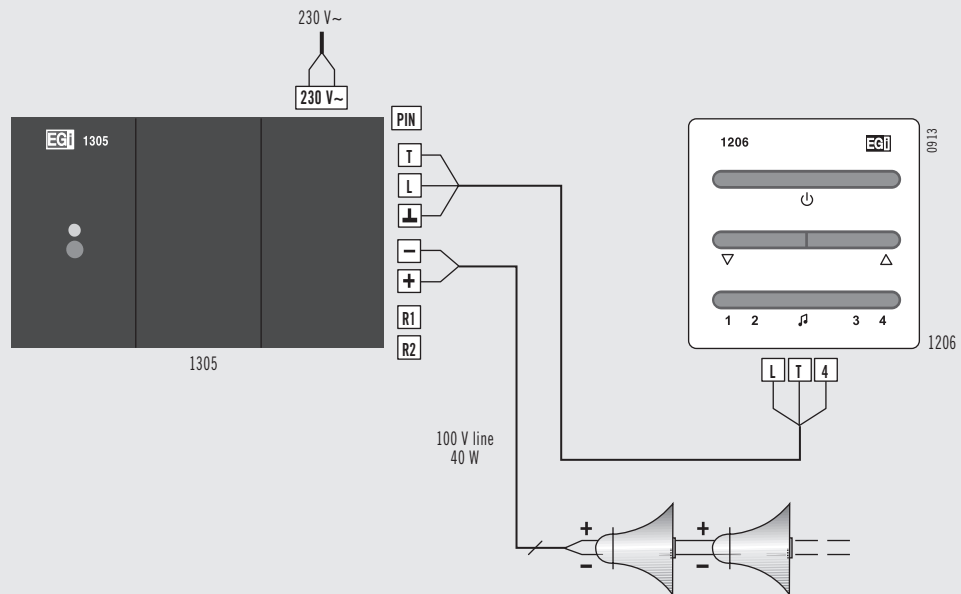


- PIN** Priority input
- T** Input for external push buttons or digital keyboard 1206
- L**
- +** 100 V audio signal output
250 Ω minimum load
-
- 230 V~** Power supply 230 V~

* See connection of this amplifier to the audio processor 1302 at page 24.

1305 connection to horn speakers/projectors and 1206 digital keyboard 2

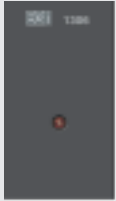
Use of the keyboard is optional



TECHNICAL SPECIFICATIONS

	1305
Mains power supply	230 V~ ; 50/60 Hz; 70 VA
Continuous power supply	15 V~ by general line
100 V output	250 Ω; 40 W
Input impedance	50 K Ω

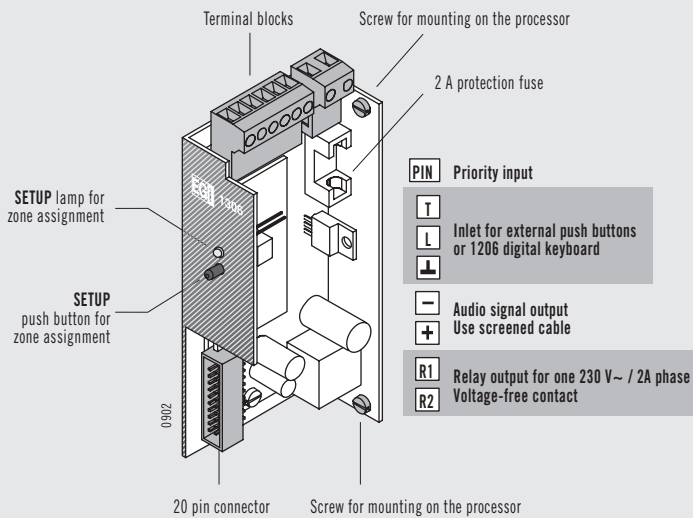
Adapter for output power stages 1306



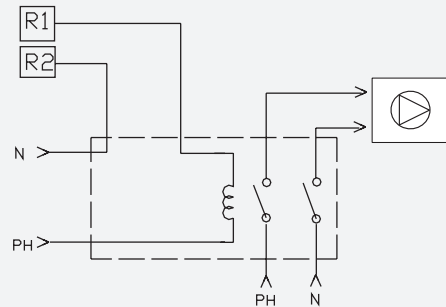
1306 Adapter for 250 W output power stages

- Adapter for up to 250 W output power stages to connect external power amplifiers to the sound installation.
- It includes a solid state relay for automatically turning ON the amplifier and audio output isolated by means of a transformer.
- Equalization according to the connected speakers.
- Volume with 80 steps of 1 dB and loudness.
- Input for local volume regulation using 2 standard electric push buttons.
- Message override (PIN inputs + digital message control).

Schematics 1



NOTE: The solid state relay inside the 1306 module only allows the driving of power amplifiers up to 250 Watts. If the mains connection of a bigger amplifier must be controlled, an external relay can be added by following the diagram below."



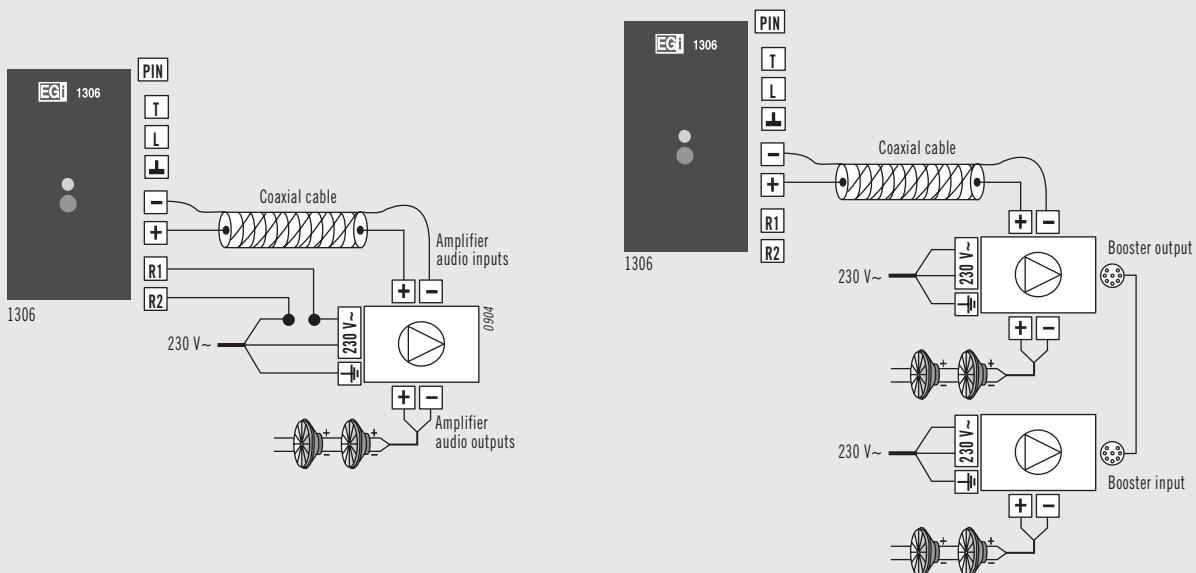
* See connection of this module to the audio processor 1302 at page 24.

TECHNICAL SPECIFICATIONS	1306
Power supply	15 V ~
Input impedance	50 K.Ω
Output impedance	600 Ω

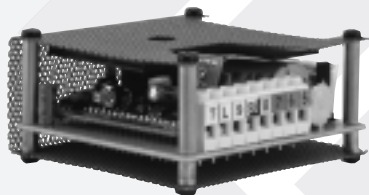
1306 module driving the mains connection of a 100 V power amplifier

Audio connection of a 1306 and some 100 V power amplifiers leaving their mains permanently connected

1306 module
100 V line amplifier



Digital 10 W amplifier 1311



1311 Digital 10 W amplifier. 15 V_{DC}

- 10 W digital amplifier with 4 channels.
- With 3 mixed audio inputs with priority, one of them adjustable.
- To be installed in 100 x 100 mm standard connection box.
- It can be controlled from the 1202 control console, from 1206.xx digital control keyboards or using standard electric push buttons.
- 15 V_{DC} power supply.

The order of priority of the amplifier inputs is the following (from higher to lower):

- 1) Audio signals arriving at the "1" terminal block –if the digital information at wires "9 and 90" confirms that there is a general call or a private message to this zone.-
- 2) Audio signals arriving to the PIN inputs (see below for connection of non-Millennium devices).
- 3) Audio signals from the general line channels arriving through the inputs "5, 6, 7 and 8".

Whenever an audio signal reaches one of these inputs, all the inputs that have a lower priority level fade down and remain silent as long as the new signal is present.

There are three PIN inputs in the amplifier. The gain of two of them is constant, while the gain of the third one is adjustable. These inputs are added (mixed) internally giving as a result an input signal to the multiplexer.

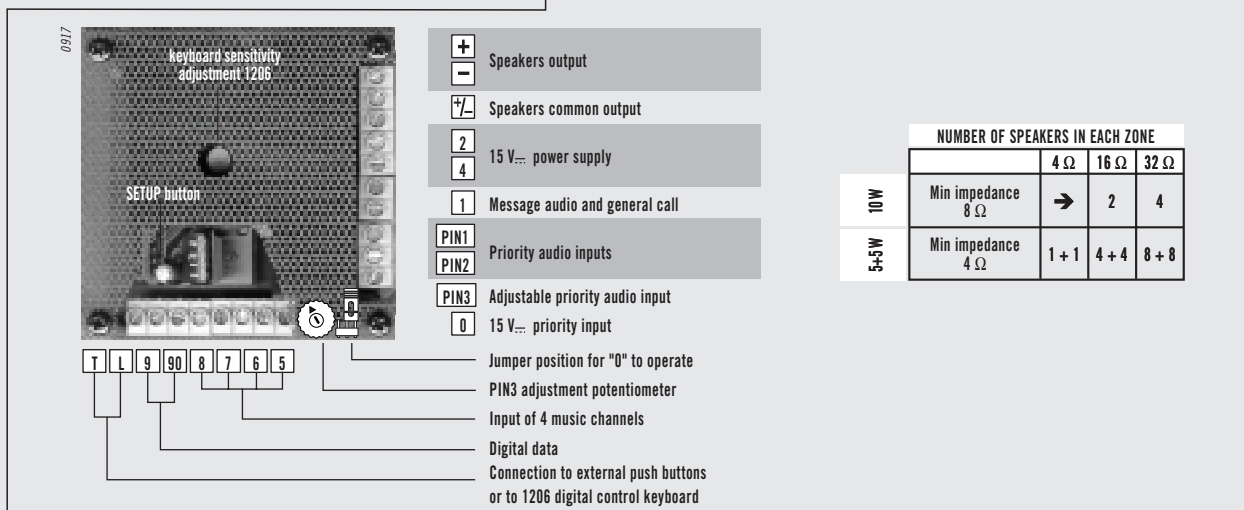
If the audio signal reaching a PIN input of this amplifier comes from a Millennium device, its origin can be a OUT output (such as those present in auxiliary input modules or in volume regulators for microphone bases) or the "+" terminal of a control unit. In these cases, the micro-controller of the amplifier detects a direct voltage component (7 V_{DC}) that is transmitted together with the audio signal and it reacts to that signal by giving access to it according to the above explained priority order. This 7V_{DC} signal is typical of the Millennium devices, except for the 1205.

Normally non-Millennium audio sources should be connected to the sound system through their specific pre-amplifiers (1105, 1106 and 1107). If we wanted an audio signal that does not come from a Millennium device to directly enter the amplifier, we must connect it to one of the PIN inputs. In order for this signal to be detected by the PIN inputs, a signal of 15 V_{DC} must be provided to the terminal block "0", and it will have to remain present as long as we want the signal to keep being broadcast.

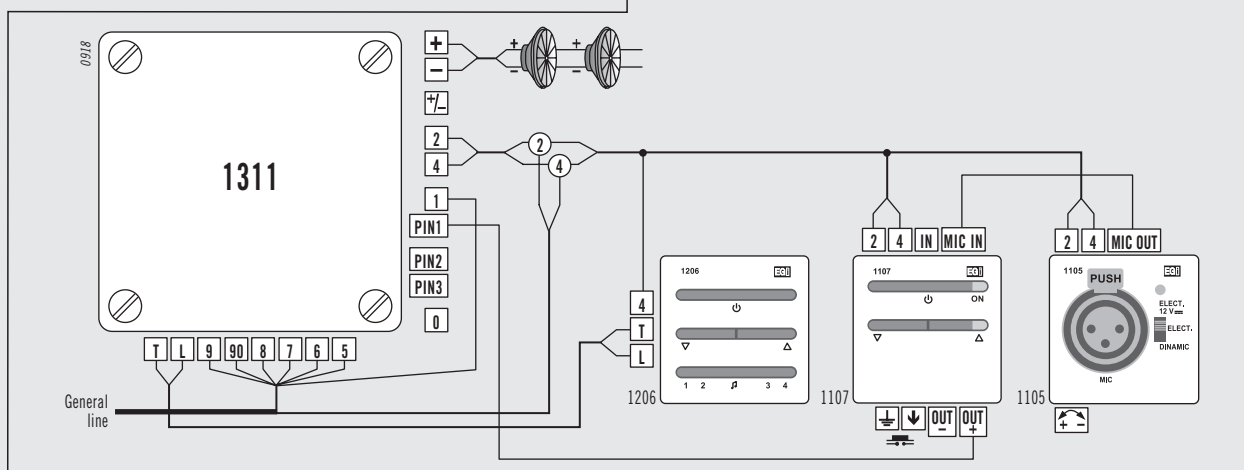
Regarding the amplified output, it can be configured in two different ways: two 5 W outputs over a minimum load of 4 Ω each or as a single 10 W output over a minimum 8 Ω load.

The amplifier itself is able to detect how the speakers are connected (if connected only to the 10 W output or if distributed between the two 5 W outputs) and gets automatically self-configured according to this.

Schematics 1



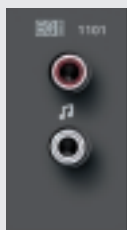
1311 connection to 1105 pre-amplified XLR microphone base and 1206 digital control keyboard 2



TECHNICAL SPECIFICATIONS

	1311
Power supply	15 V _{DC}
Power	10 W; min line impedance 8 Ω
Input impedance	60 K Ω

Modular RCA audio input | 1101

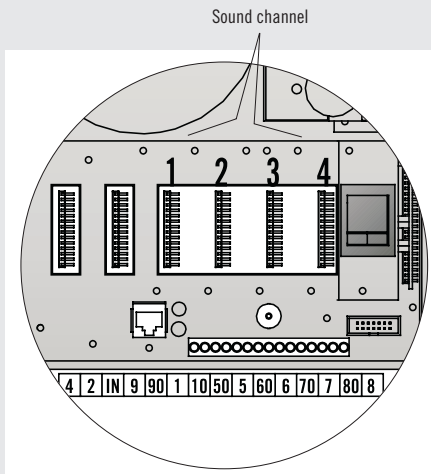


1101 Modular RCA audio input with compressor

- Modular RCA audio input with compressor for connecting an external music source to the sound installation.
- The audio signal can be connected externally (RCA) or internally using a terminal strip.
- Automatic adjustment of sensitivity (316 mV to 3.16 V).
- Lamp indicating signal presence.
- Possibility of balanced output.

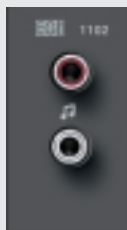
Schematics ¹

Details of location and assembly order in the 1302 processor. Begin always with position 1.



* See connection of this module to the audio processor 1302 at page 24.

Modular digital FM tuner | 1102

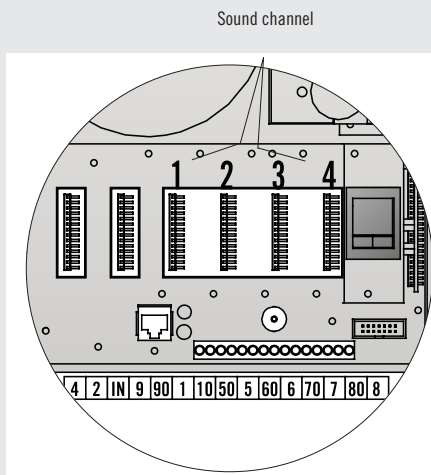


1102 Modular digital FM tuner

- Modular digital FM tuner as internal music source for the sound installation.
- It also includes an RCA audio input for connecting another external music source.
- The audio signal can be connected externally (RCA) or internally using a terminal strip.
- Automatic adjustment of sensibility (316 mV to 3.16 V).
- Lamp indicating signal presence.
- Possibility of balanced output.

Schematics ¹

Details of location and assembly order in the 1302 processor. Begin always with position 1.



TECHNICAL SPECIFICATIONS	1101 • 1102
Power supply	15 V $\overline{=}$
Input impedance	20 K Ω

WARNING: If an external audio source has been connected to the system through a wall base 1501, the position 1 of the audio processor must be left empty, and any module 1101 or 1102 must be placed from position 2 on.

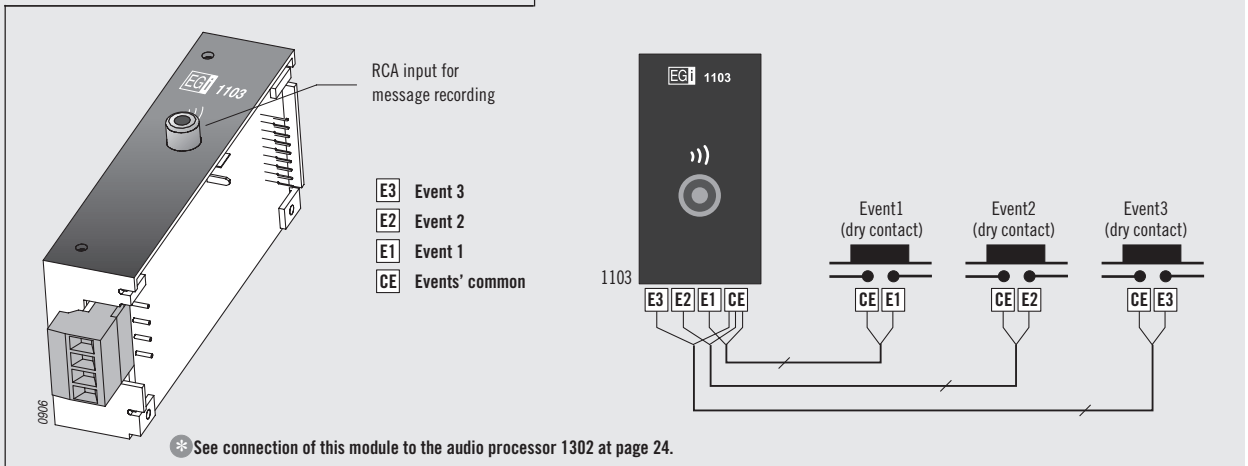
Pre-recorded message player 1103



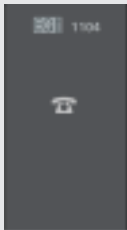
1103 Modular pre-recorded message player

- Modular pre-recorded message player with capacity of 8 messages, lasting up to 15 seconds each.
- Messages can be issued at a scheduled time and in the selected zones or groups by using the 1202 control console.
- The message recording can be done either directly using the 1202 gooseneck microphone or through the front RCA input included.
- This module allows the input of up to 3 external events, such as signals coming from presence detectors, smoke detectors, etc. These signals activate the scheduled message issuing to the programmed zone (see 1202 console setup) depending on the event status.

Schematics 1



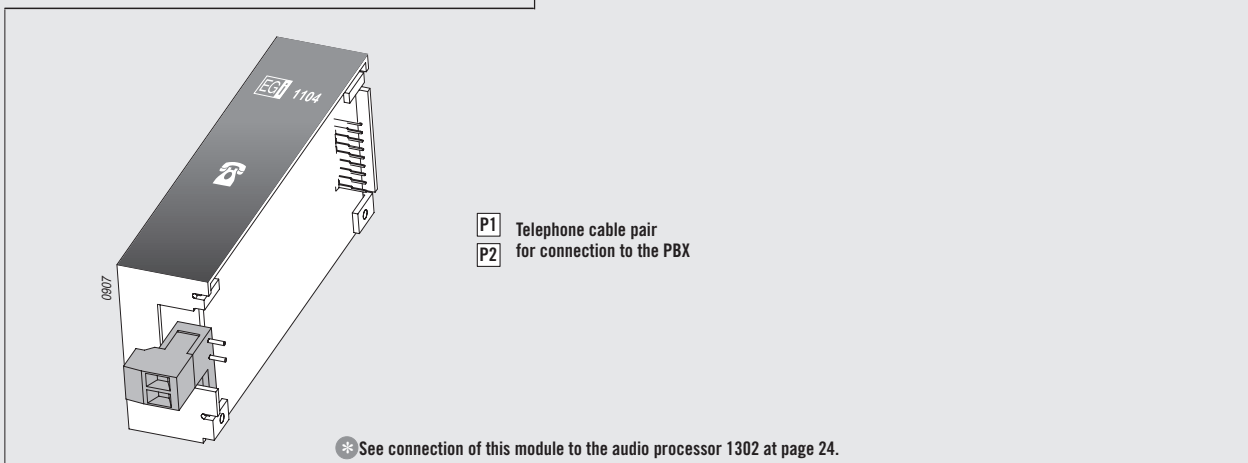
Module for telephone messages 1104



1104 module for telephone messages

- Module for telephone messages, allowing the issuing of public address messages by zones from any telephone handset.
- The operating instructions are pre-recorded and direct the user by voice commands.
- Automatic shutdown timer that acts if the user forgets to hang the phone.
- Connected to a PBX with 2 wires, like a normal phone.
- It is integrated in the telephone system like an analogic extension of the PBX.

Schematics 1



TECHNICAL SPECIFICATIONS	1103 • 1104
Power supply	15 V $\overline{=}$
Input impedance	600 Ω

Digital control keyboard | 1206



1206.10 Digital control keyboard. White.

- Digital control keyboard for up to 4 sound channels, to be installed in standard Ø 60 mm box.
- Selected channel indicator lamps.
- To combine with 1310.x, 1311, 1306, 1305, and 1304 digital amplifiers.
- Up to 3 can be installed in parallel, in the same zone. (To the same amplifier.)
- It can only activate one digital amplifier.

1206.12 Digital control keyboard. Black.

- Same features that the 1206.10 in black.

Operation mode

SETUP

During the setup of the system, when zone numbers are being assigned, the channel indicator lamps corresponding to channels 1 and 2 will blink slowly. When pressing any key the zone number is assigned and the leds will stop blinking. When the setup process is finished, the control keyboard will turn back to its normal operation mode again.

Sensitivity Regulation

In case the control keyboard did not work correctly (the volume level can only be increased but not decreased, the channel can not be selected, etc) there may be a conflict between the amplifier and the control keyboard due to the sensitivity level of the amplifier. This can be regulated in the amplifiers 1304, 1305, 1306, 1310 and 1311, by means of a potentiometer (see picture below). Turn the potentiometer until the lamp D20 turns off.

Schematics

1 ON/OFF push button

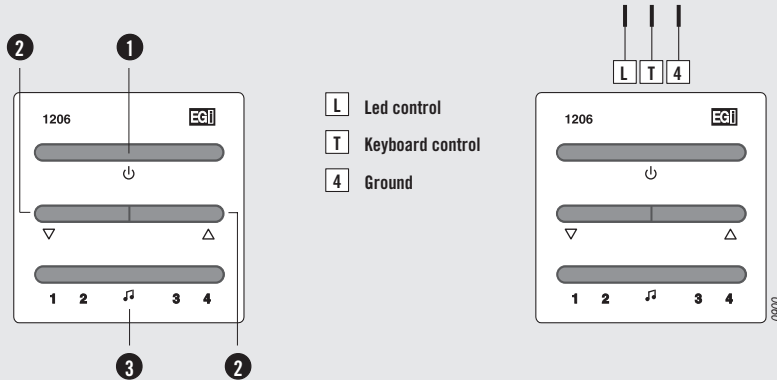
One press turns on and the next press turns off the digital amplifier that drives the speakers of that zone.

2 Volume regulator

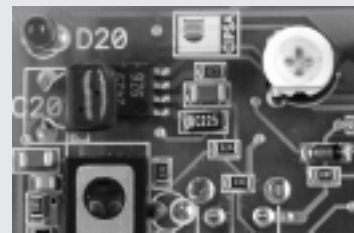
To raise or to lower the volume level of the amplifier to which the digital keyboard is connected.

3 Channel selector

This push button allows selecting the music channel that will be played in a zone. Each press will change between the four available channels, and the selection will be showed by the light of a red lamp.

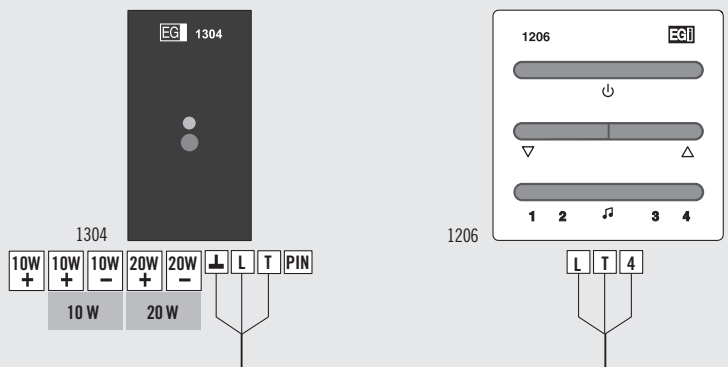


Detail of the amplifier motherboard



Connection details

1206 digital control keyboard
1304 amplifier



* Maximum distance between the keyboard and the amplifier 300 ft. (100 m).

4-Channel control unit. 2 W | 1207



1207.10 4-Channel control unit 2W. 1-4 speakers. Message override. Zone assignment. White.

- 4-channel control unit, 2 W power for connecting up to 4 speakers.
- Digital volume regulation with 80 steps of 1 dB.
- It can store a zone number in the setup process.
- Digital message broadcast with override facility.
- It can be controlled from a control console 1202.

1207.12 4-Channel control unit 2W. 1-4 speakers. Message override. Zone assignment. Black.

- Same features that the 1207.10 in black.

Operation mode

SETUP

During the setup of the system, when zone numbers are being assigned, the channel indicator lamps corresponding to channels 1 and 2 will blink slowly. When pressing any key the zone number is assigned and the leds will stop blinking. When the setup process is finished, the control keyboard will turn back to its normal operation mode again.

Message Broadcast With Priority

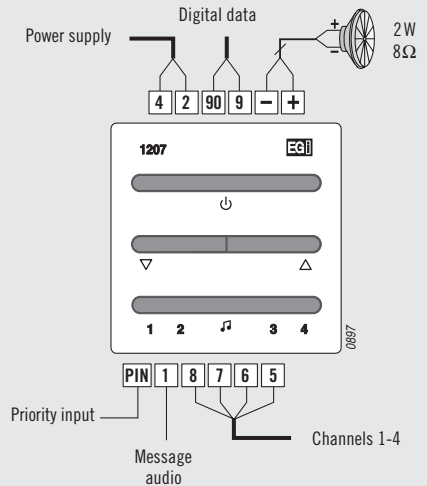
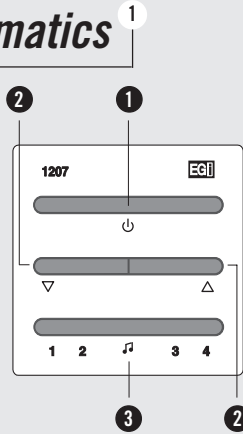
While a priority message (received at the PIN inlet) is being broadcast, the lamps of channels 1 and 4 will blink, and the control unit is self-configured at its maximum volume level. The volume level of the audio signal should be regulated at the device that is connected to the PIN input.

ERROR

If an error occurs, whether a communication one or an error in the setup memory, the led lamps of channels 3 and 4 will start blinking quickly until the problem is solved or a new correct transmission has been received.

Schematics

- ON/OFF push button**
One press turns on and the next press turns off the sound system in that zone.
- Volume regulator**
To raise or to lower the volume level of the control unit.
- Channel selector**
This push button allows selecting the music channel that will be played in a zone. Each press will change between the available channels, and the selection will be showed by the light of a red lamp.



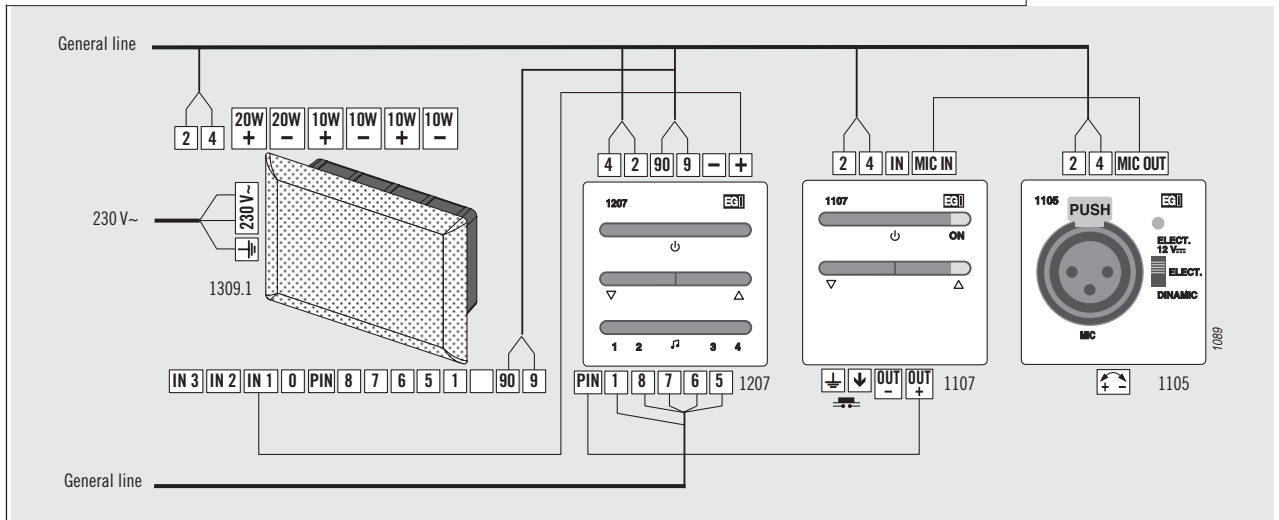
TECHNICAL SPECIFICATIONS

1207

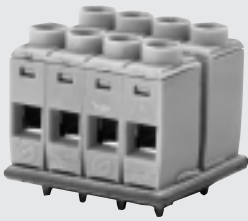
Power supply	15 V \pm by general line
Power	2 W; min line impedance 8 Ω
Current consumption (@ max. power)	340 mA

Connection details

4-Channel control unit 1207.
Amplifier with message override 1309.1



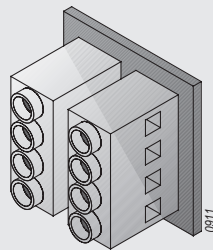
Push button adapter for digital amplifiers 1503



1503 Push button adapter for digital amplifiers

- Electric push buttons adapter for digital amplifiers

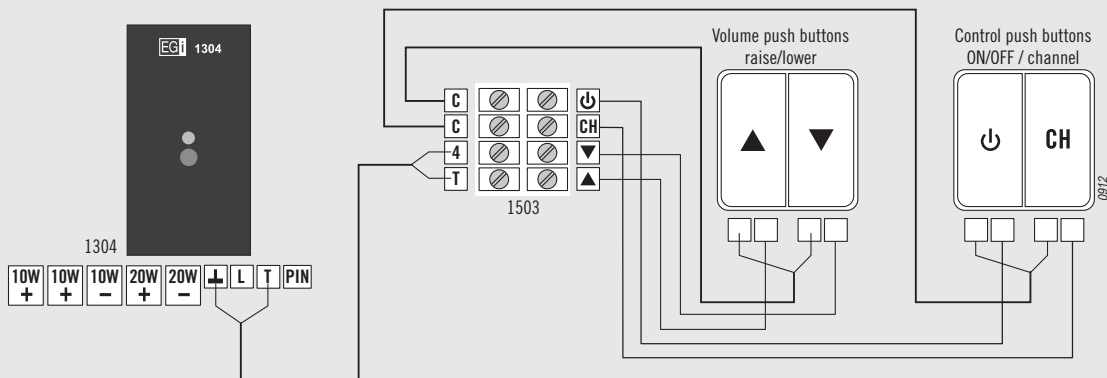
Schematics ¹



- C** Push buttons common
- C** Push buttons common
- 4** Ground
- T** Keyboard control
- ⏻** ON/OFF control
- CH** Channel control
- ▼** Lower volume
- ▲** Raise volume

Connection details

1503 adapter.
1304 amplifier.
External push buttons.



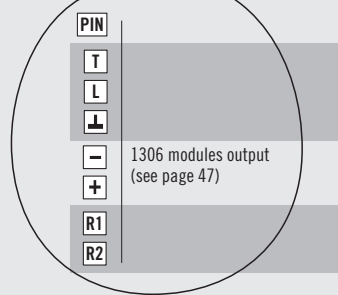
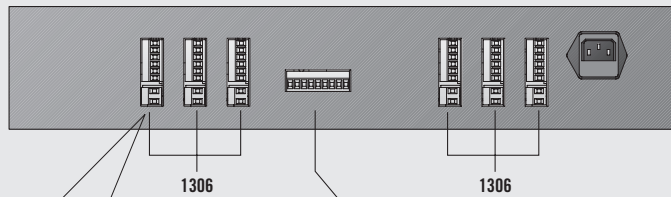
19" Rack for six 1306 adapters | 1312



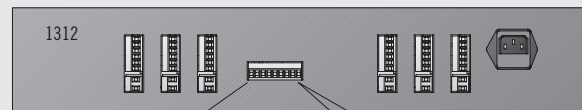
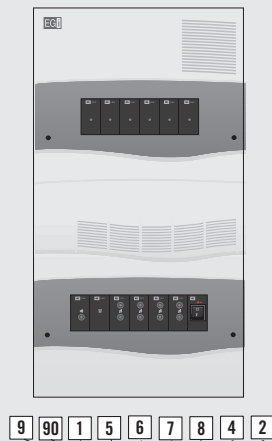
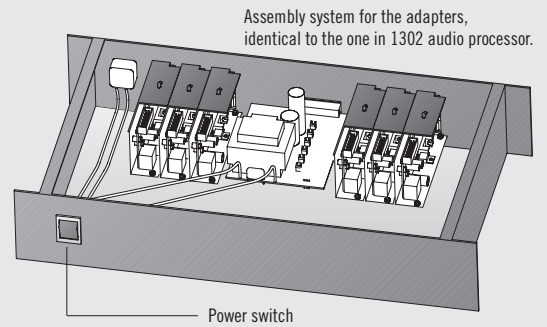
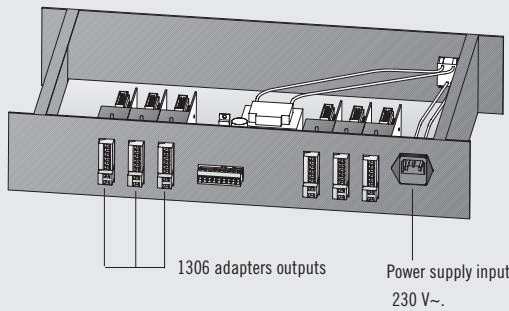
1312 19" Rack for 6 1306 adapters

- 19" rack for mounting up to six 1306 power stage adapters in mixed MILLENNIUM and 100 V public address installations.
- Can be connected through general line to the 1302 audio processor.
- Maximum connection length to the processor 1500 ft. (500 m).
- Maximum sound power 250 W per adapter.
- It takes 2 modular units of rack space.

Schematics 1



General line for connection to 1302 audio processor



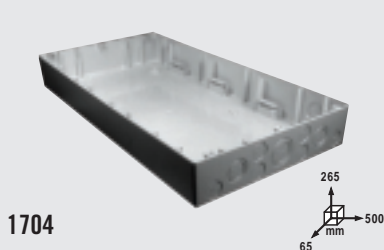
Ref. 1507

TECHNICAL SPECIFICATIONS	1312
Power supply	230 V~
Consumption	40 W

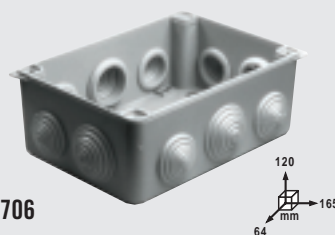
Covers and fitting boxes



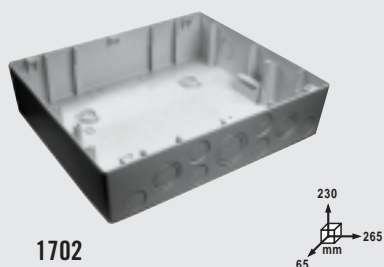
1701



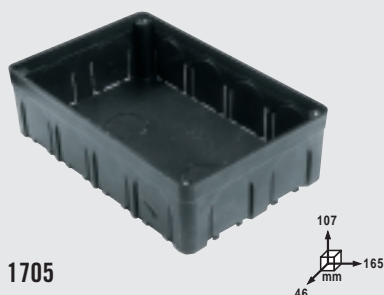
1704



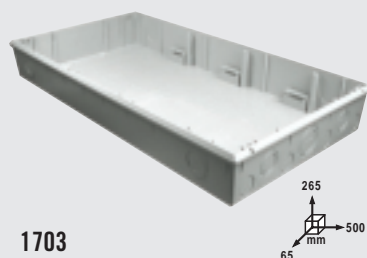
1706



1702



1705

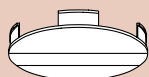


1703

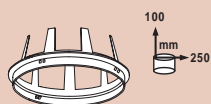
Applications

Ref.	Box MILLENNIUM	Use with modules MILLENNIUM
	1701 1702	1301.x
	1703 1704	1302
	1705 1706	1307.x 1308.x 1309.x 1310.x

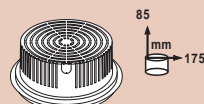
Covers and flush mounting boxes for speakers



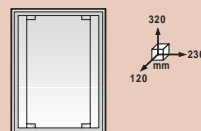
V18B (8" cover) / V21A (5" cover)
diameter 265 mm diameter 185 mm



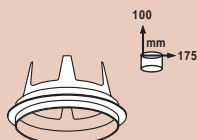
V17B Open flush mounting box
for 8" speaker



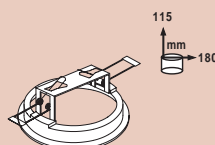
V29A Closed flush mounting box
for 5" speaker



V22E Flush mounting frame
for baffle G22E/4

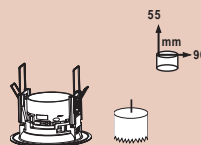


V19A Open flush mounting box
for 5" speaker



H28N Ring with springs for easy
installation of 5" speakers in drop ceilings

• Hole: \varnothing 160 mm

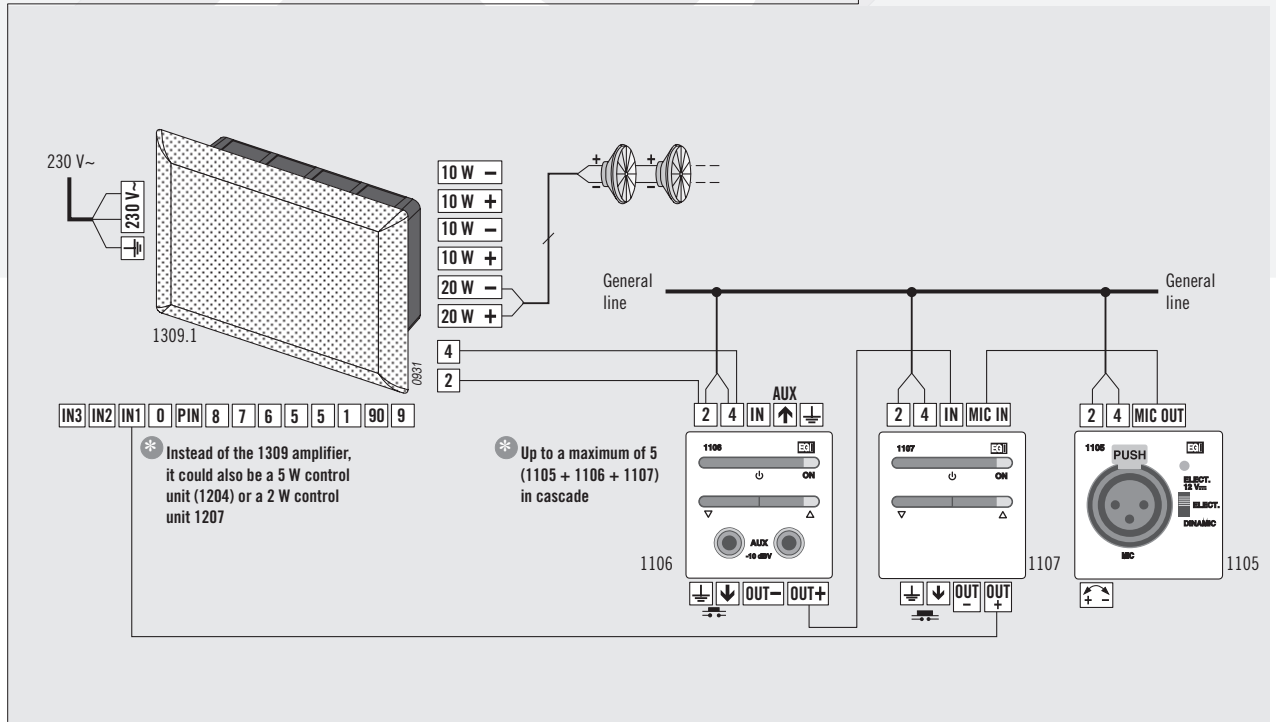


2" Ceiling speaker

• Hole: \varnothing 73 mm

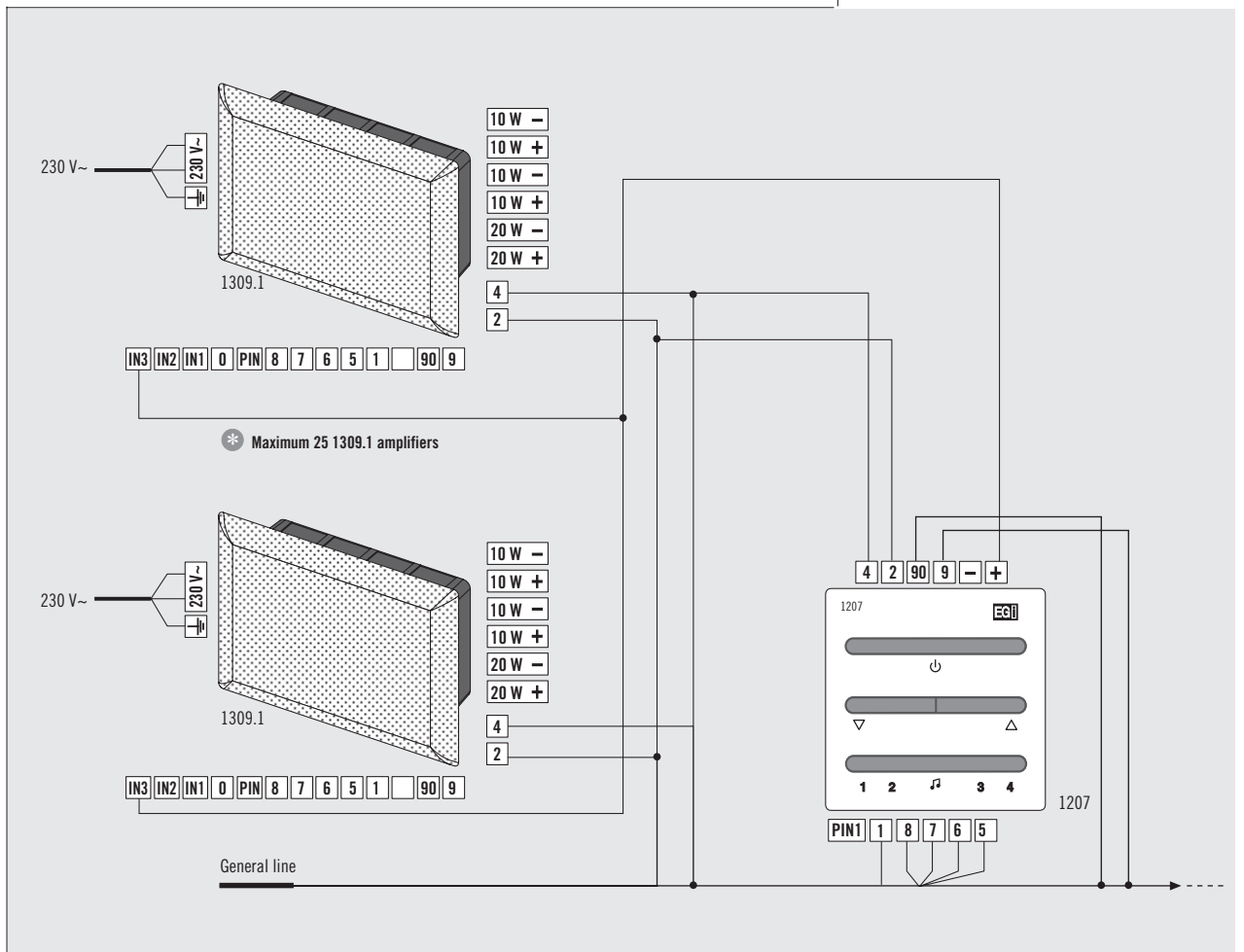
Connection details

Microphone preamplifier input and audio auxiliary input in cascade



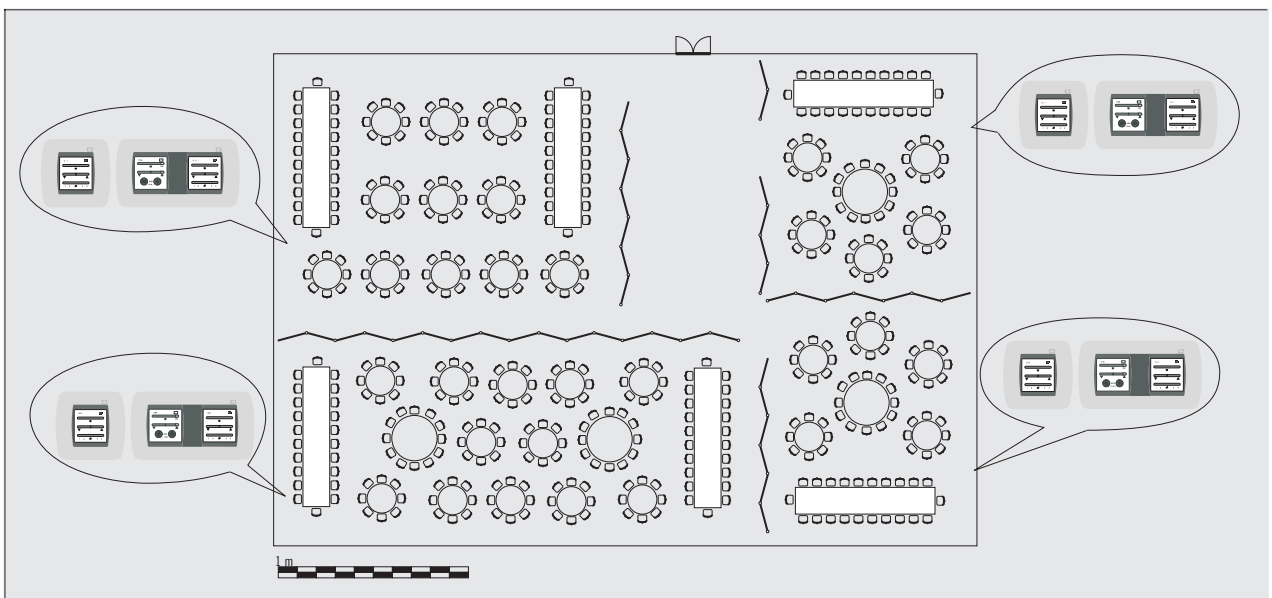
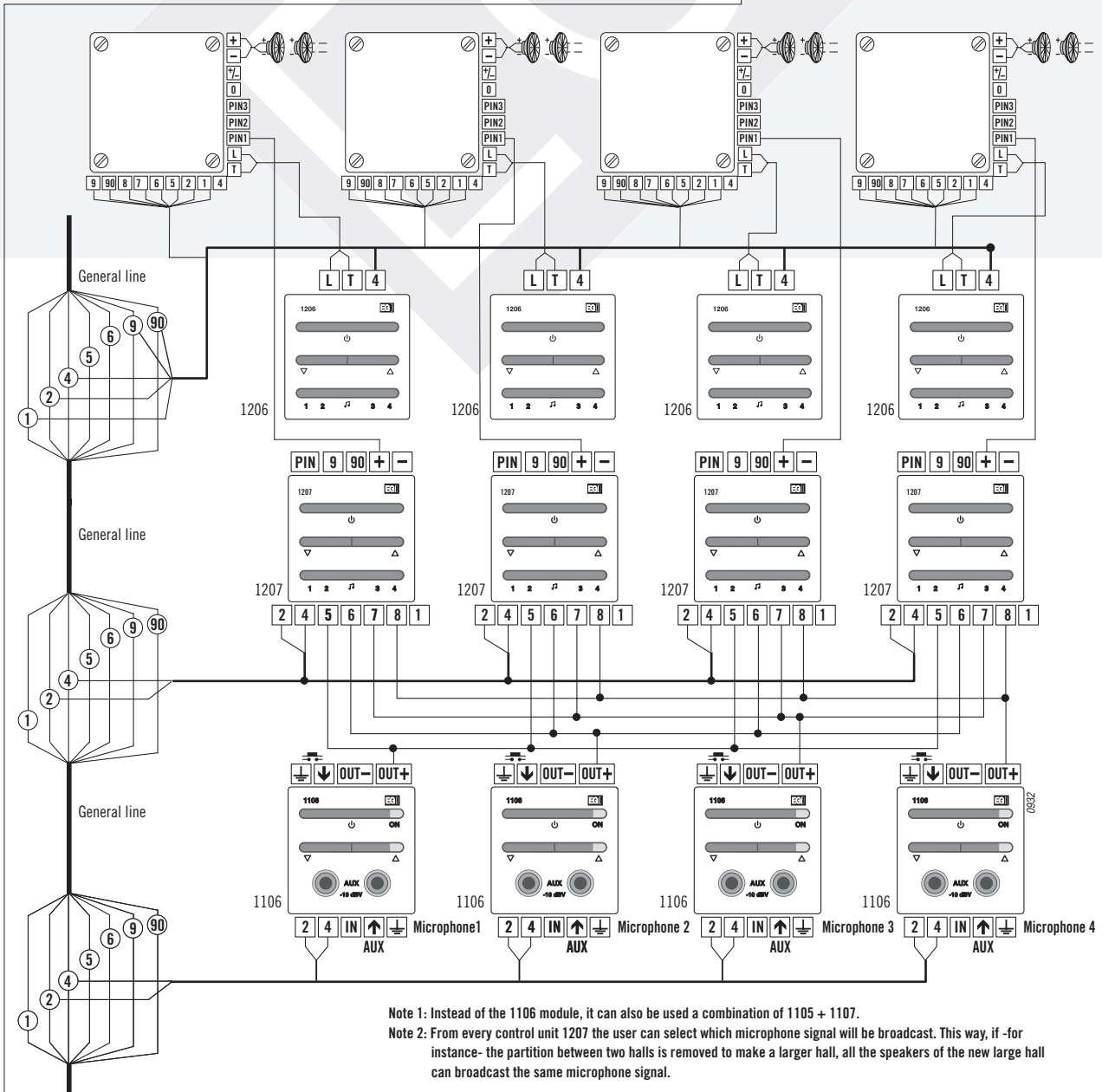
Connection details

Connection of several 1309.1 amplifiers to a 1207 digital control unit



Connection details

Hall with removable partitions with 4 wireless microphone pre-amplifiers



Installation start up

The first advice is NOT to power up the installation (230 V~) before connecting all the installation components.

1301 audio processor + 1201 control console (2 + 1 areas)

Power up the installation pressing the ON/OFF button in the 1301 audio processor and then press the console button \odot . After a few seconds, the installation will be available for use.



1302 audio processor + 1202 control console (up to 127 areas)

The first step is powering up the installation pressing the ON/OFF button of the 1302 processor. Then, we turn on the console(s) pressing the button \odot . The message «WELCOME TO THE EGI SYSTEM» will appear.

The first time that an installation, made of a 1202 control console and a 1302 audio processor plus their peripherals, is turned ON, only the "general" zone (that can not be eliminated) is available. The zone assignment and the zone groups creation will be performed through the SETUP menu in the 1202 control console.

Pressing the SETUP key, we will see the different options, among them ZONE. When we select this option; the following display appears.

Using the «000+» key we will set the zone number to «1», the display will be «001+». Press «ZONE SET».

Then, all the zone lamps (leds) of the digital modules will start blinking.

Afterwards, we will only need to press sequentially the zone assignment SETUP button in each of the digital modules, without need of returning to the 1202 console.

It is important to do so in the same order that we want to assign the zone numbers (to that end, we advise using the accompanying sheet). The console will memorize automatically the zone order.

When we finish pressing all the zone assignment SETUP buttons, we will return to the console, where we just have to assign it a zone number (preferably the last one). In order to do it, we will press the «HERE» button.

Finally, pressing the «<>» button we will return to the previous menu where we can configure the «MESSAGE», «LANG.», «TIME», «T-PHONE», «BELL», and «ZONES». In order to do it, please see pages 25-32 in this manual.



Modification of an installation with up to 127 zones.

If we increase or decrease the number of zones in an installation, it will be necessary to reprogram it.

- If we decrease the number of zones (in the «ZONE SETUP» display):

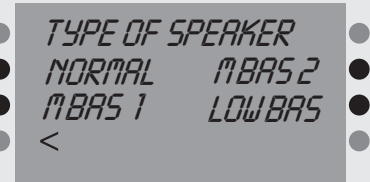
With the «000+» key we will set «001+» as zone number and we will press sequentially all the zone assignment SETUP buttons of the various digital modules, as we described previously.

- If we increase the number of zones:

Using the «000+» key, we will go to the next zone number that we want to assign (Ex: if we change from 15 to 20 zones we will go to the zone «016+») and sequentially press the zone assignment SETUP buttons in the new digital modules as we previously described.

SETUP from the 1206 module

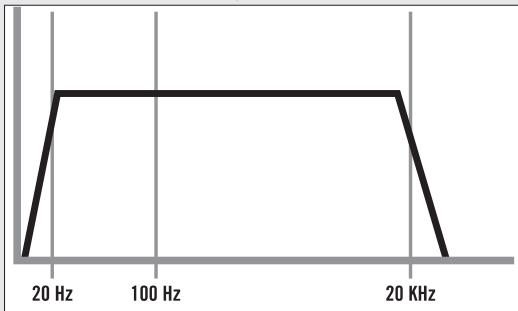
It is possible to perform the SETUP from the 1206 module if it is connected to a 1304, 1305, 1306, 1310, or 1311 amplifier. When the SETUP is being performed, the channel leds 1 and 2 blink in the 1206 keyboard. When any button of the control unit is pressed, the zone number is assigned to the amplifier. This is shown by the leds, that stop blinking.



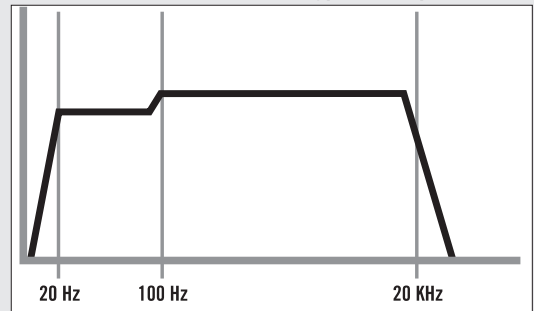
Speaker type selection

Depending on the speakers connected to the different areas of the installation, their equalization could be selected per zone according to the accompanying graphics. This will allow a better audition.

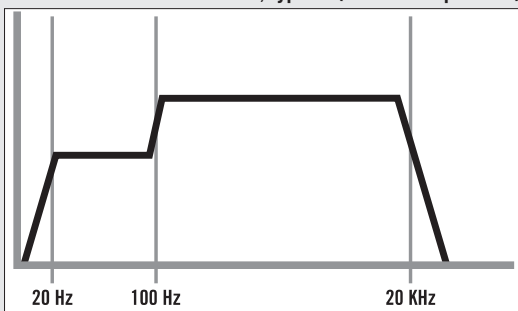
NORMAL (8" speakers and baffles)



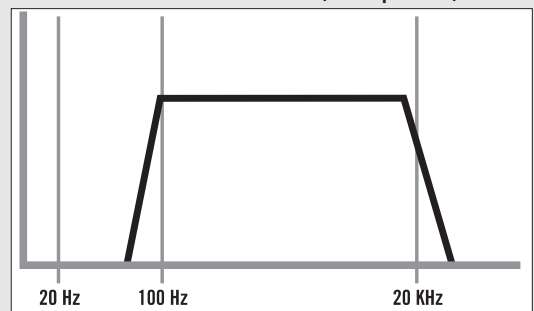
M BAS 1 -medium bass tones, type 1- (5" speakers)



M BAS 2 -medium bass tones, type 2- (2" and 3" speakers)





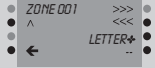

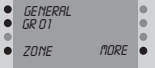
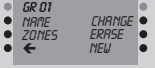
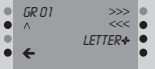
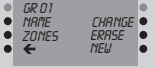

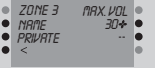
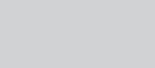


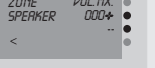
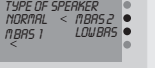


LOW BAS -Low bass tones- (horn speakers)



Installation start up

Zone and group assignment and parameter adjustment *Example of key sequence to press*

Assigning zone numbers	Assigning zone names	Creating and labelling groups	Setting maxi. volume level	Setting private mode	Setting the speaker type
<p>▲ SETUP</p> <p>◀ ZONES</p> <p>◀ + (DISPLAY SHOWS 001)</p>  <p>◀ ZONE SET</p> <p>All the SETUP lamps in the modules blink. Go through the rooms according to the zone assignment order.</p> <p>1... </p> <p>When the SETUP button is pressed, the lamp stops blinking and remains on, indicating that the zone number for that device has been selected.</p> <p>...n </p> <p>REPEAT THE PROCEDURE IN ALL THE ZONES TO BE ASSIGNED. Then, return to the control console and press HERE to assign its zone number to it.</p>  <p>Number of zones that have already been assigned</p> <p>▶ - -</p> <p>The SETUP lamps turn off.</p> <p>◀ MORE</p> <p>◀ START UP</p> <p>▶ YES</p>	<p>▶ GENERAL <</p> <p>▶ ZONE</p> <p>▶ ZON 001 <</p> <p>▲))</p> <p>▶ NAME</p>  <p>A name must be assigned</p> <p>▶ <</p> <p>And so for each zone that we have in the system</p>	<p>▶ GENERAL <</p> <p>▲))</p> <p>◀ NEW</p>   <p>Group 01 Has Been Created. We Must Select it To Label It With A Name.</p> <p>▲))</p>  <p>By pressing "NAME" we assign a name to the group.</p>  <p>▶ <</p> <p>By pressing "ZONES" we set the zones that will form the group.</p> 	<p>▶ GENERAL <</p> <p>▶ ZONE</p> <p>▶ AMP. 001 <</p> <p>▲))</p> <p>◀ MORE</p>  <p>Setting PA volume level</p> <p>▶ GENERAL <</p> <p>▶ ZONE</p> <p>▶ ZONE 3</p> <p>▲))</p> <p>◀ Use Keys "+" And "-" To Adjust The Volume Level</p>  	<p>▶ GENERAL</p> <p>▶ ZONE</p> <p>▶ ZONE 3</p> <p>▲))</p> <p>◀ PRIVATE</p>  <p>We Select More.</p>   <p>▶ SPEAKER</p> 	

Zone name	Zone Nr.	Assigned to group	Max. volume level	Max. PA vol. level	Private	Speaker type
Mr. Low	1	Sales	60	80	No	5" (M BAS 1)
Smith	2	Sales	60	80	No	5" (M BAS 1)
Clarke	3	Mkting	50	70	No	5" (M BAS 1)
Cohen	4	Mkting	55	65	No	5" (M BAS 1)
Stores	5	— (Direct)	70	80	Yes	Horn sp. (LOW BAS)
Garden	6	Common	60	70	No	Horn sp. (LOW BAS)
Bckyard	7	Common	60	70	No	Horn sp. (LOW BAS)
Corridr	8	Common	60	70	No	Horn sp. (LOW BAS)
QA Lab	9	— (Direct)	60	70	Yes	2" (M BAS 2)
Rcption	10	— (Direct)	40	50	No	8" (NORMAL)

Installation start up

Public address automatic message scheduling *Example of key sequence to press*

Selecting a message	Selecting a target zone/group	Selecting an activation time	Setting repeats	Setting message volume	Setting private mode	Activating a message by an event
<p>▲ SETUP</p> <p>▶ MESSAGE</p> <p>▶ MSG. 1</p> <p>MESSAGE OPTIONS MENU</p> <ul style="list-style-type: none"> MSG. 1 PRIVATE TIME EVENT ZONES REPEAT < MORE 	<p>(CONTINUING FROM THE MESSAGE OPTIONS MENU:)</p> <p>▶ ZONES</p> <ul style="list-style-type: none"> MSG. 1 +Z./G. .. < <p>The symbol «>» on the right shows that the first target zone / group (from a total of 4) is being selected. Using the keys «+» and «-» on the left we can see the available zones/groups appearing in the target line. When the desired group/zone is displayed in the target line, we press the second key from the key set on the right to select the second zone/group.</p> <ul style="list-style-type: none"> MSG. 1 GROUP X +Z./G. > .. < 	<p>(CONTINUING FROM THE MESSAGE OPTIONS MENU:)</p> <p>▶ TIME</p> <ul style="list-style-type: none"> MSG. 1 HOUR+> YES .. NO MINUTE+> < <p>If we select "YES" the message will be broadcast at the selected time. If we select "NO" the activation time will have no effect. Use "HOUR" and "MINUTE" to define the activation time.</p>	<p>(CONTINUING FROM THE MESSAGE OPTIONS MENU:)</p> <p>▶ REPEAT</p> <ul style="list-style-type: none"> MSG. 1 NUMBER 000+> OF REPEATS .. INTERVAL < <p>Use «+» and «-» to decide how many times should the message be repeated.</p> <p>▶ INTERVAL</p> <ul style="list-style-type: none"> MSG. 1 INTERVAL OF 10+> MINUTES .. < <p>With «+» and «-» we select the minutes of interval between the message repetitions.</p>	<p>(CONTINUING FROM THE MESSAGE OPTIONS MENU:)</p> <p>▶ MORE</p> <ul style="list-style-type: none"> MSG. 1 MONITOR VOLUME RECORD < ERASE <p>▶ VOLUME</p> <ul style="list-style-type: none"> MSG. 1 VOLUME 000+> .. < <p>With «+» and «-» we select the volume level of the message broadcast</p>	<p>(CONTINUING FROM THE MESSAGE OPTIONS MENU:)</p> <p>▶ PRIVATE</p> <ul style="list-style-type: none"> MSG. 1 OVERRIDE PRIVATE YES < NO <p>We can decide to override the private mode of the selected zone / group or not.</p>	<p>(CONTINUING FROM THE MESSAGE OPTIONS MENU:)</p> <p>▶ EVENT</p> <ul style="list-style-type: none"> MSG. 1 EVENT 1 EVENT 2 EVENT 3 < <p>If we select «>» no event is assigned to the message. When we select an event, that event will activate the message (only one event can be selected for each message).</p>

Message	Target zone / group	Activation time	Repeats	Interval	Volume	Private	Event
Closing time	General	19:45	5	3'	75	No	
Welcome	Lobby		0	0'	65	No	Presence Detector
Promotion	Coffee Shop	09:00	12	10'	70	No	

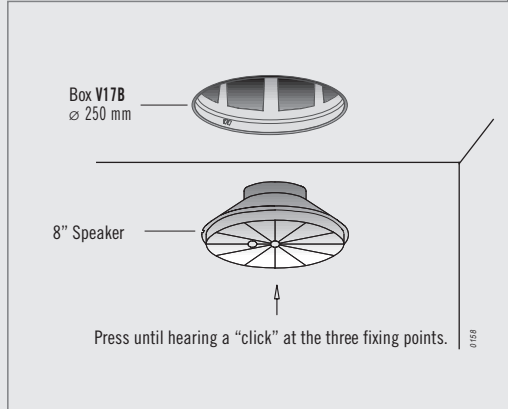
Enabling general access password and telephone PA password

Millenium installation password	Telephone PA password
<p>▲ SETUP</p> <p>◀ MORE</p> <ul style="list-style-type: none"> PASSWORD SOFTWARE VERSION START UP < <p>◀ PASSWORD</p> <ul style="list-style-type: none"> 0 3 1 4 2 5 NO PASSWORD YES 6 7 8 9 <p>We must enter the password and press YES. To remove the password we must press NO.</p>	<p>▲ SETUP</p> <p>◀ T-PHONE</p> <ul style="list-style-type: none"> MSG. CUT IN 000+> SECONDS .. ASSIGN PASSWORD < <p>◀ PASSWORD</p> <ul style="list-style-type: none"> 0 3 1 4 2 5 NO PASSWORD YES 6 7 8 9 <p>Enter the password and press YES.</p>
General password of the MILLENNIUM	Password of the telephone PA system
1234	5678

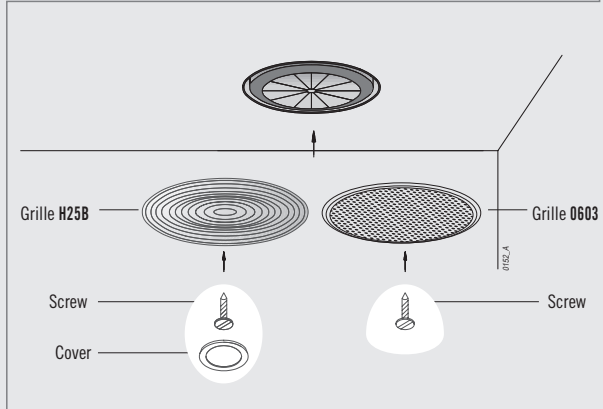
Selecting chime tones	Assigning a telephone number to a zone or group
<p>▲ SETUP</p> <p>▶ BELL</p> <ul style="list-style-type: none"> TONE1 TONE4 TONE2 TONE5 TONE3 TONE6 < <p>We can select the TONE type.</p>	<p>▲ SETUP</p> <p>◀ T-PHONE</p> <ul style="list-style-type: none"> MSG. CUT IN 000+> SECONDS .. ASSIGN PASSWORD < <p>◀ ASSIGN</p> <ul style="list-style-type: none"> NUMBER ZONE +0000 000+> .. < ASSIGN <p>Pressing ZONE we will change to GROUP. Using «000+» and «-», we can select the zone or group number. Using «+000» and «-», we can select the number assigned to that zone or group. Once the number is selected, we must press ASSIGN.</p>
Bell tone	
Reception	Tone 1
Management	Tone 2
Phone operator	Tone 3

8" speaker mounting

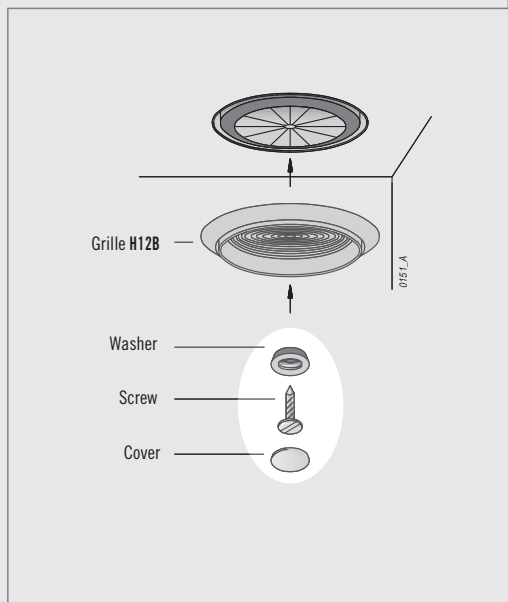
1 8" speaker in V17B flush mounting box



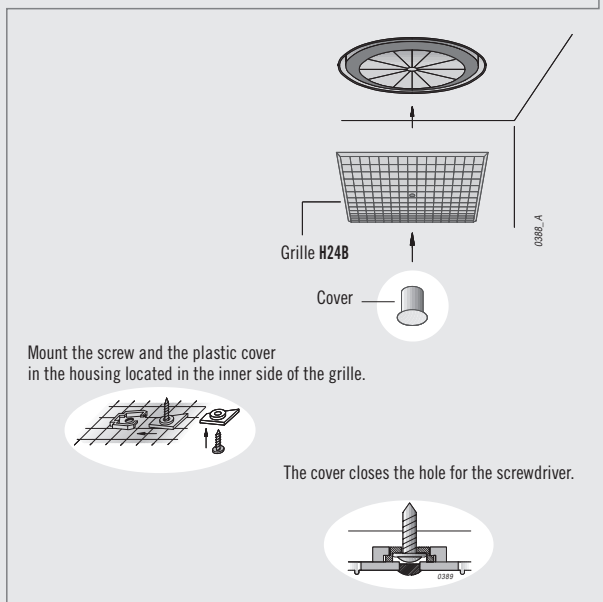
2 Placement of the H25B and 0603 grilles



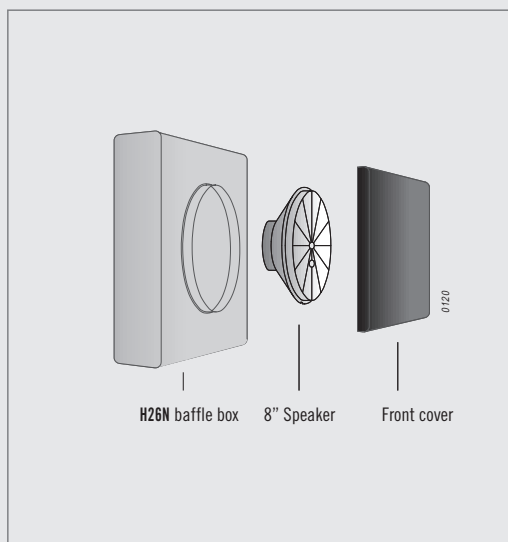
3 Placement of the H12B grille



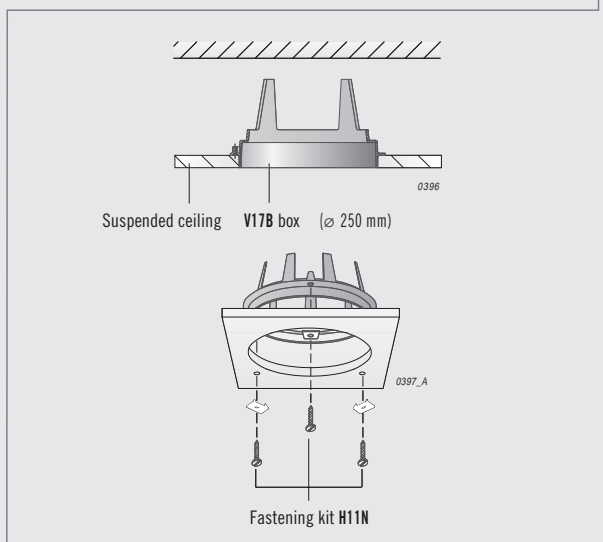
4 Placement of the H24B grille



5 8" speakers in H26N baffle box

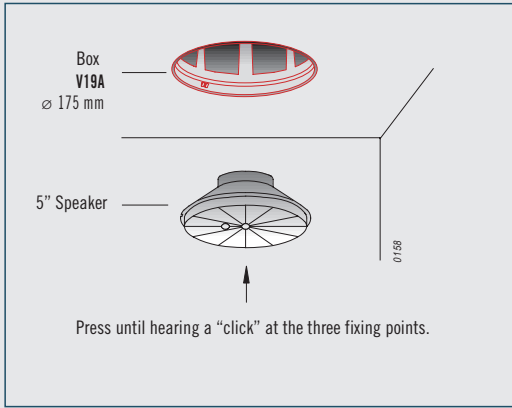


6 8" flush mounting box with H11N kit in suspended ceilings

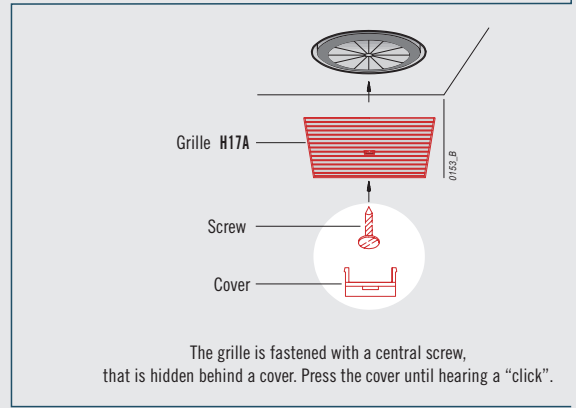


5" speaker mounting

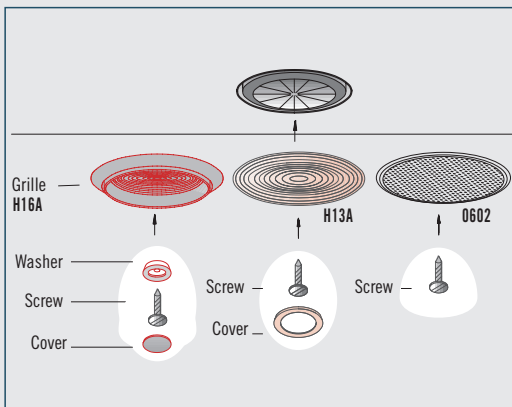
1 In V19A flush mounting box



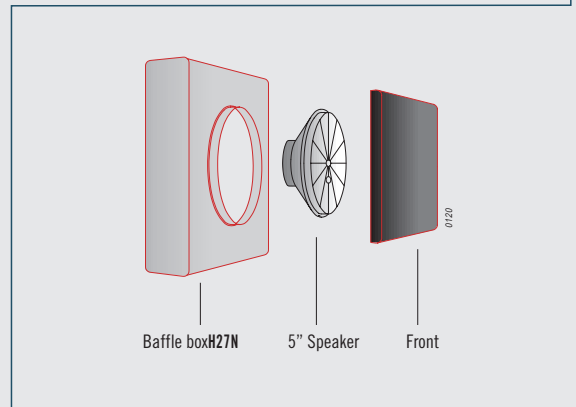
2 Placement of the H17A grille



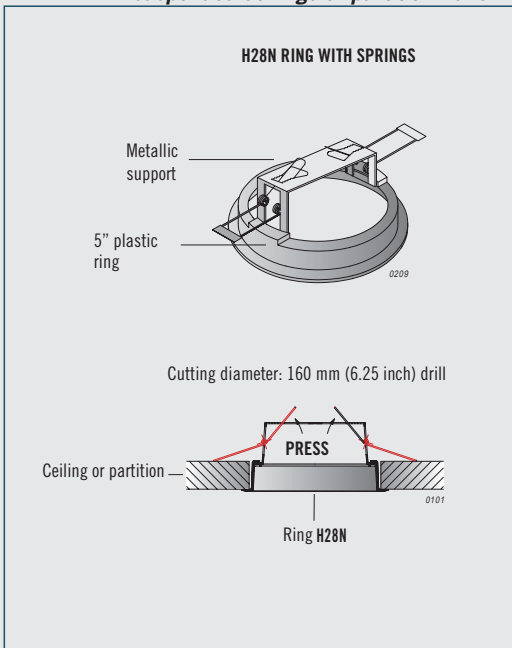
3 H16A, H13A, and O602 grilles



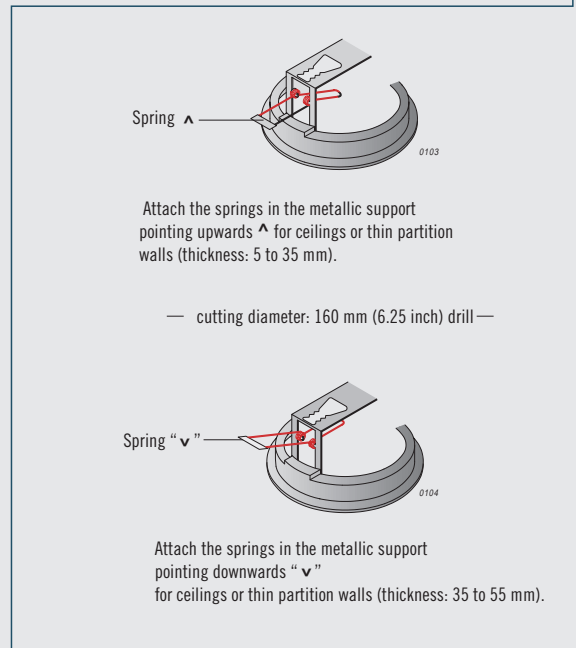
4 In H27N baffle box



5 For flush mounting without mason works in suspended ceilings or partition walls



6 Spring mounting according to the ceiling width



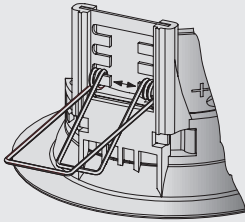
2" speaker mounting

1

2

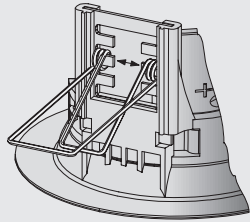
3

Spring mounting



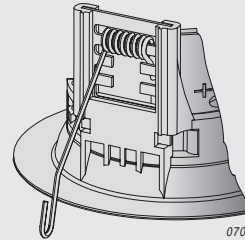
0699

Thickness: 1 to 5 mm in plate or wood.



0700

Thickness: 5 to 15 mm in plaster or wood.

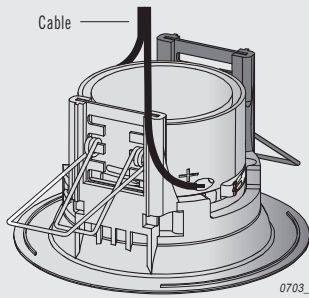


0701

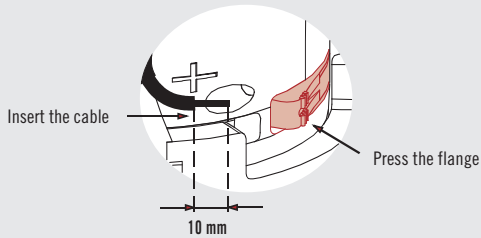
Thickness: 15 to 50 mm max. in hollow brick ceilings or very thick ceilings.

4

Connection

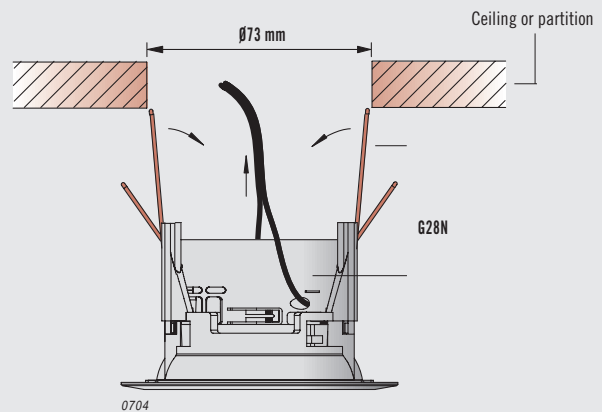


0703_D



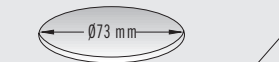
5

Ceiling mounting



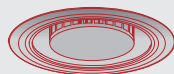
6

End result

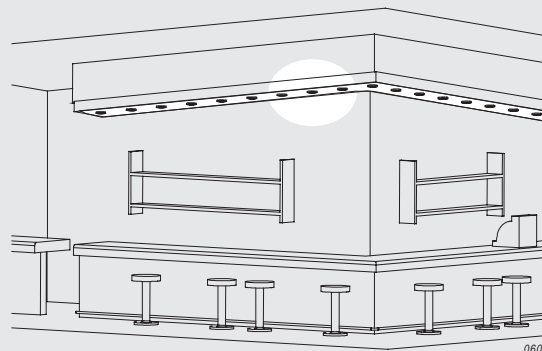
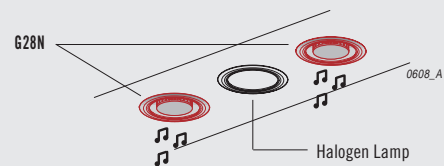


END RESULT IN THE CEILING

0698

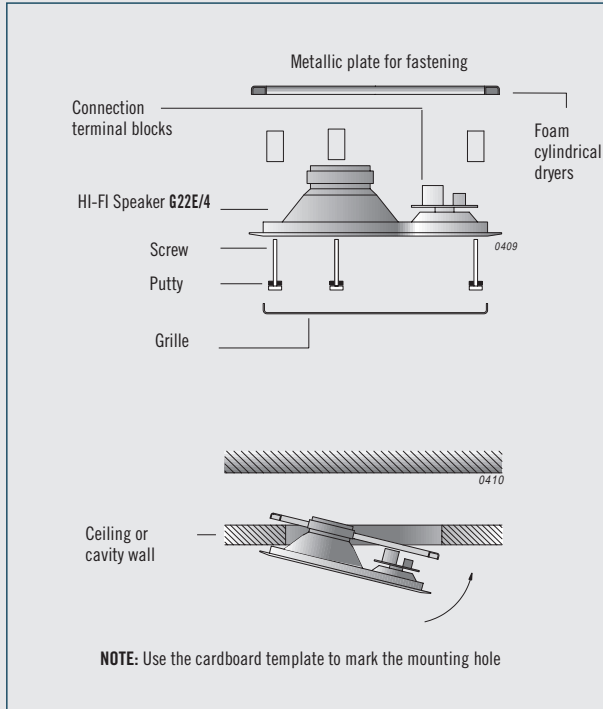


0607

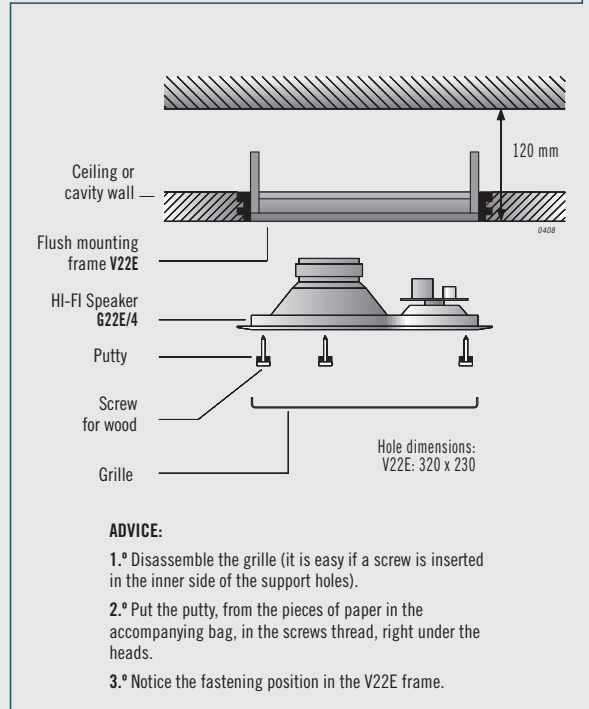


Baffles mounting

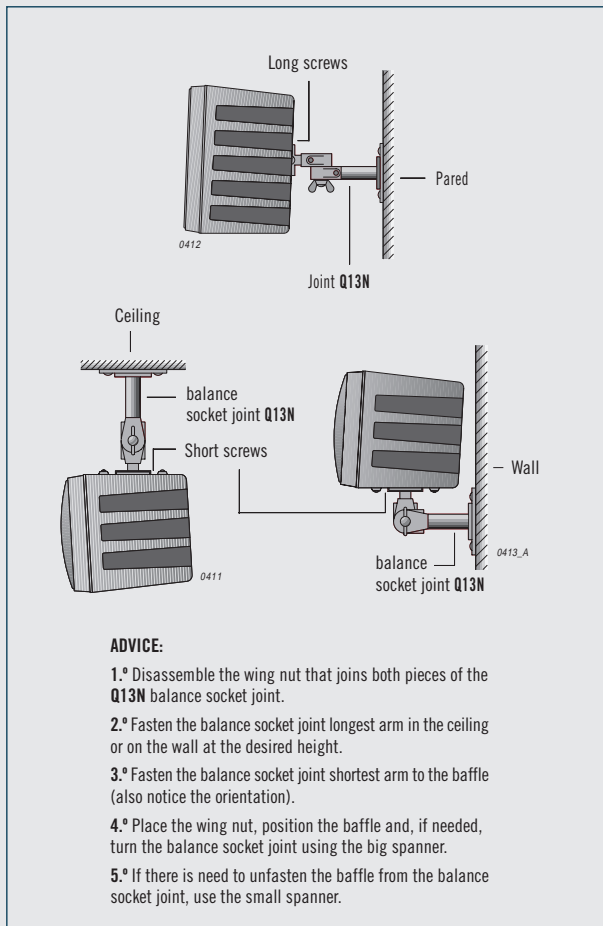
G22E/4 baffle in ceiling or cavity wall



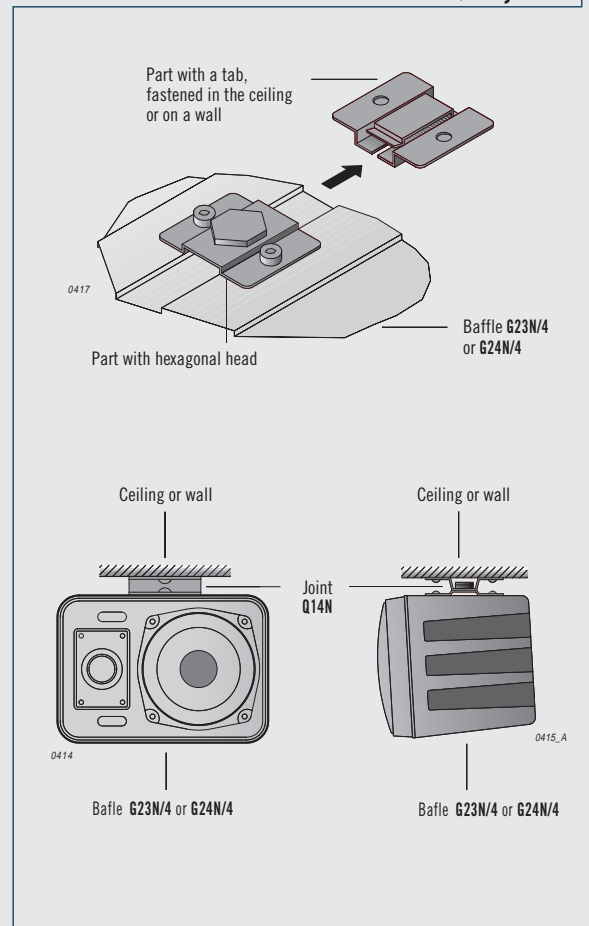
Fastening in V22E flush mounting frame



Fastenings of G23N/4 baffle in the Q13N balance socket joint



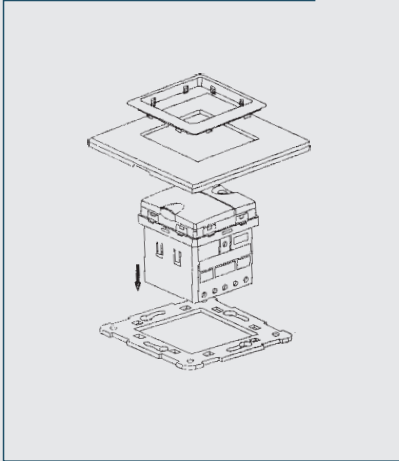
Fastenings of G23N/4 baffle in the Q14N joint



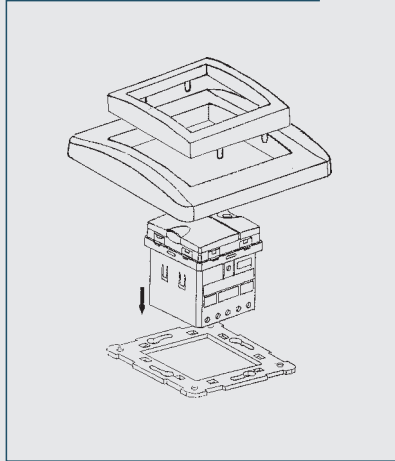
Module assembly accessories

Adapting EGi modules to the electrical switchgear of other manufacturers

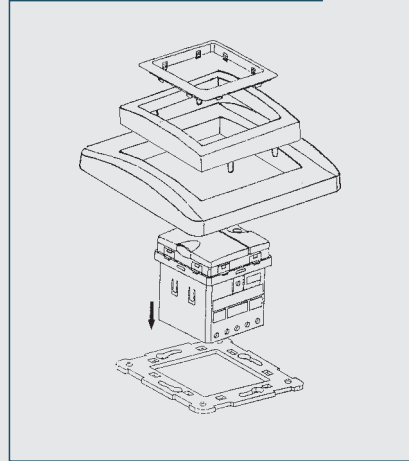
Mode A



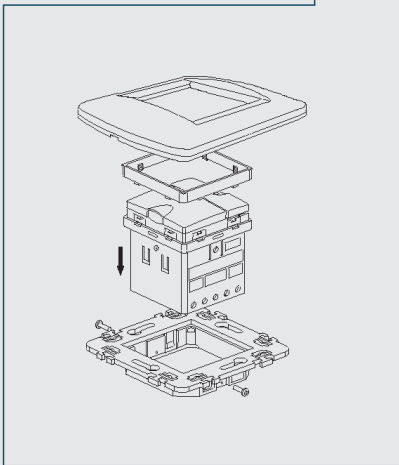
Mode B



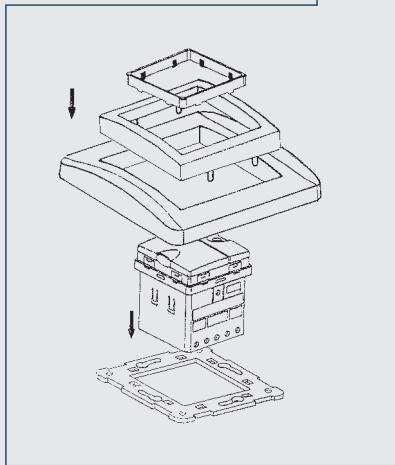
Mode C



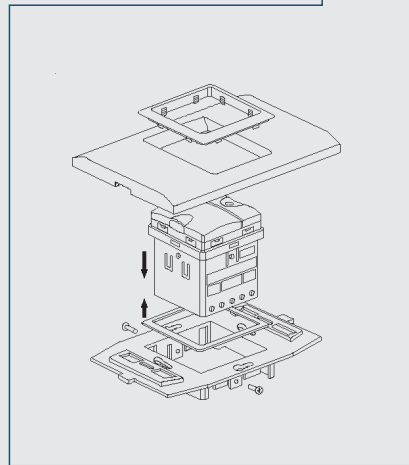
Mode D



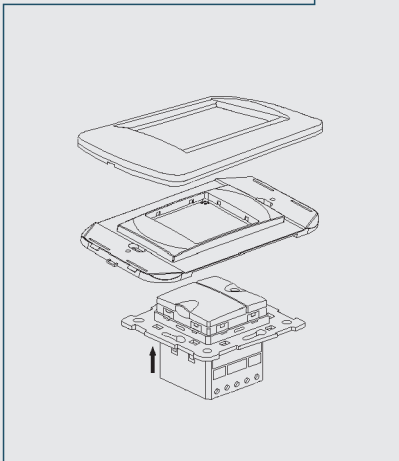
Mode E



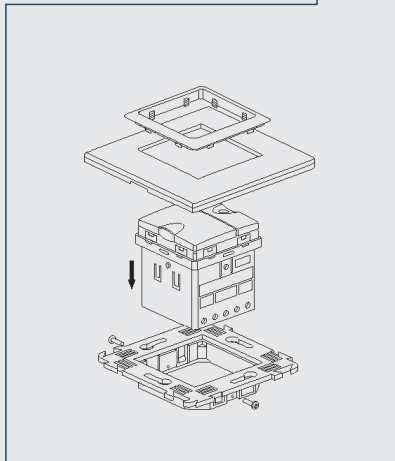
Mode F



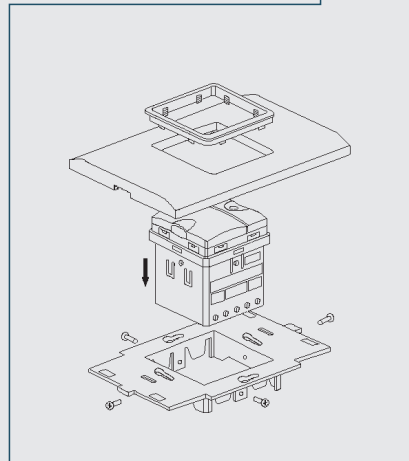
Mode G



Mode H

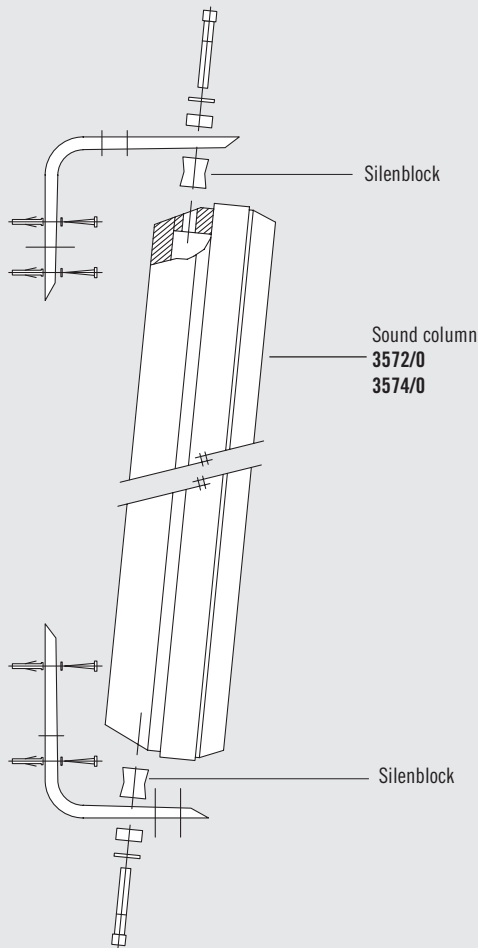


Mode I



Sound columns and horn speakers mounting

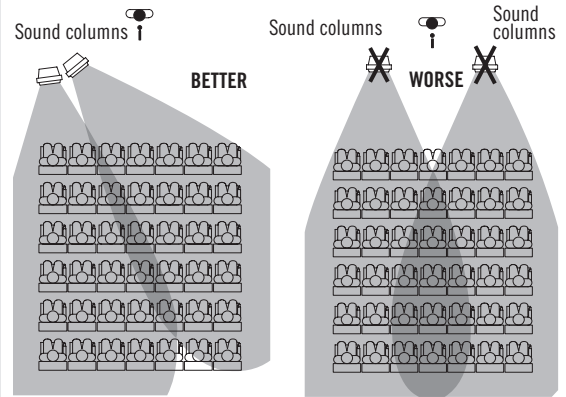
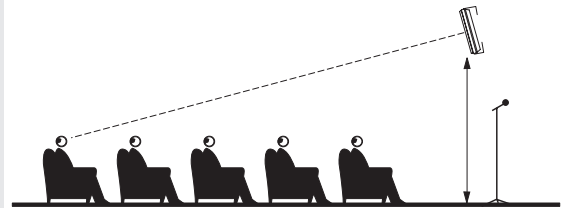
Sound column mounting in walls



NOTE: All these accessories form the K3870 reference

Sound distribution with columns for meeting halls

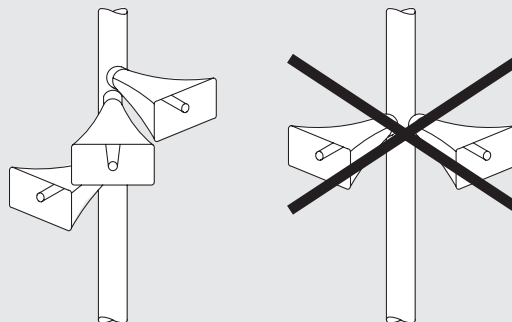
The column axis pointing to the furthest listener.



SOUND DISTRIBUTION FROM A SINGLE POINT

PLACING A SPEAKER IN EACH SIDE OF THE ROOM, WE GET A WORSE SOUND DISTRIBUTION.

Horn speakers



To widen the horizontal covering angle of the horn speakers, stack them over the vertical of their acoustic center and position them in a way that each of them covers a part of the desired horizontal angle.

Speakers deployment in the ceiling

The correct deployment of the speakers in the ceiling is very important to achieve a consistent sound level in all the area. This is a prime factor in the understandability of the PA messages and in the quality of the background music.

BASIC RULES FOR CHOOSING CEILING SPEAKERS (and attaining good message understandability):

A. A big speaker concentrates the sound in a narrower but more intense focus than a smaller one.
In the same way that some lamps concentrate the light beam in a narrow but intense angle and others illuminate in a wide but more uniform angle, speakers have a different "covering angle", depending on their size.

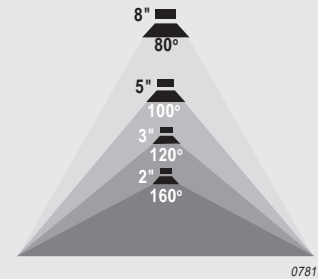
B. The bigger the size, the greater the acoustic performance for a speaker, that is, more sound with the same amplifier power.

The 8" speakers compensate with their high performance the bigger distance to the listener when they are located in high ceilings. This is the reason why we advise 8" speakers for high ceilings and 5" ones for mid and low ceilings. The 3" should only be used in rooms with small ceiling height AND very little ambient noise.

C. The EGi 5" speakers offer a trade off between good performance and wide covering.

With an exceptional performance for its size (92 dB at 1 W), and a wide covering angle (100°), the 5" speaker is the right solution for providing sound from the ceiling when it is not very high and there is not a high level of noise.

COVERING ANGLE

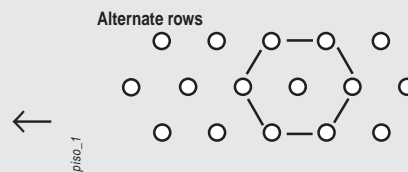
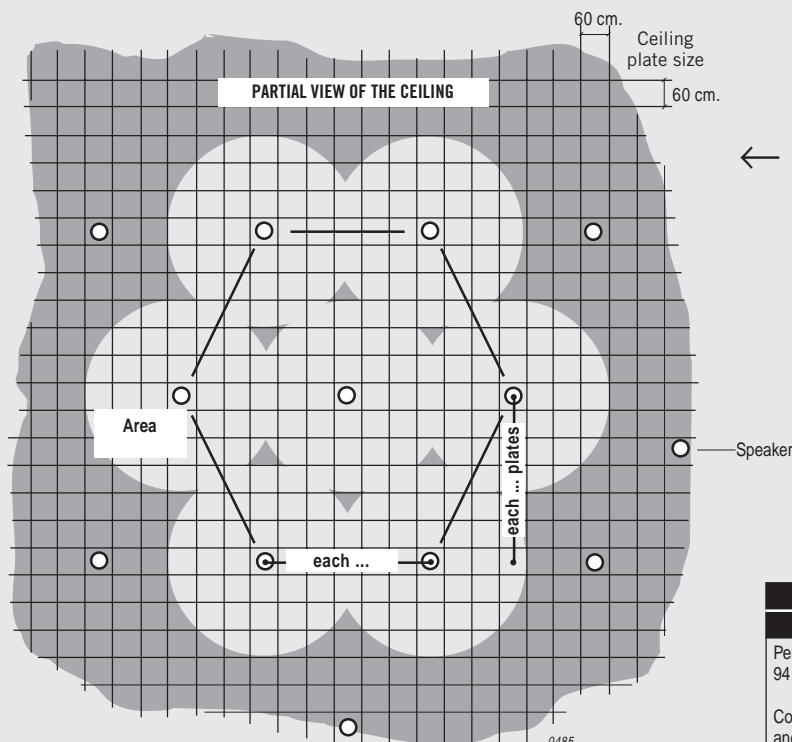


SURFACE COVERED BY A SPEAKER			
HEIGHT	NOISE LEVEL		
	LOW	MEDIUM	HIGH
> 4 meters	If it is possible, hang the speakers to lower them to 14 feet (approx. 4 m)		
4 meters	5" : 35 m ²	8" : 18 m ²	8" : 18 m ²
3,5 meters	5" : 24 m ²	5" : 24 m ²	8" : 12 m ²
3 meters	3" : 30 m ²	5" : 16 m ²	5" : 16 m ²
2,5 meters	2" : 10 m ² 3" : 16 m ² 5" : 8 m ²	3" : 16 m ² 5" : 8 m ²	5" : 8 m ² 8" : 4 m ²

NOISE LEVEL		
LOW	MEDIUM	HIGH
Office	Youth shop	Bus or railroad station
Bank branch office	Bar	Public areas
Shop	Restaurant	Hall
Travel agency	Bingo	Gaming parlour
Luxury restaurant	Gym	Music bar
Doctor's surgery	Store	

Advisory rating. For special cases, please contact EGi.

EXAMPLE OF 5" SPEAKERS LAYOUT IN 2 x 2 ft PLATES CEILING.



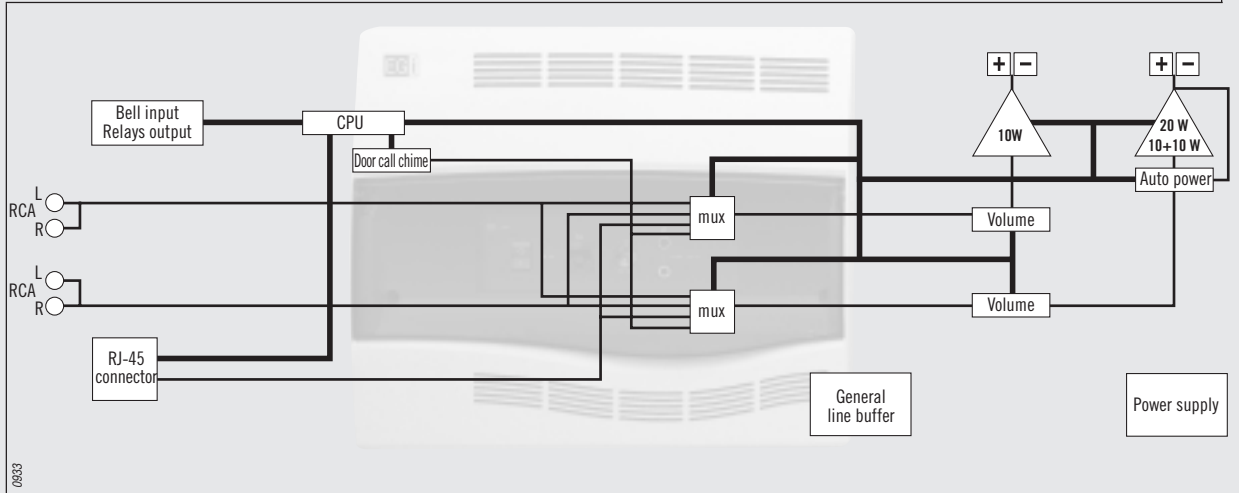
RECOMMENDED FLUSH MOUNTED SPEAKERS DEPLOYMENT IN A PREMISES CEILING

HEIGHT SPEAKER/FLOOR	PLACE A SPEAKER EACH... PLATES			
	8"	5"	3"	2"
3,5 meters	7 plates	9 plates	NO	NO
3 meters	5 plates	7 plates	10 plates	NO
2,5 meters	4 plates	5 plates	7 plates	6 plates

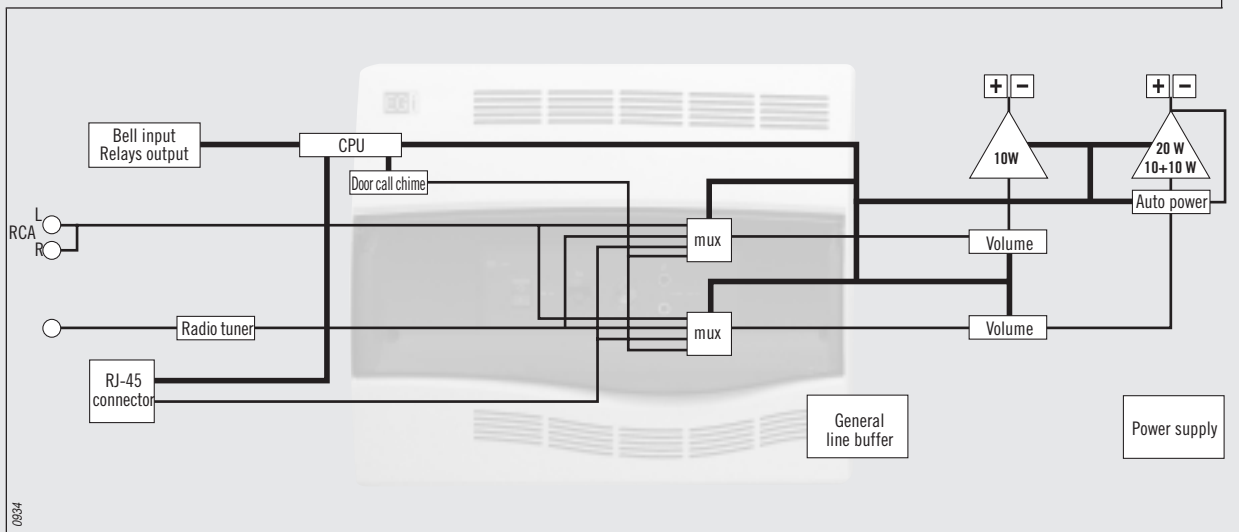
EGi SPEAKER FEATURES			
8"	5"	3"	2"
Performance: 94 dB @ 1 W	Performance: 92 dB @ 1 W	Performance: 86 dB @ 1 W	Performance: 83 dB @ 1 W
Covering angle: 80°	Covering angle: 100°	Covering angle: 120°	Covering angle: 160°

Block diagrams

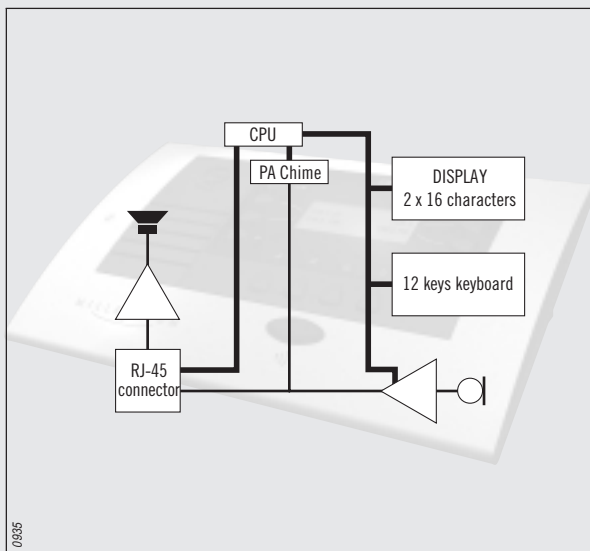
1301 audio processor 2 + 1 zones



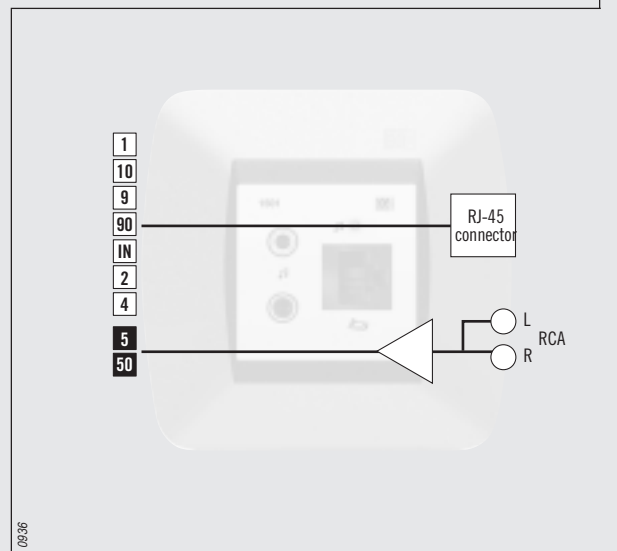
1301.1 audio processor 2 + 1 zones with radio



1201 control console for 2 + 1 zones



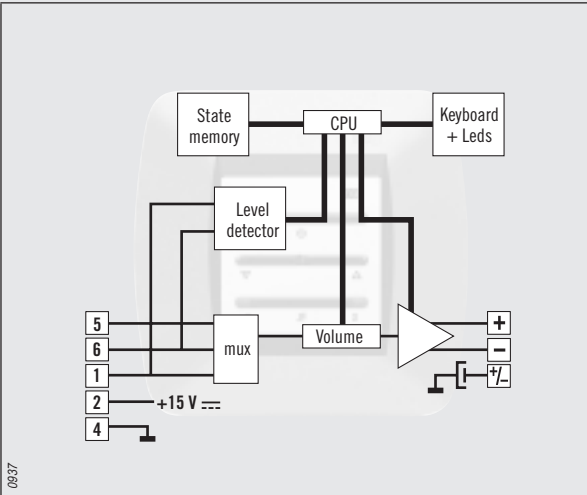
Base for connection of control console / music source



Block diagrams

1204 2-channel control unit. 5 W

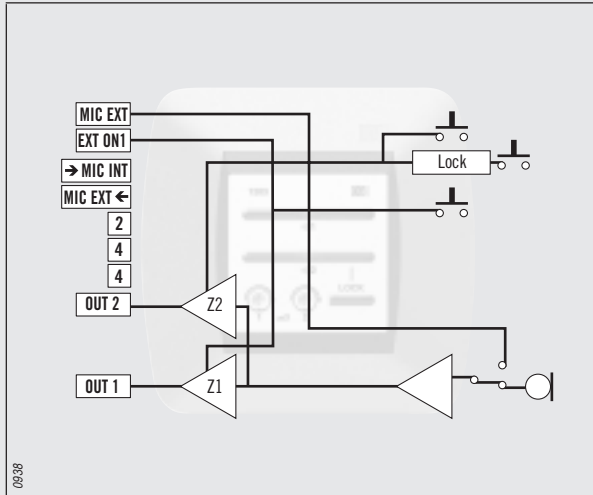
5



0837

1203 2-zone intercom unit with amplifier

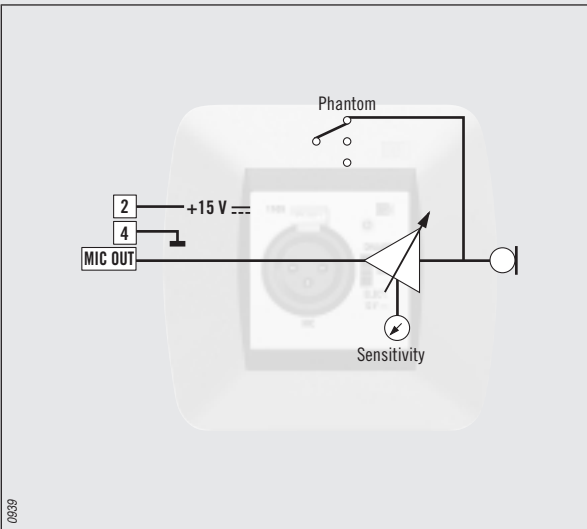
6



0838

1105 Pre-amplified XLR microphone base

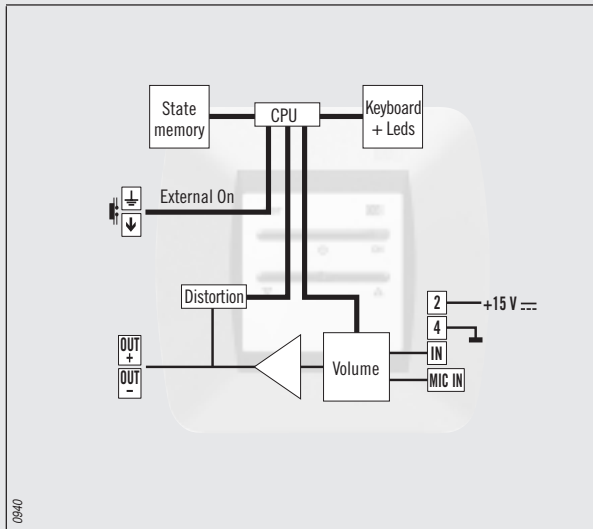
7



0839

1107 Volume regulator for 1105 base

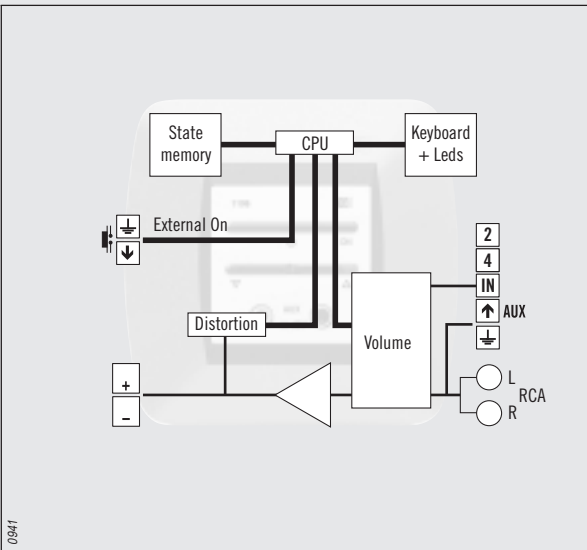
8



0840

1106 Volume regulator and auxiliary input

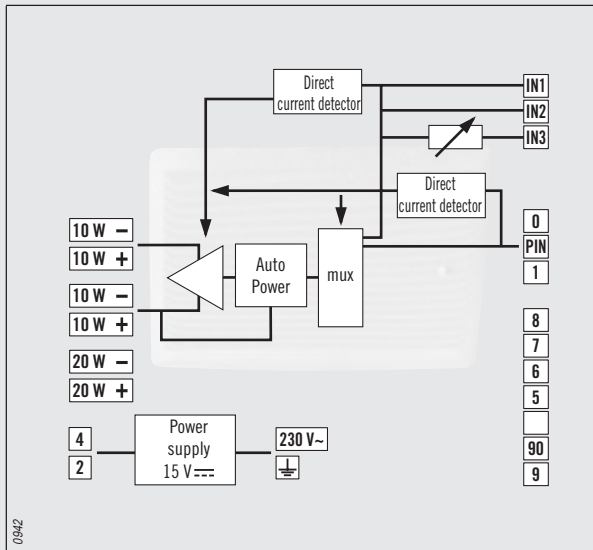
9



0841

1309 20 W amplifier with message

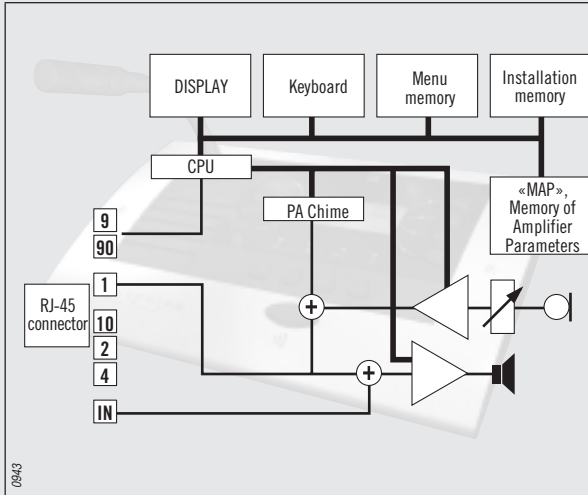
10



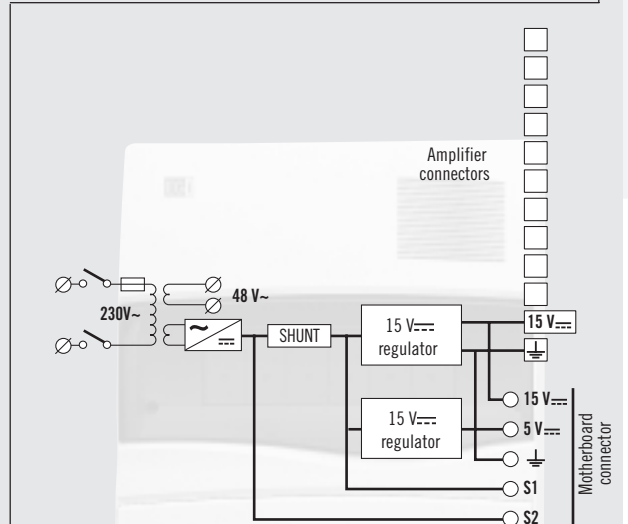
0842

Block diagrams

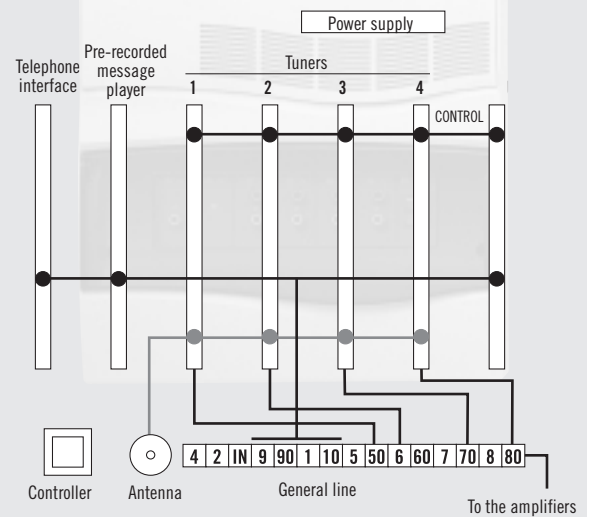
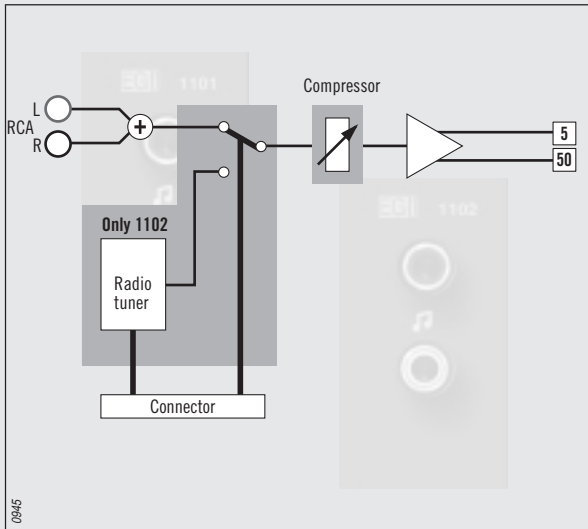
1202 control console for up to 127 zones



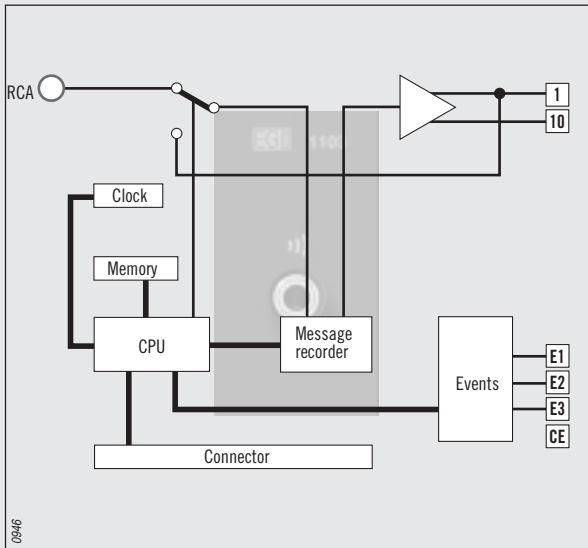
1302 audio processor



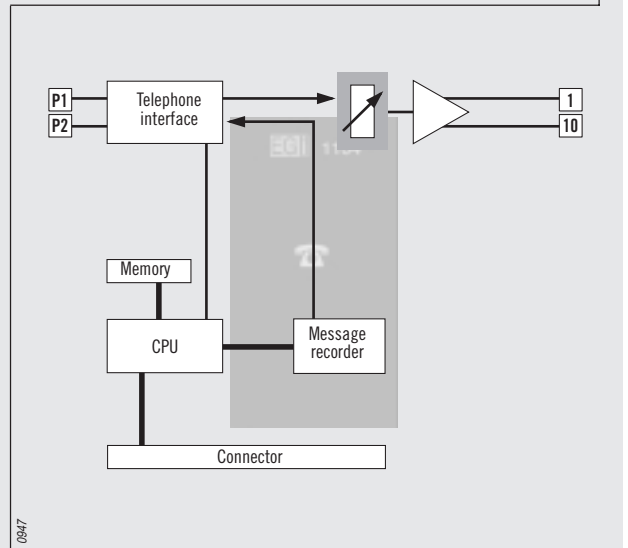
1101 and 1102; RCA input / FM radio tuner



1103 Pre-recorded message player

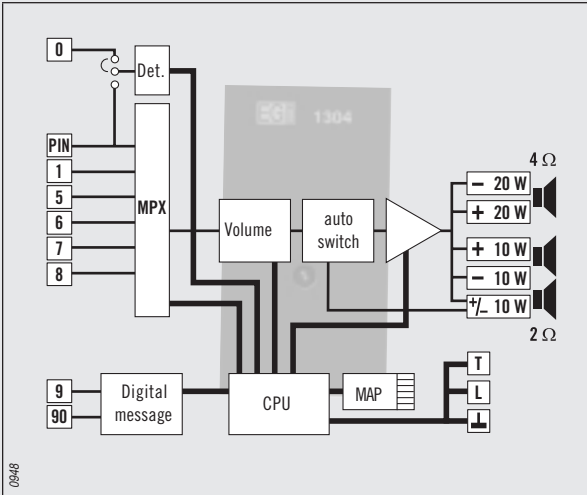


1104 module for telephone messages



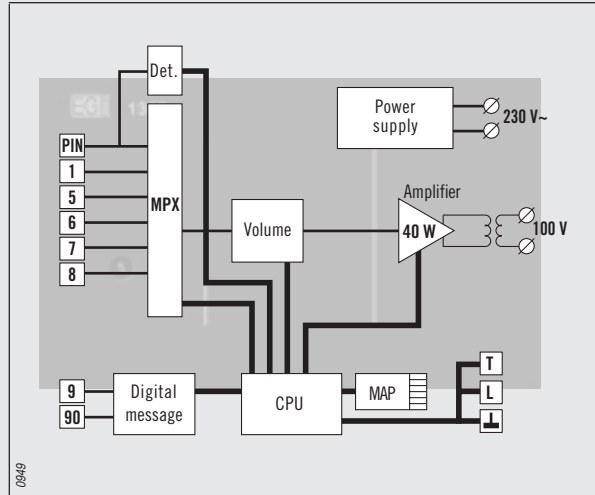
Block diagrams

1304 10 + 10 / 20 W amplifier



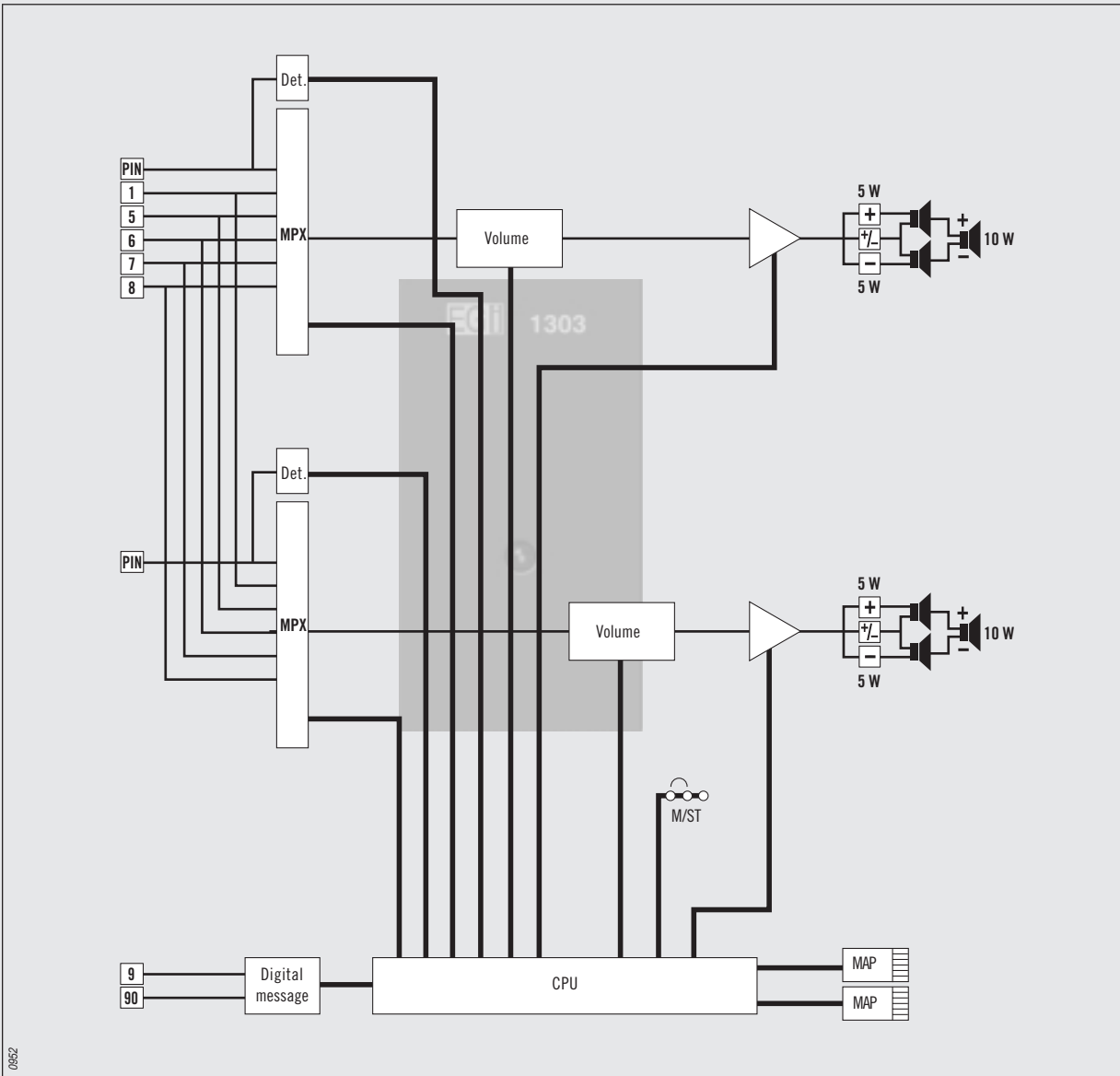
0946

1305 40 W, 100 V amplifier



0949

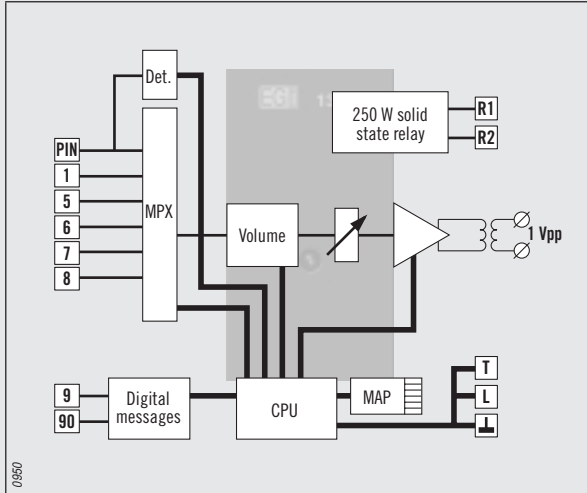
1303 2-zone x 10 W amplifier



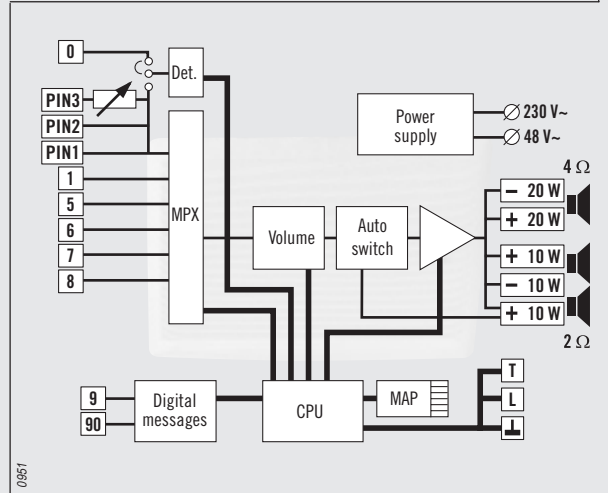
0662

Block diagrams

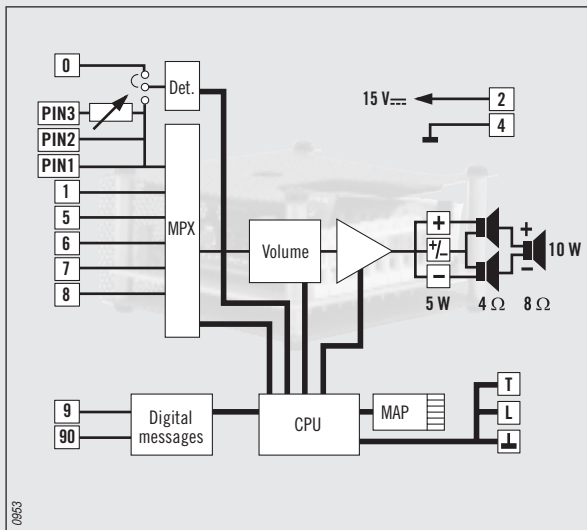
1306 Interface module for 100 V amplifiers



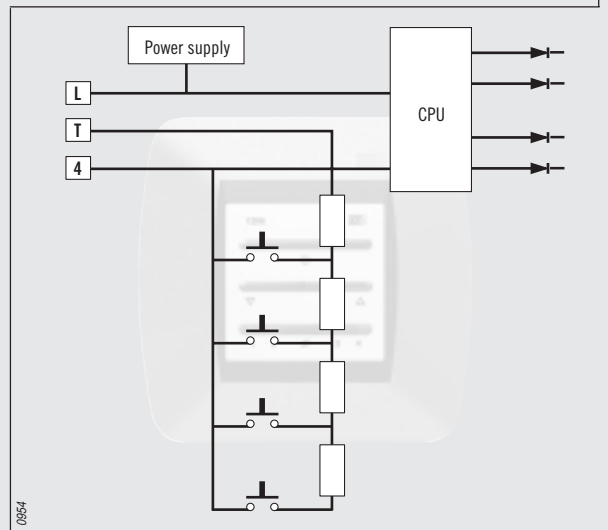
1310 Digital 20 W amplifier



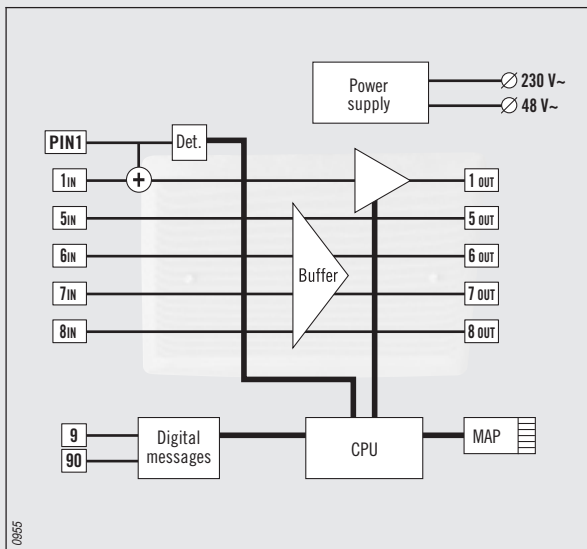
1311 Digital 10 W amplifier



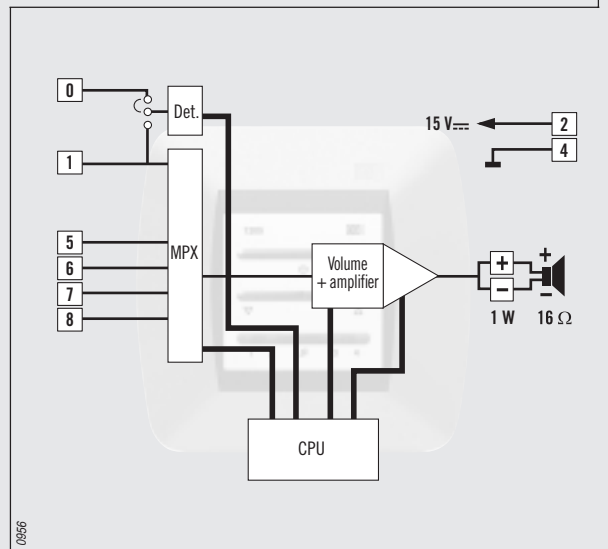
1206 Digital control keyboard



1308 15 V power supply & buffer



1604 1205 4-channel control unit, 1 W



DISTRIBUTOR



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